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Creality Falcon Pro 10W

Creality Falcon Pro 10W Laser Engraver Instruction Manual

Model: Falcon Pro 10W

1. INTRODUCTION

The Creality Falcon Pro 10W is a versatile laser engraving and cutting machine designed for various materials. This manual provides essential information for the safe and effective use of your device, covering assembly, operation, maintenance, and troubleshooting.



Image: The Creality Falcon Pro 10W laser engraver shown with various engraved items such as a slate coaster, leather wallet, and wooden art pieces.

Key features of the Falcon Pro 10W include:

- **10W Laser Output:** Capable of engraving and cutting a wide range of materials.
- **Integrated Air Assist:** Improves cutting performance and reduces material charring.
- **Offline Operation:** Supports engraving via TF card without a continuous computer connection.
- **Enhanced Safety Features:** Includes an emergency stop button, laser protection cover, security lock, and active stop function.
- **Simplified Assembly:** Designed for quick and straightforward setup.

2. SAFETY INFORMATION

Operating a laser engraver requires adherence to strict safety protocols to prevent injury and damage. Always prioritize safety during setup and operation.

Engrave Heartily with Sure Safety

Intelligent and thoughtful functions are introduced in all aspects for user safety.



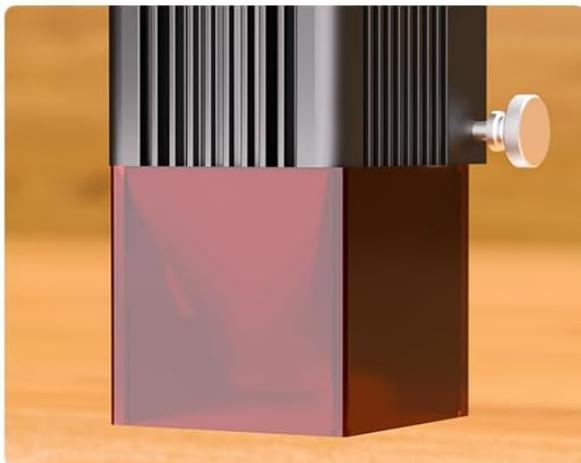
Emergency Stop Button

If an emergency occurs during operation, you can also manually stop the machine immediately.



Security Lock Design

Professional use only.



Laser Protective Cover

Made of high-efficiency colored filter glass material, the protective cover around the laser head will effectively prevent the laser from dazzling the eyes.



Active Stop Function

The machine will stop working in case of accidental tilt, flip or drop, with the buzzer and indicator sending alert.

Image: A composite image detailing the safety features of the Creality Falcon Pro 10W. This includes an emergency stop button, a key-operated security lock, a laser protective cover, and an active stop function that triggers upon tilt or drop.

- **Eye Protection:** Always wear appropriate laser safety goggles when the machine is operating. The laser beam can cause permanent eye damage.
- **Emergency Stop Button:** In case of any malfunction or emergency, immediately press the red emergency stop button to halt all operations.
- **Security Lock:** The machine is equipped with a key-operated security lock. This feature is for professional use only and helps prevent unauthorized operation.

- **Laser Protective Cover:** The laser module includes a high-efficiency colored filter glass cover to prevent direct laser exposure to the eyes. Ensure it is properly installed before use.
- **Active Stop Function:** The machine will automatically stop operation and emit a warning if it detects accidental tilting, flipping, or dropping.
- **Ventilation:** Operate the engraver in a well-ventilated area to dissipate fumes and smoke produced during engraving and cutting.
- **Flammable Materials:** Do not engrave or cut highly flammable materials without proper precautions. Always have a fire extinguisher nearby.
- **Supervision:** Never leave the machine unattended during operation.

3. SETUP

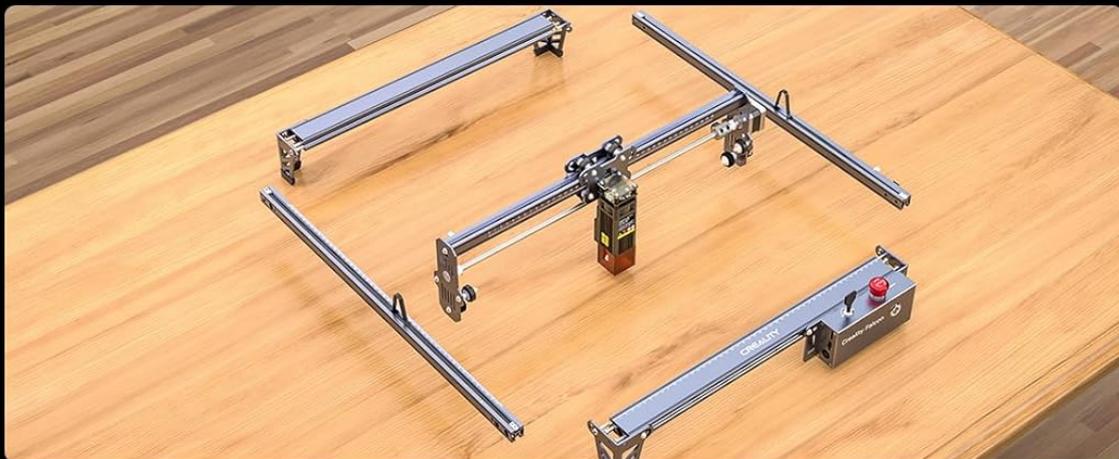
The Creality Falcon Pro 10W is designed for easy assembly. Follow these steps to set up your engraver.

Let Your Creativity Flow Effortlessly



Unleash innovation with one-button

In the offline working state, a single button to preview, start, pause or stop engraving. The integrated LED indicator will signal the status clearly.



Quick assembly

Simplified construction for effortless assembly

Image: A composite image illustrating the quick assembly process of the engraver's frame and the one-button control panel.

1. **Unpacking:** Carefully remove all components from the packaging. Verify that all parts are present according to the packing list.
2. **Frame Assembly:** The machine framework comes largely pre-assembled. Connect the main structural components as indicated in the included quick start guide. Ensure all screws are tightened securely.
3. **Laser Module Installation:** Mount the laser module onto the gantry. Ensure it is securely fastened.
4. **Air Assist Pump Connection:** Connect the air assist pump to the designated port on the laser

module and the control box.

5. **Power Connection:** Connect the power adapter to the machine and then to a suitable power outlet.
6. **Software Installation:** Install the recommended engraving software (e.g., LightBurn, LaserGRBL) on your computer. Refer to the software's documentation for detailed installation instructions. Ensure your computer's sleep settings are configured to 'Never' during large jobs to prevent interruptions.
7. **Initial Focus Adjustment:** Perform the 3S focusing procedure. Loosen the laser module screw, slide the module block until its protective cover touches the material surface, then tighten the screw. This sets the optimal focal distance.

4. OPERATING INSTRUCTIONS

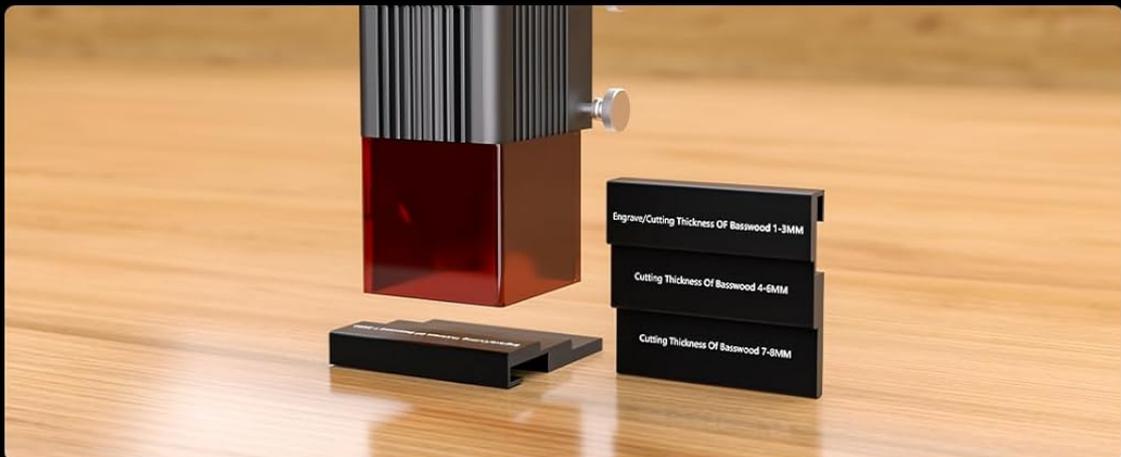
The Falcon Pro 10W offers flexible operation modes for your engraving and cutting projects.

Let Your Creativity Flow Effortlessly



Engrave anywhere, anytime

Import a file via a TF card. Use it indoors, outdoors or anywhere you like without connection with a computer.



3S focusing

Loosen the laser module screw, slide the module block and tighten the screw until its protective cover touches the focus

Image: A composite image highlighting the TF card slot for offline engraving and the method for 3S focusing.

4.1 Offline Operation

For convenience, the Falcon Pro 10W supports offline engraving using a TF card.

1. **Prepare File:** Save your engraving file (SVG, PNG, DXF, TIF, BMP, PDF, NG formats supported) onto a TF card.
2. **Insert TF Card:** Insert the TF card into the designated slot on the control box.
3. **One-Button Control:** In offline mode, a single button on the control box allows you to preview, start, pause, or stop your engraving project. The integrated LED indicator will display the current status.

4.2 Online Operation (via Computer)

Connect the engraver to your computer using the provided USB cable. Use compatible software like LightBurn or LaserGRBL (Windows and Mac OS supported) to control the machine.

- Ensure the correct drivers are installed for your operating system.
- Select the appropriate COM port in your software to establish a connection.
- If the software fails to detect the engraver, try re-adding the device or restarting the software and machine.

4.3 Air Assist Function

The built-in air assist device significantly improves engraving and cutting quality by clearing smoke and debris from the laser's path.

Do Neat Jobs with Air Assist

With the built-in air-assist device, the surface of the engraved object stays clean. No need to waste material for repeated cuts, and satisfactory results can be obtained in one pass. Just adjust it manually or automatically with LightBurn!

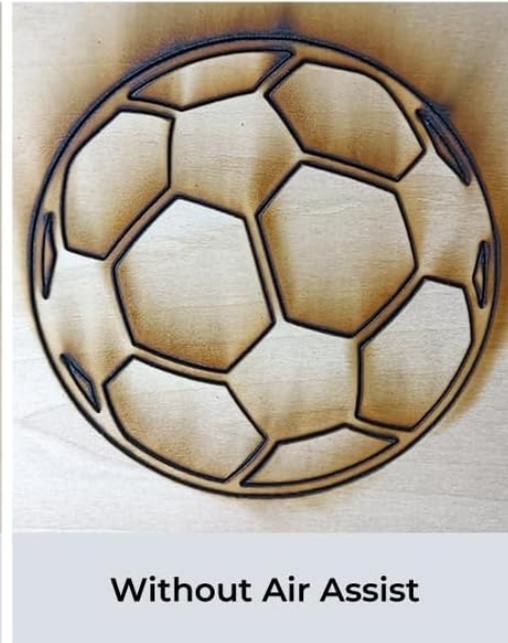


Image: A visual comparison showing the cleaner cut achieved with air assist versus without. Also depicted are methods to adjust airflow: through the LightBurn software and via a physical knob on the machine.

- **Activation:** The air assist is integrated and activates automatically during operation.
- **Adjustment:** Airflow can be adjusted manually using the knob on the control box or digitally through the LightBurn software for precise control.

4.4 Material Compatibility

The Falcon Pro 10W is suitable for engraving and cutting a variety of materials:

More Materials, More Possibilities

Cutting through thicker materials and engraving bold patterns on stainless steel is like injecting a jolt of creativity into every fiber of your existence. The artistic possibilities are limitless.



Wood



Porcelain



Denim



Paper

Image: A collage showcasing various materials and objects that can be engraved or cut, including a metal tumbler, wooden decorations, ceramic mugs, denim, and paper.

- **Cutting:** Paper, wood (up to 5mm basswood), leather, plastic, dark acrylic.
- **Engraving:** Metal, glass, wood, acrylic, paper, felt, leather, stone, and more.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Creality Falcon Pro 10W laser engraver.

- **Clean the Laser Lens:** Periodically clean the laser lens with a soft, lint-free cloth and lens cleaning solution to maintain engraving precision.
- **Clear Debris:** After each use, remove any dust, debris, or small material scraps from the engraving area and the machine's rails.
- **Lubricate Moving Parts:** Apply a small amount of lubricant to the guide rails and motion wheels as needed to ensure smooth movement.
- **Inspect Cables:** Regularly check all cables for signs of wear or damage. Replace any damaged cables immediately.
- **Firmware Updates:** Check the official Creality website for any available firmware updates to ensure your machine has the latest features and bug fixes.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your Falcon Pro 10W.

Problem	Possible Cause	Solution
Machine not connecting to computer/software.	Outdated USB memory card reader, incorrect drivers, software not detecting device.	Ensure you are using a compatible USB memory card reader (e.g., USB 3.0+). Verify correct drivers are installed. In software (e.g., LightBurn), try re-adding the device or selecting the correct COM port. Contact support if issues persist, a new motherboard might be required.
Engraving/cutting stops mid-job.	Computer entering sleep mode during operation.	Adjust your computer's power settings to prevent it from entering sleep mode during engraving tasks. Set the sleep option to 'Never'.
Poor engraving/cutting quality (e.g., charring, incomplete cuts).	Incorrect focus, insufficient air assist, incorrect power/speed settings for material.	Re-check laser focus using the 3S method. Ensure air assist is active and adjusted appropriately. Calibrate power and speed settings for the specific material being used.
Laser not firing or weak output.	Dirty laser lens, damaged laser module, incorrect power settings.	Clean the laser lens. Verify power settings in your software. If the issue persists, the laser module may need inspection or replacement.

7. SPECIFICATIONS

Product Parameters:

Cutting thickness: 5mm (basswood cutting)

Laser head power: 10W

Engraving speed: Maximum 10000mm/min

Laser wavelength: 455±5nm

Engraving precision: 254 dpi

Applicable materials: wood, acrylic, metal, paper, felt, leather, stone, etc.

Image: A table summarizing the key product parameters of the Creality Falcon Pro 10W.

Feature	Specification
Model Number	Falcon Pro 10W
Product Dimensions	12.2 x 24.21 x 7.68 inches
Item Weight	14.8 pounds
Laser Head Power	10W
Engraving Speed	Maximum 10000mm/min
Laser Wavelength	455 ± 5nm
Engraving Precision	254 dpi
Cutting Thickness	5mm (basswood cutting)
Applicable Materials	Wood, acrylic, metal, paper, felt, leather, stone, etc.
Operating System Compatibility	Mac OS, Windows
Supported File Formats	SVG, PNG, DXF, TIF, BMP, PDF, NG

8. WARRANTY INFORMATION

The Creality Falcon Pro 10W Laser Engraver comes with a **1-year warranty** from the date of purchase. This warranty covers manufacturing defects and malfunctions under normal use. Please retain your proof of purchase for warranty claims. For detailed terms and conditions, refer to the official Creality website or contact customer support.

9. SUPPORT

For technical assistance, troubleshooting, or any inquiries regarding your Creality Falcon Pro 10W, please contact Creality customer support. You can find contact information and additional resources on the official Creality website.

Creality is committed to providing excellent customer service and support for their products.

Note: When seeking support, please have your product model number (Falcon Pro 10W) and purchase details readily available.

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