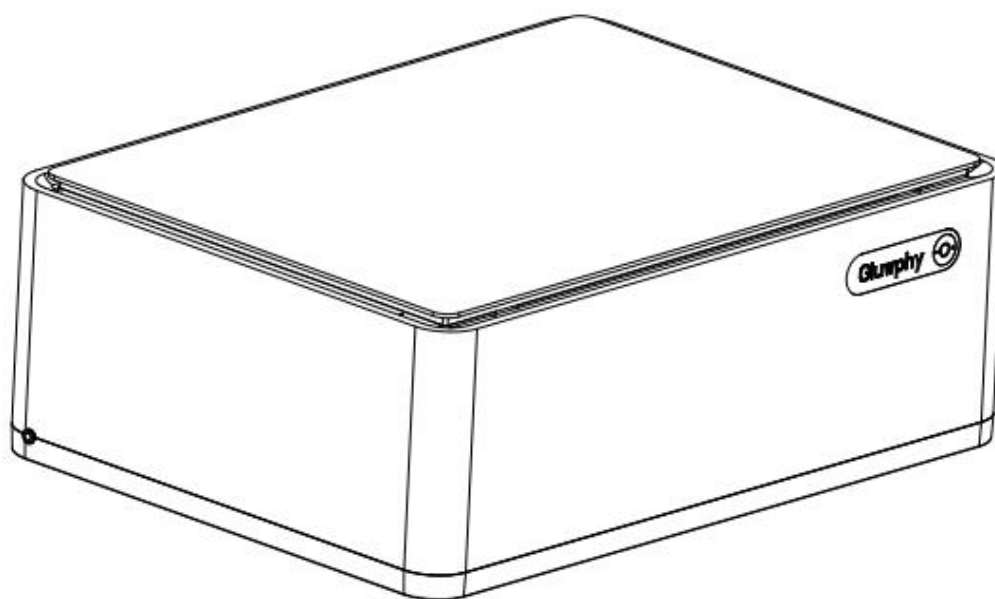


# GM1 Instruction Manual

Instruction Manual for Gluphy Laser Engraving Machine

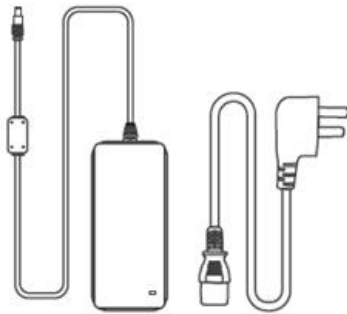
GM105B/GM110BFQ/GM120BFQ



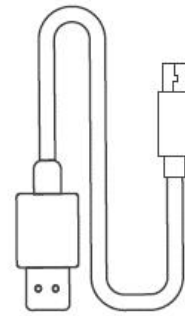
## Part1 Unbox and check



Gluuphy GM1 × 1



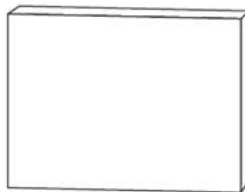
Power adapter & cable × 1



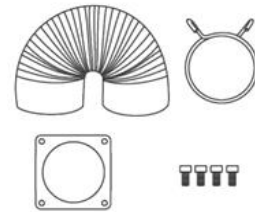
USB cable × 1



User Manual × 1



Material Pack × 1



Smoke exhaust pipe pack × 1

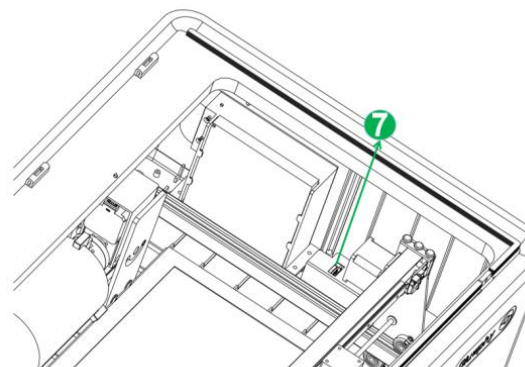
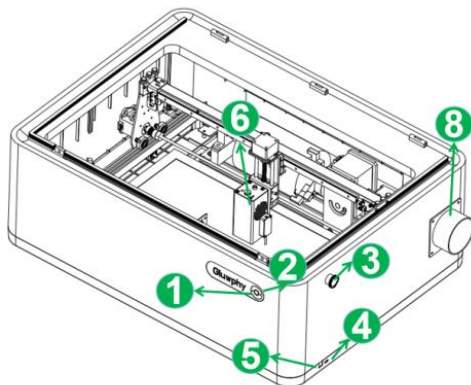


Hex key × 5



Screwdriver × 1

## Part 2, Familiar with GM1

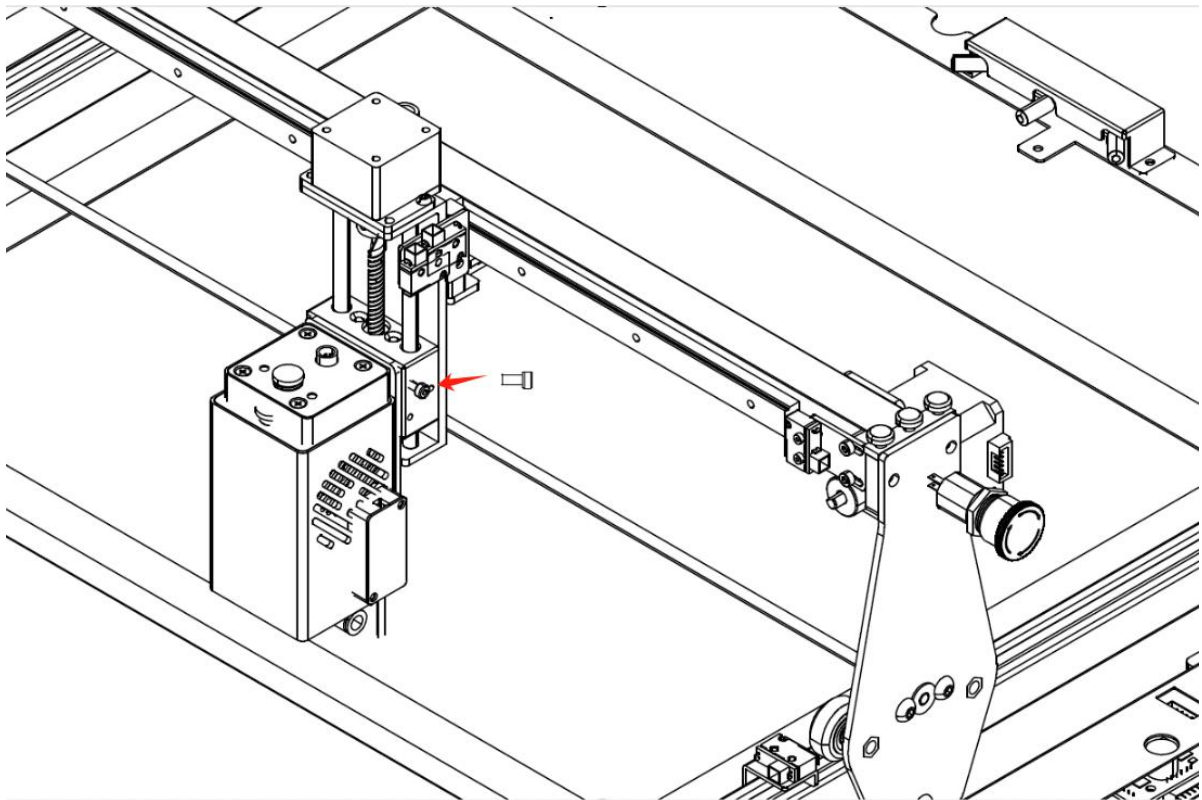


- 1, Button
- 2, Ring indicator light
- 3, Emergency Stop Switch
- 4, USB port
- 5, Power interface
- 6, Laser modules
- 7, Rotating claw plate interface
- 8, Smoke exhaust vent

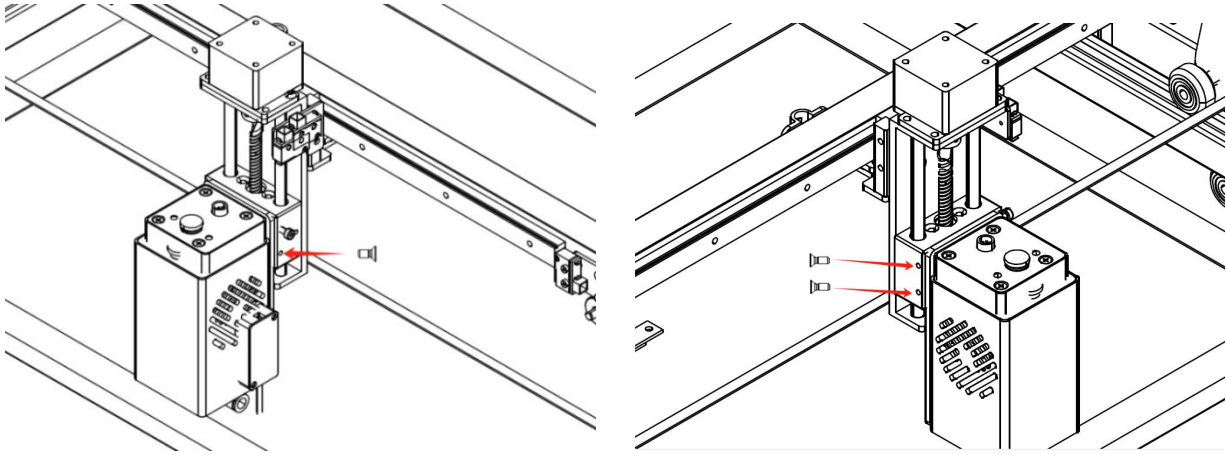
Attention: You can visit the link: <http://support.gluwphy.com> for watching video course.

## Part 3: GM1 settings:

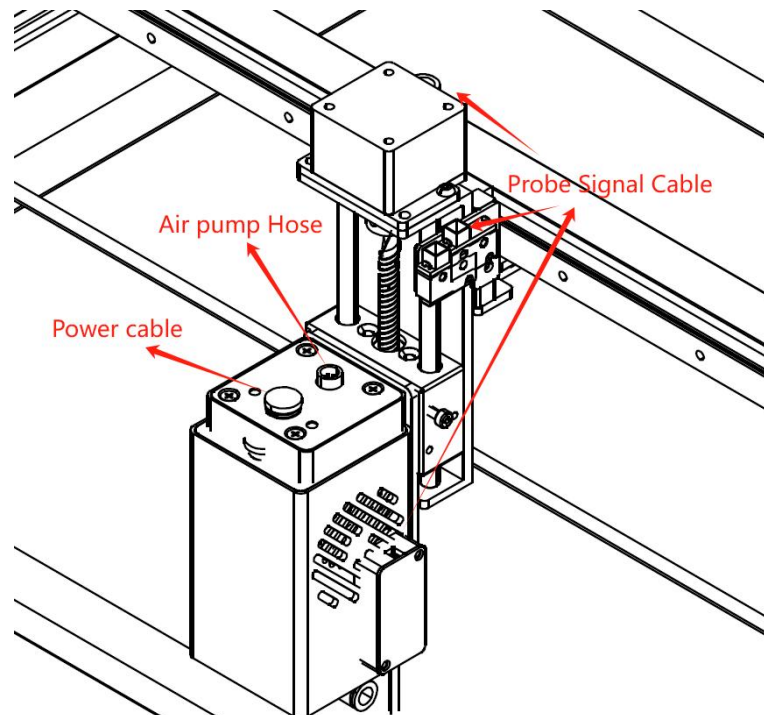
- 1, Open the package and take out GM1 and other components.
- 2, Place the laser module on the lift table and tighten the hand screws to the position shown below.



- 3, Use a screwdriver to secure each of the remaining three screws to the positions shown below.

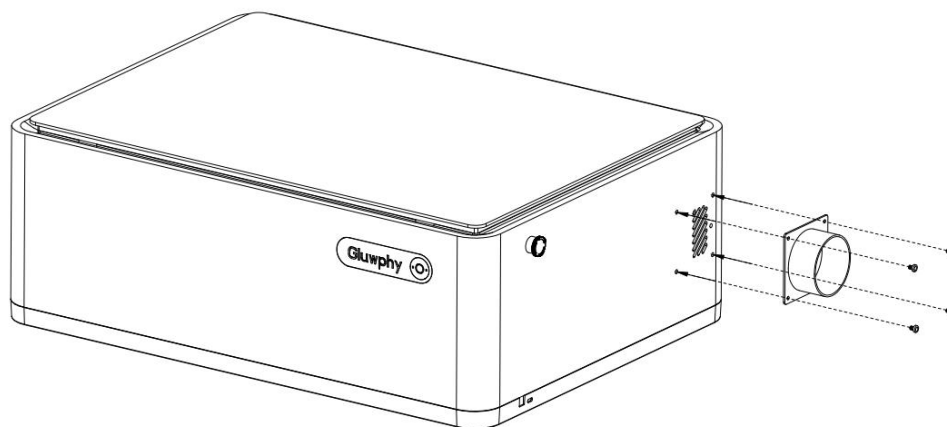


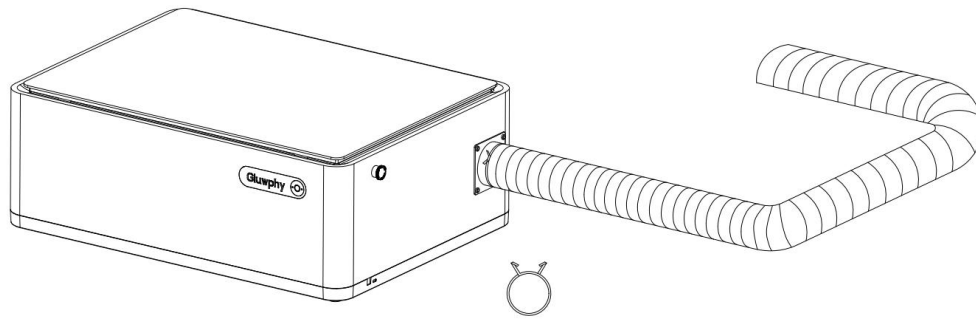
4, Connect the module power cable, the air pump tube and the two probe signal cables according to the diagram below.



5, Installation flange

6, Use the pipe clamp to hold the exhaust pipe





7, Connect the device to a power supply with the power adapter.

8, Connect device to your computer with the USB cable.

9, The button functions as following

Operation:	Description
Single click	Power on, the laser will reset to the origin point (the origin point is in the lower left corner), and the LED light will light up
Single click in power-on state	Cancel the buzzer prompt
Double click	Reset, double click at any time, the laser will reset to the origin point (the origin point is in the lower left corner)
Press and hold for 3 seconds	Turn off the device. The device will enter the shutdown state and the LED light will turn off.

10, The LED indicators are as follows

Power on: LED light is always on;

Power off: LED light is off.

Not connected with computer: LED blinking.

11, The buzzer is as follows

Status	Prompt	Operation
When the limit switch is touched,	The buzzer will beep continuously	The user can stop the beep by clicking the power button.
The laser status is abnormal	The buzzer will beep continuously	The user can stop the beep by clicking the power button.
Detection of fire occurrence	The buzzer will beep continuously	The user can stop the beep by clicking the power button.

12, “Auto focus” , “Z-axis reset” and “Z Down 2mm”

GM1 has autofocus function, Z-axis reset and Z Down 2mm(When cutting thick boards, laser's

light waist can't be satisfied, which will lead to poor cutting results, at this time, sinking the laser, which helps to improve the cutting effect)Users only need to add buttons in the corresponding engraving software, The setting method is as described in part 4.

Users can also log in to: <https://support.gluwphy.com> to view course.

### 13, Red cross

GM1 has the function of red cross, and **the red cross has an offset from the centre of the laser of (-12mm on X-axis and -10.6mm on Y-axis)**

\*Note1: Due to the difference in the positions of the red cross and the laser, The border frame movement of red cross will produce a certain deviation, Cannot be used as an absolute border frame position.

\*Note2:How to set the Laser Offset in Lightburn

- 1, Connect to the device and launch Lightburn.
- 2, Go to Device Settings -> Laser Offset -> Enable Pointer Offset.
- 3, Fill in -12mm at X and -10.6mm at Y.

\*Note3:How to set the Laser Offset in LaserGRBL

- 1, Connect to the device and launch LaserGRBL.
- 2, Import the image to be processed, and the Target image dialogue box appears.
- 3, Find Offset, fill in -12mm at X and -10.6mm at Y.

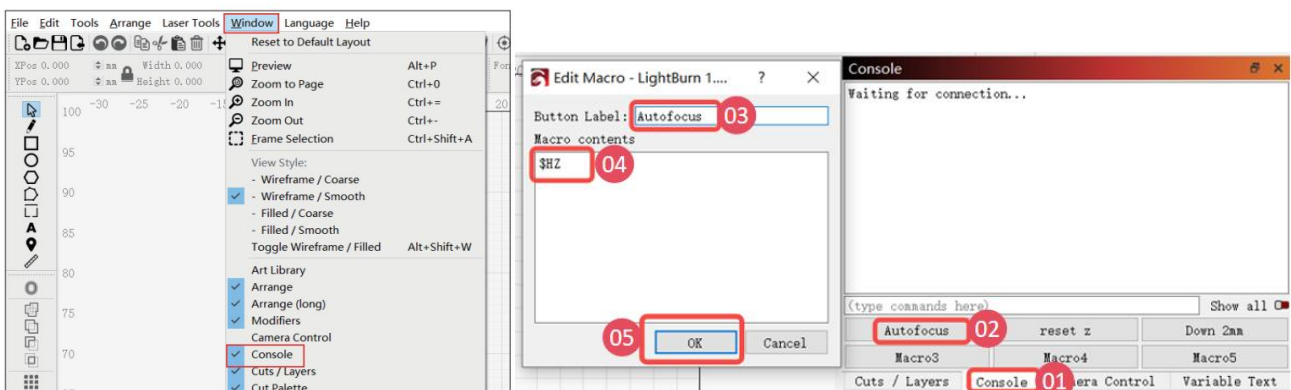
## Part4 How to Set "Autofocus", "Z-axis reset" , "Z Down 2mm"

GM1 support LaserGRBL and Lightburn.

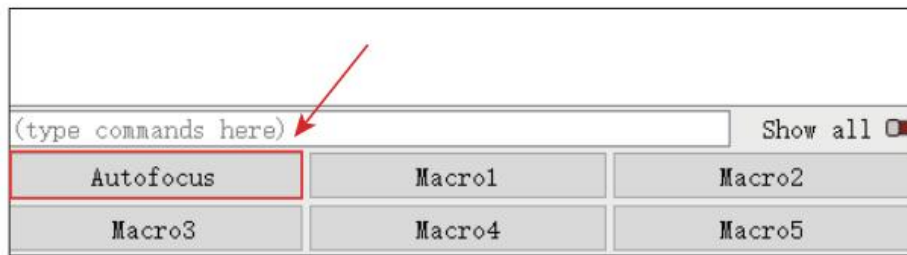
### For Lightburn:

#### 1, How to use "Autofocus" function :

01. Turn on the "Autofocus" function.
02. Select the engraving file, the machine will automatically start focusing after clicking Start, and start engraving after the focus is completed.
03. Find "Window" in the top navigation bar, and enable "Console" function in the drop-down menu.

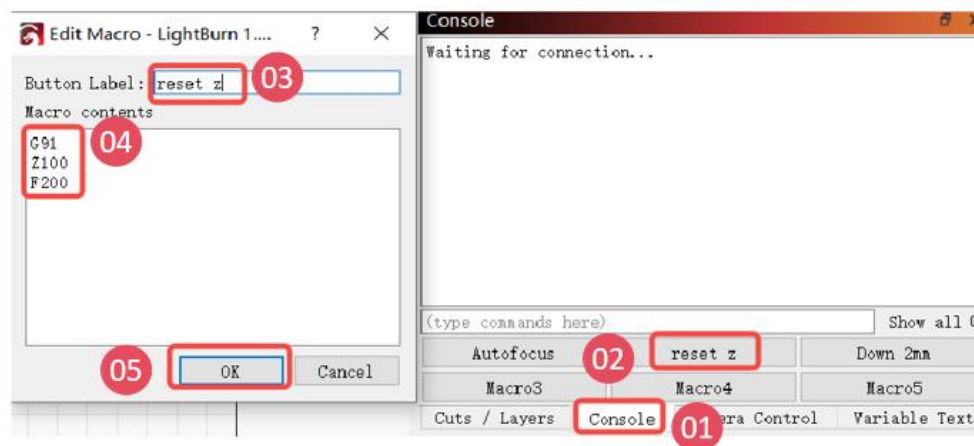


04. Select any custom button, right click mouse to pop up the button setting page, enter the name of the button in "Button Label", enter [\$HZ] under "Macro contents"
05. After clicking OK, a button with the corresponding function will be generated



## 2, How to raise the Z-axis to the highest - Z-axis reset

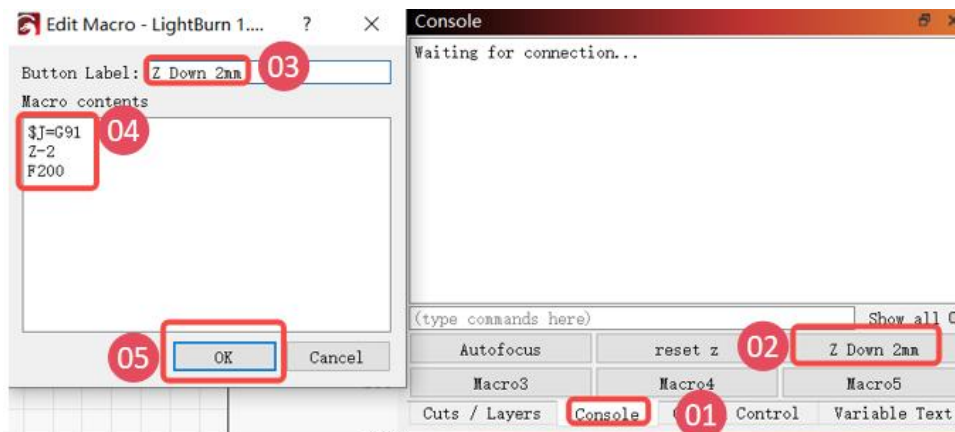
01. When you need to engrave or cut a thicker object, you need to raise the z-axis to put the object in, and then you can reset the z-axis.
02. Find "Window" in the top navigation bar, and enable "Console" function in the drop-down menu, Just like the steps for autofocus.
03. Select any custom button, right click mouse to pop up the button setting page, enter the name of the button in "Button Label", enter [\$J=G91 Z100 F200] under "Macro contents"



04. After clicking OK, a button with the corresponding function will be generated.

## 3, How to drop the laser head 2mm

01. When you cut thick objects, you can drop the laser head by 2mm, making the focal length drop by 2mm for a perfect cut!
02. The steps are the same as before.
03. Select any custom button, right click mouse to pop up the button setting page, enter the name of the button in "Button Label", enter [\$J=G91 Z-2 F200] under "Macro contents" .

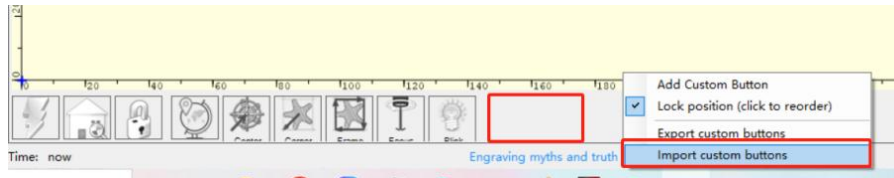




## For LaserGRBL:

### 1, How to set "Autofocus", "Z-axis reset", "Z Down 2mm" functions in LaserGRBL:

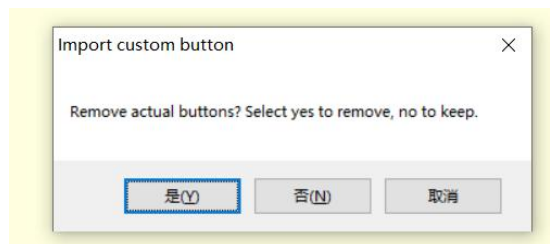
01. We have packaged LaserGRBL's function buttons so that you can import three buttons at once.
02. You need to go to [support.gluwphy.com](https://support.gluwphy.com) to download the button file "Gluwphy\_GM\_GRBL\_Button.zbn" first.
03. At the bottom of the laserGRBL interface, click the right button of your mouse and choose "Import custom buttons", as follows:



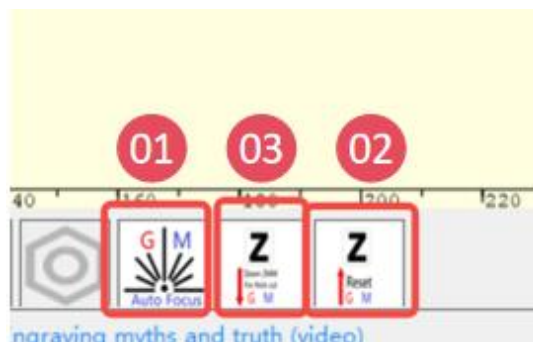
04. Select the "Gluwphy\_GM\_GRBL\_Button.zbn" you have download.



05. Follow the prompts and select Yes for all.



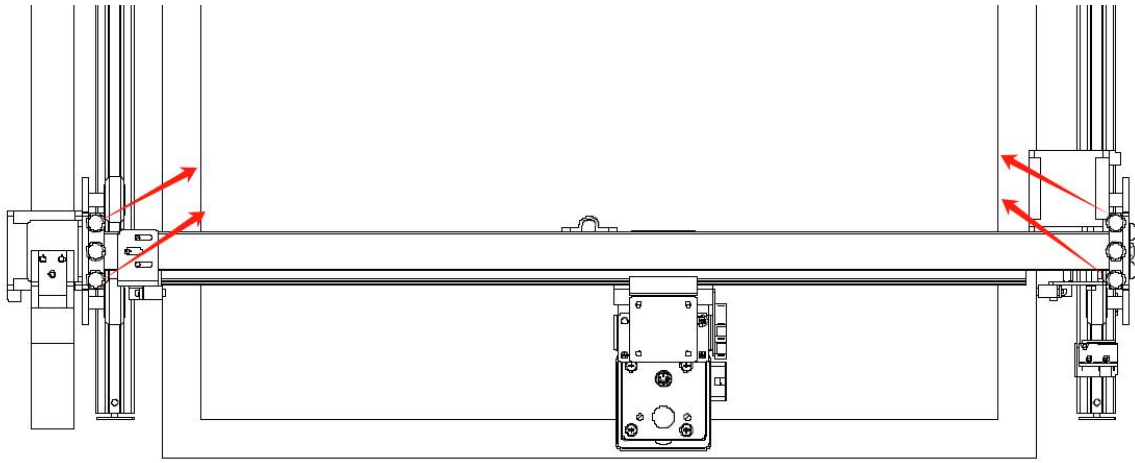
06. As shown below, the newly added button, 01 is the "Autofocus", 02 is the "Z-axis reset", 03 is the "Z Down 2mm"



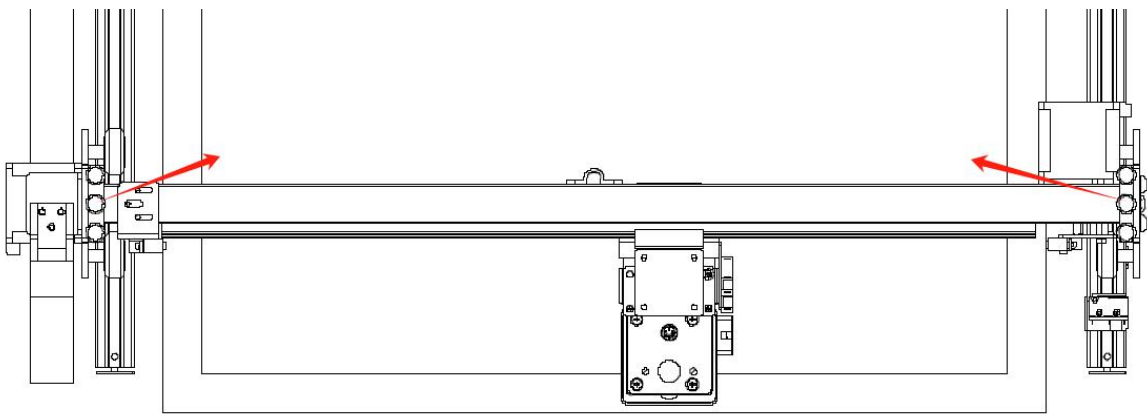
## Part 5 How to Rotate the X-axis to use the rotary roller

- 1, Connect to your computer, turn on lightburn or LaserGRBL, and use the Z reset command to reset the z-axis.
- 2, Power off the machine, use a screwdriver to remove the 4 screws in the picture below.

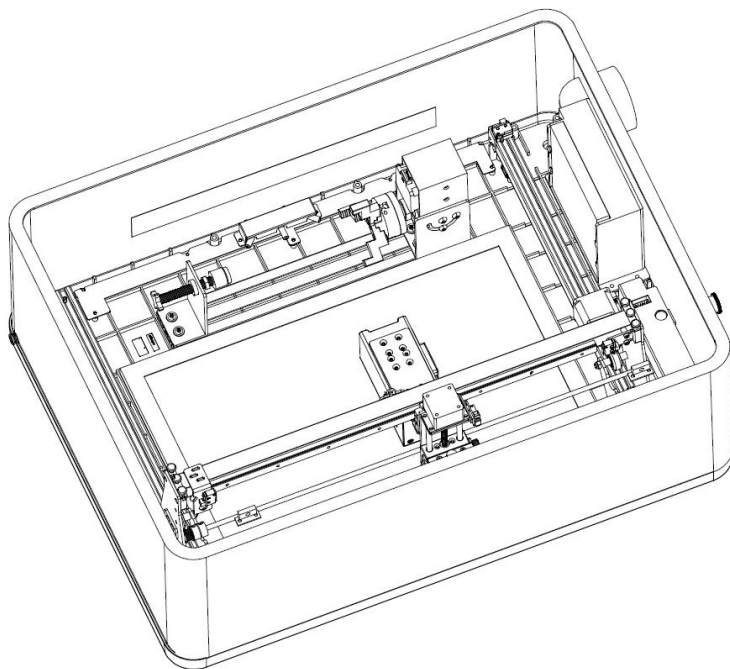






2, Use a screwdriver to remove the middle 2 screws in the picture below



3, Rotate the x-axis 90 degrees clockwise and install the 6 screws previously removed as follows.




## Part 6 Safety

	If you do not comply with relevant operating instructions or specifications, It will cause personal injury or equipment damage.
	If you do not comply with relevant operating instructions or specifications, Laser may cause personal injury or equipment damage.

### 1. General safety

Before operating this product, please read and familiarize yourself with all safety instructions and usage procedures, Users should strictly follow all safety precautions, and make sure this product has been assembled correctly and is in normal working order.

	Please follow the following operating principles:
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- Before each use, please make sure to check if the machine is damaged, Do not operate a damaged or defective machines in any way.
- Keep your workspace clean and level.
- Do not disassemble or change the structure of the machine in any other way.
- Never modify or decompile the operating system of this product without permission.
- Please always pay attention to the working status of the machine during operation.
- Please keep the interior of the machine clean, Residue and debris accumulated from cutting and engraving can cause a fire, Please clean the debris and residue inside the machine regularly.
- The working environment temperature of the machine is 0°C~35°C, and the storage temperature is 0°C~45°C. It is strictly prohibited to operate at temperatures below zero.

### 2. Laser safety

Under normal circumstances, the laser is completely enclosed in the housing for operation, The machine has a safety interlock switch, If the cover is opened during work, the machine will stop working and there will be no harm to humans, no special precautions are required to ensure laser safety.



**Please follow these safety guidelines:**

- Never operate the machine with any parts removed, Please note that any missing part of the machine may expose the laser system and increase the risk of equipment damage.
- Never engrave or cut any material containing PVC or vinyl (it is recommended not to process plastics), These materials (as well as other materials containing chloride) can generate corrosive vapors, Extremely harmful to the human body and can cause damage to machines, Any damage caused by engraving or cutting any material containing PVC or vinyl, all are not covered by the warranty.
- Never engrave or cut into any unknown material, Vaporization/melting of many materials including but not limited to PVC, polycarbonate, It will release harmful smoke.
- Never leave equipment unattended, Please pay close attention to whether the equipment is working properly when running.
- Never operate the machine with the lid open, Make sure the lid is closed when operating and do not tamper with the lid's safety mechanism.

### **3. Fire-protection safety**

When the machine is cutting or engraving materials, Use a high-density laser beam to irradiate the material to generate high temperature on the surface of the material, The purpose is to vaporize the material without burning it, But most materials themselves are flammable and may be ignited to produce an open flame, Seriously, it will burn the machine (even if the machine is made of flame-retardant materials) and its surrounding environment. Experience shows that vector cutting with laser has the highest probability of producing an open flame, Especially acrylic, it is the most flammable material for laser cutting.



**Please carefully read the following warnings and suggestions:**

- When operating the machine, ensure that the space is well ventilated and that there is space around the smoke exhaust vents, So that the machine can exhaust smoke normally.

- Never stack materials (especially organic materials such as paper, wood, etc.) that may spread flames or increase the risk of material ignition around the machine.
- Do not use the machine unattended, If the machine is set incorrectly to start working and left unattended for a long time, or a mechanical or electrical failure may occur when the machine is working, which may cause a fire.
- Clean the machine regularly, Excessive accumulation of residue and debris from cutting and engraving can increase the risk of fire. The machine should be cleaned regularly to ensure that there are no residues and debris inside the machine.
- Keep the area around the machine clean and free of flammable materials, explosives or volatile solvents such as acetone, alcohol or gasoline, Prepare fire extinguishers for backup and regularly maintain and inspect them.

#### 4. Electrical safety

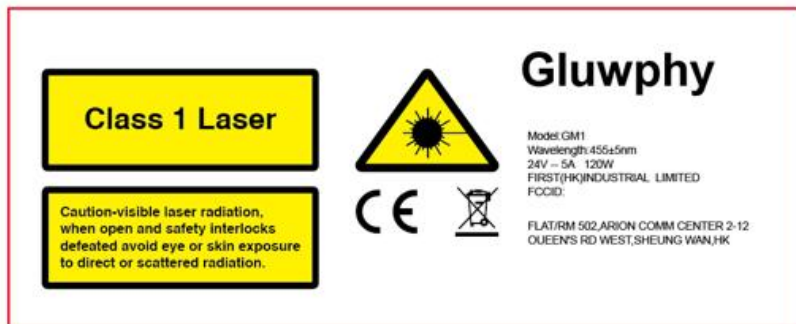
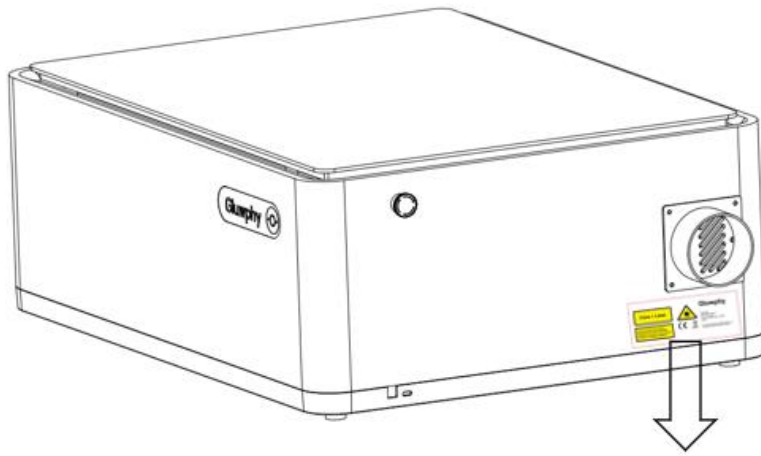


Please carefully read the following warnings and suggestions:

- When the machine is connected to a power , Do not open any maintenance panels on the device body to avoid accidentally touching the power supply.
- When the machine is connected to power, Do not touch electronic related areas with your hands or other tools.

#### 5. Warning and indicator signs

The warning and indication signs on Gluephy GM1 are affixed to areas that may cause danger before or during operation, If the logo is damaged or lost, please replace it immediately, You can use the following template to copy and print the logo you need.



## Part 7 Care and Maintenance

- Laser processing often produces smoke, When the smoke is heavy, the lens of the laser head is prone to power attenuation due to dirt, In serious cases, damage may occur, Please use alcohol cotton to clean dirty lenses in time.
- The machine has integrated filter cotton for preliminary filtration of smoke, Large particles of smoke generated during laser processing will be intercepted by the filter cotton, Filter cotton belongs to consumables. If the filter cotton is blocked, The built-in fan will make it difficult to expel smoke from the machine, The lifespan of the fan will also decrease, please replace the filter cotton in a timely manner.

## Part 8 After-sales Service

- For technical support, contact us through [support@gluwphy.com](mailto:support@gluwphy.com).
- For more information about after-sales services, please visit <http://support.gluwphy.com>.