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### xTool MXF-K005-002

# xTool F2 5W IR & 15W Diode Dual Laser Engraver User Manual

Model: MXF-K005-002

## 1. INTRODUCTION

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The xTool F2 is a versatile and portable desktop laser engraving machine designed for a wide range of creative and commercial applications. It features a unique dual-laser system, combining a 15W diode laser and a 5W infrared (IR) laser, allowing it to engrave and cut over 300 different materials. Equipped with a 50MP camera, the F2 offers precise visual positioning and efficient batch processing capabilities. Its compact and enclosed design ensures safe operation in various environments.

One Machine. Dual Power.  
Unlimited Materials.

15W Diode | 5W IR



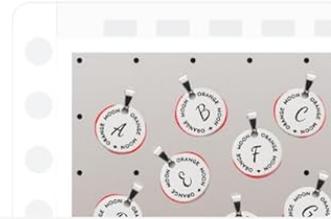
8K  
ULTRA HD

Details Captured



AI-Powered  
Efficiency

One-Click Batch &  
Variable Fill



Unlock 3D Embossing



Wood

Slate

Zinc

Acrylic



Vibrant Color  
on Bare Metal



5W IR

Faster, Deeper  
Black Marking

115 × 400 mm

4× Workspace,  
More Pieces per Run



Enclosed  
Design

360°



Quick-Swap Rotary  
Engraving

6,000 mm/s

Fastest of Its Kind

50MP Camera

Easy Full-Workspace Live Preview



Image: The xTool F2 Dual Laser Engraver, highlighting its compact and enclosed structure.

## 2. KEY FEATURES

- **Dual-Laser System:** Integrates a 15W diode laser for cutting and 3D embossing on materials like wood and acrylic, and a 5W IR laser for color marking on metals and deep, dark engraving.
- **High-Speed Engraving:** Achieves speeds up to 6000mm/s, significantly reducing processing time for various projects.

- **50MP High-Resolution Camera:** Provides a full-workspace live preview for precise positioning and alignment, ensuring accuracy down to 0.1 mm.
- **Wide Material Compatibility:** Capable of working with over 300 types of materials, including wood, leather, acrylic, metal, plastic, and more.
- **Portable and Compact:** Weighing only 4.6 kg, its design allows for easy transport and use in various locations, from workshops to craft fairs.
- **Fully Enclosed Design:** Ensures safety during operation by containing laser emissions and fumes.
- **User-Friendly Software:** The xTool Creative Space software simplifies design, material selection, and processing with built-in presets and AI image generation.



*Image: The 50MP camera provides an intuitive and easy preview for precise engraving.*

Your browser does not support the video tag.

*Video: This video demonstrates the portability and versatility of the xTool F2, showcasing its ability to personalize various items on-site and anywhere.*

### 3. SETUP

1. **Unboxing:** Carefully remove the xTool F2 and all accessories from its packaging. The robust packaging ensures the device arrives securely.
2. **Placement:** Place the xTool F2 on a stable, flat surface. Ensure adequate ventilation around the machine.

3. **Power Connection:** Connect the power adapter to the machine and then to a power outlet.
4. **Software Installation:** Download and install the xTool Creative Space software from the official xTool website. Follow the on-screen instructions for installation.
5. **Connect to Computer:** Connect the xTool F2 to your computer via USB cable or Wi-Fi as prompted by the software.
6. **Initial Calibration:** Follow the software's guide for any initial calibration steps, such as focusing the laser or setting up the camera.



*Image: The xTool F2 is designed for quick setup and immediate use.*

## 4. OPERATING INSTRUCTIONS

1. **Power On:** Turn on the xTool F2 using the power button.
2. **Place Material:** Open the protective cover and place your material on the work platform. Ensure it is flat and stable.
3. **Design in Software:** Open xTool Creative Space. Import or create your design.
4. **Positioning with Camera:** Use the 50MP camera's live preview in the software to accurately position your design on the material. Adjust the material or design as needed.
5. **Select Material Settings:** Choose your material type from the software's presets. The software will automatically suggest optimal laser power and speed settings. You can fine-tune these settings if necessary.
6. **Start Processing:** Close the protective cover. Initiate the engraving or cutting process from the software. The machine will begin operation.
7. **Monitor Progress:** Observe the process through the transparent cover. Do not leave the machine unattended during operation.
8. **Completion:** Once the process is complete, the machine will stop. Carefully open the cover and remove your finished piece.

## Using Accessories:

- **Rotary Attachment (RA3):** For engraving cylindrical objects like tumblers or mugs, attach the RA3. Follow the accessory's specific setup and software instructions for rotary engraving.
- **Slide Extension:** To expand the working area for batch processing of multiple small items (e.g., coasters, phone cases), install the slide extension. This allows for continuous feeding of materials.

### Expand Your Engraving Possibilities



#### Make Any Round Surface Your Canvas.

Suitable for daily use cylinders and spheres, such as tumbler, mug, Christmas ball, ring, etc. Plus, unlock full-wrap engraving.



#### 4X Expand Your Working Area.

Fast & easy process. Long enough to do all the projects. It helps you achieve batch production and improve efficiency.

*Image: Expand your engraving possibilities with optional accessories like the rotary attachment and slide extension.*

Your browser does not support the video tag.

*Video: This video highlights the xTool F2's capabilities for on-site customization, demonstrating its portability and ease of use for various materials.*

## 5. MAINTENANCE

- **Clean the Lens:** Regularly inspect and clean the laser lens using a soft, lint-free cloth and lens cleaning solution to ensure optimal performance.
- **Clean the Work Area:** Remove any debris or dust from the work platform after each use to prevent interference with future projects.
- **Fume Extraction System:** If using an optional smoke purifier, regularly check and replace its filters as recommended by the manufacturer to maintain effective fume removal.
- **General Inspection:** Periodically check all cables and connections for any signs of wear or damage.

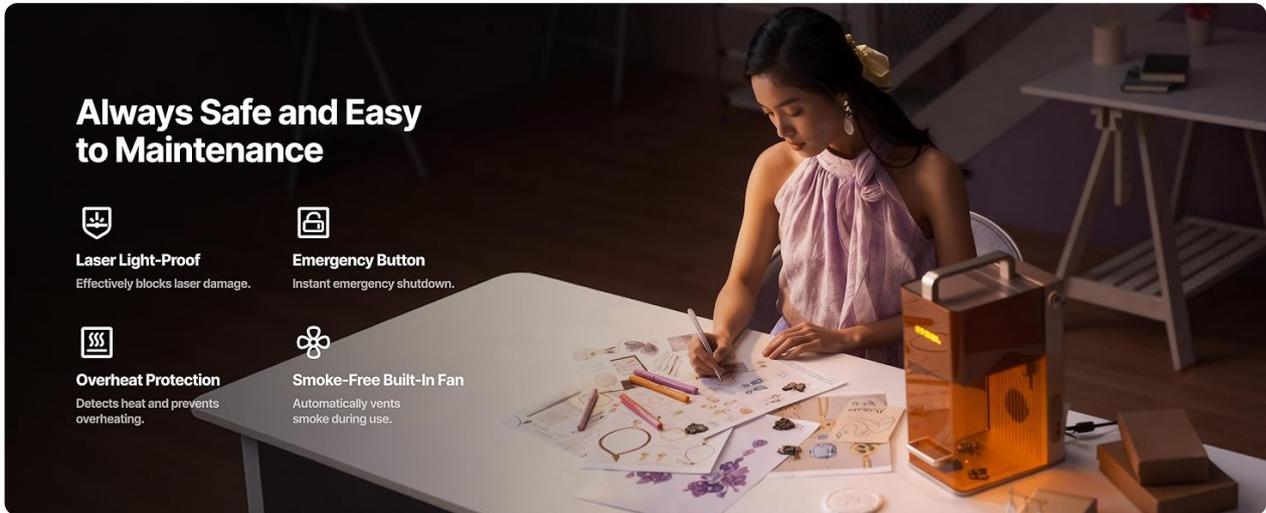


Image: The xTool F2 is designed for easy maintenance to ensure longevity and consistent performance.

## 6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Laser not firing/engraving	Loose cable, software error, material not properly placed, laser head not focused.	Check all connections. Restart software and machine. Ensure material is flat. Adjust laser focus.
Poor engraving quality	Incorrect material settings, dirty lens, material not flat, laser head not focused.	Verify material settings in software. Clean the laser lens. Ensure material is flat and secure. Adjust laser focus.
Machine not connecting to computer	USB cable issue, Wi-Fi connectivity problem, driver not installed.	Try a different USB port/cable. Check Wi-Fi connection. Reinstall software drivers.
Excessive smoke/fumes	Poor ventilation, purifier filter needs replacement.	Ensure adequate ventilation. Check and replace purifier filter if applicable.

## 7. SPECIFICATIONS

Feature	Detail
Model Number	MXF-K005-002
Laser Type	15W Diode Laser & 5W IR Laser
Engraving Speed	Up to 6000mm/s
Camera	Built-in 50MP Camera
Motion Accuracy	0.00199"
Working Area	115 mm x 115 mm (expandable with Slide Extension)
Item Weight	10 pounds (approx. 4.6 kg)
Package Dimensions	16 x 16 x 12.5 inches
Manufacturer	Makeblock Co., Ltd.

## 8. SAFETY INFORMATION

The xTool F2 is a Class 4 laser engraver. Adherence to safety guidelines is paramount to prevent injury and ensure safe operation.

- **Eye Protection:** Always wear appropriate laser safety glasses when operating the machine, especially if the protective cover is open or removed.
- **Enclosed Design:** The fully enclosed, leak-proof design helps contain laser emissions and fumes. Keep the cover closed during operation.
- **Ventilation:** Ensure proper ventilation. The built-in fan helps manage fumes. For indoor use, an optional smoke purifier is highly recommended to effectively eliminate fumes and odors.
- **Emergency Stop:** Familiarize yourself with the emergency stop button for instant shutdown in case of an unexpected event.
- **Material Safety:** Only engrave or cut materials approved for laser processing. Some materials can produce toxic fumes or catch fire.
- **Supervision:** Never leave the machine unattended during operation.
- **Overheat Protection:** The machine is equipped with overheat protection to prevent damage.

## 9. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation included with your xTool F2 or visit the official xTool website. xTool provides multi-channel support to assist users with any questions or issues.

### Support Channels:

- **Email Support:** Contact xTool customer service via email for assistance.
- **Live Chat:** Access live chat support on the xTool official website for real-time help.
- **Phone Support:** Reach out to the technical service team via phone.
- **Community Forums:** Join the xTool Facebook group or other community forums for peer support and tips.