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› Monport 60W Fiber Laser Engraver User Manual

Monport YXF60

Monport 60W Fiber Laser Engraver User Manual

Model: YXF60

Brand: Monport

1. INTRODUCTION

The Monport 60W Fiber Laser Engraver is an advanced MOPA fiber laser marking machine designed for high-precision engraving and color marking on a wide range of materials. Featuring an integrated autofocus system and a robust aluminum casing, this machine offers enhanced performance and ease of use for both professional and hobbyist applications. Its 6.9" x 6.9" work area is ideal for detailed work on items such as gold, steel, and various types of jewelry.

This manual provides essential information for the safe and effective operation of your Monport laser engraver. Please read it thoroughly before initial use and keep it for future reference.

2. SAFETY INFORMATION

WARNING: This is a Class 4 Laser Product. Direct exposure to the laser beam can cause severe eye damage and skin burns. Always wear appropriate laser safety glasses when operating the machine. Never look directly into the laser beam or its reflection.

- Ensure the work area is well-ventilated to dissipate fumes and dust generated during engraving.
- Do not operate the machine if any covers are removed or if the safety interlocks are bypassed.
- Keep flammable materials away from the laser path.
- Familiarize yourself with the emergency stop procedure.
- Always disconnect power before performing maintenance or cleaning.
- The machine features chamfered or filleted sharp parts for enhanced safety.

3. PRODUCT OVERVIEW AND COMPONENTS

The Monport 60W Fiber Laser Engraver is designed with an industrial-grade aluminum casing, integrating the auto-focus and galvanometer modules directly into the optical path for a compact and efficient design.



Figure 3.1: Monport 60W Fiber Laser Engraver, showcasing its compact and robust design.

Key Features:

- **All-in-One Design:** Independently developed autofocus laser marking machine for enhanced performance and cost-effectiveness.

- **Robust Aluminum Casing:** The entire machine features a durable anodized aluminum oxide material, ensuring longevity and a high-quality texture.
- **Integrated Optics:** Auto-focus and galvanometer modules are integrated into the optical path for precision.
- **Auto-Focus Innovation:** Proprietary auto-focus technology with single-click precision (error < $\pm 1\text{mm}$). Manual focus is also available, guided by three red lights.
- **$\pm 90^\circ$ Vertical Arm Rotation:** The vertical arm offers an infinitely adjustable range, allowing for flexible marking applications on various object sizes and shapes. Adjustments are made by loosening screws without complete unscrewing.
- **Enhanced Performance:** Ultra-high stability, precision positioning, rapid marking speeds (up to 10000mm/s), and robust anti-interference capabilities.
- **0.01mm Ultra-Fine Spot:** Sub-micron and error-free accuracy for detailed engravings.
- **Dust Shields:** Added to the back of the work area for longer service life.

10000mm/s

Max. Marking Speed




Professional Software

BSL (Free) / LightBurn

One-Button Autofocus

Accurate Ranging Exact Measure , Exquisite Marking



60W

MOPA

Color Marking



High Scalability

Rotary Axis, Protection Enclosure, Fume Extractor, etc

175 × 175 mm

(6.9 × 6.9 in)



Gold Marking Size

Sub-micron And Error-free Accuracy



Wide Marking Materials

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



Ultra-high Work piece Marking

Unrestricted Vertical Arm 90° Infinite Rotation



Figure 3.2: Overview of the Monport 60W Fiber Laser Engraver's key features, including high marking speed, autofocus, and wide material compatibility.

SAFE & RELIABLE



Figure 3.3: Safety and reliability features of the Monport laser engraver, including the laser switch, power switch, and built-in filter.

4. SETUP

The Monport 60W Fiber Laser Engraver is designed for quick and easy installation, allowing you to begin operation swiftly.

4.1 Unpacking and Initial Inspection

- Carefully remove all components from the packaging.
- Verify that all items listed in the packing list are present.
- Inspect the machine for any visible damage that may have occurred during transit. Contact customer support immediately if any damage is found.

4.2 Assembly Steps

The machine arrives ready-to-use with minimal assembly required. Follow these steps for quick installation:

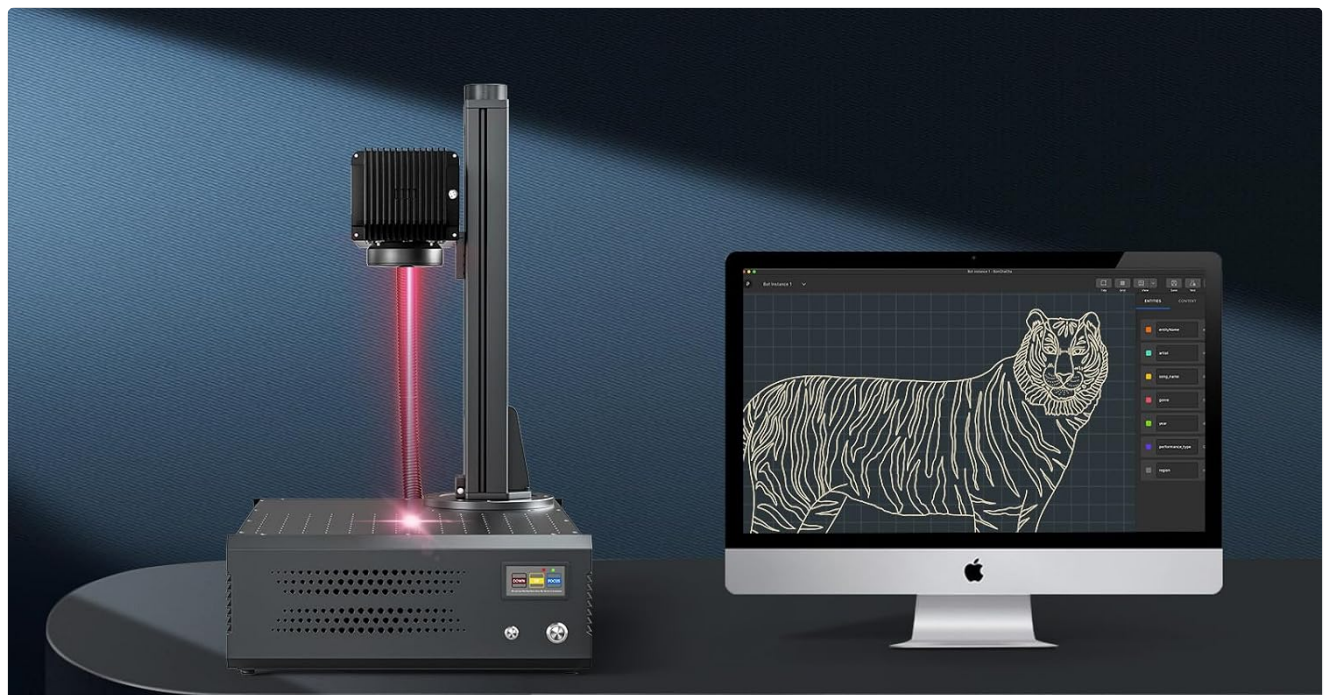
1. Place the base unit on a stable, level surface.
2. Attach the vertical arm assembly to the base unit, ensuring it is securely fastened with the provided screws.
3. Connect any necessary cables as indicated in the quick start guide.



Figure 4.1: Visual guide for the easy 3-step installation process of the Monport laser engraver.

4.3 Software Installation

The Monport 60W Fiber Laser Engraver is compatible with LightBurn software. Install the software on your computer following the instructions provided with the software package. The machine also supports BSL (Free) software.



The image shows a Monport laser engraver on a dark surface. A red laser line is projected from the engraver's head onto the work platform. To the right, a computer monitor displays the LightBurn software interface, which features a grid and a white line drawing of a tiger. The background is a dark, textured blue.

LIGHTBURN INCLUDED

Edit, Arrange, and Take Your Designs to New Heights
with the Bundled Feature-Packed LightBurn Software

Compatible with



win7, 8, 10, 11



BSL (Free)



Light Burn(Payment)

Figure 4.2: The Monport laser engraver is compatible with LightBurn software for design and control.

4.4 Setup Video Guide

Video 4.1: This video demonstrates the quick installation process, autofocus innovation, and flexible vertical arm rotation of the Monport Fiber Laser Engraver. It provides a visual guide for setting up and preparing your machine for use.

5. OPERATING INSTRUCTIONS

Operating your Monport 60W Fiber Laser Engraver involves preparing your material, setting up the machine, and initiating the engraving process through the software.

5.1 Material Preparation

- Ensure your material is clean and free of debris.
- Place the material securely on the work platform.

- The machine supports a wide range of materials including Stainless Steel, Aluminum, Gold, Silver, Alloy, Ceramic, Marble, Leather, Plastics, and Colored Acrylic.

5.2 Autofocus Operation

The machine features a one-button autofocus technology for precise focusing. This streamlines the process and enhances work efficiency.

- Position the material under the laser head.
- Press the 'FOCUS' button on the control panel. The machine will automatically adjust the laser head height to achieve optimal focus (error < $\pm 1\text{mm}$).
- For manual focusing, use the 'UP' and 'DOWN' buttons, guided by the three red lights to achieve the sharpest laser spot.



Figure 5.1: Illustration of the true one-button autofocus technology, showing the sensor and focusing mechanism.

5.3 Vertical Arm Adjustment

The vertical arm can be rotated $\pm 90^\circ$ to accommodate various object sizes and shapes, providing flexible marking space.

- To adjust the arm, loosen the screws at the base of the vertical arm.
- Carefully rotate the arm to the desired angle.
- Tighten the screws to secure the arm in place before beginning engraving.



Figure 5.2: The Monport laser engraver's vertical arm offers $\pm 90^\circ$ continuous rotation for unrestricted engraving across objects.

5.4 Engraving Process

- Design or import your desired pattern into the LightBurn software.
- Adjust laser parameters (power, speed, frequency) according to the material and desired effect.
- Initiate the engraving process from the software. The machine is capable of rapid marking speeds up to 10000mm/s.
- The MOPA fiber laser allows for color marking on metals, such as stainless steel color marking and anodized aluminum black marking.



Figure 5.3: The Monport laser enables vibrant color marking, allowing for stunning and diverse creative outputs.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Monport Fiber Laser Engraver.

- **Cleaning:** Regularly clean the work platform and the laser lens. Use a soft, lint-free cloth and appropriate lens cleaning solution for the laser lens.
- **Dust Shields:** The machine includes dust shields to protect internal components. Periodically check and clean these shields to prevent dust buildup.
- **Ventilation:** Ensure the machine's ventilation openings are clear and unobstructed to prevent overheating.
- **Software Updates:** Keep your LightBurn software updated to the latest version for improved features and stability.

7. TROUBLESHOOTING

This section addresses common issues you might encounter. For more complex problems, please refer to the comprehensive online resources or contact Monport customer support.

Problem	Possible Cause	Solution
Laser not firing	Laser switch off, power cable disconnected, software error.	Ensure laser switch is on, check power connections, restart software and machine.
Poor engraving quality	Incorrect focus, wrong laser parameters, dirty lens.	Perform autofocus, adjust power/speed settings, clean the laser lens.
Machine not connecting to computer	USB cable issue, driver not installed, software port settings.	Try a different USB port/cable, reinstall drivers, check software communication settings.

8. SPECIFICATIONS

Attribute	Detail
Brand	Monport
Model Number	YXF60
Laser Power	60W (60000 mW output power)
Laser Class	Class 4
Material	Aluminum (Casing)
Color	Dark Grey
Operation Mode	Automatic (Autofocus)
Work Area	6.9" x 6.9" (175 x 175 mm)
Max. Marking Speed	10000mm/s
Spot Size	0.01mm Ultra-Fine Spot
Vertical Arm Rotation	±90° Continuous Rotation
Software Compatibility	LightBurn, BSL (Free)

9. WARRANTY AND SUPPORT

9.1 Warranty Information

Your Monport 60W Fiber Laser Engraver is covered by a return policy that allows for refund or replacement within 30 days of purchase. Please retain your proof of purchase for any warranty claims.

9.2 Customer Support

For technical assistance, troubleshooting, or any inquiries regarding your Monport product, please contact Monport Direct customer support. You can find contact information on the official Monport website or through your purchase platform.

Monport is committed to providing high-quality products and excellent customer service. Your feedback is valuable and helps us improve.

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Email

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

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