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YORA LASER MODULE FOR 3018-PRO

USER MANUAL
Version 1.1 • Jun, 2020

Contents

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Part 1 Packing List

Name	Model/Size	Quantity	Picture
Laser Head with Power Supply (or Laser Control Module)		1	
Protective Glasses	Green	1	
Laser Cable	60cm	1	

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Part 2 Safety Instructions

→ This machine is classified as a Class 4 Laser, it can and will cause injury if not properly used. YoraHome does not accept any responsibility or liability for any use or misuse of the laser.

→ ALWAYS wear the provided laser protective glasses when operating the laser. A fire extinguisher should be kept nearby when operating, in case of an unexpected fire.

→ Never leave the laser unattended in order to avoid accidental fires and careless actions from humans or animals.

→ Combustion products are released during the laser engraving, which can be harmful to health. Always use an air funnel and ventilation.

→ If you plan to cut any material, underlay a piece of metal to protect the worktable from damage and fire.

⚠ DANGER
CLASS 4 LASER PRODUCT
**AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED LASER LIGHT**

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→ **Step 1**

If the spindle motor for carving is already mounted and connected, **disconnect** both sides of the electrical connection to the spindle motor and the board.

Make sure the wiring is disconnected from the motor carefully. Those terminals are subject to metal fatigue and could be damaged. We suggest you to leave the motor wires out of the wire loom, and just disconnect at the board end when swapping from spindle to laser.

Then, remove the spindle motor from the motor mount.

Note: Do not operate the Yora CNC Carving Machine 3018-Pro with both the Laser and the Spindle motor connected!

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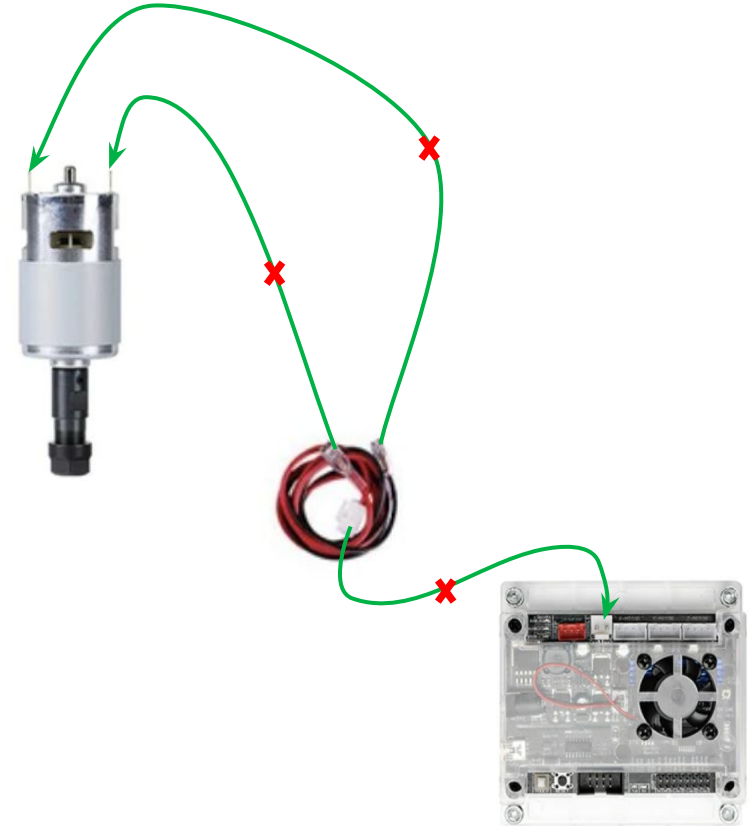
Part 3 Laser Mounting

Step 2
Slide the laser head into the bracket so that the corners are right in the slots of the bracket mount, with the cooling fan pointing upwards.

You may need to use a small screwdriver or allen wrench to carefully pry the bracket open to allow the laser to fit

Position the laser head so that the lower edge of the bottom of the lens is about 45 mm (1.75 in) from the workpiece. This will help to adjust the optimal focal point of the laser.

Tighten the clamping screw on the laser bracket. Do not use excessive force. It just needs to be secure.

Bracket slots

Clamping Screw

60 mm

WORKPIECE

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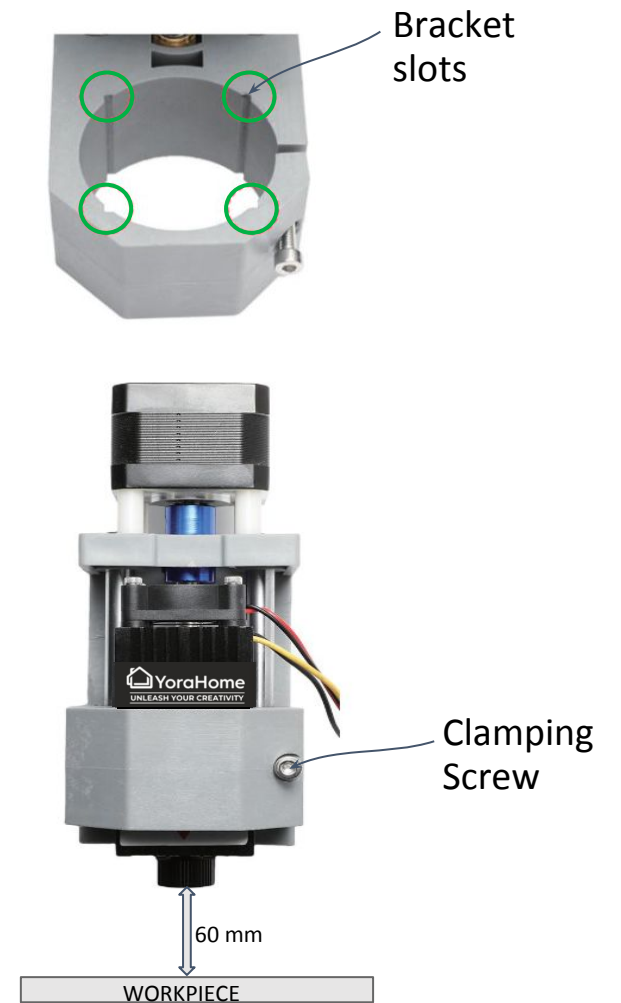
Part 3 | Laser Mounting

Step 3

Connect the red connector of the laser power supply to the red 3-pin socket on the board (marked "Laser") using the supplied 3-wire connection cable.

Make sure that the cables to the laser head can move freely in all directions (X,Y,Z axes).
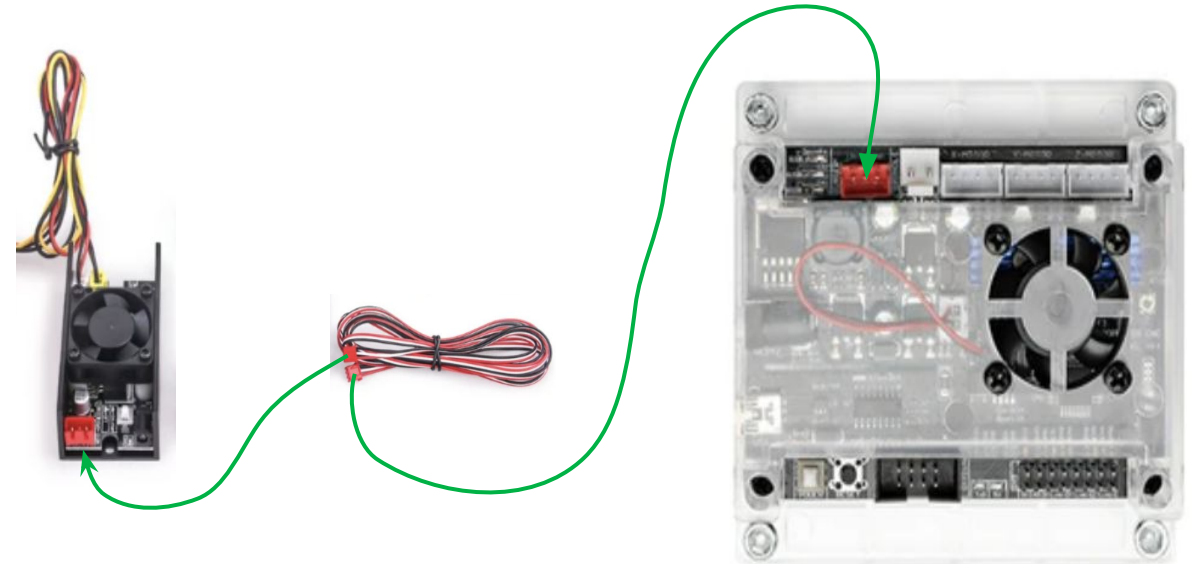
Note: Powering on the machine and connecting the USB Cable can cause the laser module to fire for a short minute. So make sure to have a scrap stock under the laser beam, and also wear your safety glasses before turning the machine on.

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Part 4 | Software Introduction

1. **Install Your Laser Engraving Software**

LaserGRBL is one of the best Windows GCode streamers for DIY Laser Engravers. LaserGRBL is able to load and stream GCode path to your control board, as well engrave images, pictures and logos with internal conversion tool.

The software is free and it is available on the CD or the USB disk that comes with your machine. You can also go to the LaserGrbl official website to download the latest version. You will also find on the website many tutorials showing show how to use this powerful software.

If you own a Mac computer, we recommend LightBurn (premium software with a free trial available) which is a laser engraving software that delivers great results too.

In the next pages, we will provide a quick introduction on how to use LaserGRBL.

Only For Windows Users

For Windows & Mac Users

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Part 4 Software Introduction

2. Open the software (LaserGRBL)

3. Connect the Control board to the PC via USB, Select the COM port recognized by the PC

LaserGRBL

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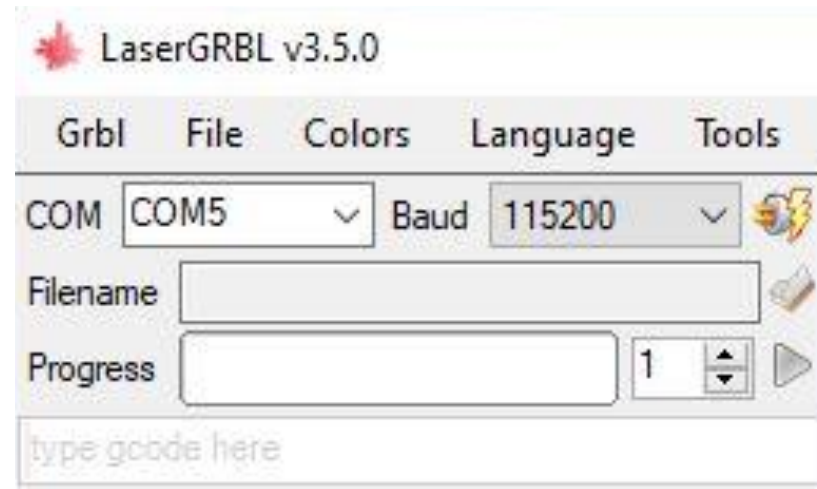
Part 4 Software Introduction

4. If the connection is successful, console window print "Grbl 1.1f ['$' for help]"
If the port selection is wrong, no information will be returned.
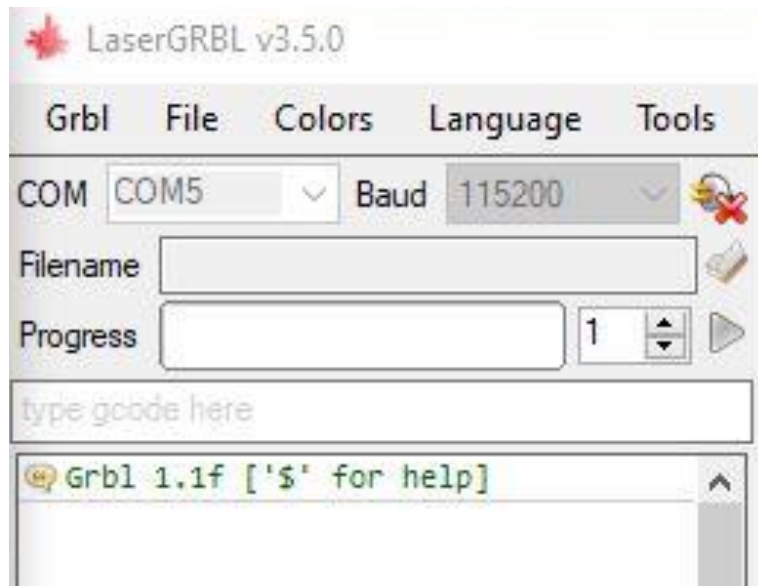
**5.** Enter the command "M3 S50" in the command window, then press Enter. The laser will be turned on with low power model.

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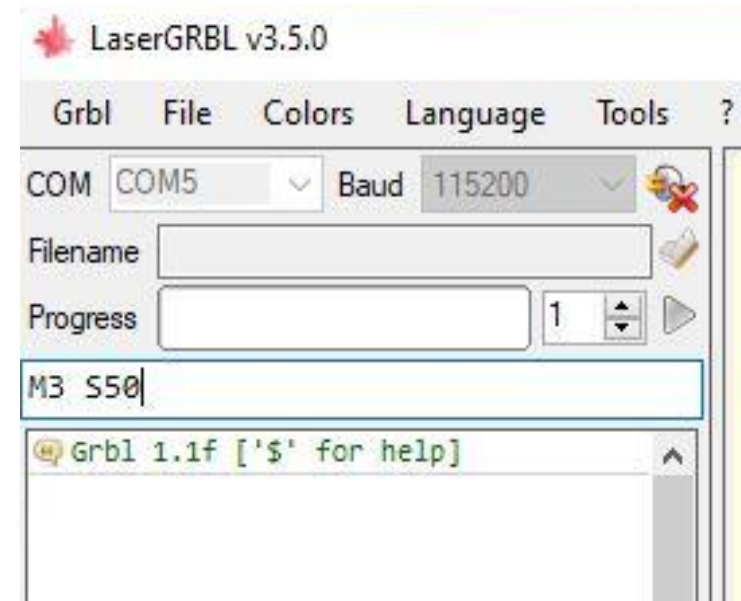
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6. **6.1** To enable the Z axis jog, go to the menu, select **Grbl Settings** and click on the **Jog Control** Tab. Make sure the **Show Z up/down control** box is ticked and click on the Save button.

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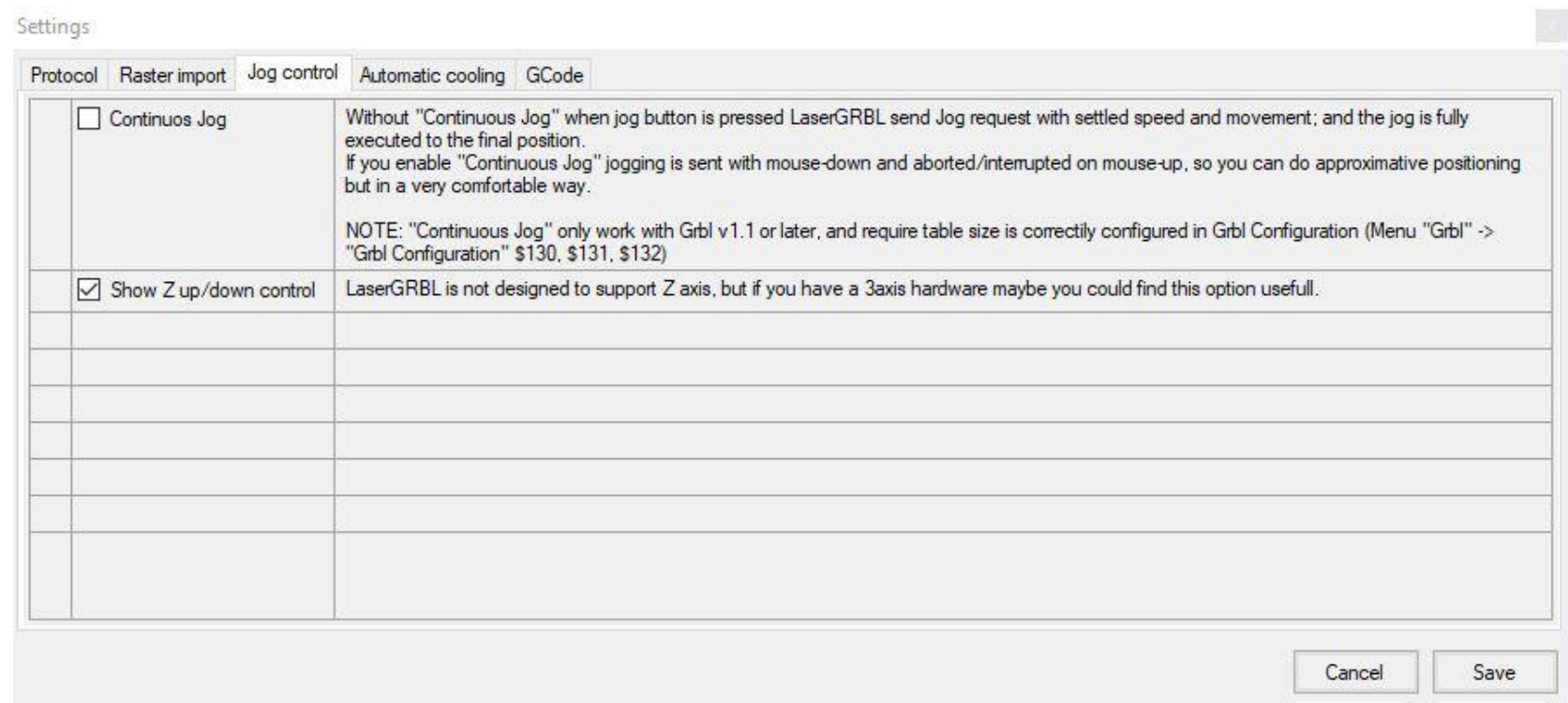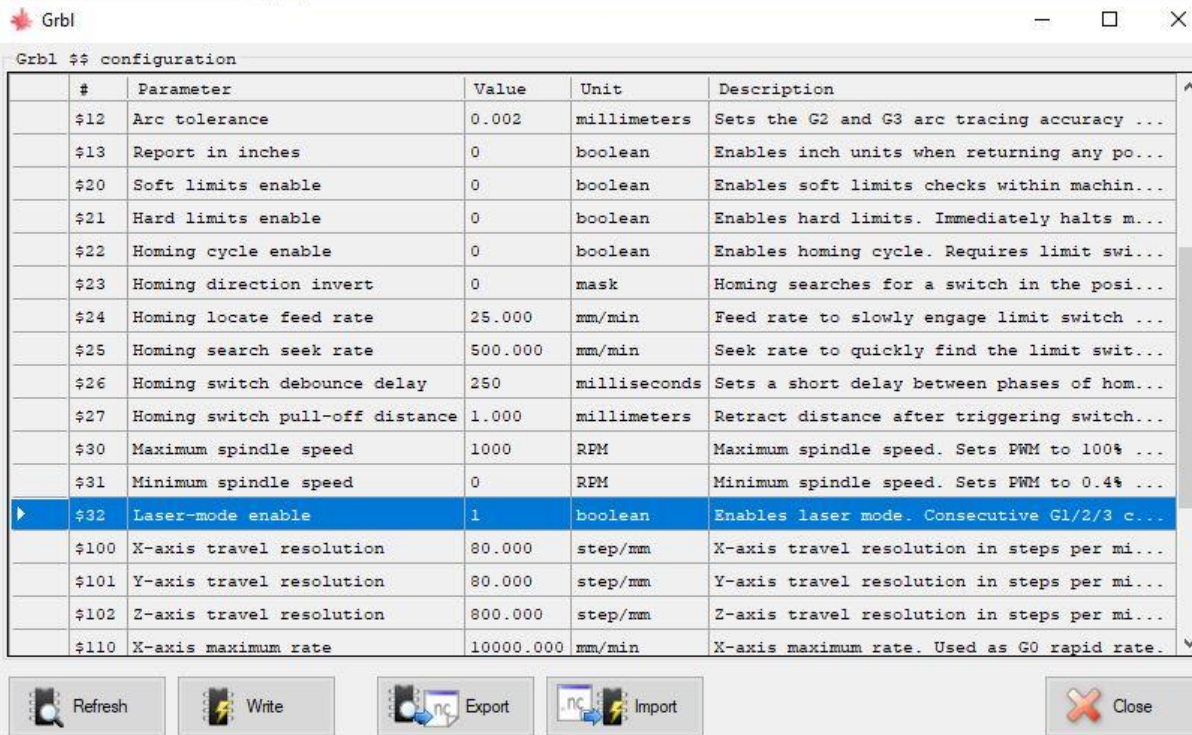
Part 4 | Software Introduction

6.

6.2 A nice set of pre-defined **custom buttons** can be used to automate certain tasks. You can download them here. In order to install them in LaserGrbl, right click in custom button area, select "Import custom buttons" from the menu and select the downloaded file. In the open window, select the downloaded file and click Open. You can now select for each individual button contained in the archive file whether it should be imported or not.

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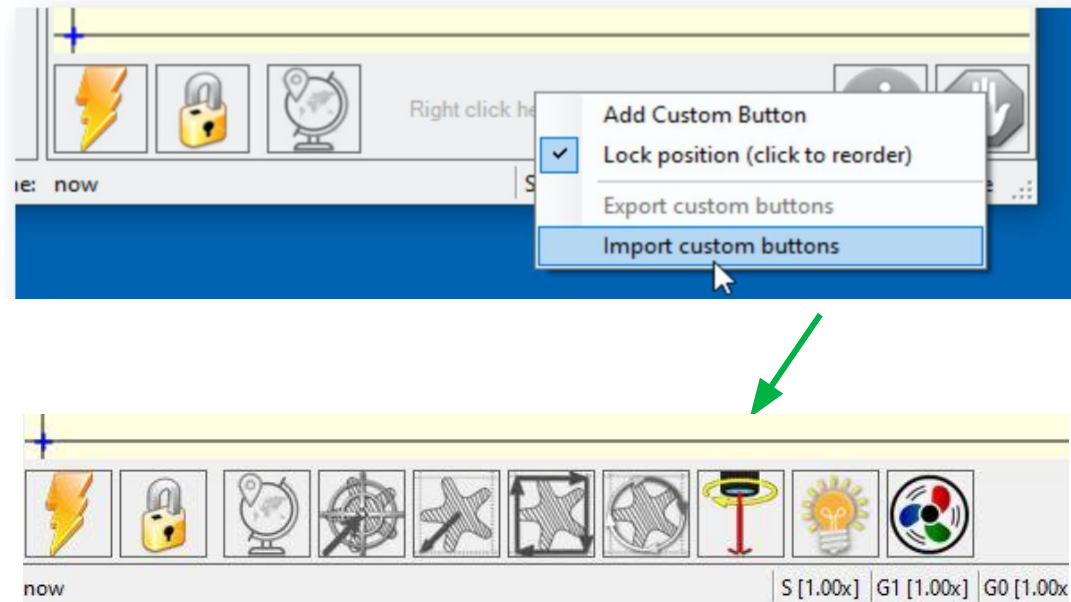
Software Introduction

7. In Grbl - Configuration, make sure **$32= 1** to turn the laser mode. When you remove the laser and replace it with the spindle motor, set it back to 0.
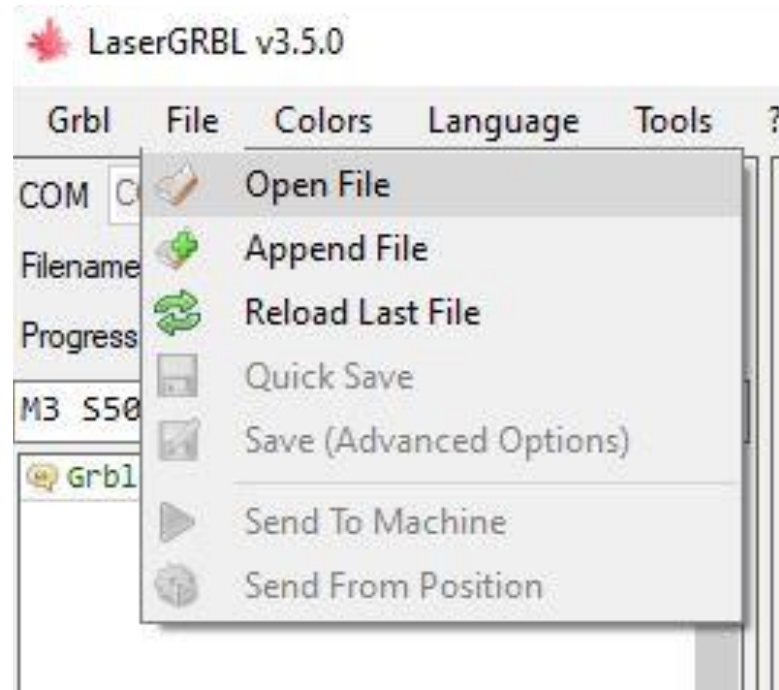
8. Rotate the lens to focus until the spot is focused to the minimum

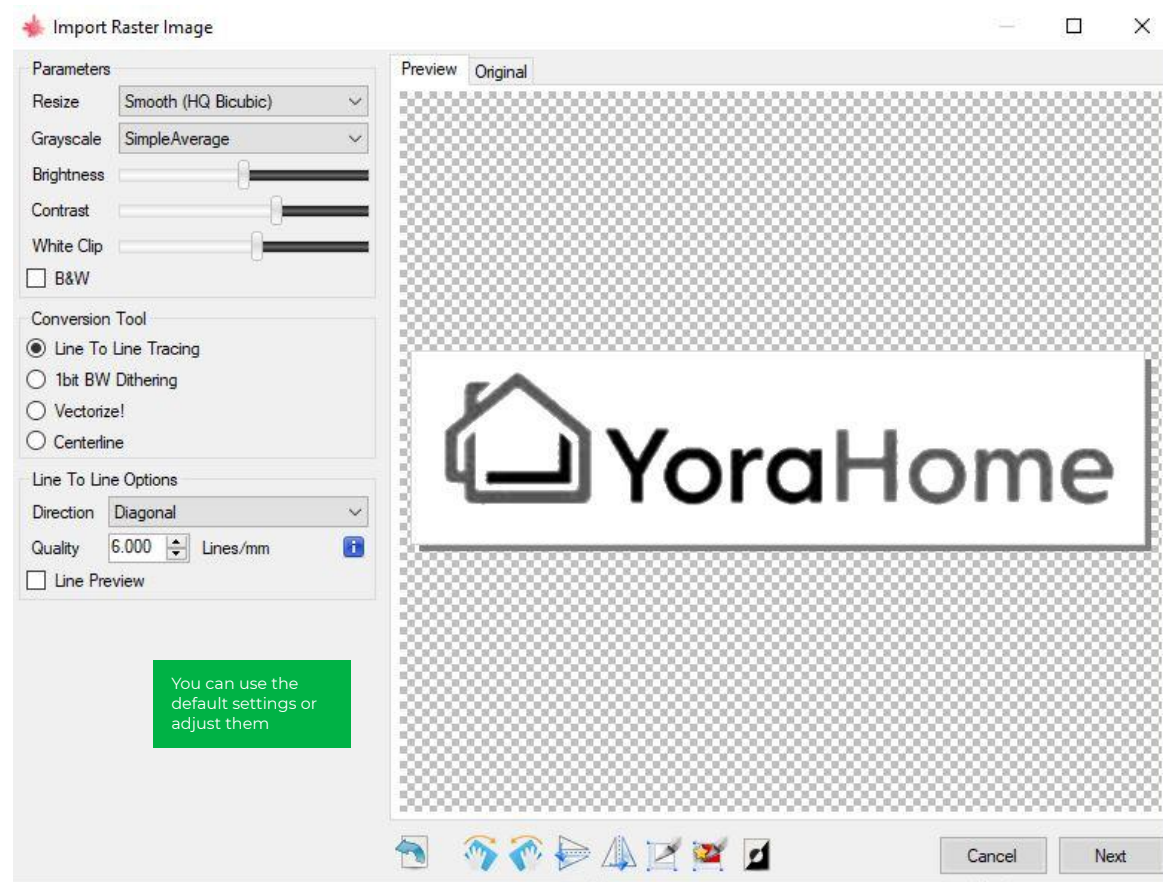YoraHome

9. Then enter the command "M5" in the command window to turn off the laser.

10. File->Open File: Open GCODE file or Image format file

11. Parameters default, click Next

12. Set the Speed and S values.

Note: Different materials need to set the engraving speed and S value are different, you need to try to find the appropriate value multiple times.
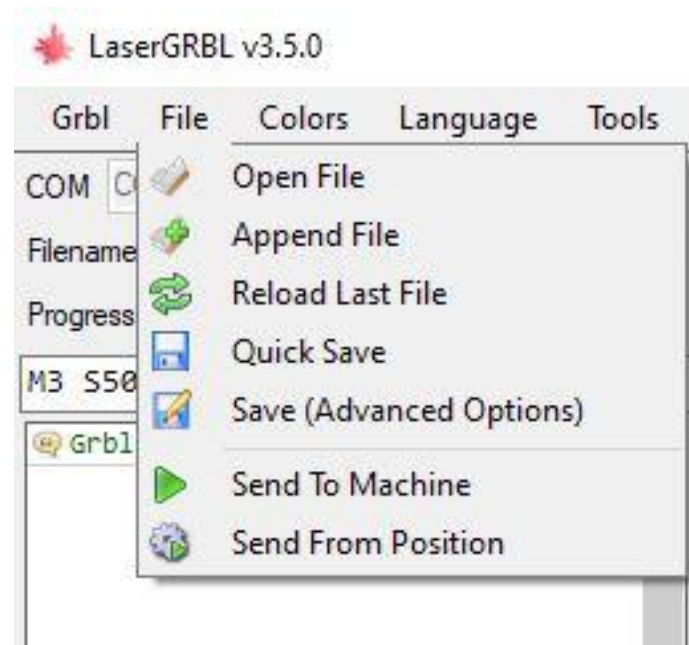
Part 4 Software Introduction

13. Set the zero point and click the button "Run Program " to start engraving
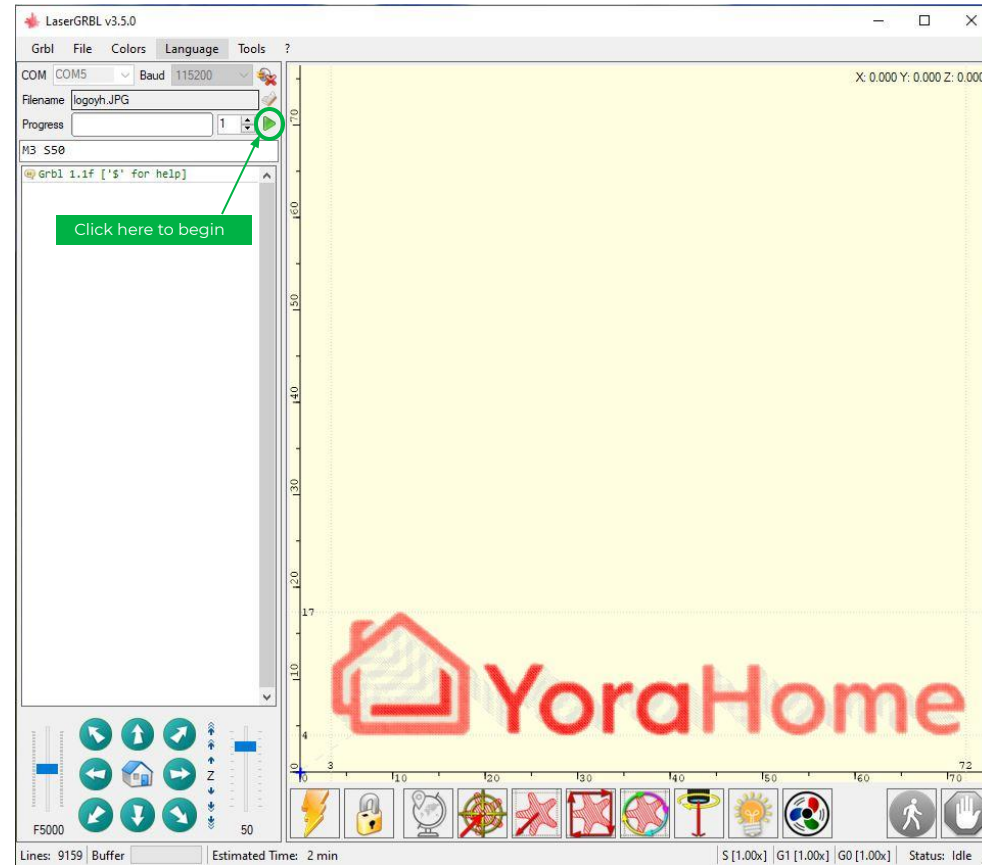
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14. File->Save Program: Click to save GCODE file

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