

Gluwphy GM1

Gluwphy 5W Enclosed Diode Laser Engraver and Cutter Instruction Manual

Model: GM1

Brand: Gluwphy

IMPORTANT SAFETY INFORMATION

The Gluwphy 5W Enclosed Diode Laser Engraver and Cutter is a Class 1 laser device. Adherence to safety guidelines is crucial for preventing injury and ensuring safe operation.

- **Class 1 Laser Safety:** This enclosed laser engraver meets Class 1 laser device safety requirements, meaning the laser radiation is contained within the enclosure during normal operation.
- **Enclosed Design:** Always operate the machine with the lid closed to ensure laser containment. Never attempt to bypass safety interlocks.
- **Ventilation and Filtration:** The integrated 5000 RPM turbo fan and HEPA filter system are designed to remove dust and debris. Ensure the exhaust system is properly connected and maintained to prevent inhalation of fumes.
- **Eye Protection:** Although a Class 1 device, never look directly into the laser beam or at reflections. Always wear appropriate laser safety glasses if the enclosure is opened for maintenance or troubleshooting.
- **Fire Prevention:** Laser engraving and cutting can generate heat and sparks. Always supervise the machine during operation. Keep a fire extinguisher nearby. Do not engrave or cut highly flammable materials without proper precautions.
- **Material Safety:** Be aware of the materials you are processing. Some materials can produce toxic fumes when laser-processed. Ensure adequate ventilation.
- **Children and Pets:** Keep children and pets away from the operating machine.

PRODUCT OVERVIEW

The Gluephy 5W Enclosed Diode Laser Engraver and Cutter is a versatile tool designed for precision engraving and cutting on various materials. It features a 5000 mW (5W) diode laser, automatic focus, and an intelligent air assist system, making it suitable for both beginners and experienced users.

Key Features:

- **Efficient Diode Laser:** Combines engraving and cutting capabilities. Capable of cutting wood and acrylic up to 8mm thick. Features a precise spot size of 0.06 x 0.04 mm with a movement precision of 0.01 mm and speeds up to 400 mm/second, enabling fine detail work and single-pass engraving.
- **Precise Automatic Focus:** Equipped with an automatic focus feature that eliminates the need for manual focusing. This is particularly beneficial for small items like rings and jewelry, significantly reducing setup time.
- **Intelligent Air Assist System:** Provides up to 30 liters/minute of airflow during operation to prevent charring and yellowing of the material surface, ensuring cleaner and higher-quality results.
- **Class 1 Laser Safety:** The enclosed design ensures the device meets Class 1 laser safety standards. It includes a powerful 5000 RPM turbo fan and a HEPA filter for effective dust and debris removal, protecting user health.
- **Patented Side Light Output Technology:** This innovative technology allows for engraving on cylindrical objects without requiring an additional, expensive rotary base. It enables auto-rotation of the lens unit, saving accessory space and installation time, and reducing the risk of damage from frequent manual adjustments.
- **Versatile Material Compatibility:** Suitable for a wide range of materials including wood, acrylic, cookies, jewelry, metal business cards, and more. It is compatible with the industry-standard "LightBurn" software.



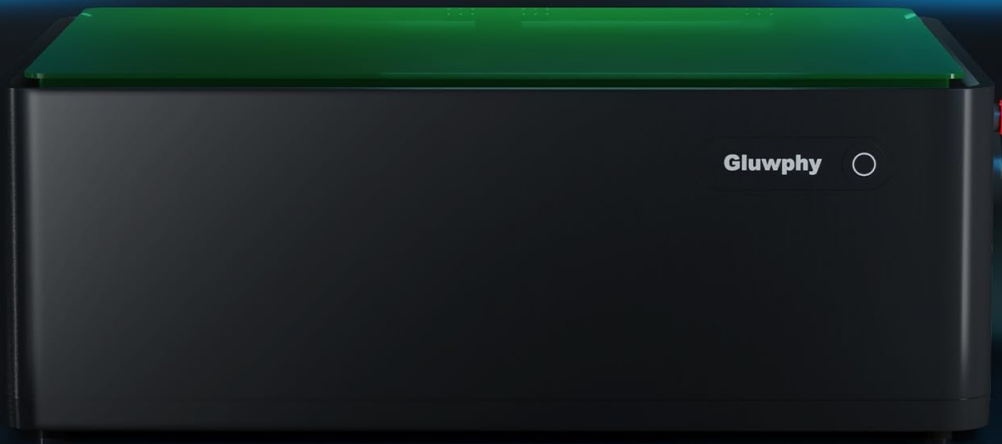
An overview of the Gluwphy 5W laser engraver, showcasing its compact enclosed design and examples of materials it can engrave, such as wood, tumblers, and decorative items.

PACKAGE CONTENTS

The standard package for the Gluwphy 5W Laser Engraver includes the following components:

- Gluwphy 5W Laser Engraver Unit
- Air Filter
- Smoke Exhaust Pipe Pack
- Power Adapter
- USB Cable

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Package Includes



Air Filter



Smoke exhaust pipe pack

This image displays the Gluwphy laser engraver unit along with its essential accessories: an air filter for purification and a smoke exhaust pipe kit for ventilation.

SETUP INSTRUCTIONS

Follow these steps to set up your Gluwphy laser engraver:

- Unpacking:** Carefully remove all components from the packaging. Inspect for any damage during transit.
- Placement:** Place the engraver on a stable, level, and heat-resistant surface. Ensure the area is well-ventilated and free from flammable materials.
- Power Connection:** Connect the power adapter to the engraver's power input port, then plug the adapter into a suitable electrical outlet.
- Exhaust System:** Attach the smoke exhaust pipe to the designated exhaust port on the engraver. Direct the other end of the pipe to an outdoor vent or a dedicated air filtration system to ensure proper removal of fumes and smoke. Ensure all connections are secure.
- Air Filter Installation:** Install the HEPA air filter into its designated slot within the machine, following the specific instructions provided with the filter. This filter is crucial for internal air purification.

6. **Software Installation:** Install the "LightBurn" software on your computer. Refer to the official LightBurn documentation or Gluwphy support resources for detailed installation and initial setup instructions.
7. **USB Connection:** Connect the engraver to your computer using the provided USB cable.

OPERATING INSTRUCTIONS

This section outlines the general steps for operating your Gluwphy laser engraver.

1. Material Preparation

Ensure your chosen material is clean, flat, and properly secured within the engraving area. Avoid placing materials that are highly reflective or contain PVC.

2. Software Configuration (LightBurn)

- Launch the LightBurn software on your computer.
- Connect the software to your Gluwphy engraver.
- Import or create your desired design within LightBurn.
- Adjust the engraving or cutting parameters (laser power, speed, number of passes) according to the specific material type and desired outcome. Refer to material settings guides for recommendations.

3. Automatic Focus

The Gluwphy engraver features an automatic focus function. Simply place your material on the engraving bed, and the machine will automatically adjust the laser focus for optimal results. This is particularly useful for small or irregularly shaped objects, ensuring precise detail without manual intervention.



Smaller Pin Spot, no distortion or blurring when engraving small objects



Prints with more realistic shading and higher definition detail, **0.06 x 0.04 mm**

This image illustrates the automatic focus capability of the Gluwphy laser engraver, showing the laser head adjusting to the material surface. It highlights the precision for small details and the benefit of a smaller pin spot for high-definition engraving.

4. Air Assist System

The intelligent air assist system automatically activates during operation, providing up to 30 liters/minute of airflow. This helps to clear smoke and debris from the laser's path, preventing charring, discoloration, and ensuring cleaner cuts and engravings.

5. Starting the Engraving/Cutting Process

- Ensure the engraver lid is securely closed before starting any operation.
- Initiate the job from the LightBurn software.
- Monitor the process through the transparent lid. Never leave the machine unattended during operation.



Engraving in **1** pass,
0 Waste **More Efficient** ,
Less Hassle



Wood



Leather



Fabric



Plastic



Glass



Ceramics



Acrylic



Fruit



Food



Anode oxide
aluminum tablets

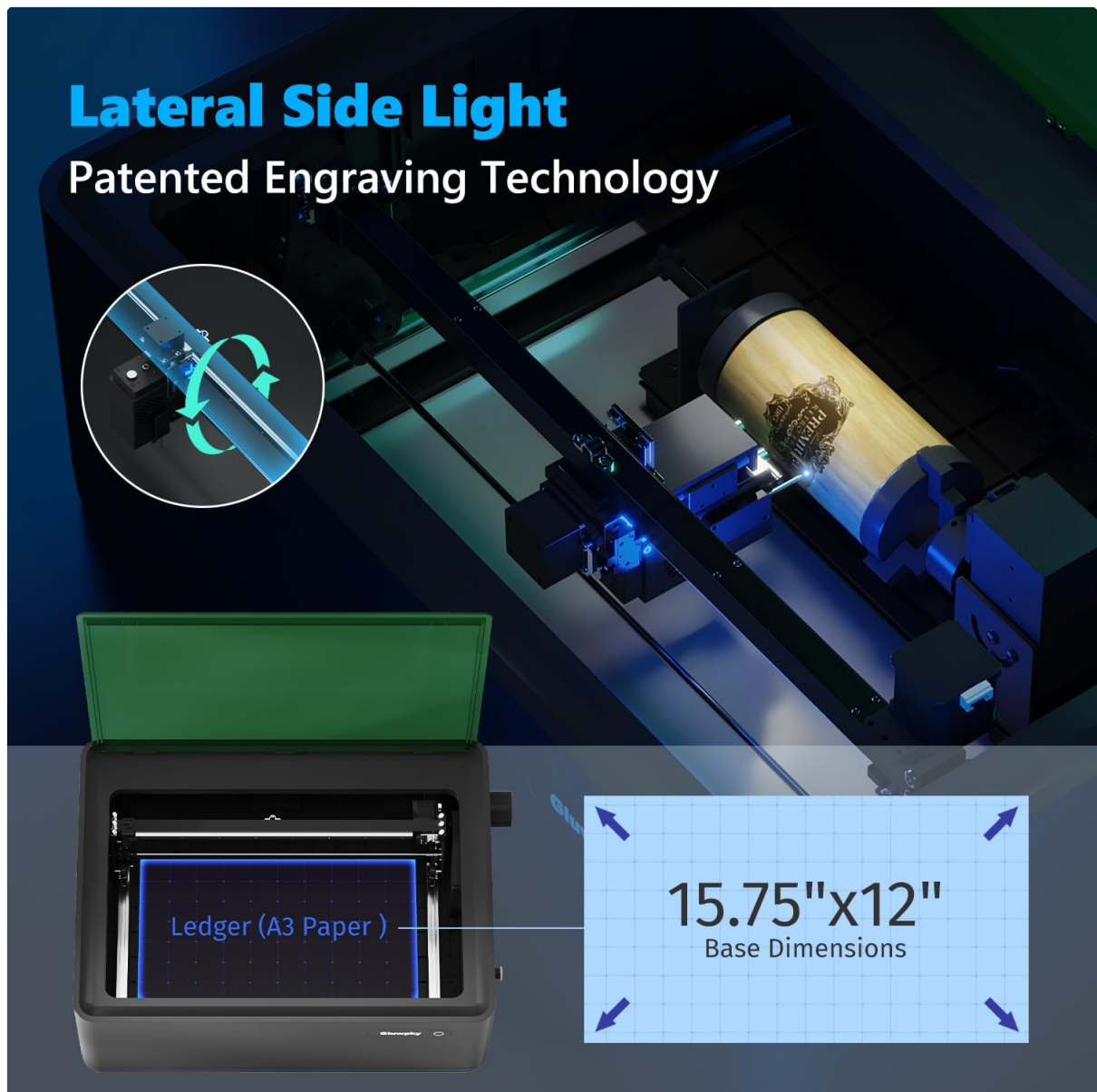
This image shows the laser head in action, demonstrating the efficiency of single-pass engraving, which minimizes waste and improves workflow.

6. Material Compatibility Examples

The Gluwphy engraver supports a wide range of materials for engraving and cutting, including but not limited to:

- Wood
- Acrylic (up to 8mm cutting thickness)
- Leather
- Fabric
- Plastic
- Glass
- Ceramics
- Fruit and Food items
- Anodized Aluminum
- Cookies
- Jewelry

- Metal Business Cards

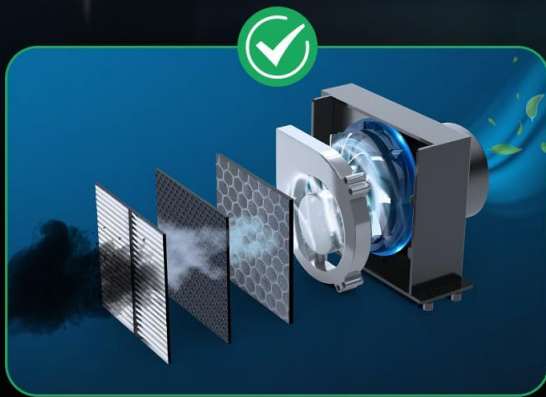
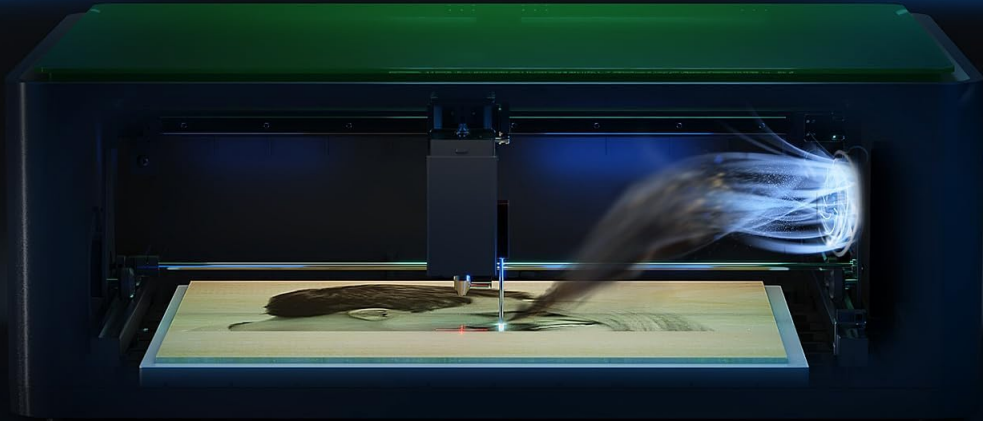


A collage of various materials successfully engraved or cut by the Gluwpay laser, such as wood, leather, fabric, plastic, glass, ceramics, acrylic, fruit, food, and anodized aluminum, demonstrating its versatility.

7. Side Light Output Technology

The patented side light output technology allows for engraving on cylindrical objects without the need for an external, expensive rotary attachment. This feature enables the auto-rotation of the lens unit, significantly saving accessory space and setup time, and reducing the risk of damage often associated with frequent manual intervention.

5000RPM Turbo Fan, HEPA High Efficiency Filtration 3-Stage Filtration Turbo Purification



Enclosure Exhaust & Filtration



Open Work Environment

This image highlights the innovative lateral side light technology, showing how the laser can engrave on curved surfaces like a wooden cylinder, indicating the auto-rotation capability of the lens unit.

MAINTENANCE

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

1. Cleaning the Engraver

- **Engraving Bed:** Regularly clean the engraving bed to remove debris and residue. Use a soft brush or vacuum cleaner.
- **Laser Lens:** Carefully clean the laser lens with a specialized lens cleaning solution and a lint-free cloth. A clean lens is critical for precise engraving.
- **Interior:** Wipe down the interior surfaces of the enclosure with a damp cloth to remove dust and particles.

2. Air Filter Replacement

The HEPA filter is essential for air purification. Check the filter periodically (e.g., every 50-100 hours of operation, depending on usage) and replace it when it appears clogged or dirty to maintain effective filtration.

3. Exhaust System Check

Ensure the exhaust pipe is free of kinks, blockages, and properly connected to maintain efficient smoke and debris removal. Clean the exhaust fan if necessary.



This image illustrates the advanced 3-stage filtration system of the Gluophy engraver, featuring a 5000 RPM turbo fan and HEPA filter, designed to capture smoke and debris, ensuring a clean and safe working environment compared to an open system.

TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

- **Laser Not Firing:**
 - Check if the power cable is securely connected and the machine is powered on.

- Ensure the USB connection to your computer is stable.
- Verify that the engraver lid is fully closed, as safety interlocks prevent operation when open.
- Check software connection status in LightBurn.
- **Poor Engraving/Cutting Quality:**
 - Verify that the material settings (power, speed, passes) in LightBurn are appropriate for your material.
 - Ensure the laser lens is clean and free from dust or residue.
 - Confirm that the autofocus function has correctly set the focal distance.
 - Check if the material is flat and securely placed on the engraving bed.
- **Excessive Smoke or Odor:**
 - Ensure the exhaust system is properly connected and venting outdoors or to an effective filtration system.
 - Check if the HEPA filter is clogged and needs replacement.
 - Reduce laser power or increase speed if the material is burning excessively.
- **Machine Not Responding:**
 - Restart the Gluwphy engraver.
 - Close and reopen the LightBurn software.
 - Try connecting the USB cable to a different port on your computer.

SPECIFICATIONS

- **Model Number:** GM1
- **Laser Power:** 5000 mW (5W) Diode Laser
- **Laser Spot Size:** 0.06 x 0.04 mm
- **Movement Precision:** 0.01 mm
- **Engraving Speed:** Up to 400 mm/second
- **Cutting Thickness (Wood/Acrylic):** Up to 8 mm
- **Product Dimensions:** 75.77 x 58.93 x 33.68 cm (29.83 x 23.20 x 13.26 inches)
- **Product Weight:** 16.56 kg (36.51 lbs)
- **Color:** Black
- **Power Source:** AC Powered (not battery operated)
- **Software Compatibility:** LightBurn
- **Laser Safety Class:** Class 1 Laser Device
- **Air Filtration:** Integrated 5000 RPM Turbo Fan, HEPA High Efficiency 3-Stage Filtration
- **Engraving Area (Base Dimensions):** Approximately 15.75" x 12" (400mm x 305mm)

WARRANTY AND SUPPORT

For detailed warranty information, technical support, and customer service, please refer to the official Gluwphy website or contact their support team directly. Specific warranty terms and conditions may vary by region and purchase date.

Official Website: www.gluwphy.com *(Note: This is a placeholder URL. Please refer to your product documentation for the correct website.)*

Customer Support: Please check the Gluwphy website for contact methods such as email, phone, or live chat.