

Monport YXF50

Monport 50W Fiber Laser Engraver (Model YXF50) User Manual

Comprehensive Guide for Setup, Operation, and Maintenance

1. INTRODUCTION

This user manual provides essential information for the safe and effective operation of your Monport 50W Fiber Laser Engraver, Model YXF50. This integrated mini fiber laser marking machine is designed for high-precision engraving and marking on various metal and non-metal materials. Please read this manual thoroughly before initial use to ensure proper setup, operation, and maintenance.



Figure 1.1: Monport 50W Fiber Laser Engraver, Model YXF50.

2. SAFETY INFORMATION

WARNING: This is a Class 4 laser product. Direct exposure to the laser beam can cause severe eye and skin damage. Always follow safety precautions.

2.1 General Safety Guidelines

- **Eye Protection:** Always wear certified laser safety glasses appropriate for the laser's wavelength

(1064nm) when the machine is in operation.

- **Skin Protection:** Avoid direct exposure of skin to the laser beam.
- **Ventilation:** Ensure adequate ventilation in the work area to remove fumes and particles generated during engraving. Consider a fume extractor.
- **Fire Safety:** Keep a fire extinguisher nearby. Do not engrave flammable materials without proper precautions.
- **Supervision:** Never leave the machine unattended during operation.
- **Authorized Personnel:** Only trained and authorized personnel should operate the laser engraver.
- **Emergency Stop:** Familiarize yourself with the location and operation of the emergency stop button.

2.2 Electrical Safety

- Ensure the machine is properly grounded.
- Do not operate with wet hands or in damp conditions.
- Disconnect power before performing any maintenance or adjustments.

3. SETUP AND INSTALLATION

The Monport 50W Fiber Laser Engraver is designed for straightforward setup. Follow these steps to prepare your machine for operation.

3.1 Unpacking and Inspection

1. Carefully remove all components from the packaging.
2. Inspect the machine for any signs of damage during transit. Report any damage to Monport support immediately.
3. Verify all accessories listed in the packing list are present.

3.2 Assembly

The integrated design minimizes assembly. Typically, this involves securing the laser head column to the base unit.

1. Place the base unit on a stable, level surface.
2. Attach the vertical column with the laser head to the designated mounting points on the base. Secure it firmly using the provided screws.
3. Connect any necessary cables (power, USB) as indicated in the quick start guide included with your machine.



Figure 3.1: Compact design and key specifications of the Monport 50W Fiber Laser Engraver.

3.3 Software Installation

Your Monport 50W Fiber Laser Engraver is compatible with LightBurn and BSLcad software. Installation files and backup parameters are typically provided on a USB drive included in the packaging.

1. Insert the provided USB drive into your computer.
2. Follow the instructions on the USB drive to install your preferred software (LightBurn or BSLcad).
3. Install the necessary drivers for the laser engraver to communicate with your computer.
4. Configure the software according to the provided parameters for your specific machine model (YXF50).

4. OPERATING INSTRUCTIONS

This section outlines the basic steps for operating your Monport 50W Fiber Laser Engraver.

4.1 Powering On and Initial Checks

1. Ensure all safety precautions are in place, including wearing laser safety glasses.

2. Connect the power cable and turn on the main power switch on the machine.
3. Launch the engraving software (LightBurn or BSLcad) on your computer.
4. Verify that the software recognizes the laser engraver.

4.2 Material Placement and Focusing

1. Place your material on the work platform.
2. Adjust the Z-axis (height of the laser head) until the laser is properly focused on the material surface. The machine features a red dot pointer to assist with focusing and positioning.
3. **Important:** Remember to remove the lens cap before operation.

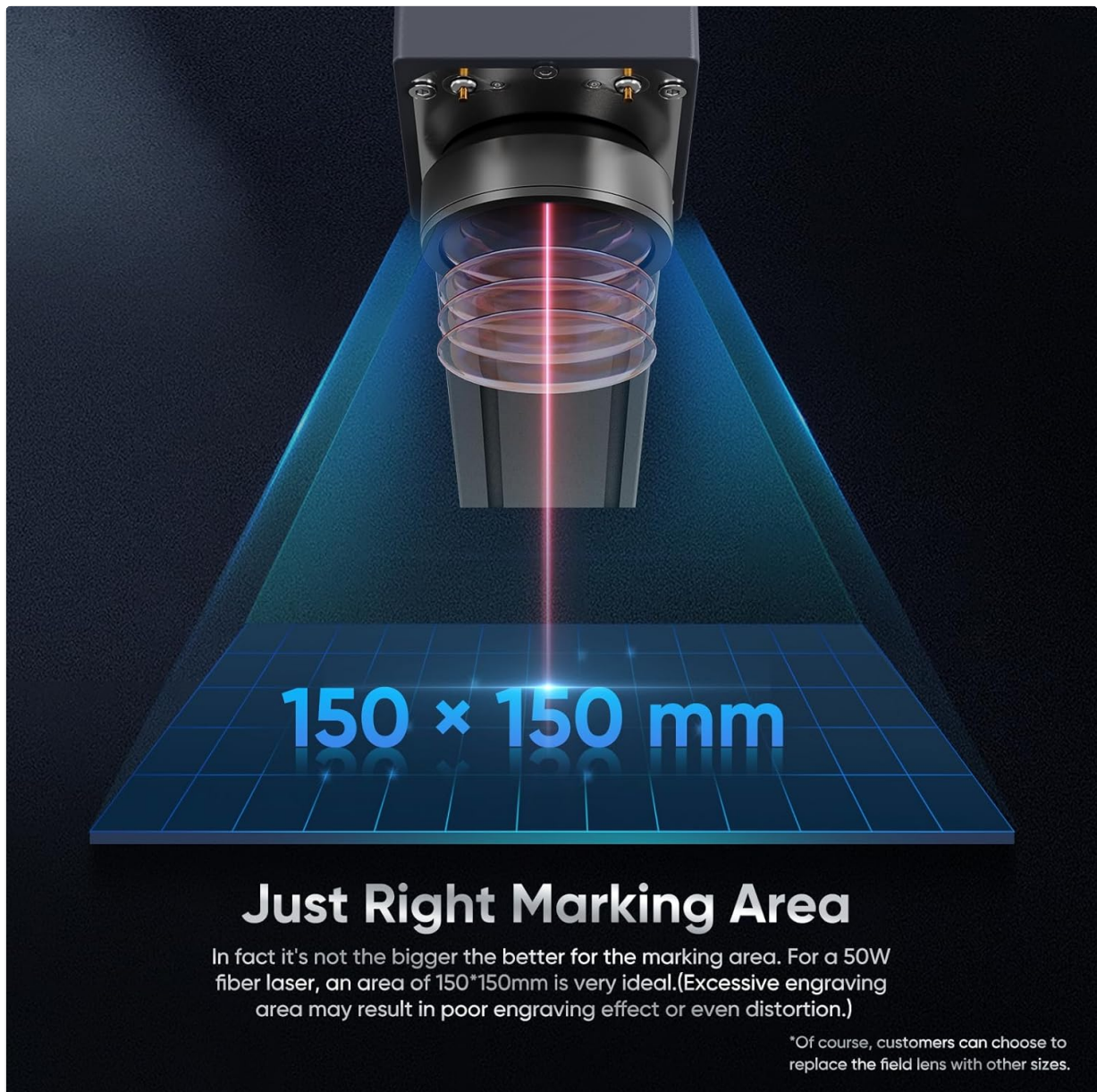


Figure 4.1: Optimal marking area of 150x150mm for the 50W fiber laser.

4.3 Software Operation and Engraving

1. Import or create your design within the software.
2. Set engraving parameters such as power, speed (up to 10000mm/s), frequency, and passes based on the material and desired effect.
3. Use the software's framing function to preview the engraving area on your material.
4. Initiate the engraving process. Monitor the machine closely during operation.

10000mm/s

Max, Marking Speed



professional Software

BslAppSimple/Lightburn



Smaller, But still Powerful

50W

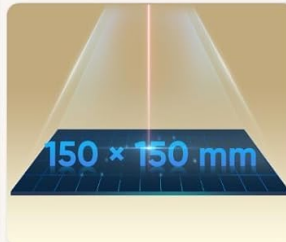
Fiber Laser

Peak power up to 11 kW



High Scalability

Rotary Axis, Protection
Enclosure, Fume Extractor, etc



**Sub-micron And
Error-free Accuracy**



Wide Marking Materials

Stainless Steel, Aluminum, Gold, Silver, Alloy, Ceramic,
Marble, Leather, Plastics, Colored Acrylic, etc



**Metal 3D
Engraving & Cutting**

Figure 4.2: Overview of key features including 10000mm/s speed and 50W power.

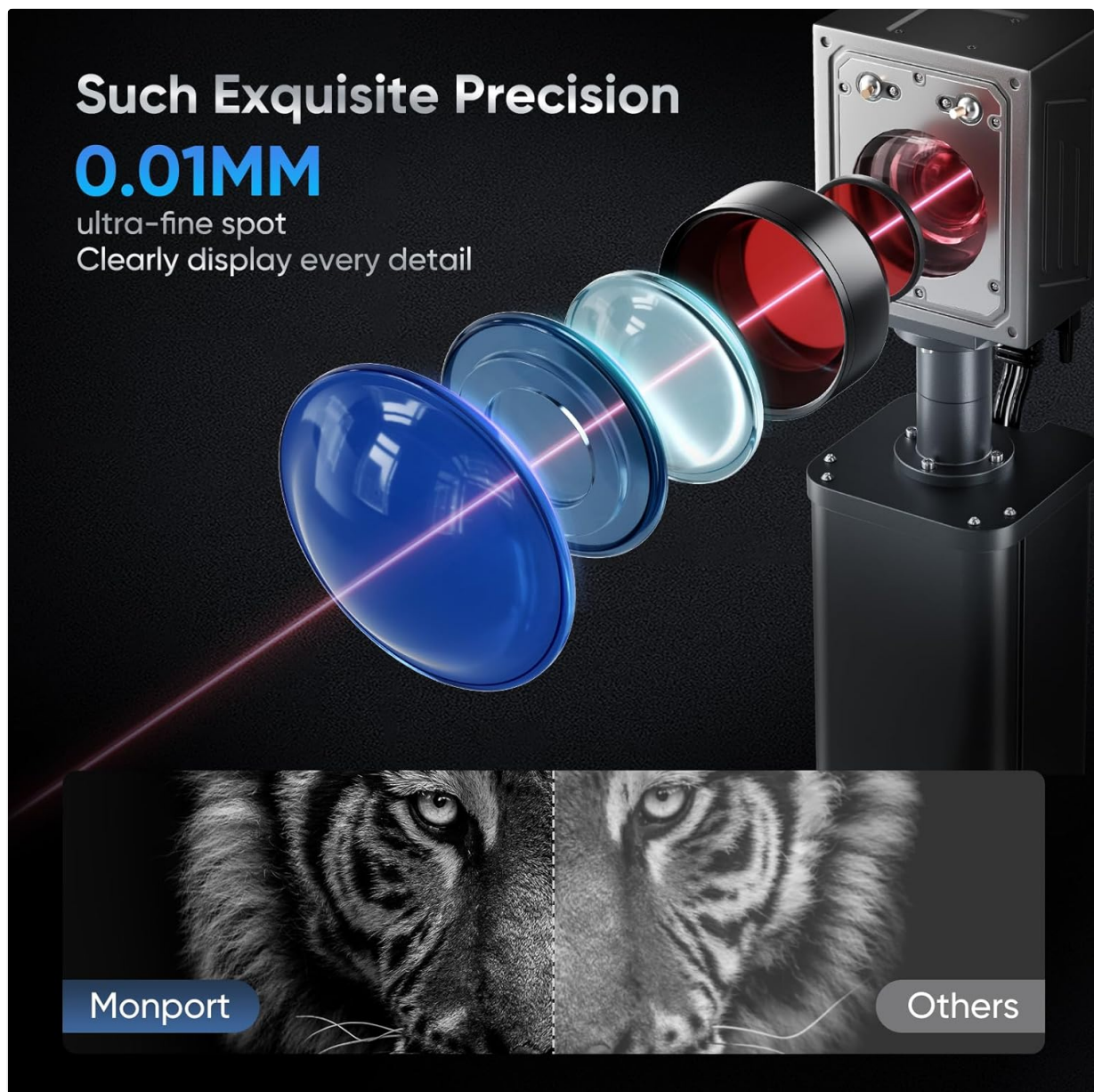


Figure 4.3: Illustration of the 0.01mm ultra-fine spot precision.

4.4 Compatible Materials

The Monport 50W Fiber Laser Engraver is suitable for marking and engraving a wide range of materials:

- **Metals:** Gold, Silver, Copper, Stainless Steel, Brass, Titanium, Aluminum, Platinum, etc.
- **Plastics:** Certain types of plastics.
- **Other:** Some ceramics, leather, painted metals.

Smaller, But still Powerful 50W Fiber Laser

Peak power up to 11 kW

For all-metals and plastic, etc.



Stainless Steel



Aluminum



Brass



Silver



Plastic



Platinum



Titanium



Gold



Figure 4.4: Examples of materials compatible with the fiber laser engraver.

5. MAINTENANCE

Regular maintenance ensures optimal performance and extends the lifespan of your Monport 50W Fiber Laser Engraver.

5.1 Cleaning the Lens

The F-theta field lens is a critical component. Keep it clean to maintain engraving quality.

- **Frequency:** Clean the lens regularly, especially if you notice a decrease in engraving quality or power.
- **Procedure:** Use a specialized lens cleaning solution and lint-free wipes. Avoid touching the lens surface with bare hands.

5.2 General Cleaning

- Keep the work area and the machine's exterior free of dust and debris.
- Ensure ventilation grilles are not obstructed.

5.3 Software Updates

Periodically check for software updates for LightBurn or BSLcad to benefit from new features and performance improvements.

6. TROUBLESHOOTING

This section addresses common issues you might encounter and provides potential solutions.

Problem	Possible Cause	Solution
No laser output	Lens cap still on, emergency stop engaged, power issue, software not connected.	Remove lens cap, disengage emergency stop, check power connections, verify software connection.
Poor engraving quality	Incorrect focus, dirty lens, incorrect power/speed settings, material not suitable.	Adjust focus, clean lens, optimize engraving parameters, ensure material compatibility.
Machine not recognized by software	USB cable issue, driver not installed, software configuration error.	Check USB cable, reinstall drivers, verify software settings.
Red dot pointer not visible	Pointer disabled in software, hardware malfunction.	Enable pointer in software settings. If issue persists, contact support.

7. SPECIFICATIONS

Key technical specifications for the Monport 50W Fiber Laser Engraver (Model YXF50):

- **Model:** YXF50
- **Laser Type:** Fiber Laser
- **Laser Power:** 50W (50000 mW output power)
- **Laser Class:** Class 4
- **Max. Marking Speed:** 10000 mm/s
- **Engraving Accuracy:** 0.01mm
- **Working Area:** 150mm x 150mm (5.9" x 5.9")
- **Max Z-Height:** 350mm
- **Lifespan:** Up to 100,000 hours
- **Compatible Software:** LightBurn, BSLcad
- **Compatible Operating Systems:** Windows, macOS
- **Product Weight:** 14.5 kg (34 lbs)
- **Material:** Aluminum
- **Color:** Grey
- **Operation Mode:** Manual



Figure 7.1: Speed capabilities of the Monport 50W Fiber Laser Engraver.

8. WARRANTY AND SUPPORT

8.1 Warranty Information

For detailed warranty terms and conditions, please refer to the warranty card included with your product or visit the official Monport website. Keep your proof of purchase for warranty claims.

8.2 Customer Support

If you encounter any issues not covered in this manual or require technical assistance, please contact Monport customer support. You can find contact information on the official Monport website or through your purchase platform.


Monport Direct: [Seller Information](#)




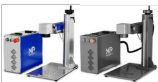







Figure 8.1: Optional accessories for enhanced functionality and safety.

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Related Documents - YXF50

	<p>Monport 30W Fiber Laser Machine User Manual</p> <p>Comprehensive user manual for the Monport 30W Fiber Laser Machine, covering installation, operation, safety, and maintenance.</p>
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<div data-bbox="129 105 167 129"></div> <div data-bbox="154 150 272 172"><p>Fiber Laser Marking Machine User Manual</p></div> <div data-bbox="159 194 271 297"></div> <div data-bbox="159 320 268 327"><p>Please Read Carefully Before Use and Keep It for Future Reference</p></div>	<p>Monport Fiber Laser Marking Machine User Manual</p> <p>This user manual provides comprehensive instructions for the installation, setup, safe operation, and maintenance of the Monport Fiber Laser Marking Machine. It covers general information, safety precautions, installation steps, operation procedures, maintenance guidelines, and troubleshooting.</p>
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