Ovsuqu JPT MOPA 60W E2

Ovsuqu JPT MOPA 60W E2 Fiber Laser Engraver Instruction Manual
Model: JPT MOPA 60W E2

1. INTRODUCTION

This manual provides essential information for the safe and effective operation, setup, and maintenance of your Ovsuqu JPT MOPA 60W E2 Fiber Laser Engraver. Please read this manual thoroughly before operating the machine to ensure proper usage and to prevent damage or injury.

The Ovsuqu JPT MOPA 60W E2 is a versatile fiber laser marking machine designed for engraving various materials, including metals and certain non-metals. It supports software files such as CorelDRAW, AutoCAD, and Photoshop, and can directly use SHX and TTF fonts. Features include automatic encoding, serial number printing, batch number, date, barcode, QR code, and automatic jump numbering.

2. SAFETY INFORMATION

WARNING: Laser radiation can cause severe injury. Always follow safety precautions.

- This device is a Laser Class II product with 0.874mW output power.
- Always wear appropriate laser safety goggles when operating the machine.
- Ensure the work area is well-ventilated to dissipate any fumes produced during engraving.
- Never look directly into the laser beam or at reflections from shiny surfaces.
- Keep the work area clear of flammable materials.
- Do not operate the machine if any covers are removed or safety interlocks are bypassed.
- Disconnect power before performing any maintenance or adjustments.

3. PRODUCT OVERVIEW AND COMPONENTS

The Ovsuqu JPT MOPA 60W E2 Fiber Laser Engraver consists of several key components designed for precision marking. Understanding these components is crucial for operation.
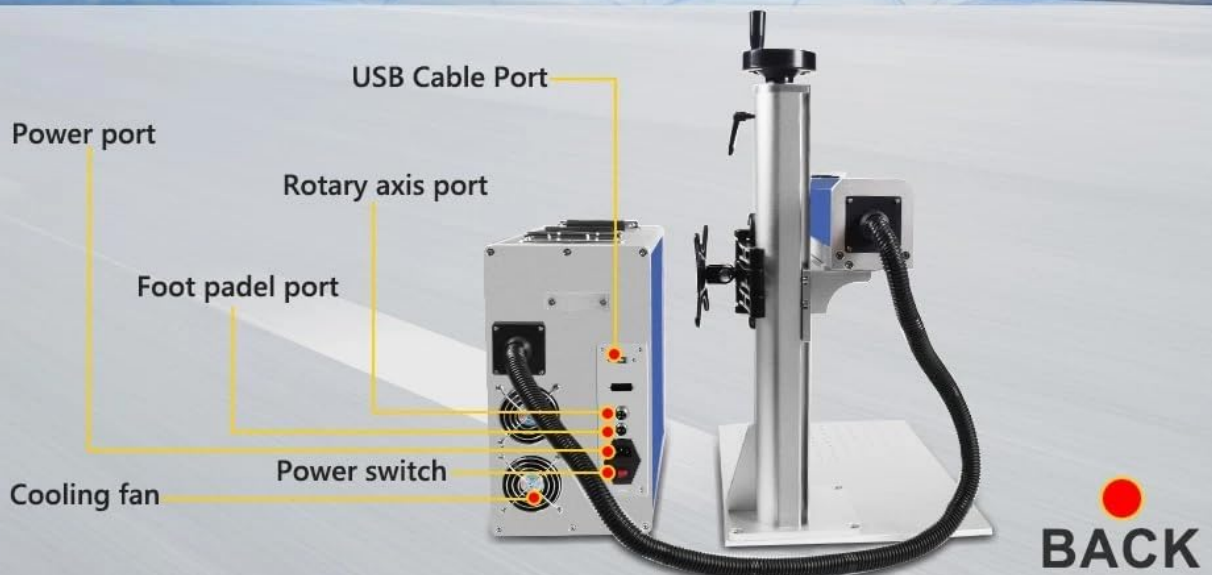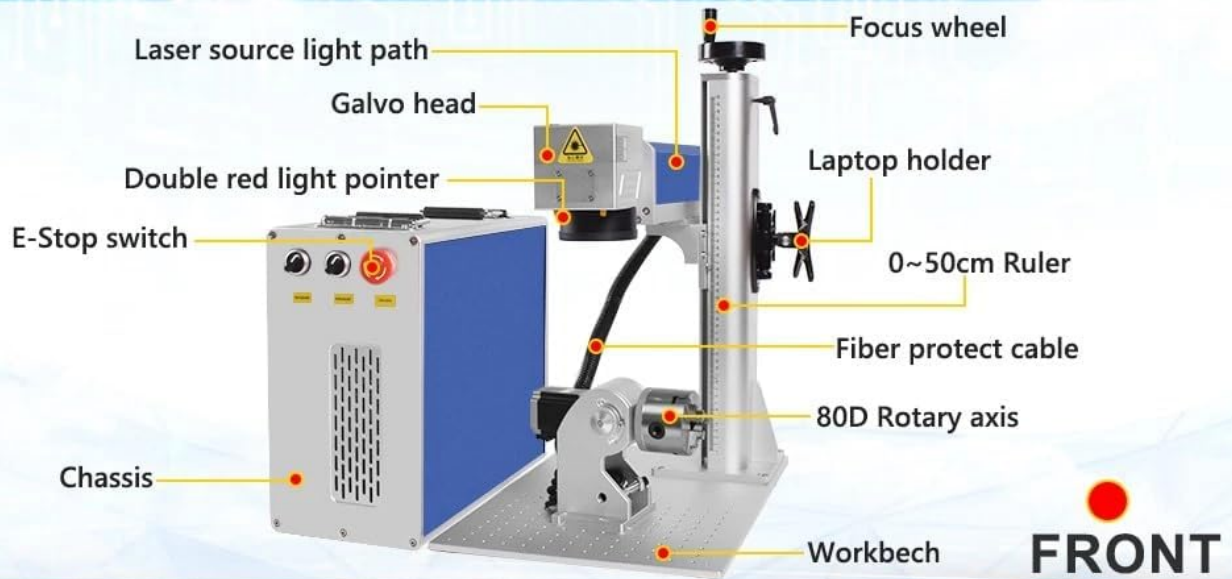
Product display

Figure 3.1: Front and Back View of the Engraver with Labeled Components. This image displays the main parts of the laser engraver, including the laser source light path, galvo head, double red light pointer, E-Stop switch, chassis, focus wheel, laptop holder, 0-50cm ruler, fiber protect cable, 80D Rotary axis, work bench, USB cable port, power port, rotary axis port, foot pedal port, power switch, and cooling fan.

3.1 Key Components

- **Laser Source:** JPT MOPA M7 60W (Model: YDFLP-E2-60-M7-M-R). This original JPT MOPA M7 Series laser source provides 60W MOPA M7 power, supporting color marking on stainless steel with high beam quality and superior reliability.

- **Main Board:** Original BJJCZ main board, compatible with Ezcad Lite software and various Windows operating systems (XP/Vista/7/8/10/11).

- **F-theta Scan Lens:** Mount M85, Wave Length 1064nm. Features high-quality optical design for good light transmittance and higher efficiency. Available scan fields include 70/110/175/200/300mm (optional).

- **Power Supply:** Mean Well (MW) Power Supply, offering high work efficiency, stability, good heat dissipation, and low working temperature. It is a single output switching power supply.

- **Rotary Axis:** 80mm Rotary Axis for engraving cylindrical objects.
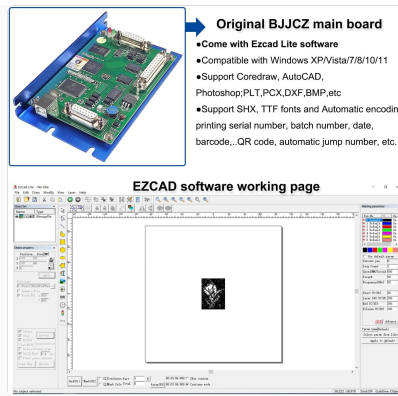
Figure 3.2: BJJCZ Main Board. This image shows the main control board of the engraver, highlighting its compatibility with Ezcad Lite software and various file formats.
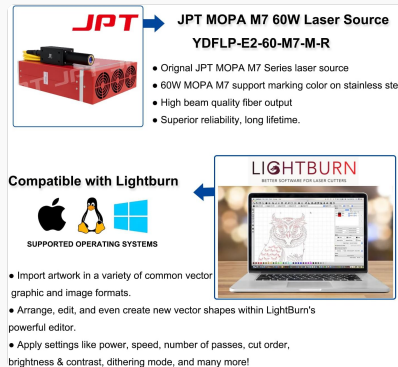

Figure 3.3: JPT MOPA M7 Laser Source. This image illustrates the JPT MOPA M7 60W laser source and its compatibility with Lightburn software, showing supported operating systems.

Figure 3.4: F-theta Scan Lens and Power Supply. This image displays the F-theta scan lens specifications and the Mean Well power supply unit.

4. SPECIFICATIONS

Feature	Specification
Model Number	FL-100W (JPT MOPA 60W E2 variant)
Laser Source	JPT MOPA M7 60W
Output Power	0.874mW (Laser Class II)
Product Dimensions	18.9 x 22.44 x 30.31 inches
Item Weight	138.6 pounds
Scan Field Options	70/110/175/200/300mm (optional)

Feature	Specification
Software Compatibility	Ezcad Lite, Lightburn, CorelDRAW, AutoCAD, Photoshop
Supported File Formats	PLT, PCX, DXF, BMP, SHX, TTF
Manufacturer	ChinaCNCzone

5. SETUP

Before operating the laser engraver, ensure proper setup:

1. **Unpacking:** Carefully unpack all components from the wooden crate. Verify all items listed in the packing list are present and undamaged.
2. **Placement:** Place the machine on a stable, level surface in a well-ventilated area. Ensure sufficient space around the machine for operation and maintenance.
3. **Assembly:** Assemble the rotary axis if included and required for your application. Refer to the specific rotary axis instructions for detailed assembly steps.
4. **Power Connection:** Connect the power cord to the machine and then to a grounded electrical outlet. Ensure the power switch is in the OFF position before connecting.
5. **USB Connection:** Connect the machine to your computer using the provided USB cable.
6. **Software Installation:** Install the Ezcad Lite software from the provided U disk. If using Lightburn, ensure it is installed and configured correctly for your machine.
7. **Safety Goggles:** Always put on your laser safety goggles before powering on the machine.

6. OPERATING INSTRUCTIONS

6.1 Software Operation

The machine is compatible with Ezcad Lite and Lightburn software. The U disk contains the machine manual and parameter files for initial setup.

- **Ezcad Lite:** The original BJJCZ main board comes with Ezcad Lite software. It supports various graphic and image formats (PLT, PCX, DXF, BMP) and allows direct use of SHX and TTF fonts.
- **Lightburn:** The machine is compatible with Lightburn, which allows importing artwork, arranging, editing, and creating vector shapes. You can apply settings like power, speed, number of passes, cut order, brightness, contrast, and dithering mode.

6.2 Material Compatibility

The Ovsuqu JPT MOPA 60W E2 is suitable for engraving a wide range of materials:

- **Metals:** Carbon Steel, Aluminum, Stainless Steel, Brass, Copper, Gold, Silver, Ferrous metals, and other metal hardware.
- **Non-metals:** Nylon, light button materials, ABS, PVC, PES, and similar non-metallic materials.
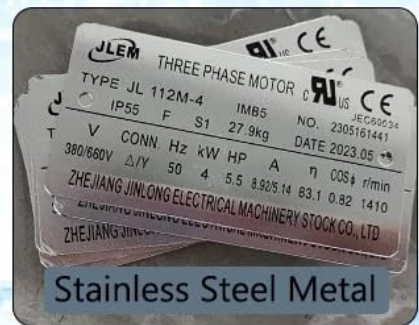
Figure 6.1: Wide Engraving Range. This image displays various metal and non-metal items successfully engraved by the fiber laser, including silver metal, metal hardware, stainless steel, aluminum, copper, and ferrous materials.

6.3 Lens Selection and Engraving Depth

The choice of lens affects the engraving area and depth:

- For the same lens, higher laser power results in deeper engraving.
- For the same laser power, a smaller lens allows for deeper engraving, but with a smaller engraving area.
- A larger lens provides a larger engraving area but may result in weaker light intensity and shallower engraving.

6.4 Stainless Steel Color Marking

The JPT MOPA 60W E2 laser source supports color marking on stainless steel. Different parameters (speed, power, frequency, pulse width) can produce various colors.
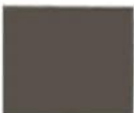
Figure 6.2: Stainless Steel Color Marking. This image shows a chart of various color outcomes on stainless steel with corresponding laser parameters (speed, power, frequency, pulse width) and examples of colored engravings on stainless steel items.

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your laser engraver:

- **Cleaning:** Regularly clean the F-theta scan lens and the work area to prevent dust and debris buildup, which can affect laser performance and accuracy. Use a soft, lint-free cloth and appropriate lens cleaning solution.
- **Ventilation:** Ensure the cooling fans and ventilation grilles are free from obstructions to maintain proper heat dissipation.
- **Cable Inspection:** Periodically inspect all cables for any signs of wear or damage. Replace damaged cables immediately.
- **Software Updates:** Keep your engraving software updated to the latest version for improved features and stability.

8. TROUBLESHOOTING

This section provides general troubleshooting tips for common issues. For complex problems, contact technical support.

- **No Laser Output:** Check power connections, emergency stop button status, and software settings (laser power, frequency). Ensure the laser source is properly connected and powered.
- **Poor Engraving Quality:** Verify focus settings, lens cleanliness, and material parameters (speed, power, frequency). Ensure the material is flat and properly secured.
- **Software Connection Issues:** Check USB cable connection, ensure drivers are installed correctly, and verify software settings for machine connection. Restart both the machine and computer if necessary.
- **Machine Not Responding:** Check the emergency stop button. Power cycle the machine (turn off, wait 30 seconds, turn on).

9. PACKING LIST

The following items are typically included with your Ovsuqu JPT MOPA 60W E2 Fiber Laser Engraver:

Figure 9.1: Included Components. This image displays the main components included in the product package: the marking machine, JPT MOPA M7 laser source, 80D rotary axis (optional), safety goggles, data cable + power cord, foot switch, U disk (with software), and wrench & position strip.

- Marking Machine (Main Unit)

- JPT MOPA M7 Laser Source

- 80D Rotary Axis (Optional)

- Safety Goggles

- Data Cable + Power Cord

- Foot Switch

- U Disk (containing software and manual)

- Wrench & Position Strip

10. WARRANTY AND SUPPORT

Ovsuqu provides professional after-sales support. If you encounter any issues or have questions regarding our products or service, you can contact us for consultation or exchange.
We offer comprehensive installation videos, detailed user manuals, accessory warranties, and lifetime remote assistance to support your machine's operation.

Related Documents - JPT MOPA 60W E2

	[Cloudray MP Series Laser Marking Machine Packing List and Contents](#) Detailed packing list for the Cloudray MP Series Laser Marking Machine, including all standard accessories, components, and their functions. Essential information for setup and operation.
	[Cloudray LiteMarker Pro MP Series User Guide: Comprehensive Instructions for Laser Marking](#) This user guide provides detailed instructions for the Cloudray LiteMarker Pro MP Series fiber laser marking machine, covering installation, safety, operation, technical specifications, maintenance, and troubleshooting.

	[ComMarker B6 Laser Marking Machine Manual](#) Comprehensive manual for the ComMarker B6 Laser Marking Machine, covering safety, assembly, specifications, operation, and software setup for precise laser engraving.
	[JPT YDFLP Fiber Laser Installation Guide and User Manual](#) Comprehensive guide for installing, operating, and maintaining the JPT YDFLP series pulsed fiber laser. Covers safety, technical specifications, control interfaces, and troubleshooting for industrial applications.
	[Cloudray EzCad2 Software Installation Guide](#) Step-by-step instructions for installing the Cloudray EzCad2 software and its necessary drivers on a PC, including system requirements and driver installation via Device Manager.
	[Cloudray EZCad Settings Guide: Adjusting Laser Marking Parameters](#) Comprehensive guide to configuring Cloudray laser marking and engraving machines using EZCad software. Learn how to adjust system parameters, focus, and distortion correction after F-theta lens replacement, covering models like QS-30 and Litemarker with JPT M7 MOPA Fiber Lasers.