

Genmitsu L8

Genmitsu L8 Laser Engraver and Cutter with MD13 Smoke Purifier Instruction Manual

Brand: Genmitsu | Model: L8

1. INTRODUCTION

The Genmitsu L8 is a high-performance laser engraving and cutting solution designed for home and professional use. It features a powerful 20W optical output laser, capable of engraving and cutting various materials at speeds up to 40000mm/min. This manual provides essential information for the safe and efficient operation of your L8 machine, along with the integrated Genmitsu MD13 Smoke Purifier, ensuring a cleaner and safer working environment.

Key Features:

- **Maximum 40000mm/min Engraving Speed:** Achieves remarkable speed, outperforming many desktop diode laser engraved machines.
- **More than 20W (20000mW) Optical Power Output:** Capable of cutting materials like 12mm Pinewood, 8mm black acrylic, and 0.05mm stainless steel in one pass.
- **Laser Safety Class 1 Certified:** Incorporates multiple safety features including a door sensor, tilted automatic stop, active flame monitor buzzer, limit switches, emergency stop, and child safety lock.
- **Integrated MD13 Smoke Purifier:** Designed to complement the L8, ensuring a cleaner and safer working environment by tackling engraving fumes.
- **Advanced 4-Layer Filtration System:** Features a pre-filter, coarse filter cartridges, extended HEPA filter, and premium activated carbon for 99.97% smoke removal.

2. SAFETY INFORMATION

Your safety is our top priority. The Genmitsu L8 and MD13 Smoke Purifier are designed with multiple safety features. Always adhere to the following guidelines:

- Ensure the machine halts operation when the cover is open and resumes once closed, thanks to the integrated door sensor.
- Utilize the tilted automatic stop feature to prevent unintended operation.
- Pay attention to the active flame monitor buzzer, which alerts you to potential fire hazards.

- Verify that all position protection limit switches are functioning correctly.
- Familiarize yourself with the emergency stop button and its location.
- Engage the child safety lock when the machine is not in use to prevent unauthorized access.
- Always operate the machine in a well-ventilated area, even with the smoke purifier, to ensure optimal air quality.
- Wear appropriate personal protective equipment (PPE), including laser safety glasses, during operation.

3. SETUP

3.1 Unboxing and Placement

Carefully unbox your Genmitsu L8 and MD13 Smoke Purifier. Place both units on a stable, level surface in a well-ventilated area. Ensure there is enough space around the machines for proper air circulation and access.

3.2 Connecting the MD13 Smoke Purifier

Connect the MD13 Smoke Purifier to the Genmitsu L8 using the provided hose. Ensure a secure connection to effectively capture fumes. The MD13 is designed to seamlessly integrate with the L8 for optimal performance.



Figure 3.2.1: Genmitsu L8 Laser Engraver connected to the MD13 Smoke Purifier.

3.3 Power Connection

Connect both the Genmitsu L8 and the MD13 Smoke Purifier to appropriate power outlets. Ensure all cables are securely connected and not obstructing any moving parts.

4. OPERATING INSTRUCTIONS

4.1 Material Preparation

Place your material (e.g., 12mm Pinewood, 8mm black acrylic, 0.05mm stainless steel) onto the built-in honeycomb table. The L8 includes a 30L/min smart air assist pump for efficient and clean cuts.



Figure 4.1.1: Genmitsu L8 Laser Engraver with Smart Air Assist and Honeycomb Table.

4.2 Focusing the Laser

The L8 features three preset focal lengths for effortless focusing. Select the appropriate focal length based on your material thickness and whether you intend to engrave or cut. This ensures precise and high-quality results.

4.3 Software Operation

The Genmitsu L8 is compatible with LightBurn software. Use the software to design your projects, set engraving/cutting parameters, and initiate the process. The built-in camera allows for real-time preview and easy project location.

4.4 MD13 Smoke Purifier Operation

Turn on the MD13 Smoke Purifier before starting any laser operation. Adjust the fan speed using the knob on the control panel to match the intensity of the fumes. The LED screen provides easy monitoring of filter status and air quality. The MD13 ensures a cleaner and safer working environment by filtering out smoke and particulates.



Figure 4.4.1: MD13 Smoke Purifier control panel with LED screen, UV function, and cartridge usage indicator.

4.5 Adjusting Z-axis

The L8 features a built-in height-adjustable Z-axis, allowing you to effortlessly gain more vertical space (up to 80mm) for diverse material needs and to accommodate rotary rollers for cylindrical objects.

5. MAINTENANCE

5.1 Filter Replacement (MD13 Smoke Purifier)

The MD13 Smoke Purifier utilizes a 4-layer filtration system. Regularly check the filter indicator light on the control panel. When the indicator suggests replacement, follow these steps:

1. Turn off and unplug the MD13 unit.
2. Open the filter compartment.
3. Remove the used pre-filter, coarse filter cartridges, HEPA filter, and activated carbon filter.
4. Dispose of used filters responsibly.
5. Install new filters in the correct order.
6. Close the filter compartment securely.
7. Press the 'RESET' button on the control panel to reset the filter usage indicator.

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Video 5.1.1: This video demonstrates the features and assembly of the FumeClear FC2002 fume extractor, which shares similar filter replacement principles with the MD13. It highlights the 3-layer tower structure filtration system, including the main carbon filter, medium HEPA filter, and pre-filter, designed for 99.97% filtration efficiency. The video also shows the bamboo tube and hood assembly, power connection, and control panel with five-speed gears and remote control support. It illustrates the effectiveness of the fume extractor in soldering and laser engraving applications by showing air quality improvements before and after use.

5.2 Cleaning the Laser Lens

Regularly inspect and clean the laser lens to maintain optimal engraving and cutting performance. Refer to the detailed cleaning instructions in the full user manual for specific steps and recommended cleaning solutions.

6. TROUBLESHOOTING

6.1 Common Issues

- **Machine not starting:** Check power connections, ensure the emergency stop button is disengaged, and verify the child safety lock is off.
- **Poor engraving/cutting quality:** Re-check laser focus, material settings in the software, and ensure the laser lens is clean.
- **Excessive smoke/odor:** Verify the MD13 Smoke Purifier is properly connected and turned on. Check the filter indicator and replace filters if necessary. Ensure the fan speed is adequate for the task.
- **MD13 Anti-Blocking Alarm:** If the anti-blocking alarm activates, it indicates a blockage or severely clogged filters. Turn off the unit, inspect the hoses for obstructions, and check/replace filters.

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Video 6.1.1: This video demonstrates the KQZ fume extractor, highlighting its features and operation. It shows the unboxing process, filter installation, and the flexible bamboo tubes. The video also illustrates the digital display with adjustable fan speeds (up to 5800 RPM) and a timer function. It demonstrates the fume extractor's effectiveness during soldering, showing how it captures smoke from various distances. The remote control functionality is also showcased, allowing for convenient speed adjustments and panel locking.

7. SPECIFICATIONS

Feature	Specification
Brand	Genmitsu
Model Number	L8

Optical Power Output	>20W (20000mW)
Engraving Speed	Max 40000mm/min
Laser Safety Class	Class 1 Certified
Smoke Purifier Model	MD13
MD13 Filtration System	4-layer (Pre-filter, Coarse, HEPA, Activated Carbon)
MD13 Smoke Removal Rate	99.97%
Power Source	Solar Powered (L8)
Wattage	20 watts (L8)

8. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the official Genmitsu website or contact their customer service department. Keep your purchase receipt for warranty claims.