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VEVOR JL3PRO

VEVOR Laser Engraver JL3PRO User Manual

BRAND: VEVOR**Model: JL3PRO**

1. INTRODUCTION

This manual provides essential information for the safe and effective operation of your VEVOR Laser Engraver JL3PRO. Please read all instructions carefully before use and retain this manual for future reference. The JL3PRO is a 20W laser engraving and cutting machine designed for precision work on various materials, featuring a Class 1 safety enclosure and broad software compatibility.

2. SAFETY INFORMATION

Your VEVOR Laser Engraver JL3PRO is a Class 1 laser product. Adherence to safety guidelines is paramount to prevent injury and damage. Always operate the device in a well-ventilated area.

- **Eye Protection:** The integrated protective enclosure filters laser light. Always wear the provided protective goggles when operating the machine, especially if the enclosure is open or compromised.
- **Enclosure:** The Class 1 enclosure is designed to filter laser light, block smoke, and reduce noise. Ensure the enclosure is properly closed during operation.
- **Emergency Stop:** Familiarize yourself with the location and function of the emergency stop button. Press it immediately in case of any malfunction or emergency.
- **Tilt Stop:** The machine features a tilt stop mechanism for added safety, automatically halting operation if tilted beyond a safe angle.
- **Limit Switches:** Integrated limit switches prevent the laser module from exceeding its operational boundaries.
- **Security Lock:** Utilize the security lock to prevent unauthorized access or operation.
- **Ventilation:** Ensure proper ventilation to exhaust smoke and fumes generated during engraving.
- **Material Safety:** Only engrave or cut materials specified as safe. Avoid highly reflective, transparent, or unknown materials without proper precautions. Never engrave PVC or materials that produce toxic fumes.

3. PACKAGE CONTENTS

Verify that all components are present and undamaged upon unpacking.

- VEVOR Laser Engraver JL3PRO Unit with Enclosure
- 20W Laser Module
- Power Adapter and Power Cords
- USB Cable
- Exhaust Hose and Adapter
- Protective Goggles
- Tool Kit (screwdrivers, wrenches, etc.)
- Sample Material Pack (wood, leather, acrylic, etc.)
- User Manual

4. SETUP INSTRUCTIONS

Follow these steps for initial assembly and setup of your laser engraver.

1. **Unpacking:** Carefully remove all components from the packaging. Place the main unit on a stable, level surface.
2. **Remove Shipping Protectors:** Locate and remove any shipping screws or protective foam securing the laser module's gantry. Refer to the included quick start guide for specific locations.
3. **Install Laser Module:** Mount the 20W laser module onto the gantry. Ensure it is securely fastened with the provided screws. Connect the necessary cables from the drag chain to the laser module.
4. **Connect Power:** Plug the power adapter into the unit and then into a suitable power outlet.
5. **Connect Exhaust System:** Attach the exhaust hose adapter to the designated port on the rear of the machine. Connect the exhaust hose to the adapter and direct it to a well-ventilated outdoor area or an appropriate air filtration system.
6. **Emergency Stop Button:** Ensure the emergency stop button is disengaged (pulled out) before powering on the machine.
7. **Software Installation:** Install the recommended software (LightBurn, LaserGRBL, or CutLabX) on your computer.
8. **Connect to Computer:** Connect the laser engraver to your computer using the provided USB cable.



Figure 1: VEVOR Laser Engraver JL3PRO with its protective enclosure.

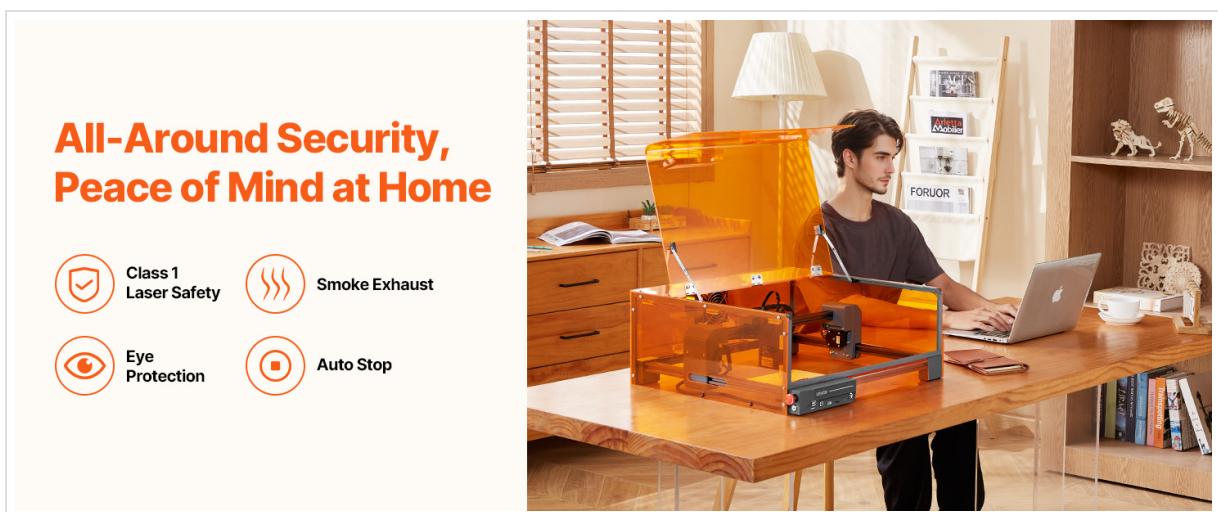


Figure 2: Components of the VEVOR Laser Engraver, including the laser module, control panel, and exhaust system.

5. OPERATING INSTRUCTIONS

This section outlines the basic steps for operating your VEVOR Laser Engraver.

- Power On:** Flip the power switch to turn on the machine. The indicator lights should illuminate.
- Software Connection:** Open your chosen laser software (LightBurn, LaserGRBL, or CutLabX) on your computer. Connect to the laser engraver via USB or Wi-Fi (CutLabX App only).
- Material Placement:** Place your material on the honeycomb workbench inside the enclosure. Ensure it is flat and secure.
- Focus Adjustment:** Use the focusing mechanism on the laser module to adjust the focal length according to your material's thickness.
- Design Import & Settings:** Import or create your design in the software. Adjust engraving/cutting parameters (power, speed, passes) based on your material and desired outcome.
- Framing:** Use the software's framing function to preview the engraving area on your material. Adjust the material position if necessary.
- Start Engraving/Cutting:** Close the protective enclosure. Initiate the engraving or cutting process from the software. Monitor the process closely.
- Offline Engraving:** For offline engraving, save your design to a TF card (if supported by your model) and insert it into the unit. Operate directly from the machine's controls.



Figure 3: Operating the laser engraver connected to a computer.

6. MATERIAL COMPATIBILITY

The VEVOR JL3PRO is compatible with a wide range of materials. However, certain materials are not suitable for engraving or cutting.

- Work Great On:** Wood, Leather, Paper, Acrylic, Glass.
- Not for Engraving:** Gold, Silver, Copper, Aluminum, Transparent & Reflective Materials (requires black coating for engraving).
- Not for Cutting:** Metals, Translucent/Transparent Acrylic, Transparent and Reflective Materials (requires black coating for cutting).

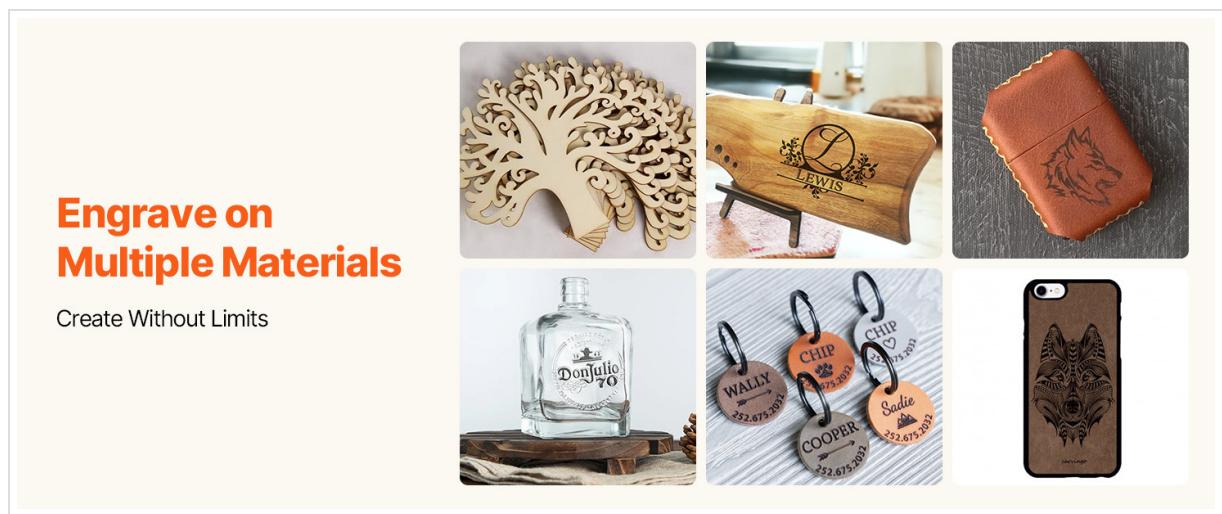


Figure 4: Various materials that can be processed by the VEVOR Laser Engraver.

7. MAINTENANCE

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

- **Cleaning the Lens:** Periodically clean the laser lens with a specialized lens cleaning solution and cloth to maintain laser beam quality.
- **Cleaning the Workbench:** Remove debris and residue from the honeycomb workbench after each use to prevent buildup and ensure proper material placement.
- **Lubrication:** Apply a small amount of lubricant to the guide rails and moving parts as recommended in the quick start guide to ensure smooth operation.
- **Exhaust System:** Regularly check and clean the exhaust hose and fan to ensure efficient smoke and fume removal.

8. TROUBLESHOOTING

This section addresses common issues you might encounter.

- **Laser Not Firing:** Check if the emergency stop button is disengaged. Ensure all cables are securely connected. Verify software connection and laser module installation.
- **Poor Engraving Quality:** Adjust focal length, laser power, and speed settings. Ensure the material is clean and flat. Clean the laser lens.
- **Machine Not Connecting:** Verify USB cable connection or Wi-Fi settings. Restart both the machine and the computer. Ensure software drivers are up to date.
- **Excessive Smoke/Fumes:** Check the exhaust hose for blockages or kinks. Ensure the exhaust fan is operating correctly. Verify proper ventilation.
- **Unusual Noises:** Inspect moving parts for obstructions or loose components. Lubricate guide rails if necessary.

9. SPECIFICATIONS

Item Model Number	JL3PRO
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Laser Type	Single Blue Light, Diode
Laser Output Power	20W
Laser Class	Class 1
Laser Wavelength	455 nm
Laser Spot Size	0.12 x 0.15 mm
Effective Working Area	11.8 x 11.8 in / 300 x 300 mm
Maximum Engraving Speed	7000 mm/min
Software Compatibility	LaserGRBL (Windows), LightBurn (Mac OS/Windows, Paid License Required), CutLabX (Mac OS/Windows/APP)
Net Weight	16 lbs / 7.3 kg
Product Dimensions	21.6 x 18.8 x 8.4 in / 548 x 477 x 214 mm

10. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the contact details provided in your product packaging or visit the official VEVOR website. Keep your purchase receipt as proof of purchase for warranty claims.