

Monport YXF50

Monport 50W Fiber Laser Engraver YXF50 Instruction Manual

This manual provides essential information for the safe and effective operation, setup, and maintenance of your Monport 50W Fiber Laser Engraver YXF50.

1. SAFETY INFORMATION

Operating a laser engraver requires adherence to strict safety protocols to prevent injury and equipment damage. This device is a Class 4 laser product.

- **Eye Protection:** Always wear approved laser safety glasses that block the specific wavelength of the fiber laser (typically 1064nm) when the machine is in operation.
- **Ventilation:** Ensure adequate ventilation to remove fumes and particles generated during engraving, especially when working with various materials.
- **Emergency Stop:** Familiarize yourself with the location and function of the emergency stop button. In case of any malfunction or hazard, press this button immediately.
- **Fire Safety:** Keep a fire extinguisher nearby. Do not leave the machine unattended during operation.
- **Material Compatibility:** Only engrave materials known to be safe for fiber lasers. Avoid materials that produce toxic fumes or are highly flammable.
- **Authorized Personnel:** Only trained and authorized individuals should operate the laser engraver.

2. PRODUCT OVERVIEW

The Monport 50W Fiber Laser Engraver YXF50 is designed for precise marking and engraving on various metal surfaces. It features a robust design and user-friendly components.

Key Features

- **50W Raycus Fiber Laser Source:** Provides a powerful laser output of 50000mW with an estimated lifetime of up to 100,000 hours, suitable for marking metals like stainless steel, gold, silver, and brass.
- **Advanced Workspace:** Equipped with a 7.9" x 7.9" (200mm x 200mm) work area, featuring a built-in grid

and removable positioning bars for accurate material placement. Supports an optional rotary axis (not included) for cylindrical objects.

- **Red Dot Pointer:** An external red dot locator assists in quick and accurate laser focus setup and previewing the engraving area.
- **Manual Focus:** A focus-height wheel and a vertical supporting tower with a ruler allow for precise manual focusing on different material thicknesses.
- **Enhanced Configuration:** Includes two cooling fans for improved heat dissipation and an integrated power supply for stable operation. Features a consolidated power button and an emergency panic button for safety.

Components

Fiber Laser Marking Machine



Image: Overview of the Monport 50W Fiber Laser Engraver with key components labeled.

- **GALVO-TECH System:** The galvanometer scanning system responsible for directing the laser beam.
- **Height Adjustment Knob:** Used to manually adjust the height of the laser head for focusing.
- **Handle:** For safe and convenient handling of the laser unit.
- **Field Lens:** Focuses the laser beam onto the material surface.

- **Power Button:** Controls the main power to the unit.
- **Fiber Optic Transmission Line:** Carries the laser beam from the source to the galvanometer head.
- **Scaleplate:** A ruler on the vertical support for precise height measurements.
- **Worktable:** The platform where materials are placed for engraving, featuring a grid and positioning bars.

3. SETUP

3.1 Unpacking

- Carefully remove all components from the packaging.
- Inspect all parts for any signs of damage during transit. Contact support immediately if damage is found.
- Retain original packaging for future transport or storage.

3.2 Assembly

- Place the main laser unit on a stable, level surface.
- Connect the fiber optic transmission line securely between the laser source and the galvanometer head.
- Ensure all cables are properly routed and secured to prevent interference with moving parts.

3.3 Power Connection

- Connect the power cable to the integrated power supply unit.
- Plug the power cable into a grounded electrical outlet. Verify the voltage matches the machine's requirements.

3.4 Software Installation

The Monport 50W Fiber Laser Engraver is compatible with LightBurn software and is based on EZCAD2. Ensure you have the correct software version installed.

- Install the necessary drivers and software from the provided USB drive or manufacturer's website.
- For LightBurn compatibility, ensure you are using a version that supports BSL lasers.
- Connect the engraver to your computer via the USB cable.



Image: The Monport 50W Fiber Laser Engraver fully assembled and ready for operation.

4. OPERATING INSTRUCTIONS

4.1 Powering On

- Ensure all safety precautions are in place, including wearing laser safety glasses.
- Insert the key into the key switch and turn it to the 'ON' position.
- Press the main power button to activate the laser engraver.

Upgraded Button Design

One-touch ease with dual-layered protection.

Simpler, safer, and more stable than ever.



Key Switch



Power Button



Emergency Button

Boosted security with an additional lock for added peace of mind.

Embark on your metallic engraving journey with a single tap.

Safety is just a tap away with our immediate emergency shut-off.

Image: Close-up of the upgraded button design, showing the key switch, power button, and emergency stop button.

4.2 Material Placement

- Place your material securely on the worktable. Utilize the built-in grid and removable positioning bars for precise alignment.
- If using an optional rotary axis, ensure it is correctly installed and calibrated according to its specific instructions.

4.3 Focusing

Accurate focusing is critical for optimal engraving results.

- **Manual Focus:** Rotate the focus-height wheel on the laser head to adjust its vertical position. Use the scaleplate on the vertical supporting tower to measure and set the correct focal height for your material.
- **Red Dot Guidance:** Activate the external red dot locator. The two red dots should converge into a single point on the surface of your material when the laser is perfectly in focus.

High Frequency, Low Power Consumption

Wavelength up to 1064nm



Red light preview



Air cooling



The minimum accuracy is 0.01mm



High conversion rate



Small volume



Image: The laser engraver demonstrating the red light preview feature for focusing and positioning.

4.4 Software Usage and Engraving Process

- Open your preferred software (LightBurn or EZCAD2) on your computer.
- Import or create your design.
- Adjust laser parameters (power, speed, frequency) according to your material and desired engraving effect. Refer to material testing guides for initial settings.
- Use the red dot pointer to preview the engraving path on your material to ensure correct placement.
- Initiate the engraving process from the software. Monitor the machine closely during operation.

Wide Application

Professional fiber marking machines for metal
Aluminum,Stainless Steel, Brass,etc



KEYBOARDS



METAL



ELECTRONIC EQUIPMENT



CIRCUITRY



JEWELRY

Image: Various applications of the fiber laser engraver, including marking on keyboards, metal, electronic equipment, circuitry, and jewelry.

5. MAINTENANCE

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

- Lens Cleaning:** Periodically inspect and clean the field lens using specialized lens cleaning solutions and wipes to prevent dust and debris from affecting laser performance.
- Work Area Cleaning:** Keep the worktable and surrounding area clean from debris and residue.
- Cable Inspection:** Regularly check all power and data cables for wear, damage, or loose connections.
- Cooling System:** Ensure the cooling fans are free from obstructions and functioning correctly to maintain proper heat dissipation.
- Software Updates:** Keep your engraving software and drivers updated to the latest versions for compatibility and performance improvements.

6. TROUBLESHOOTING

This section addresses common issues you might encounter during operation.

| Issue | Possible Cause | Solution |
|---|---|--|
| Laser not firing | Power not connected, emergency stop engaged, software error, laser source issue. | Check power connections, ensure emergency stop is disengaged, restart software, contact support if laser source is suspected. |
| Poor engraving quality | Incorrect focus, wrong laser parameters (power/speed), dirty lens, material issues. | Verify focus using the red dot pointer, adjust power/speed settings, clean the field lens, ensure material is suitable. |
| Red dot pointer not visible or misaligned | Red dot laser off, misalignment. | Ensure red dot laser is activated. If misaligned, refer to the calibration section in the full user manual or contact support for guidance on recalibration. |
| Software not connecting to machine | USB cable issue, driver not installed, incorrect software version. | Check USB cable and port, reinstall drivers, ensure LightBurn version supports BSL lasers. |

7. SPECIFICATIONS

Detailed technical specifications for the Monport 50W Fiber Laser Engraver YXF50.

| Specification | Detail |
|--------------------------|---|
| Model Number | YXF50 |
| Laser Power Output | 50W (50000mW) |
| Laser Source Type | Raycus Fiber Laser |
| Laser Class | Class 4 |
| Estimated Laser Lifetime | Up to 100,000 hours |
| Work Area | 7.9" x 7.9" (200mm x 200mm) |
| Compatible Materials | Metal, Brass, Stainless Steel, Gold, Silver, etc. |
| Software Compatibility | LightBurn, EZCAD2 |
| Item Weight | 45 pounds (approx. 20.4 kg) |
| Package Dimensions | 25 x 16 x 15 inches (approx. 63.5 x 40.6 x 38.1 cm) |
| Manufacturer | Monport |
| Color | Blue |

Product Parameter

Laser Frequency: 30-60kHz

Machine Weight: 33.5KG



Image: The Monport 50W Fiber Laser Engraver with its physical dimensions indicated.

8. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact Monport Direct, the manufacturer and seller of this product.

- Refer to your purchase documentation for specific warranty terms and conditions.
- Contact information for Monport Direct can typically be found on their official website or through your purchase platform.
- When contacting support, please have your model number (YXF50) and purchase date available.

Related Documents - YXF50

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|  Quick start For GM Pro For helpful tips and machine advice, visit our Help Center or join our official Facebook group. If you encounter any other issue, please feel free to contact us. Our support team will respond ASAP to resolve your concern. Official Website: monportlaser.com Technical Support: support@monportlaser.com Support Tel: +1(312) 264-8209 (Mon-Fri: 09:00-18:00 EST) (+1) 617 470 8900 (Mon-Fri: 08:00-18:00 EST) Read Carefully Before Use Keep for Future Reference | <h3>Monport GM Pro Laser Engraver Quick Start Guide</h3> <p>A concise guide to setting up and connecting your Monport GM Pro Fiber Laser Engraver with LightBurn software, covering unpacking, installation, and initial parameter configuration.</p> |
|  <p>30W Fiber Laser Machine User Manual</p> | <h3>Monport 30W Fiber Laser Machine User Manual</h3> <p>Comprehensive user manual for the Monport 30W Fiber Laser Machine, covering installation, operation, safety, and maintenance.</p> |
|  <p>20W Fiber Laser Machine User Manual</p> | <h3>Monport 20W Fiber Laser Machine User Manual</h3> <p>User manual for the Monport 20W Fiber Laser Marking Machine, covering installation, safety, operation, and maintenance.</p> |
|  <p>laser rotary attachment User Manual</p> | <h3>Monport Laser Rotary Attachment User Manual</h3> <p>Comprehensive user manual for the Monport laser rotary attachment, detailing installation, software configuration, operation, fine-tuning, and maintenance for cylindrical object engraving with laser cutters.</p> |
|  <p>Fiber Laser Marking Machine User Manual</p> | <h3>Monport Fiber Laser Marking Machine User Manual</h3> <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> |
|  <p>Fiber Laser Marking Machine User Manual</p> | <h3>Monport Fiber Laser Marking Machine User Manual</h3> <p>This user manual provides comprehensive guidance on the installation, operation, safety, maintenance, and troubleshooting of Monport Fiber Laser Marking Machines, including the GQ and Gpro series. It details software setup for BslAppSimple and LightBurn, material handling, and technical specifications.</p> |