

## Woxcker JL7

# Woxcker JL7 10W Laser Engraver Instruction Manual

Model: JL7

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## 1. SAFETY INFORMATION

This product is a Class 1 laser device. Always prioritize safety when operating the machine. Failure to follow safety guidelines can result in serious injury or damage to property.

- **Eye Protection:** Always wear the provided protective glasses when the laser is active. The laser module protective cover helps reduce exposure but is not a substitute for proper eye protection.
- **Ventilation:** Operate the laser engraver in a well-ventilated area to prevent the accumulation of smoke and fumes, which can be harmful.
- **Fire Safety:** Keep a fire extinguisher nearby. Do not leave the machine unattended during operation, especially when cutting or engraving flammable materials.
- **Stable Surface:** Ensure the machine is placed on a stable, level, and fireproof surface.
- **Emergency Stop:** Familiarize yourself with the location of the ON/OFF button for immediate shutdown in case of an emergency.
- **Children and Pets:** Keep children and pets away from the operating area.
- **Material Compatibility:** Only engrave or cut materials suitable for laser processing. Avoid reflective, transparent, or unknown materials that may cause unexpected laser behavior.
- **Tilt Sensor:** The machine is equipped with a built-in gyroscope device that will stop operation if the inclination angle exceeds 15 degrees, enhancing safety.
- **Limit Switches:** Three-direction limit switches prevent the laser engraver from colliding with the edges of the frame, protecting the machine and preventing potential hazards.

## 2. PRODUCT OVERVIEW

The Woxcker JL7 is a versatile 10W laser engraving and cutting machine designed for high-accuracy and high-speed processing across a wide range of materials. It features a 0.01mm ultra-fine engraving accuracy and a 400x400mm working area, making it suitable for various DIY projects and professional applications.

### Key Features:

- **Powerful 10W Output Module:** Capable of cutting up to 20mm wood and 10mm black acrylic.
- **Ultra-fine Engraving Accuracy:** Achieves 0.01mm precision with a focused spot of 0.08\*0.08 mm.
- **High-Speed Operation:** Laser engraving speed up to 333 mm/s (20000 mm/min) for efficient project completion.
- **Enhanced Safety:** Features a module protective cover, protective glasses, built-in gyroscope, and three-direction limit switches.
- **Built-in Airflow Regulation:** Effectively reduces dust and promotes heat dissipation, extending laser life.
- **Easy Focusing Design:** Top metal knob and module focusing block allow for quick and precise focusing.
- **Offline Engraving Support:** Utilize a TF card for engraving without continuous computer connection.
- **Wide Compatibility:** Supports popular software like LaserGRBL, LightBurn (paid), and CutlabX. Connects via USB, TF card, or APP.
- **Durable Construction:** Sturdy all-metal design for stability and longevity.

### Supported Materials:

The JL7 can be used on a variety of materials including wood, dark acrylic, glass, stainless steel, ceramics, fabrics, stone, plastics, and leather.

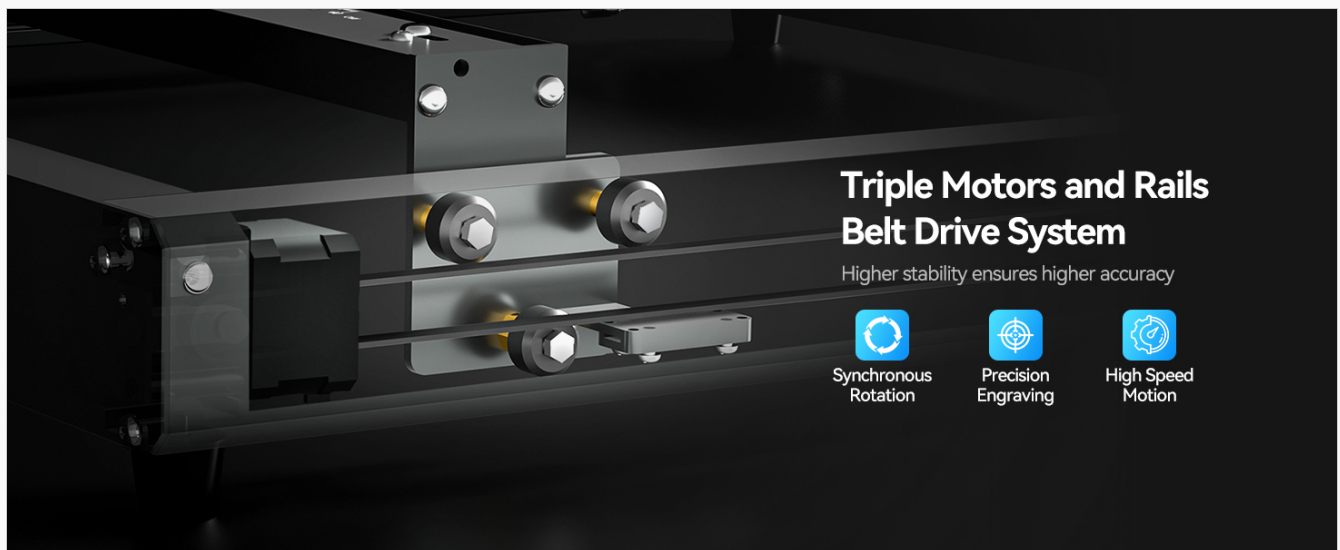


Figure 2.1: Examples of materials that can be engraved or cut by the JL7 laser engraver.

## 3. SETUP

The Woxcker JL7 laser engraver comes 80% pre-assembled for quick and easy setup. Follow these steps to get your machine ready for operation.

### 3.1 Initial Assembly

Complete the remaining assembly steps as per the included quick start guide. Ensure all components are securely fastened.

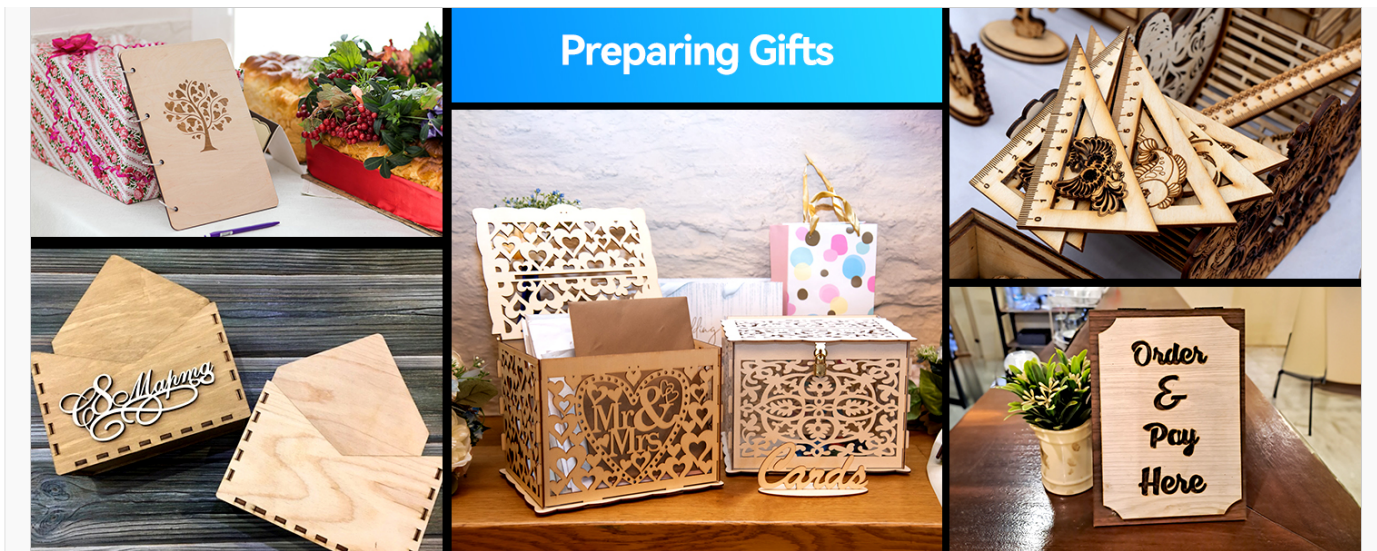


Figure 3.1: Overview of the quick setup process for the JL7.

### 3.2 Connecting Rotary Rollers (Optional)

If you are using a rotary roller accessory (e.g., AROT-8 or AROT-5) for engraving cylindrical objects, follow these connection instructions.

#### 3.2.1 AROT-8 Rotary Roller Connection

To connect the AROT-8 rotary roller, first assemble the AROT-8 with the object to be engraved. Then, take out the 6-pin adapter cable and connect it to the AROT-8. Locate the Y-axis connection wire at the bottom of the JL7 machine (highlighted in the video) and unplug it. Connect the rotary roller line to this port. Ensure all connections are secure.

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Video 3.1: Step-by-step guide on connecting the AROT-8 rotary roller to the JL7 laser engraver.

#### 3.2.2 AROT-5 Rotary Roller Connection

For the AROT-5 rotary roller, take out the 6-pin adapter cable and connect it to the AROT-5. Similar to the AROT-8, locate and unplug the Y-axis connection wire at the bottom of the JL7 machine. Connect the rotary roller line to this port. Place the cylindrical item to be engraved onto the AROT-5. Ensure all connections are firm.

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Video 3.2: Step-by-step guide on connecting the AROT-5 rotary roller to the JL7 laser engraver.

### 3.3 Power Connection

Connect the DC 24V power adapter to the power interface on the machine. Press the ON/OFF button to power on the device. The button will illuminate when powered on.

# The Fusion of Industry and Technology

Sturdy All-metal & Humanised design

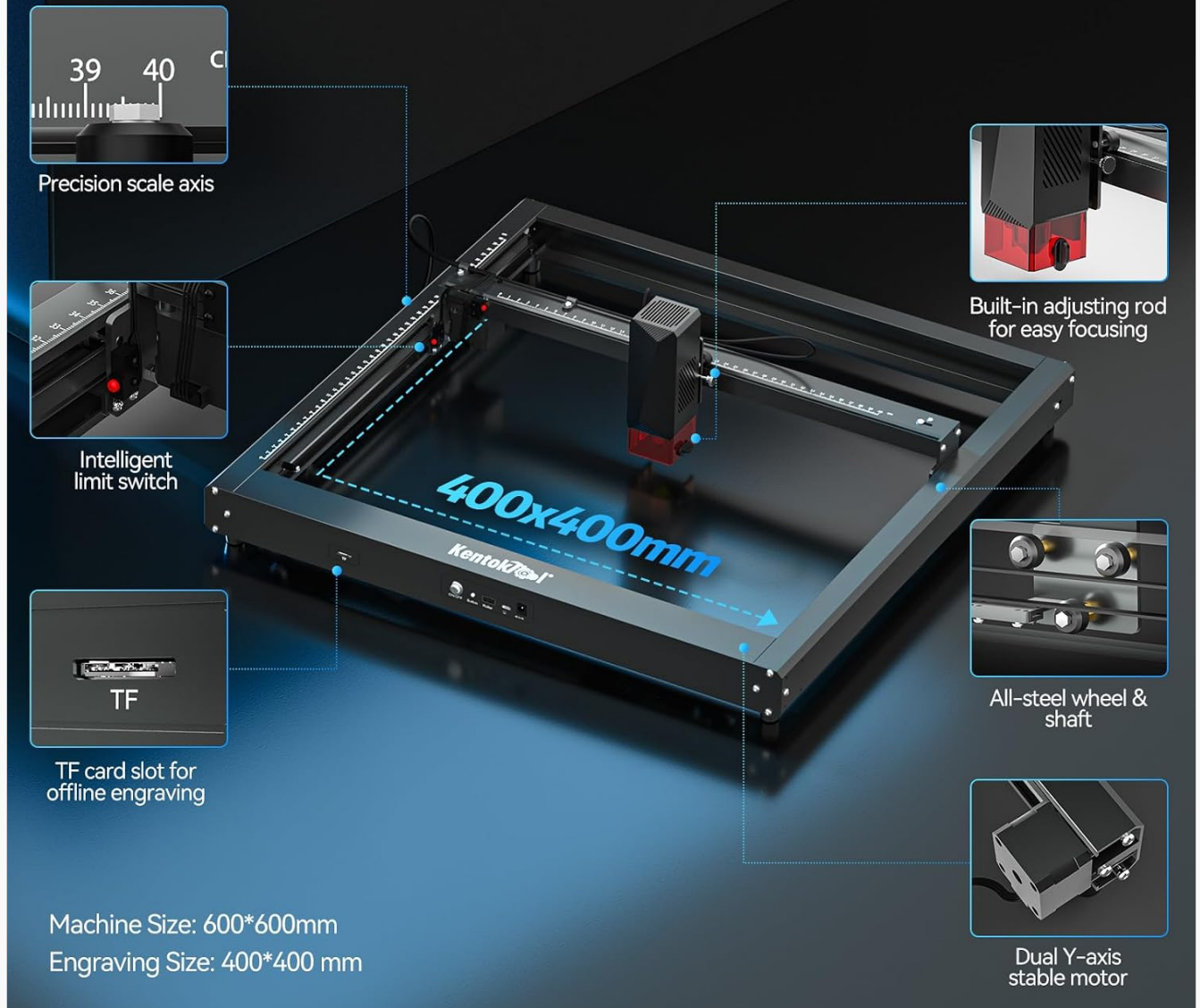


Figure 3.2: JL7 control panel with labeled ports.

## 3.4 Focusing the Laser

The JL7 features a unique easy focusing design. Use the top metal knob and the module focusing block to quickly adjust the laser height and precisely focus the laser onto your material.

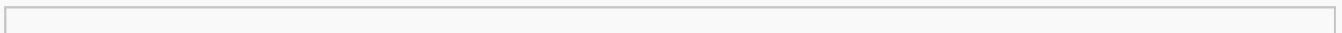


Figure 3.3: Easy focusing mechanism of the JL7 laser module.

## 4. OPERATION

The Woxcker JL7 offers multiple operation modes for flexibility and convenience.

### 4.1 Software and Connectivity

The JL7 is compatible with various operating systems (Windows, Mac OS, Linux, iOS, Android) and software (LaserGRBL, LightBurn, CutlabX, MKS Laser). You can connect the machine via USB, TF card, or Wi-Fi for app control.

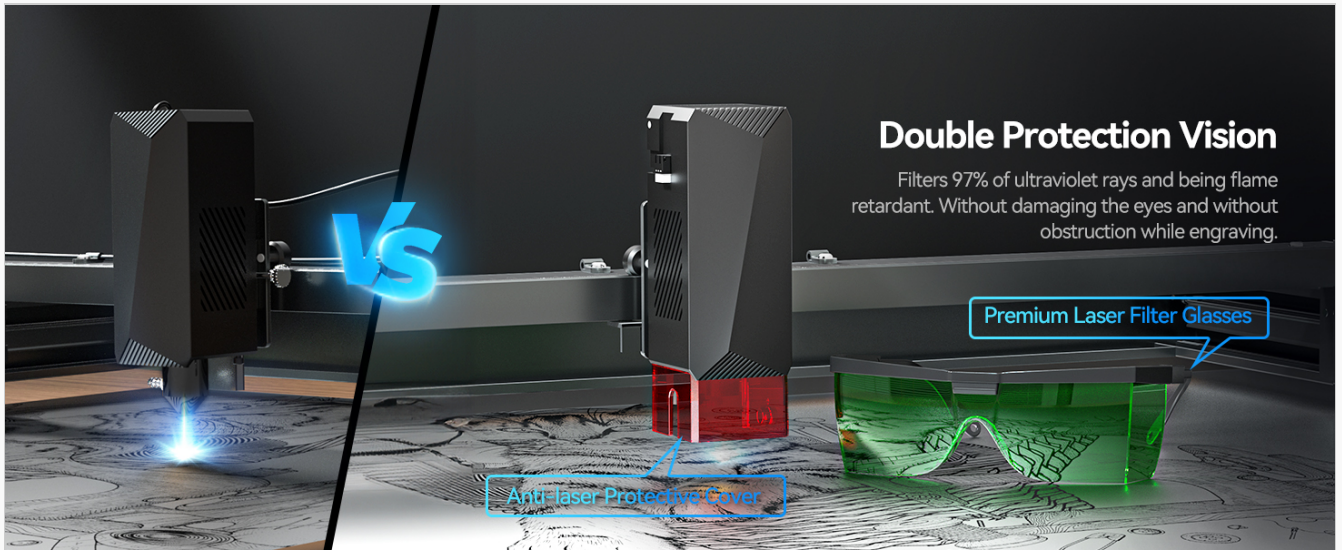


Figure 4.1: JL7 connectivity options and software compatibility.

## 4.2 App Control

Use the MKS Laser APP for smart and simple operation. Connect your smartphone to the JL7 via Wi-Fi, select your design, adjust parameters, and start engraving directly from the app.



Figure 4.2: App control interface for the JL7 laser engraver.

### 4.3 Offline Engraving (TF Card)

For offline engraving, copy your desired design files to the included TF card. Insert the TF card into the machine's card slot. You can then initiate engraving directly from the machine without needing a continuous computer connection.

*Note: If you cannot find the TF card in the packaging, it may already be inserted into the card slot of the machine.*

### 4.4 Rotary Setup in LightBurn (for AROT-5/AROT-8)

After connecting the JL7 to your computer and the rotary roller, open the LightBurn software. Navigate to "Laser Tools" > "Rotary Setup". Select the appropriate rotary roller type (Chuck or Roller) and click "Enable Rotary". Then, click on the Y-axis, set the relevant values for your object's diameter and circumference, and click OK to complete the setup. Test the rotary roller by clicking "Home" to reset the engraving head position, then "Frame" to preview the engraving area. The rotary roller should rotate, indicating successful activation.

### 4.5 General Operation Overview

This video provides a general overview of the JL7 laser engraver in operation, showcasing its assembly, app control, and various engraving and cutting capabilities on different materials.

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## 5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Woxcker JL7 laser engraver.

- **Cleaning the Laser Lens:** Periodically inspect and clean the laser lens using a soft, lint-free cloth and lens cleaning solution. A dirty lens can reduce laser power and engraving quality.
- **Cleaning the Machine Body:** Wipe down the machine frame and rails with a soft, dry cloth to remove dust and debris.
- **Lubrication:** Occasionally apply a small amount of lubricant to the moving parts (rails, belts) to ensure smooth operation. Refer to the detailed product manual for specific lubrication points.
- **Airflow System:** The built-in airflow regulation system helps reduce dust. Ensure the air vents on the laser module are not obstructed to maintain efficient cooling.
- **Firmware Updates:** Check the manufacturer's website periodically for any available firmware updates to improve performance and add new features.
- **Replaceable Lens:** The JL7 features a replaceable lens. If you notice a significant drop in performance or damage to the lens, it can be replaced.



Figure 5.1: Internal view of the JL7 laser module with air assist.

## 6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your Woxcker JL7 laser engraver.

- **Machine Not Powering On:**
  - Ensure the power adapter is securely connected to both the machine and a working power outlet.
  - Check if the ON/OFF button is pressed and illuminated.
  - Verify the power outlet is functional.
- **Laser Not Firing or Weak Output:**

- Check the laser focus. An improperly focused laser will have weak output.
- Ensure the laser lens is clean and free of debris.
- Verify that the laser power settings in your software are correctly configured for the material.
- Confirm the material is compatible with the laser.

- **Engraving/Cutting Inaccurate or Skipping:**

- Check all belt tensions. Belts should be taut but not overly tight.
- Ensure the machine is on a stable surface and not vibrating during operation.
- Verify that the material is securely placed and not moving.
- Check for any obstructions on the rails that might impede smooth movement.
- If using a rotary roller, ensure it is correctly set up in the software and the object is stable.

- **Software Connectivity Issues:**

- For USB connection, ensure the correct drivers are installed and the USB cable is securely connected.
- For Wi-Fi/App connection, ensure the machine and your device are on the same network and the app is updated.
- Restart both the machine and your computer/device.

- **Machine Stops Unexpectedly:**

- The built-in gyroscope will stop the machine if tilted more than 15 degrees. Ensure the machine is on a level surface.
- Check for any error messages in the software console.
- Ensure the power supply is stable and not experiencing interruptions.

If you encounter issues not covered here, please refer to the full product manual or contact Woxcker customer support for assistance.

## 7. SPECIFICATIONS

Feature	Detail
Product Model Number	JL7
Brand	Woxcker
Laser Output Wattage	10W (10000mW)
Engraving Accuracy	0.01mm
Focused Spot Size	0.08*0.08 mm
Engraving Speed	Up to 333 mm/s (20000 mm/min)
Working Area	400 x 400 mm
Cutting Capacity (Wood)	Up to 20mm
Cutting Capacity (Black Acrylic)	Up to 10mm

Feature	Detail
Connectivity	USB, TF Card, Wi-Fi (App Control)
Software Compatibility	LaserGRBL, LightBurn (paid), CutlabX, MKS Laser
Operating Systems	Windows, Mac OS, Linux, iOS, Android
Product Dimensions	23.62 x 23.62 x 7.87 inches
Item Weight	11 pounds
Safety Features	Module protective cover, protective glasses, built-in gyroscope (tilt sensor >15°), three-direction limit switches

## 8. WARRANTY & SUPPORT

Specific warranty details for the Woxcker JL7 laser engraver are not provided in this document. Please refer to the warranty card included with your product or visit the official Woxcker website for the most up-to-date warranty information.

For technical support, troubleshooting assistance, or any questions regarding your JL7 machine, please contact Woxcker customer service. Contact information can typically be found in the product packaging, on the official Woxcker website, or through your point of purchase.

**Manufacturer:** Woxcker

