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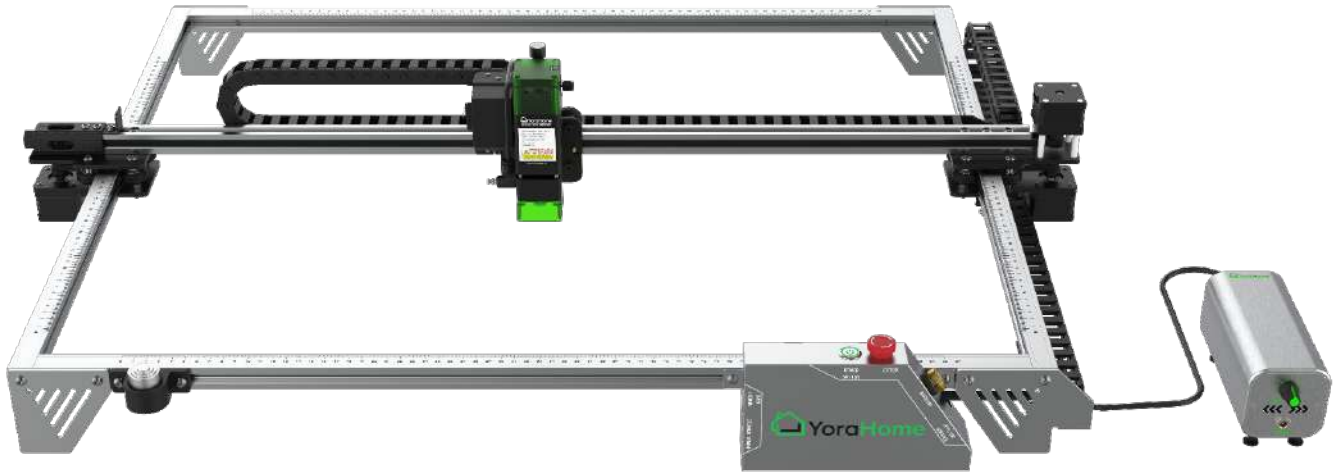
YORAHOME CNC LASER ENGRAVING MACHINE 6550-PRO

USER MANUAL

Version 1.0 • June, 2022



Purpose

This Manual is intended for assembly of the YoraHome 6550-Pro Laser Engraving Machine.

Before beginning assembly, we recommend conducting an inventory using the Packing List to ensure all components are present.

NOTE - there may be extra hardware included; this is normal, in case items get dropped or lost.

Please read these instructions carefully before assembling your machine to prevent possible damage to your machine.

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Safety 1/3

- ➔ Read and understand the entire user manual before attempting assembly or operation
- ➔ Do not use the laser engraver other than its intended use. If used for other purposes, YoraHome disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
- ➔ Always wear approved safety glasses while using the laser engraving machine. Everyday eyeglasses will NOT protect your eyes from the laser
- ➔ It is not recommended to wear loose clothing around moving equipment. Confine long hair.
- ➔ Do not operate the laser engraver while tired or under the influence of drugs, alcohol or any medication.
- ➔ Make all machine adjustments or maintenance with laser engraving machine unplugged from the power source.
- ➔ Give your work undivided attention. Looking around, carrying on a conversation and “horseplay” are careless acts that can result in serious injury.

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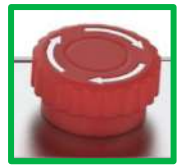
Safety 2/3

- ➔ Never leave the laser engraving machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.
- ➔ Keep a fire extinguisher nearby since use of the laser may lead to an unexpected fire.
- ➔ Remove loose items and unnecessary work pieces from the area before starting laser engraver.
- ➔ The laser engraver should be set up in a fire-resistant working area with good ventilation.
- ➔ Keep children away from your laser engraver. Minors of any age should not use this laser without direct adult supervision and proper eye protection
- ➔ Do not place your hands or any other objects you do not wish to engrave/burn/cut in the path of the laser beam. Serious physical harm is possible if used improperly.
- ➔ Do not touch the heat sink when the laser engraver is in operation, or immediately after use, it may cause burns.
- ➔ Never cut vinyl or PVC. When engraved, a corrosive agent is produced that will destroy the machine. Never use unknown materials.

Safety 3/3

- ➔ Make sure the cutting area under the laser is metal or non-flammable.
- ➔ Ensure that the room or area you are operating the laser in is sufficiently labeled to prevent someone from unknowingly walking into an active work area.
- ➔ Never use the laser except for the purpose intended.
- ➔ When engraving mirror, stainless steel and other reflective materials, please paint the surface black to prevent damage to the laser head from reflective light.
- ➔ The machine should be placed securely on a flat surface to avoid dropping or being hit.
- ➔ Be within reach of the Emergency Stop or pause button when the machine is in operation. In the event of an emergency, or if there are any conditions that may result in injury to yourself or others, the 6550-Pro is equipped with an Emergency Stop button on top of the Controller. When pressed, this button will latch in the Stop position. To reset, twist the red knob clockwise.



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Contents

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Part 1 Packing List 1/8

Name	Model	Parameter	Quantity	Picture
Aluminium Profile	Front Frame Rail		1	
	Rear Frame Rail		1	
	Left Frame Rail		1	
	Right Frame Rail		1	
	X Axis Gantry Rail (with wiring)		1	
Bolt	M3x6		18	
	M3x8		8	
	M5x8		7	
	M5x18		6	
	M5x20		13	
	M5x25		1	

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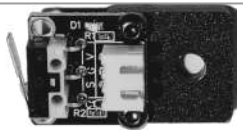
Part 1 Packing List 2/8

Name	Model	Parameter	Quantity	Picture
Timing Belt	Y Axis		2	
Timing Belt	X Axis	Brass grommets pre-installed	1	
Timing Belt Clamp Screw	Y Axis		4	
Limit Switch	Y Axis		1	
Wrench	For roller adjustment	8mm/10mm	1	
Cable Ties			20	
Sanding Disc	For removal of burrs, as needed		2	

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Part 1 Packing List 3/8

Name	Model	Parameter	Quantity	Picture
Z Axis Assembly			1	
Laser Module	Diode	80W Electrical Power 10W Optical Power	1	
X Axis Belt Tensioner			1	
Laser Height Gauge	With Holder		1	
Safety Glasses	Style may vary		1	

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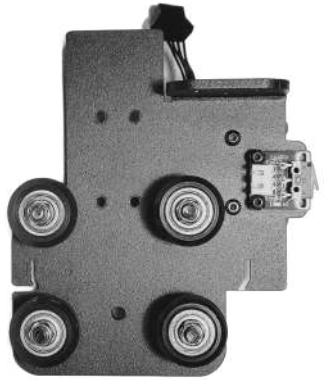
Part 1 Packing List 4/8

Name	Model	Parameter	Quantity	Picture
Frame Foot	For rear and left front		3	
Frame Foot	For right front	With flange	1	
Hex Wrench		1.5 | 2 | 2.5 | 3 | 4	1 of each	
Right Motor Assembly	For both X and Y axis	2 motors installed	1	

Part 1 Packing List 5/8

Name	Model	Parameter	Quantity	Picture
Left Motor Assembly	For Y axis	1 motor installed	1	
X Gantry Assembly		Flame detector and limit switch installed	1	

Part 1 Packing List 6/8

Name	Model	Parameter	Quantity	Picture
Limit Switch Touch Plate			1	
Drag Chain Bracket - X Axis	Stepped design		1	
Drag Chain Bracket - X/Y Axis	L-shaped design		1	
Drag Chain Support Bracket	For Y Axis		1	

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Part 1 Packing List 7/8

Name	Model	Parameter	Quantity	Picture
USB Cable			1	
Control Board	Includes wiring, air assist tubing, and Drag Chain - pre-attached		1	
Power Supply	Includes power cord		1	

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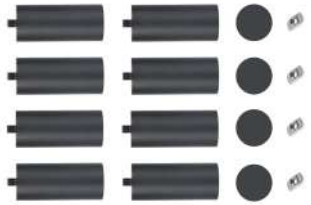
Part 1 Packing List 8/8

Name	Model	Parameter	Quantity	Picture
Drag Chain Support Rail			1	
Air Pump			1	
Air Pump Power Supply			1	
Leg extension kit	Includes 8 Leg segments (50mm each), 4 Leg pads, 4 T-slot nuts		1	

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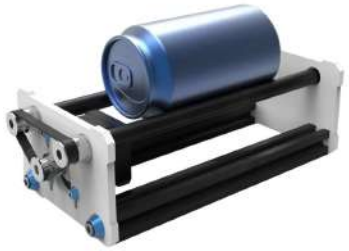
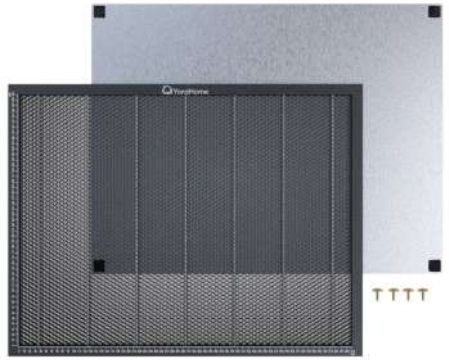
Part 1 Optional Accessories (Not Included)

YoraHome Rotate Module 	YoraHome TLC Rotary Attachment 
YoraHome 4th Axis 	YoraHome Honeycomb Platform 

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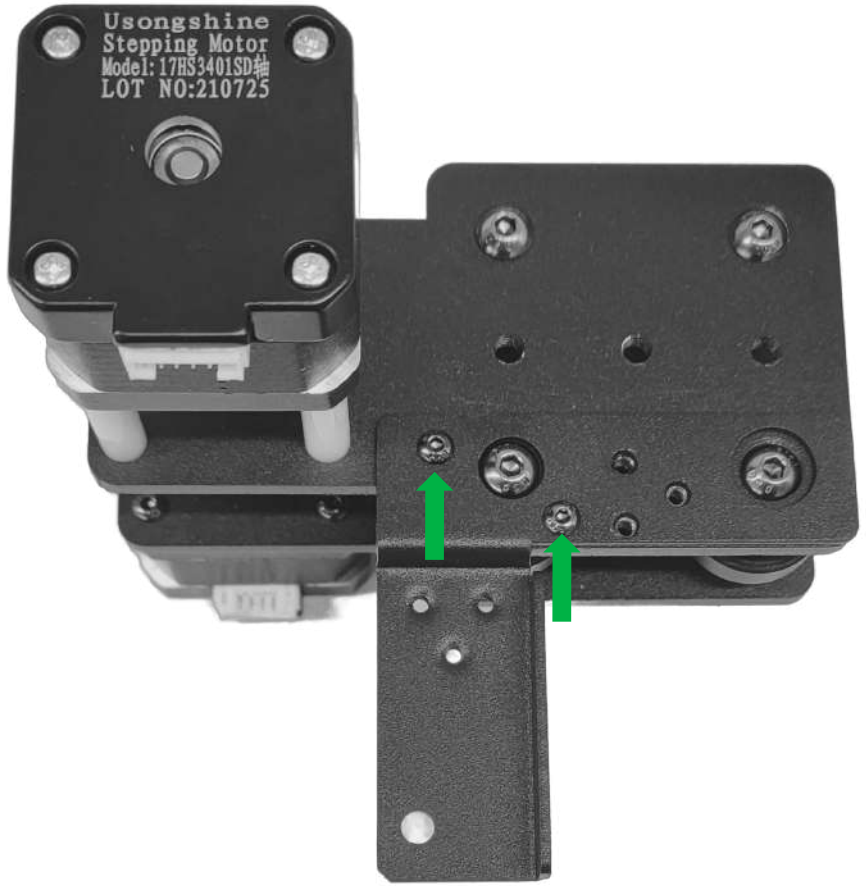
Part 2 Mechanical Installation

Step 1 1/2

Parts Required:

- ➔ 2 M3x6 Screws
- ➔ 2 M5x8 Screws
- ➔ Right Motor Assembly
- ➔ Drag Chain Bracket - X/Y Axis
- ➔ Drag Chain Support Bracket



Using M3x6 Screws, attach Drag Chain Bracket - X/Y Axis to the Right Motor Assembly as shown.

Do not use the other 3 screw holes yet!

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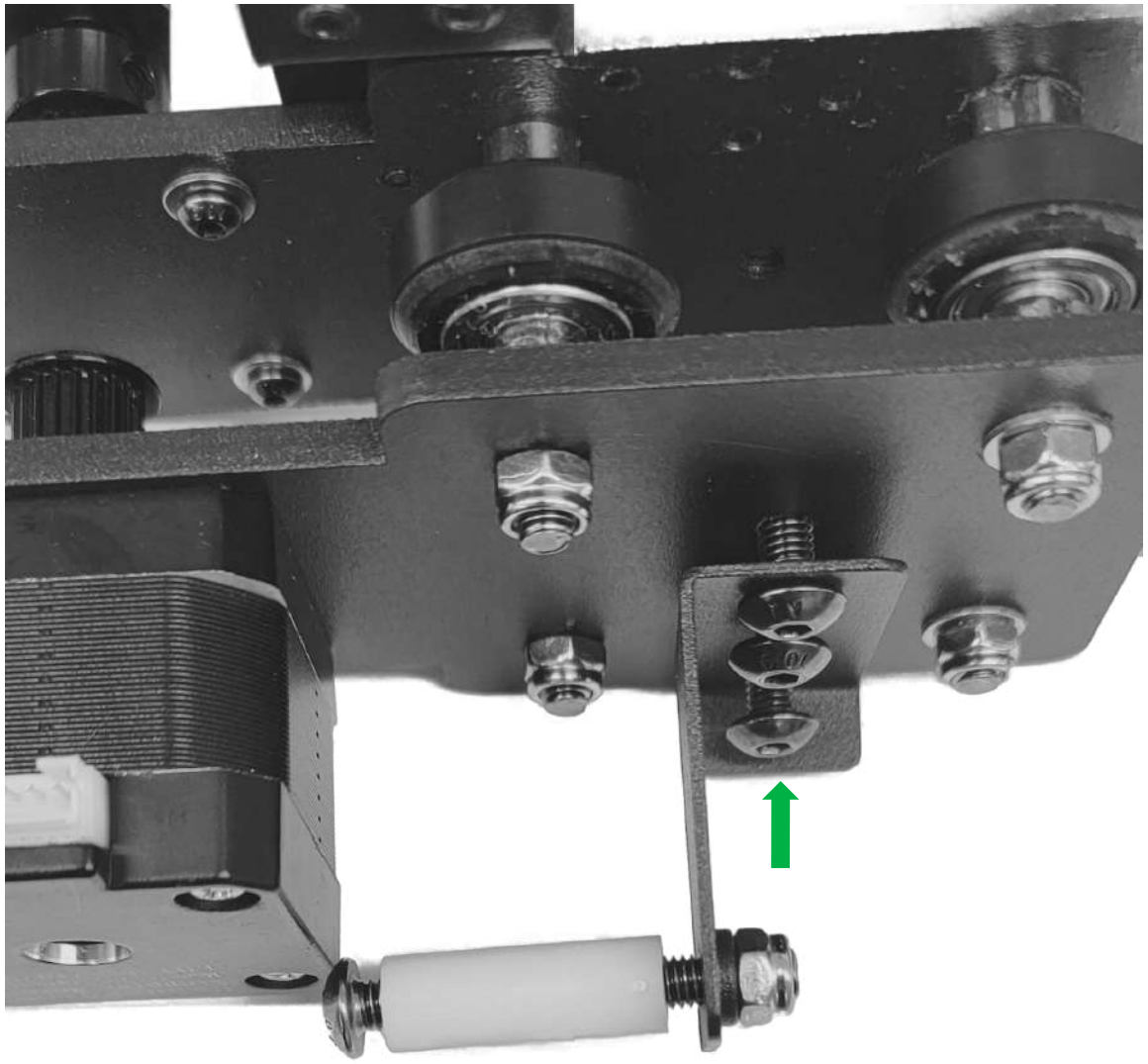
Part 2 Mechanical Installation

Step 1$_{2/2}$

Using M5x8 Screws, LOOSELY attach Drag Chain Support Bracket to the underside of the Right Motor Assembly as shown.

Do not tighten these screws until later in assembly!



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Part 2 Mechanical Installation

Step 2

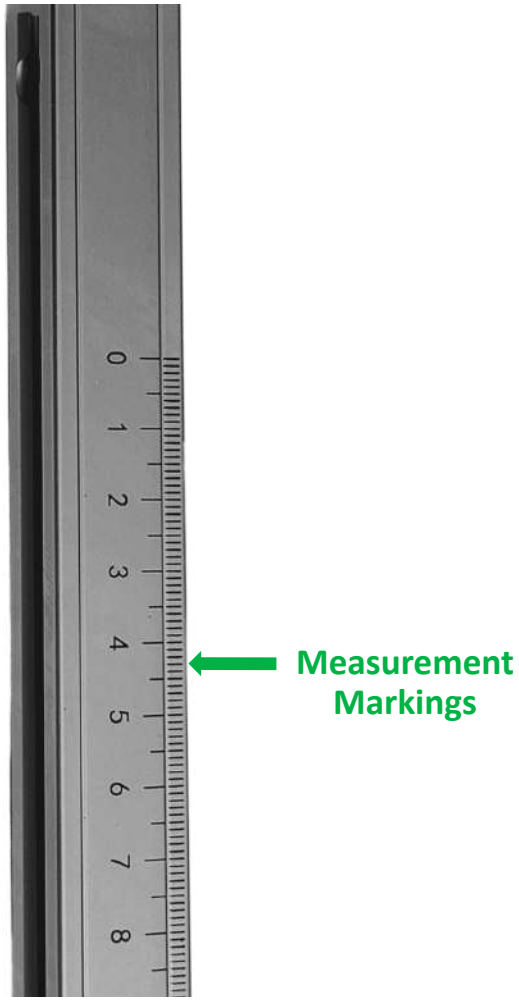
Rail Identification -

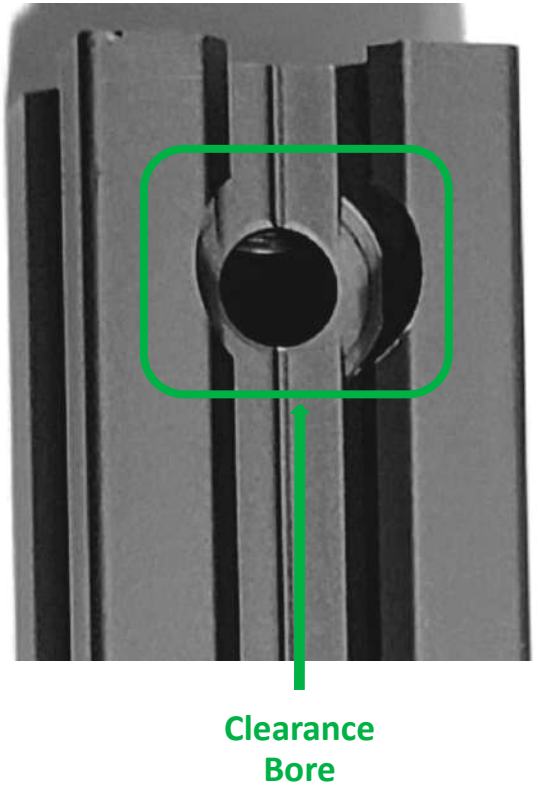
All Rails will have measurement markings along the inside edge of the rail.

On the outside edge of the Left and Right Side Rails, check for the clearance bore to allow for screw installation, as shown.

Side Rail measurement markings: 0-50 cm

Front/Rear Rail measurements markings: 0-65cm





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Part 2 Mechanical Installation

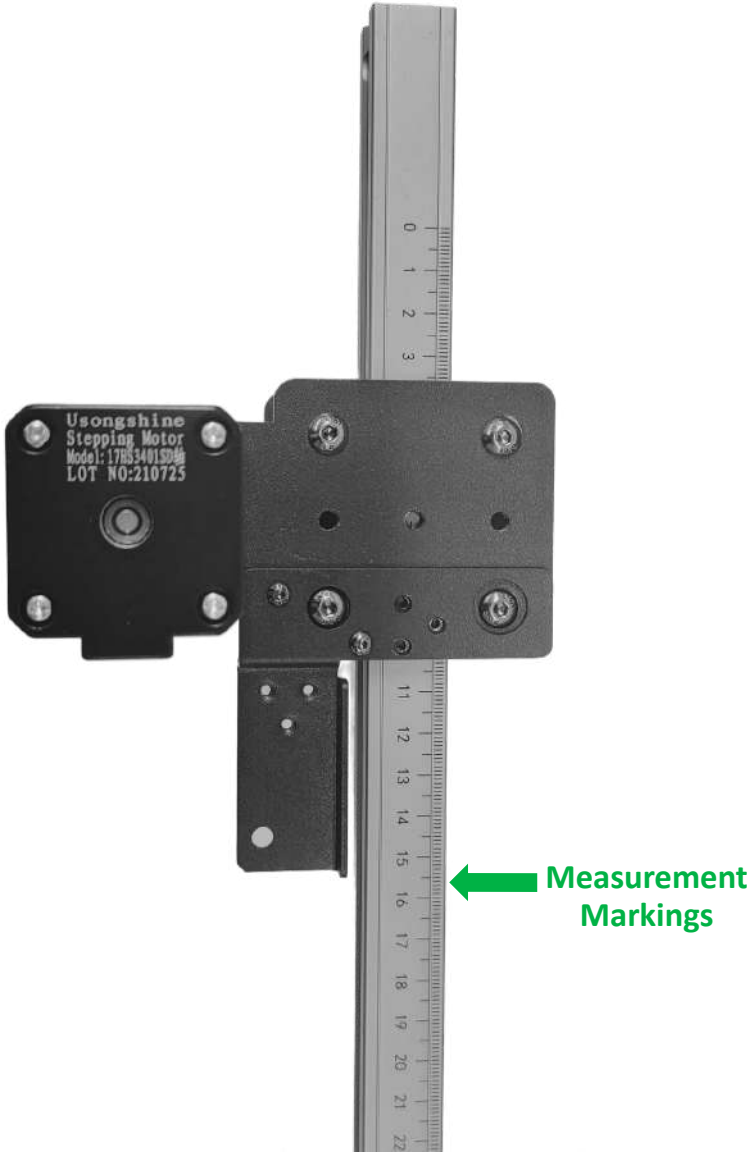
Step 3

Parts Required:

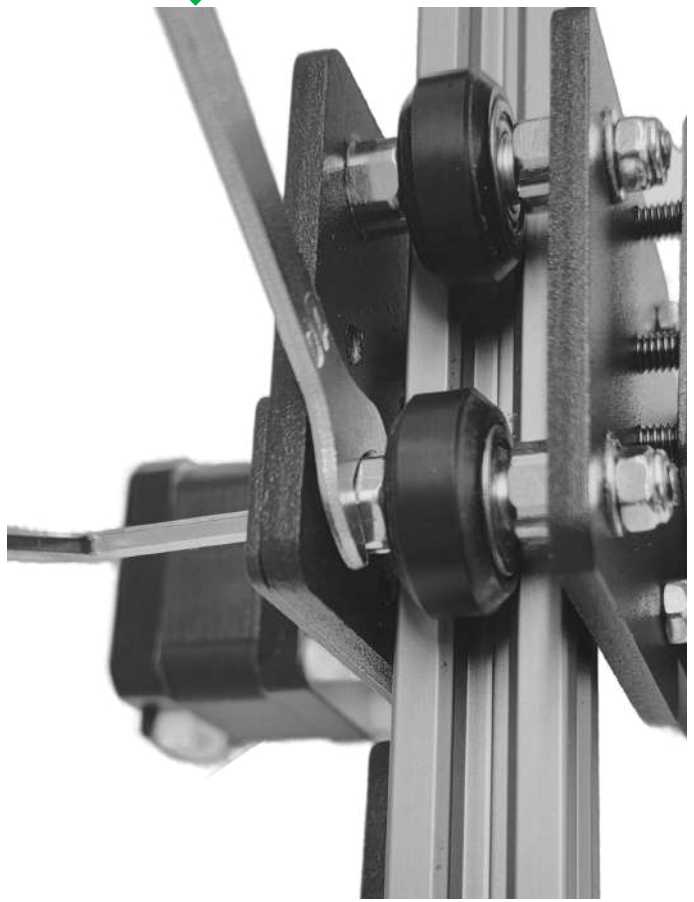
- ➔ Right Motor Assembly
- ➔ Right Side Rail

Slide the Right Motor Assembly onto the Right Side Rail as shown - note the orientation of the measurement markings towards the inside of the machine frame.

If the assembly is loose, use the supplied wrench and hex key to adjust the inner rollers as shown.



Roller Adjustment Detail



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Part 2 Mechanical Installation

Step 4

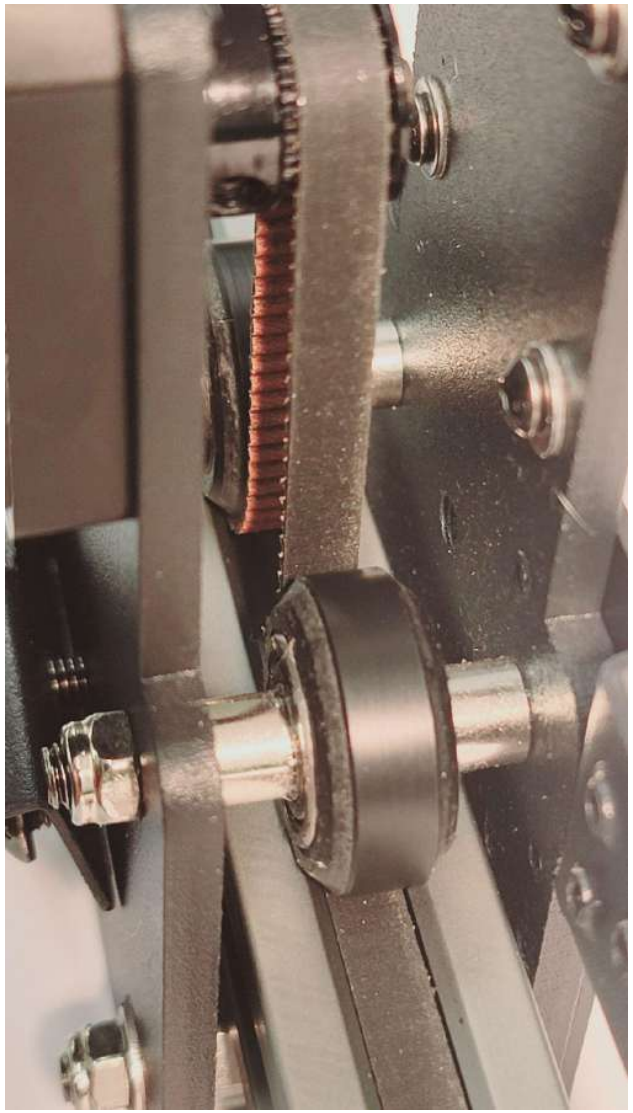
Parts Required:

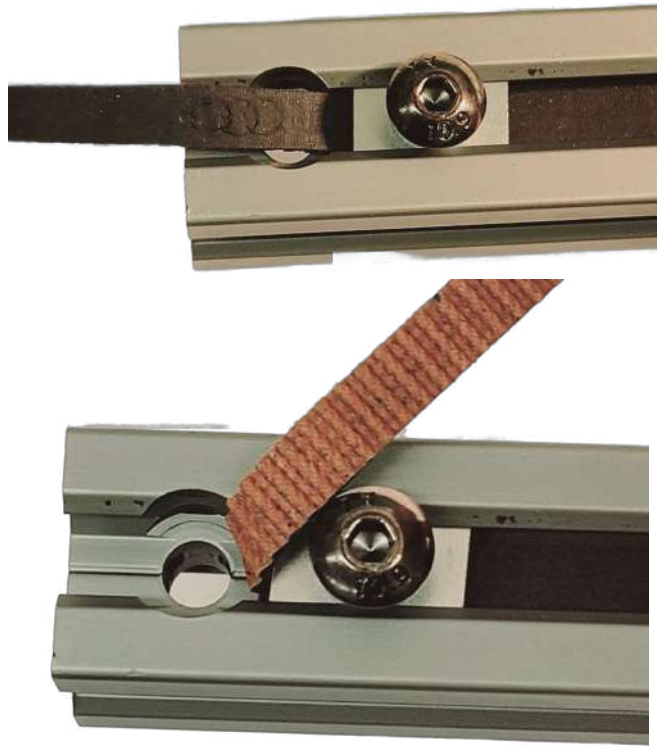
- ➔ Right Side Rail with Right Motor Assembly
- ➔ Timing Belt
- ➔ 2 Timing Belt Clamp Screws

Route Timing Belt (with teeth down) OVER the synchronous wheel on the Y axis stepper motor, and UNDER the rollers, as shown.

Secure belt at both ends of the rail as shown - do not overtighten and twist belt.

Belt should be taut, but still allow free movement on the motor assembly.





Ensure screw hole is accessible

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Part 2 Mechanical Installation

Step 5

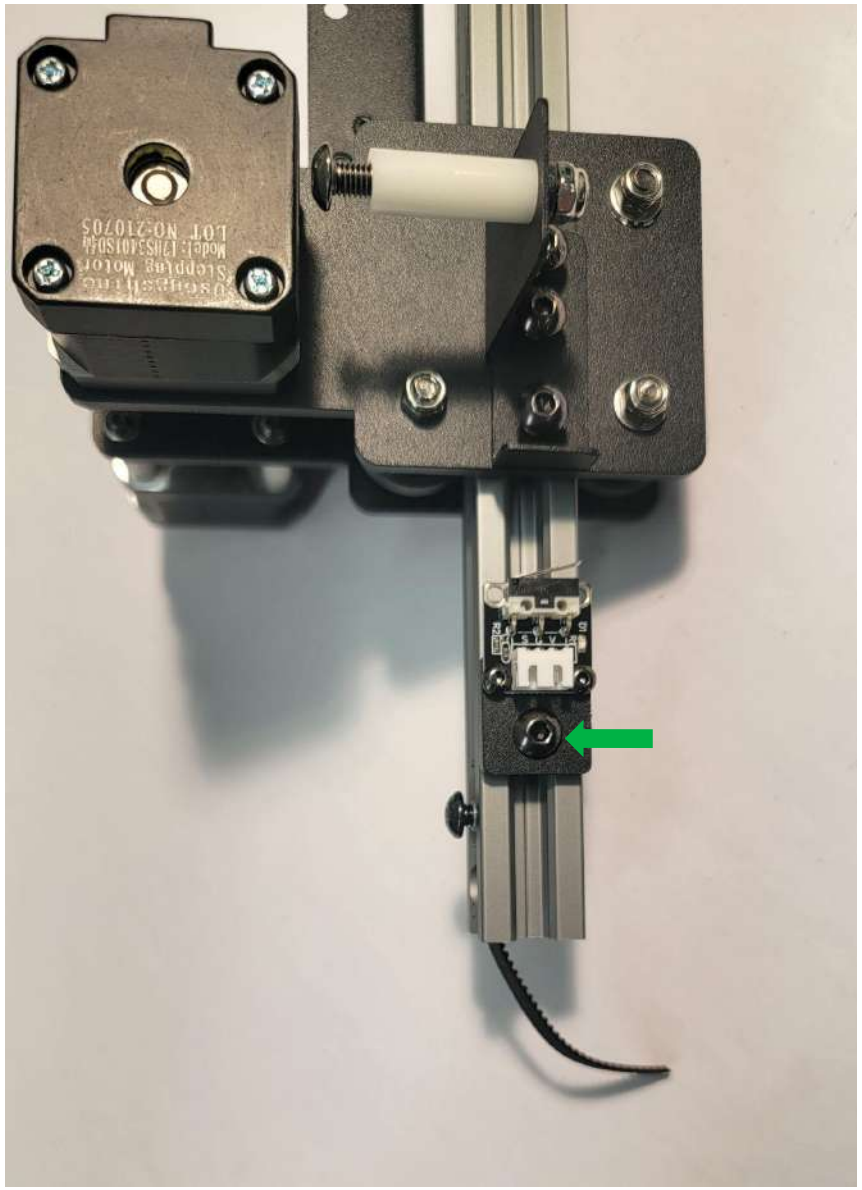
Parts Required:

- ➔ Right Side Rail Assembly
- ➔ Limit Switch
- ➔ M5x20 Screw

Install the Limit Switch on the underside of the Right Side Rail assembly, as shown.

Limit Switch will be positioned at the right front corner of the machine frame.

Set Right Side Rail Assembly aside until Frame Assembly steps.



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Part 2 Mechanical Installation

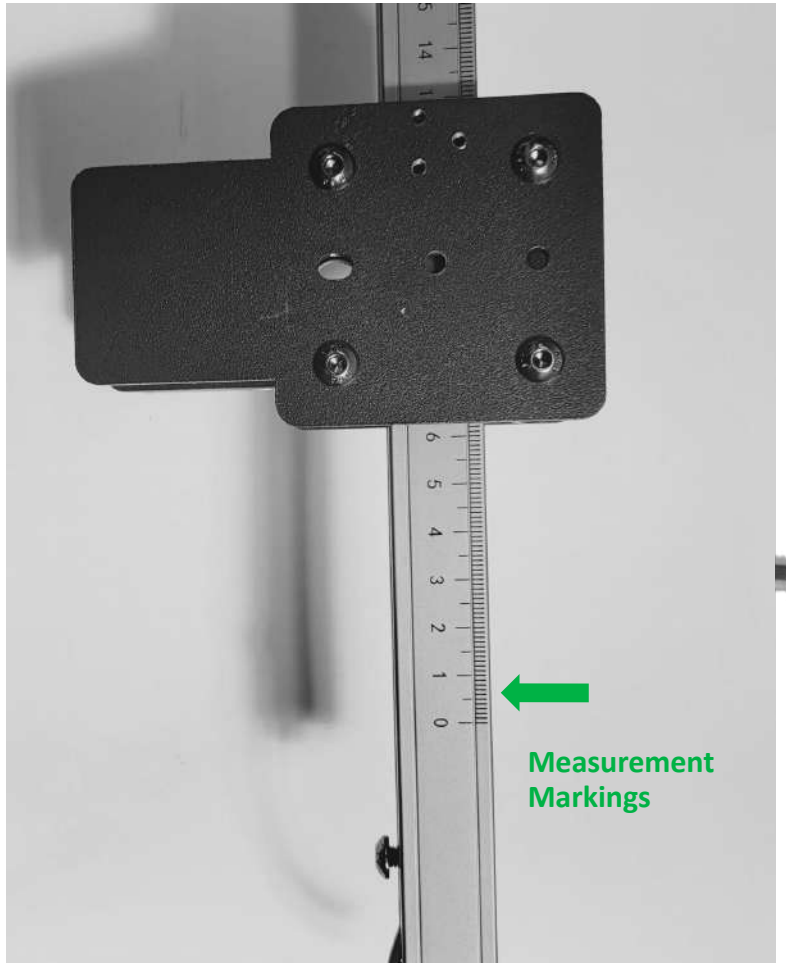
Step 6

Parts Required:

- ➔ Left Motor Assembly
- ➔ Left Side Rail

Slide the Left Motor Assembly onto the Left Side Rail as shown - note the orientation of the measurement markings towards the inside of the machine frame.

If the assembly is loose, use the supplied wrench and hex key to adjust the inner rollers as shown.



Roller Adjustment Detail

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Part 2 Mechanical Installation

Step 7

Parts Required:

- ➔ Left Side Rail with Left Motor Assembly
- ➔ Timing Belt
- ➔ 2 Timing Belt Clamp Screws

Route Timing Belt (with teeth down) OVER the synchronous wheel on the Y axis stepper motor, and UNDER the rollers, as shown.

Secure belt at both ends of the rail as shown - do not overtighten and twist belt.

Belt should be taut, but still allow free movement on the motor assembly.

Set Left Side Rail Assembly aside until Frame Assembly steps.

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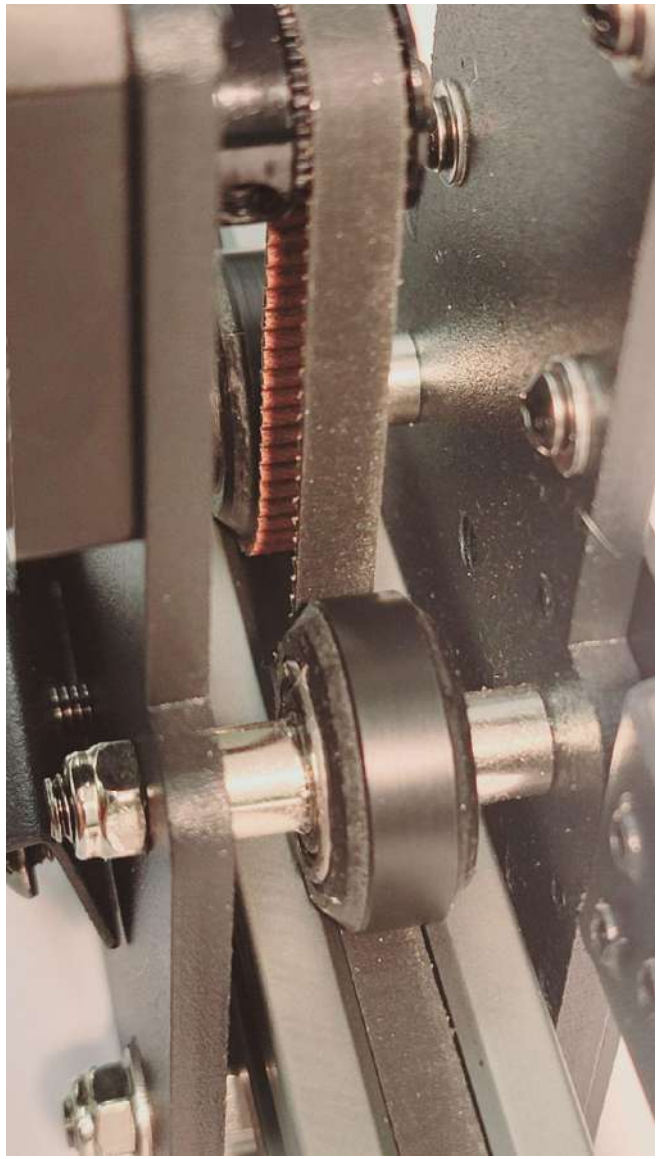
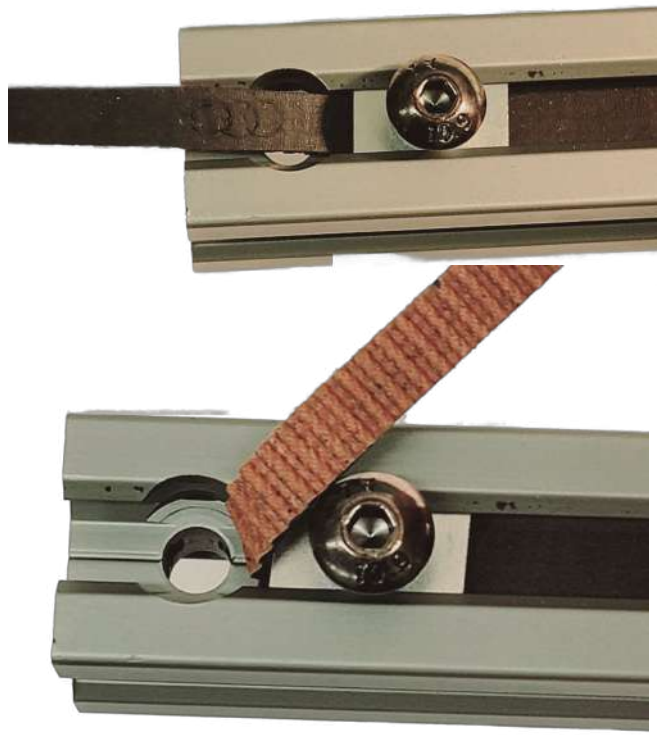




Ensure screw hole is accessible

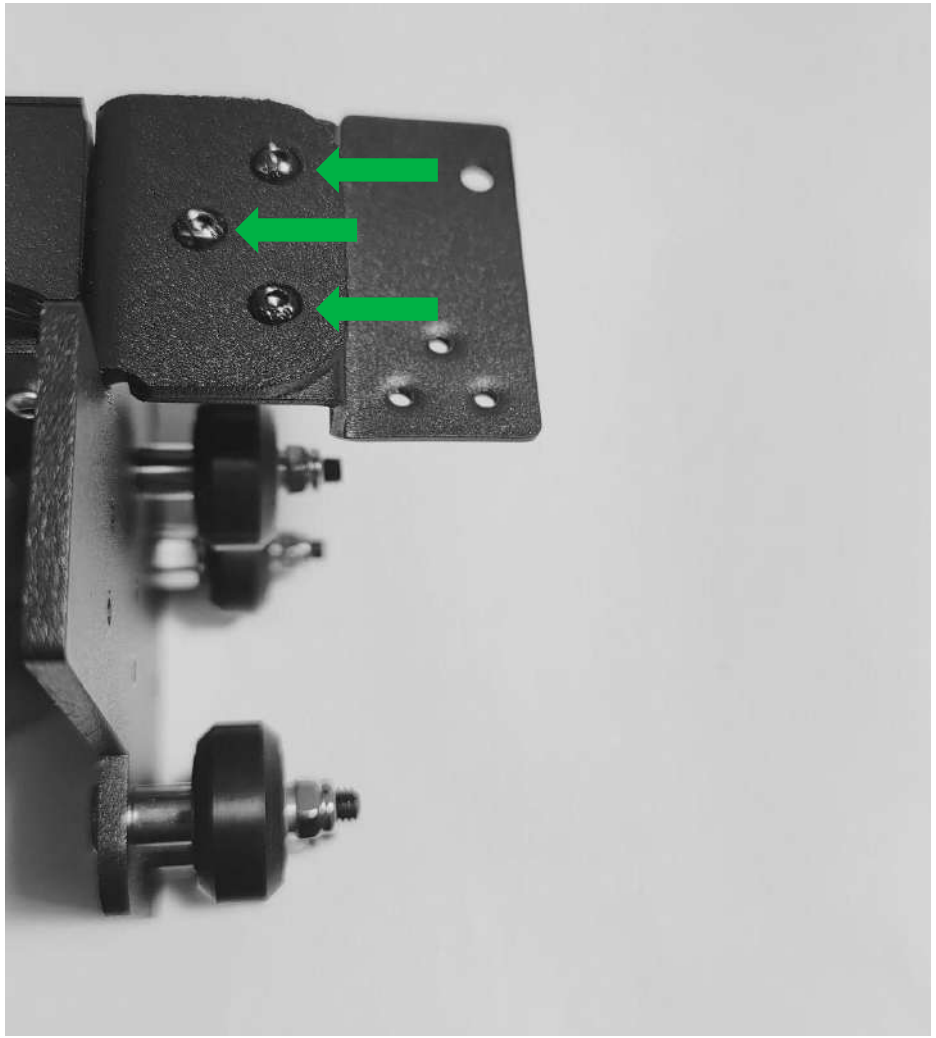
Part 2 Mechanical Installation

Step 8 1/2

Parts Required:

- ➔ 7 M3x6 Screws
- ➔ X Gantry Assembly
- ➔ Z Axis Assembly
- ➔ Drag Chain Bracket - X Axis

Using 3 of the M3x6 Screws, attach Drag Chain Bracket - X Axis to the X Gantry Assembly as shown.



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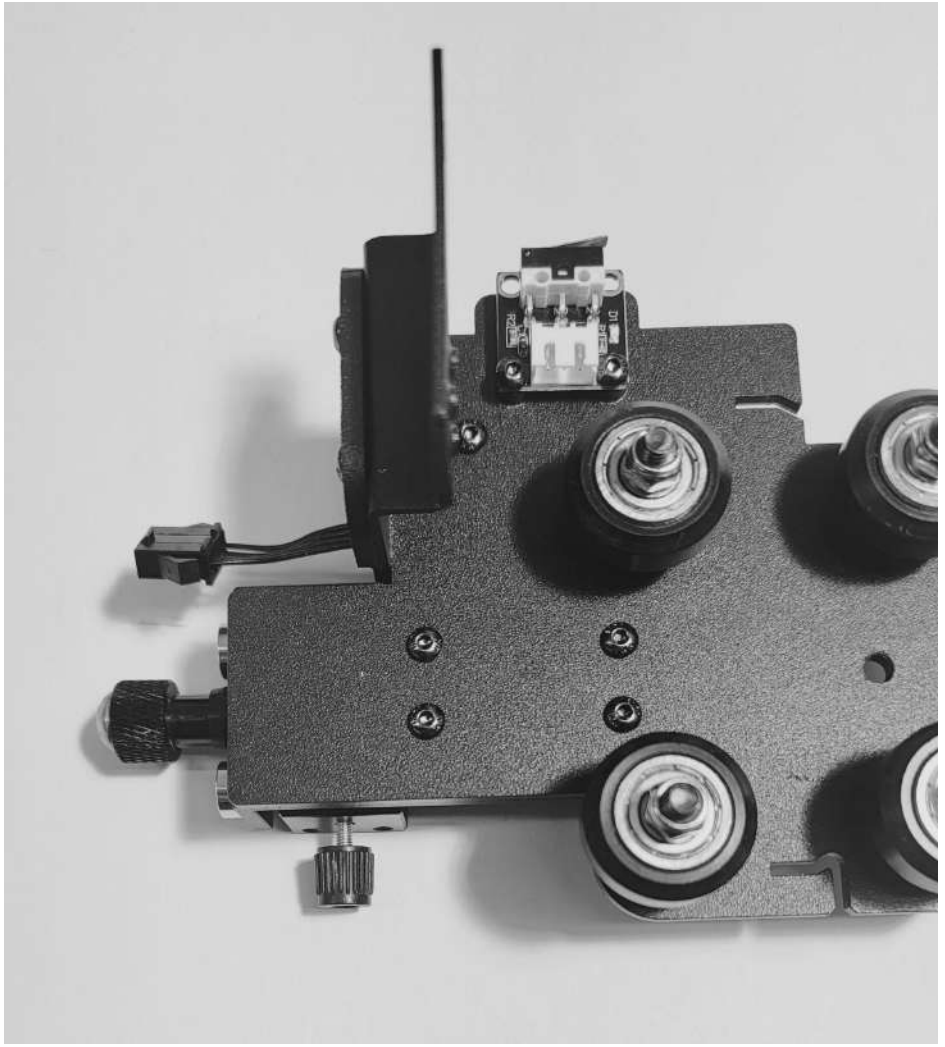
Part 2 Mechanical Installation

Step 8$_{2/2}$

Using 4 of the M3x6 Screws, attach the Z Axis Assembly to the X Gantry Assembly as shown.



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Part 2 Mechanical Installation

Step 9

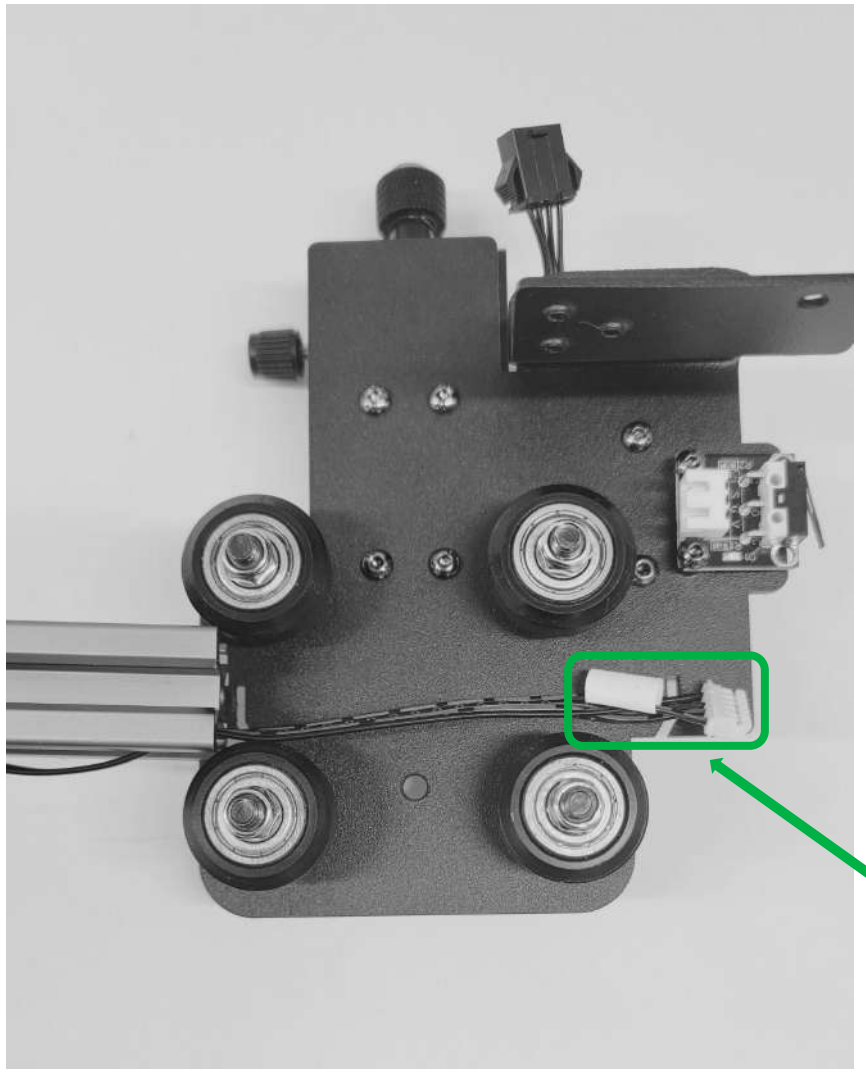
Parts Required:

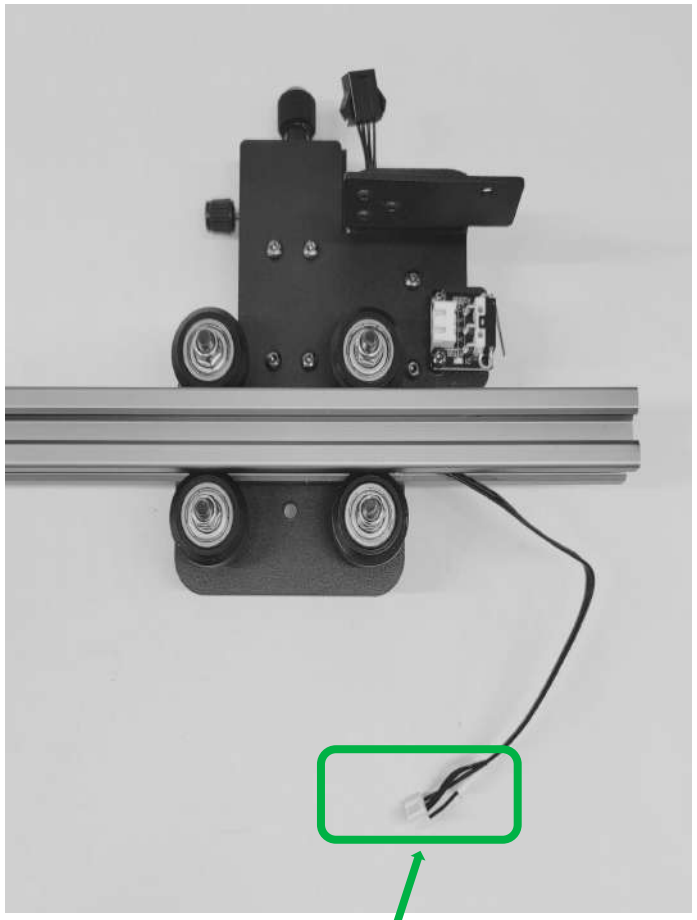
- ➔ X Gantry Assembly
- ➔ X Axis Gantry Rail

Slide the X Gantry Assembly onto the X Axis Gantry Rail as shown - note the orientation of the wiring to avoid pinching wires in the rollers.

NOTE - The 6-pin wire connector end of the rail needs to be oriented to the left of the machine.

Set X Rail Assembly aside until Frame Assembly steps.





6-pin wire connector - NOT THE 4-pin wire connector!

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Part 2 Mechanical Installation

Step 10

Parts Required:

- ➔ Right Side Rail (from Step 5)
- ➔ Left Side Rail (from Step 7)
- ➔ Front and Rear Frame Rails
- ➔ 4 M5x20 Screws

Assemble Frame as shown; using M5x20 Screws from the OUTSIDE of the Right and Left Side Rails into the ENDS of the Front and Rear Frame Rails.

Ensure all measurement markings are oriented to the INSIDE of the frame.

Do NOT completely tighten these screws yet!

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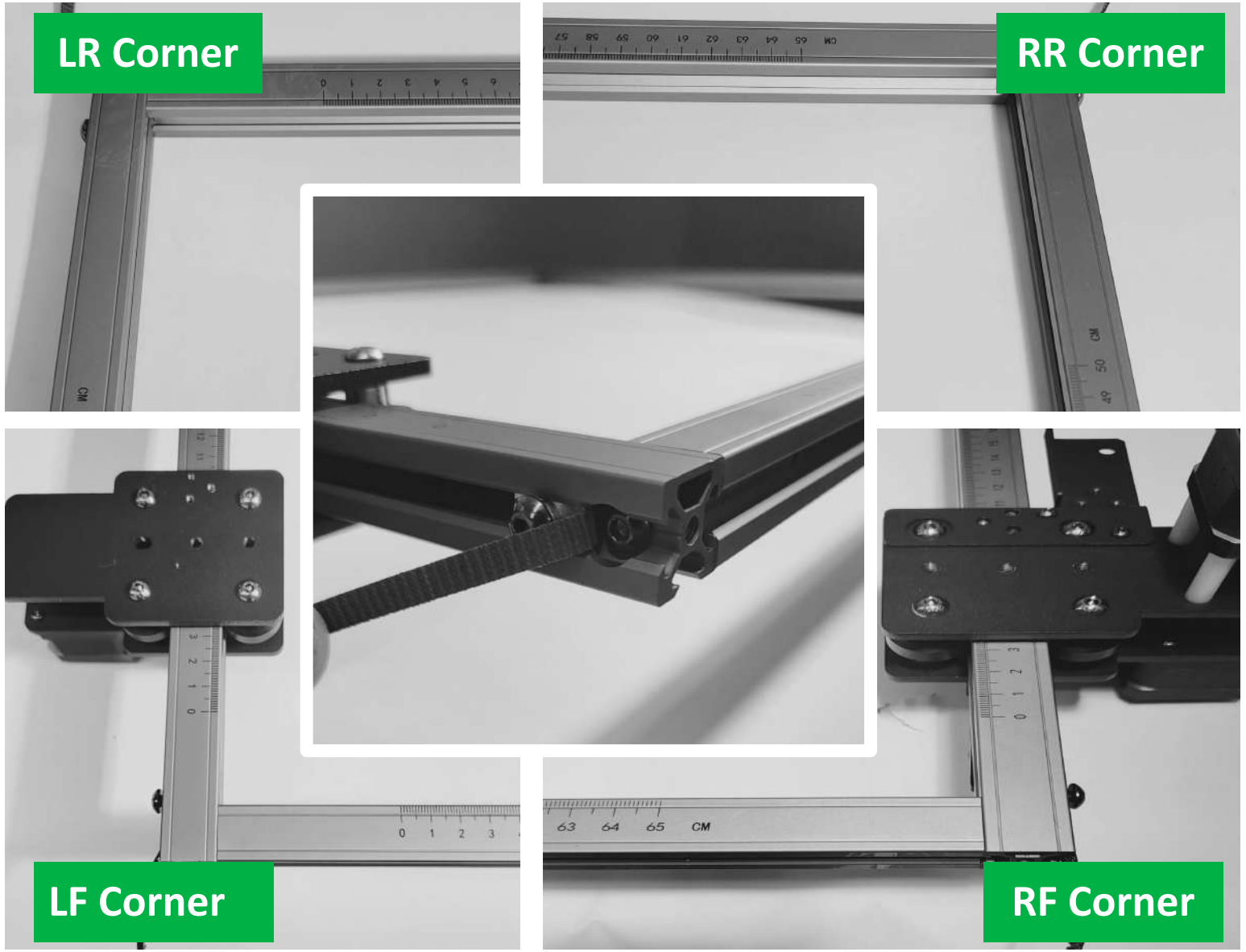


Part 2 Mechanical Installation

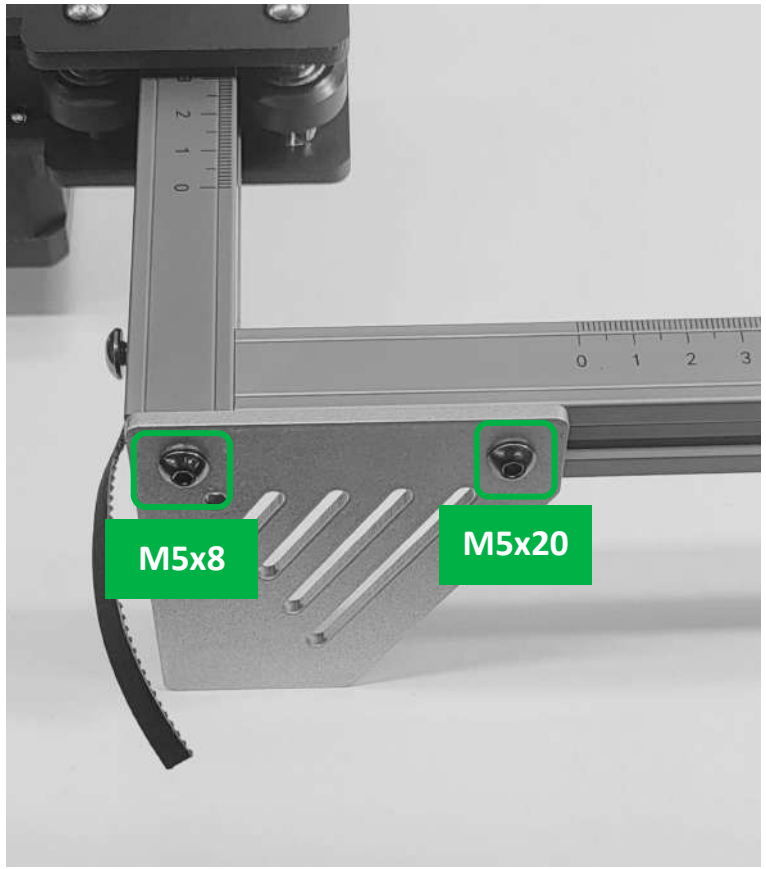
Step 11

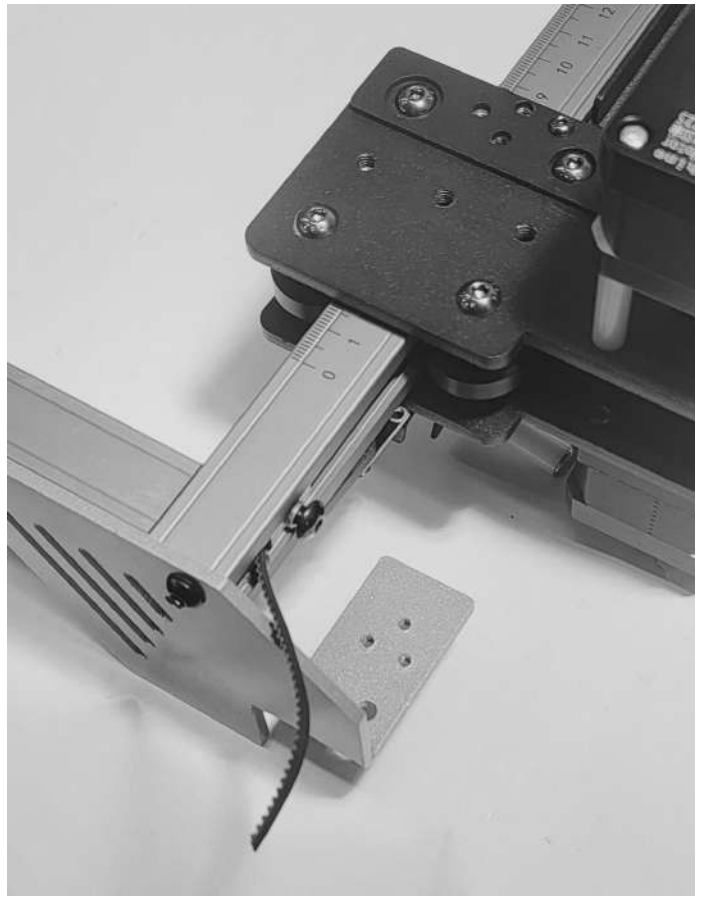
Parts Required:

- ➔ Frame Assembly
- ➔ Frame Foot (Right Front)
- ➔ 3 Frame Feet
- ➔ 4 M5x8 Screws
- ➔ 4 M5x20 Screws

Assemble Frame Feet to Frame Assembly as shown; using M5x8 Screws in the ENDS Right and Left Side Rails, and M5x20 Screws into the holes located in the Front and Rear Frame Rails.

Once these are tight; tighten the frame screws from the previous step.





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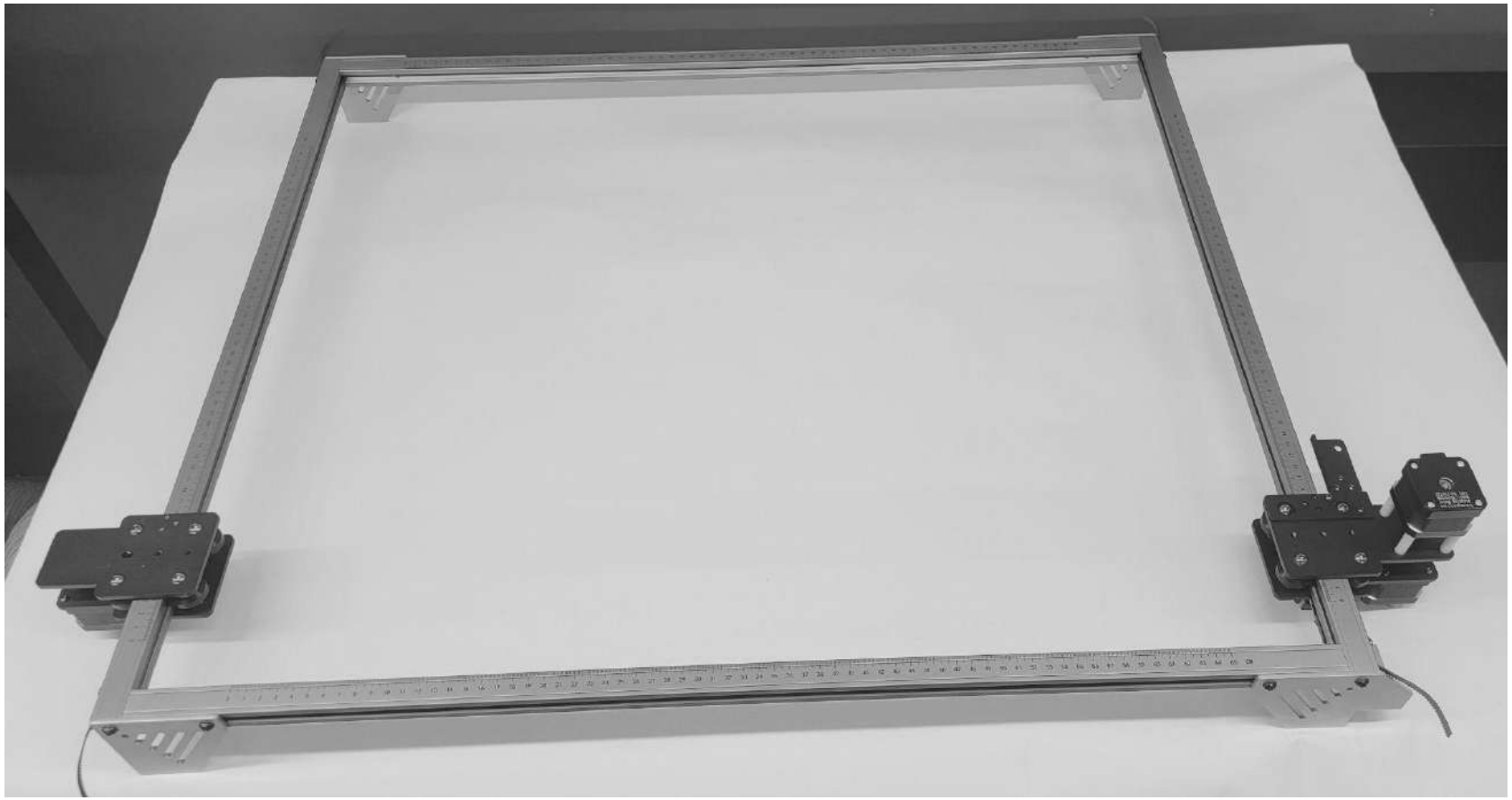
Part 2 Mechanical Installation

Progress Check -
Your assembly should now look like this - if it does not, verify the previous assembly steps!



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Part 2 Mechanical Installation

Step 12

Parts Required:

- ➔ Frame Assembly
- ➔ X Axis Gantry Rail Assembly (from Step 9)
- ➔ 5 M5x18 Screws

With the Z Axis Assembly facing the front of the machine, place the X Axis Gantry Rail Assembly on top of the Right and Left Motor Assemblies.

Attach with 3 M5x18 Screws to the Right Motor Assembly, and 1 M5x18 Screw to the Left Motor Assembly, as shown.

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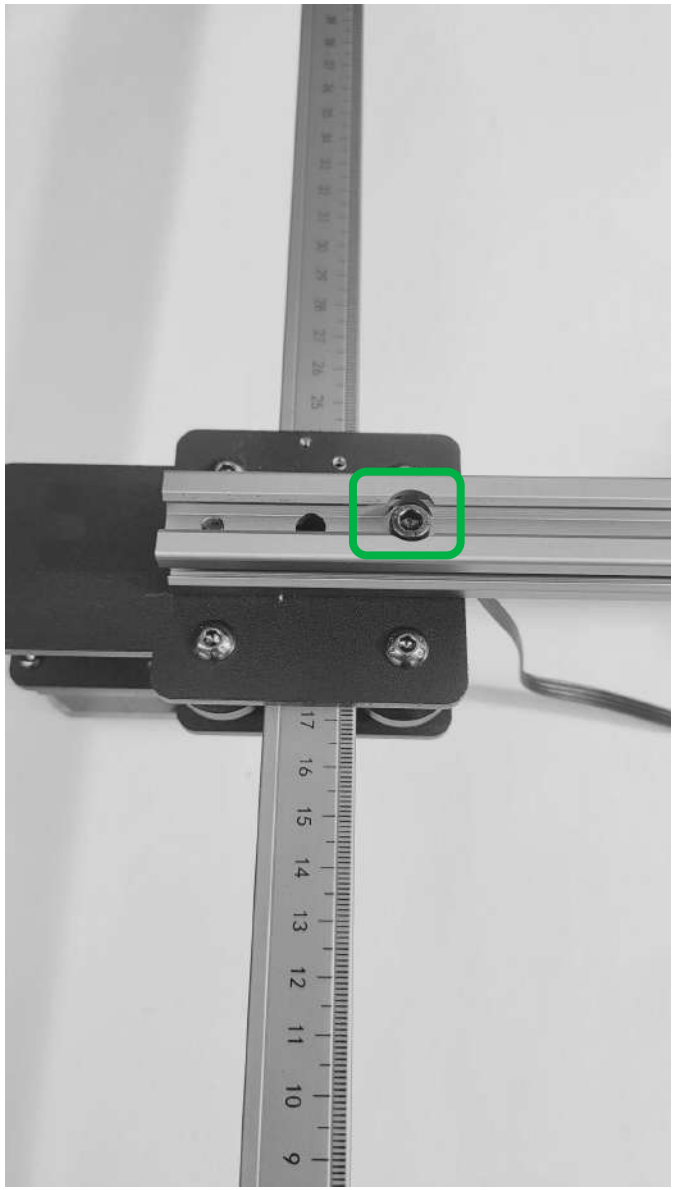
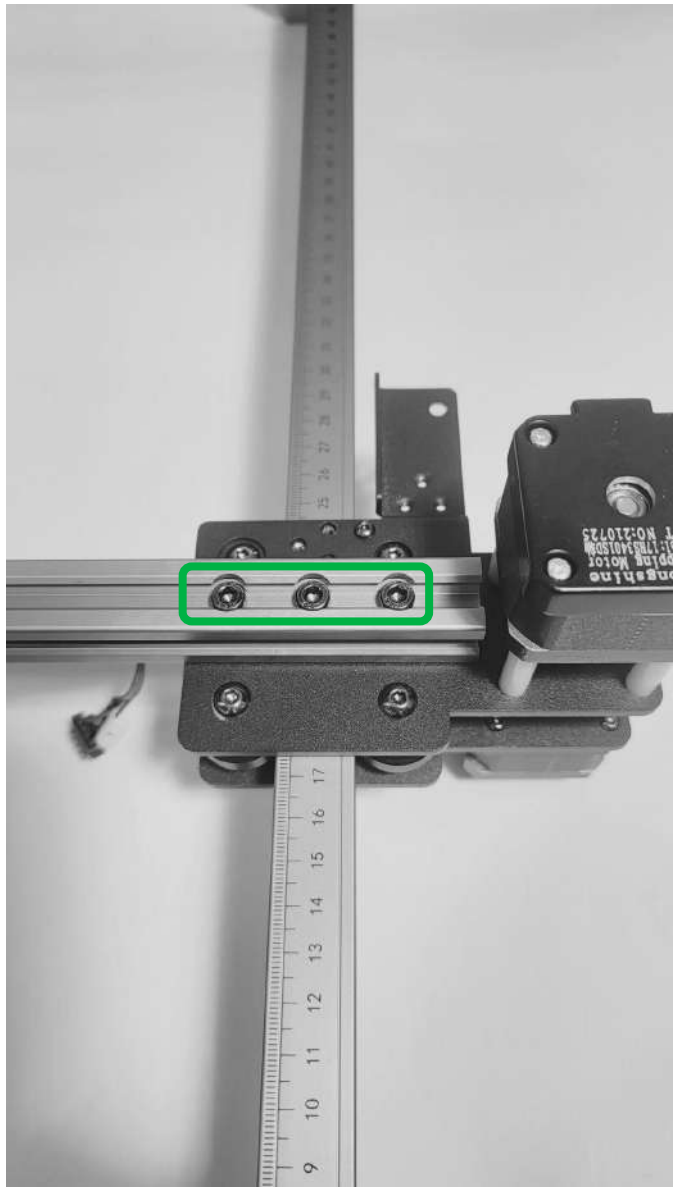




Part 2 Mechanical Installation

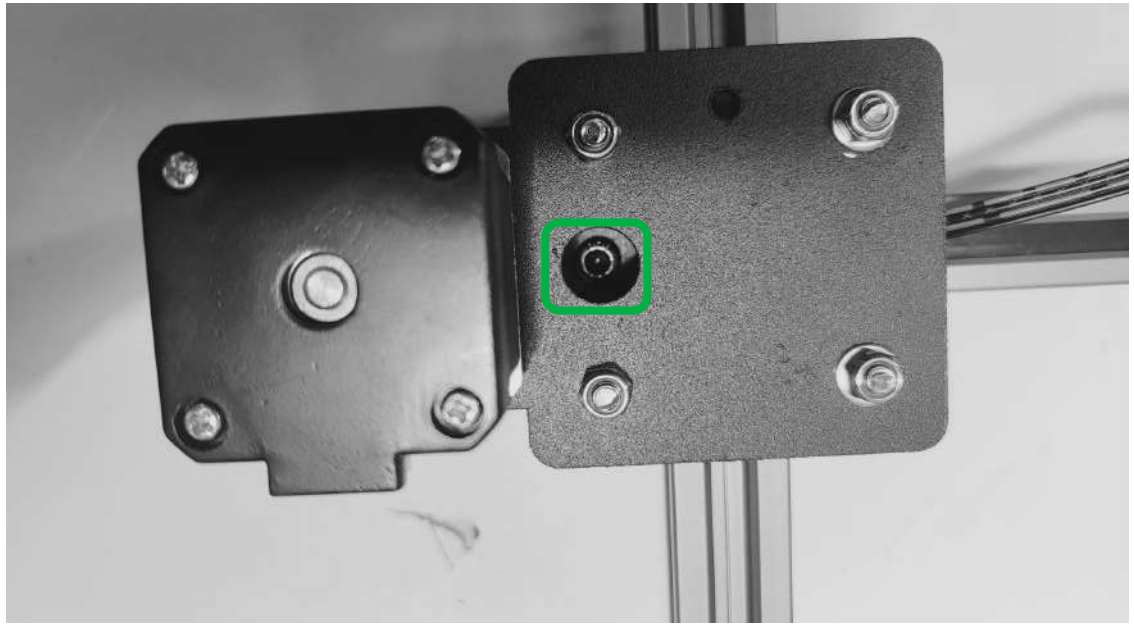
Step 13

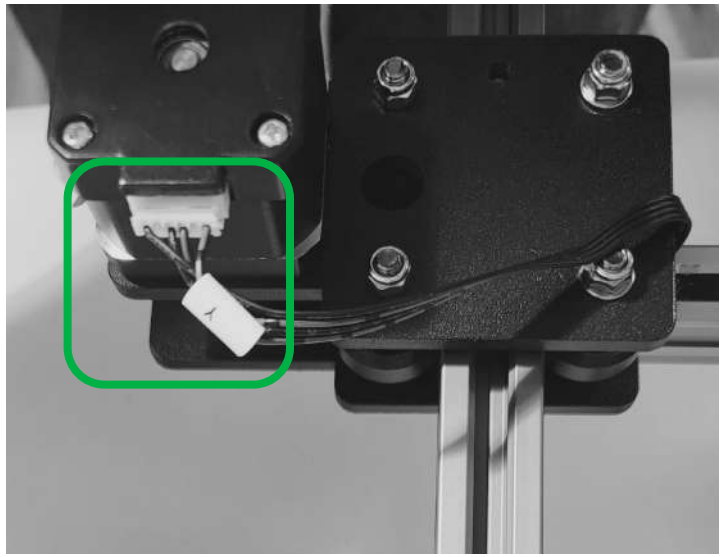
CAREFULLY turn the machine upside down.

Insert 1 M5x18 Screw from the underside of the Left Motor Assembly, securing the X Axis Gantry Assembly.

Plug the 6-Pin connector into the stepper motor on the Left Motor Assembly.

CAREFULLY turn the machine back right-side up.





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Part 2 Mechanical Installation

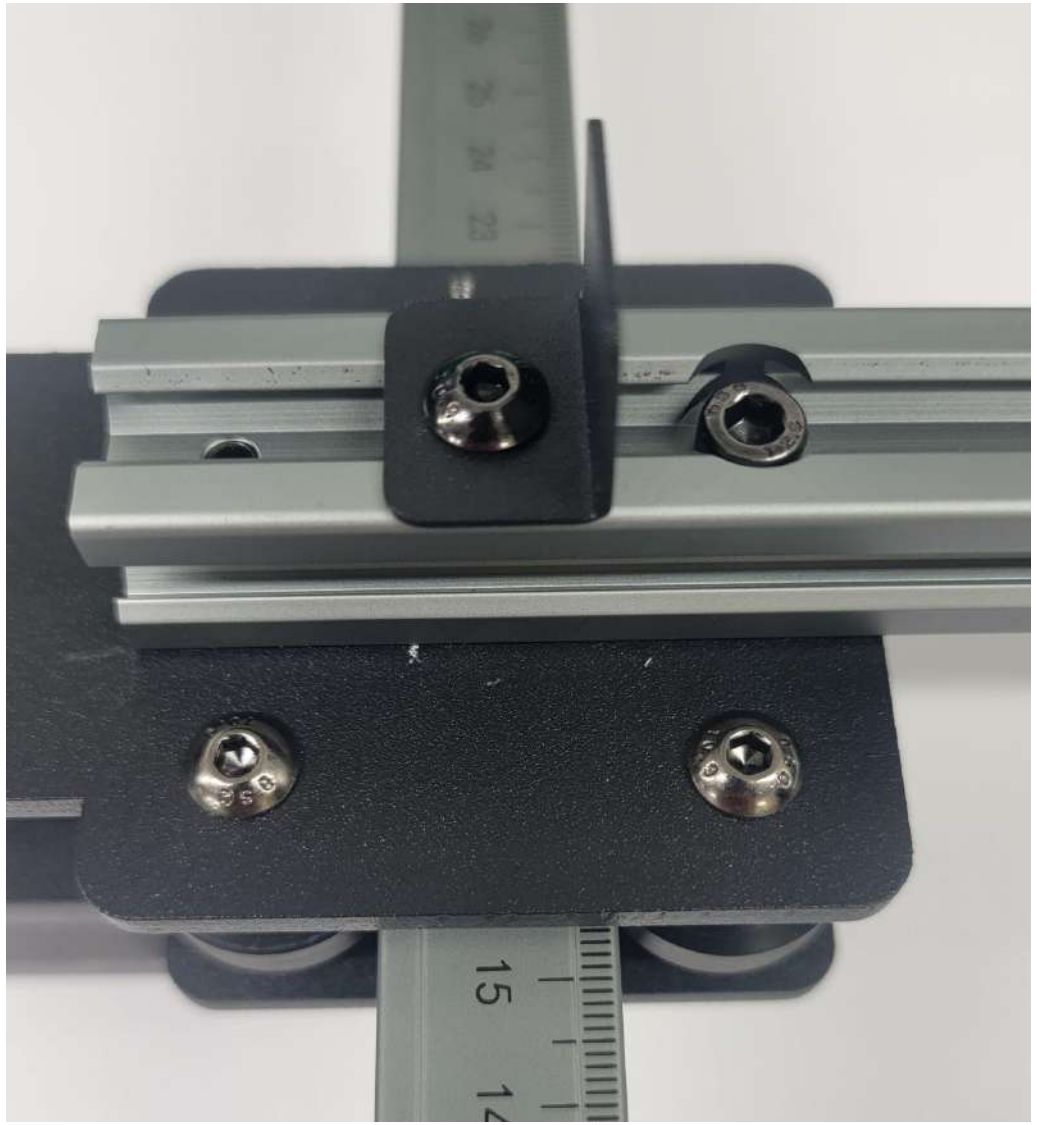
Step 14

Parts Required:

- ➔ Limit Switch Touch Plate
- ➔ 1 M5x25 Screw

Install the Limit Switch Touch Plate onto the X Axis Gantry Rail, using the center hole on the Left Motor Assembly, as shown.

The vertical part of the Limit Switch Touch Plate should be facing the inside of the frame.



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Part 2 Mechanical Installation

Step 15

Parts Required:

➔ X Axis Belt Tensioner

The mounting screws for the X Axis Belt Tensioner are pre installed.

Loosen the mounting screws slightly, and insert the Belt Tensioner on the left end of the X Axis Gantry Rail. The Belt Tensioner will fit against the Limit Switch Plate as shown.

Tighten the mounting screws to secure the tensioner to the rail.

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Part 2 Mechanical Installation

Step 16 1/2

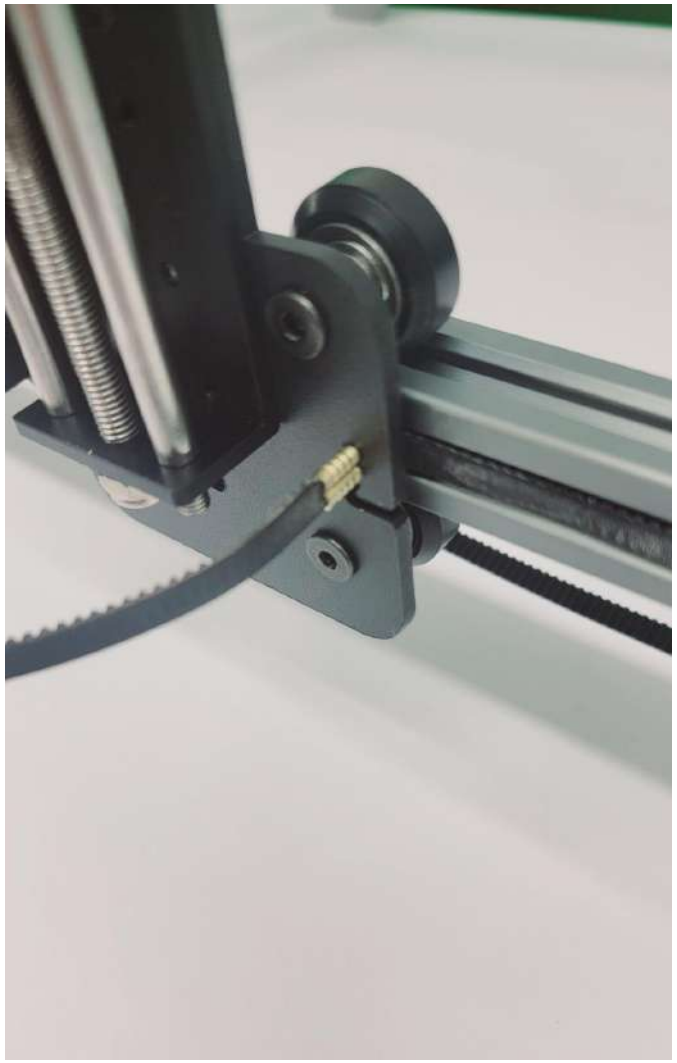
Parts Required:

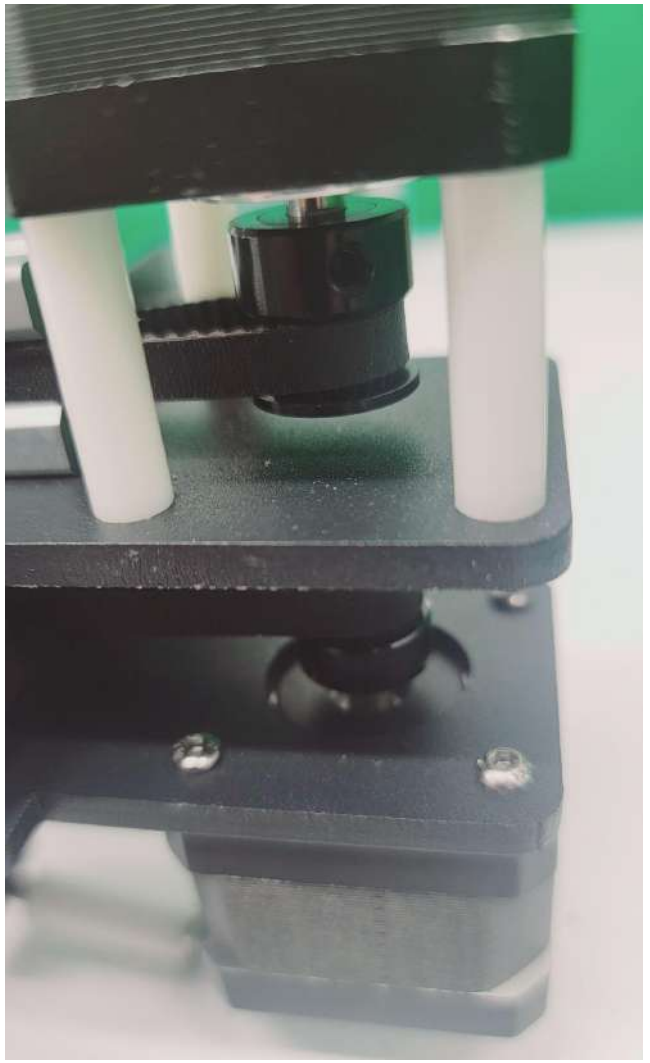
➔ Timing Belt - X Axis

Starting at the right side of the X Axis Gantry -

Slide one end of the Timing Belt into the slot on the X Axis Gantry.

Route the Timing Belt to the X Axis motor on the Right Motor Assembly, and around the synchronous wheel of the motor.





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Part 2 Mechanical Installation

Step 16$_{2/2}$

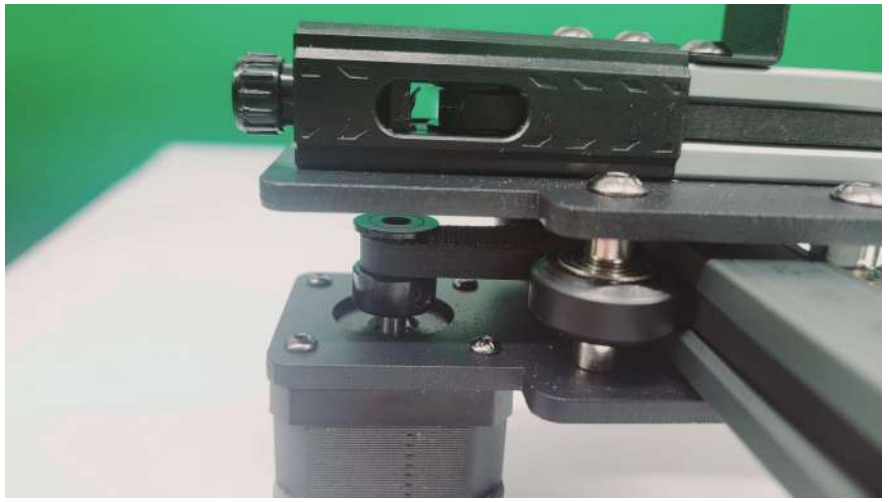
Parts Required:

➔ Timing Belt - X Axis

Route the Timing Belt along the back of the X Axis Gantry Rail, and through the Belt Tensioner - the belt must go on the inside of the Belt Tensioner housing, as shown.

Slide the other end of the Timing Belt into the slot on the left side of the X Axis Gantry.

Tighten the belt using the knob on the end of the Belt Tensioner - allowing smooth movement of the X Axis Gantry



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Part 2 Mechanical Installation

Step 17

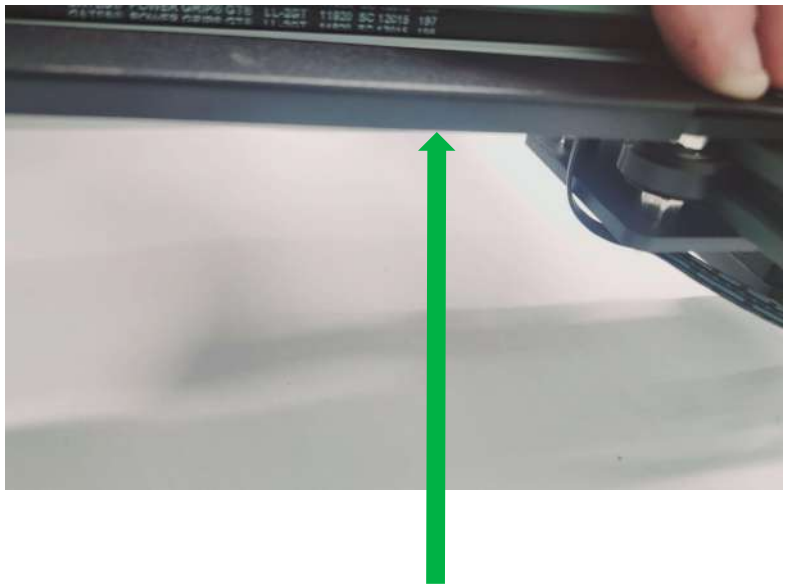
Parts Required:

- ➔ Drag Chain Support Rail
- ➔ 3 M3x6 Screws

Place the Drag Chain Support Rail on the rear side of the X Axis Rail; with the flat side of the support rail facing up.

Using 3 M3x6 Screws, attach the Drag Chain Support Rail to the Left Motor Assembly, as shown.

Do NOT install any screws into the Right Motor Assembly at this time.



Flat side UP; ridge facing DOWN

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Part 2 Mechanical Installation

Step 18

Parts Required:

- ➔ Control Board (with Wiring and Drag Chain)
- ➔ 2 M5x20 Screws

Place the Control Board in the right front corner of the machine frame.

Route the wiring behind the right front foot, ensuring that the wiring is not “pinched” in between the Control Board and the foot.

Attach the Control Board to the Front Frame Rail with 2 M5x20 Screws

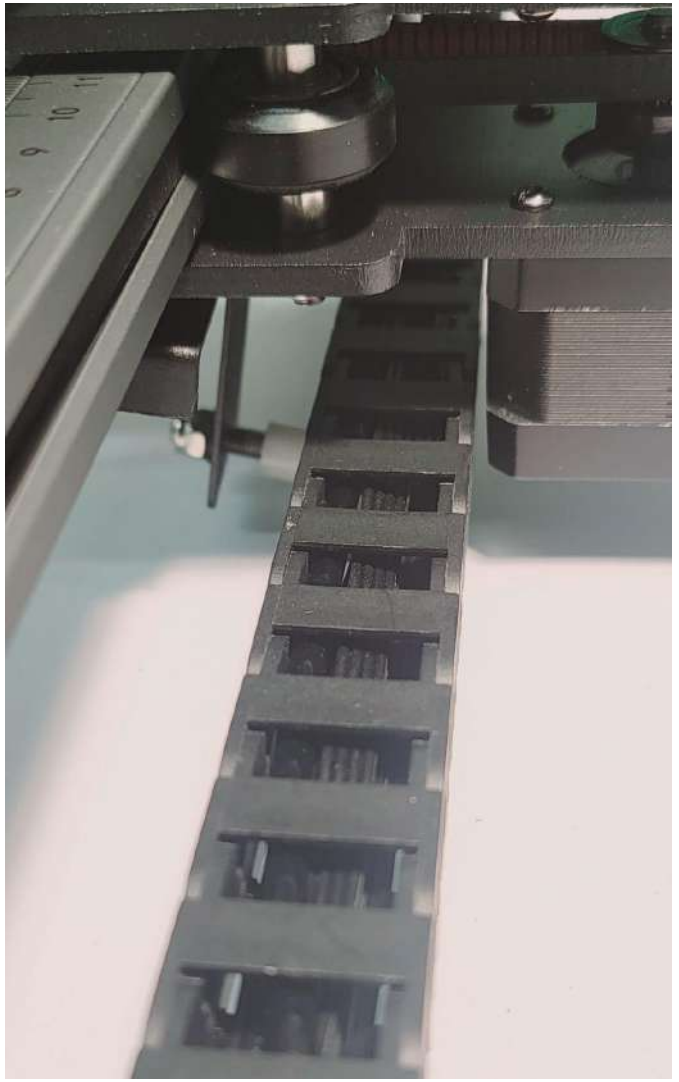
Part 2 Mechanical Installation

Step 19

Route the Drag Chain and wiring along the right side of the machine.

Ensure the Drag Chain is routed OVER the roller on the Drag Chain Support Bracket on the underside of the Right Side Motor Assembly.

At this time, you may tighten the screws holding the Drag Chain Support Bracket to the Right Side Motor Assembly.



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Part 2 Mechanical Installation

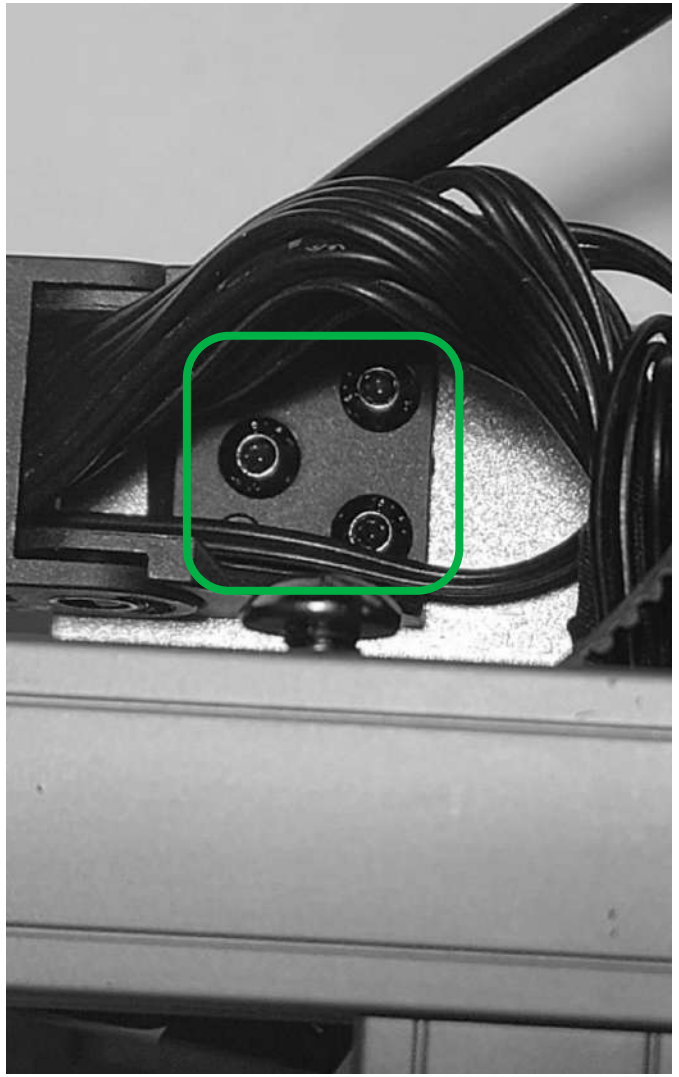
Step 20

Parts Required:

➔ 3 M3x6 Screws

Using 3 M3x6 Screws, attach the Y Axis Drag Chain to the right front Frame Foot, as shown.

Ensure that no wiring is caught under the screws.



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Part 2 Mechanical Installation

Step 21

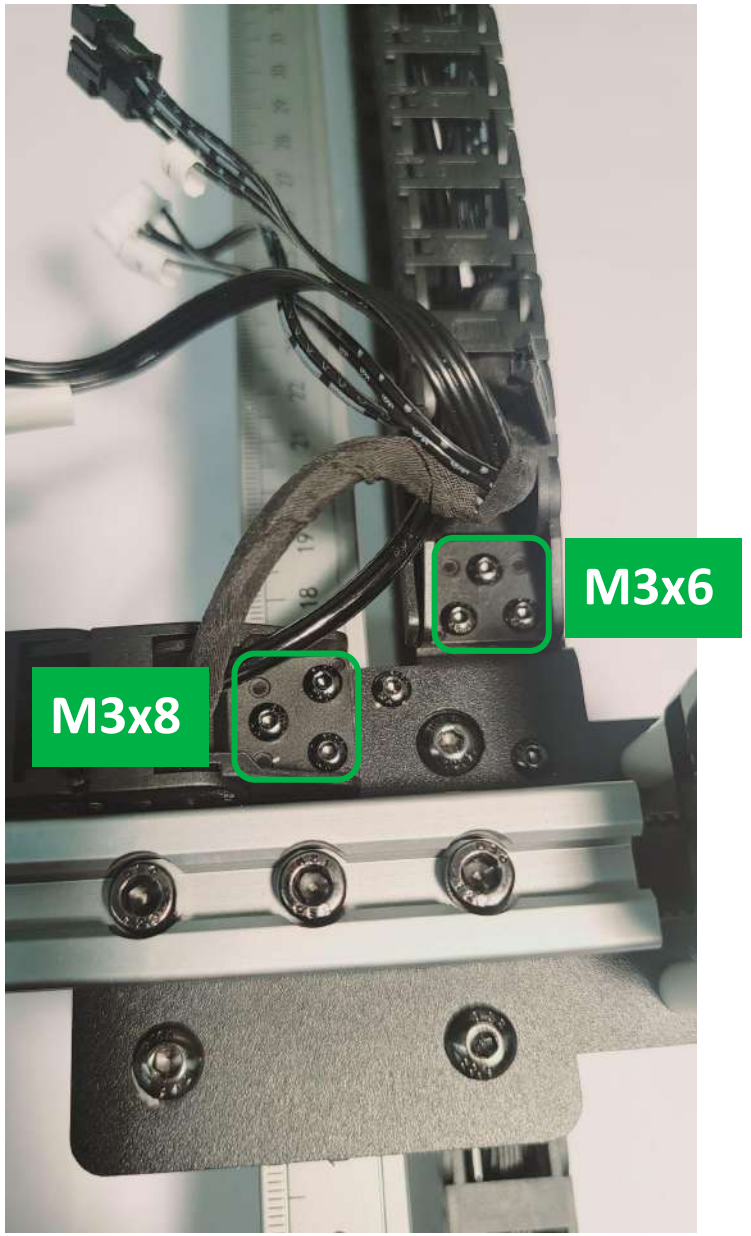
Parts Required:

- ➔ 3 M3x6 Screws
- ➔ 3 M3x8 Screws

Using 3 M3x6 Screws, attach the Y Axis Drag Chain to the Right Motor Assembly, as shown.

Using 3 M3x8 Screws, attach the X Axis Drag Chain to the Right Motor Assembly, as shown.

Ensure that no wiring is caught under the screws.



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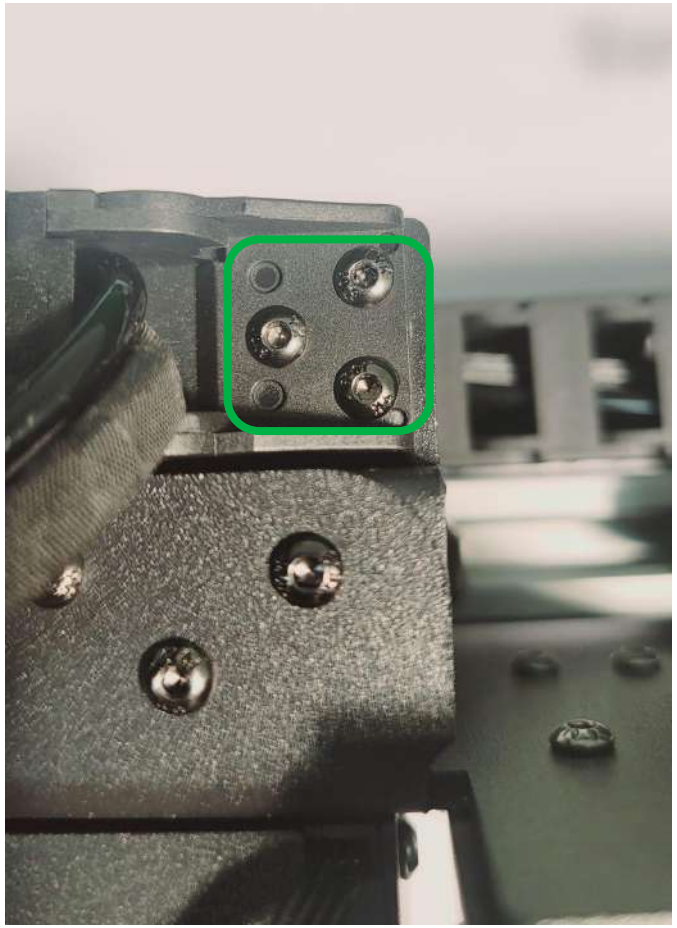
Part 2 Mechanical Installation

Step 22

Parts Required:

➔ 3 M3x6 Screws

Using 3 M3x6 Screws, attach the X Axis Drag Chain to the X Axis Gantry Assembly, as shown.



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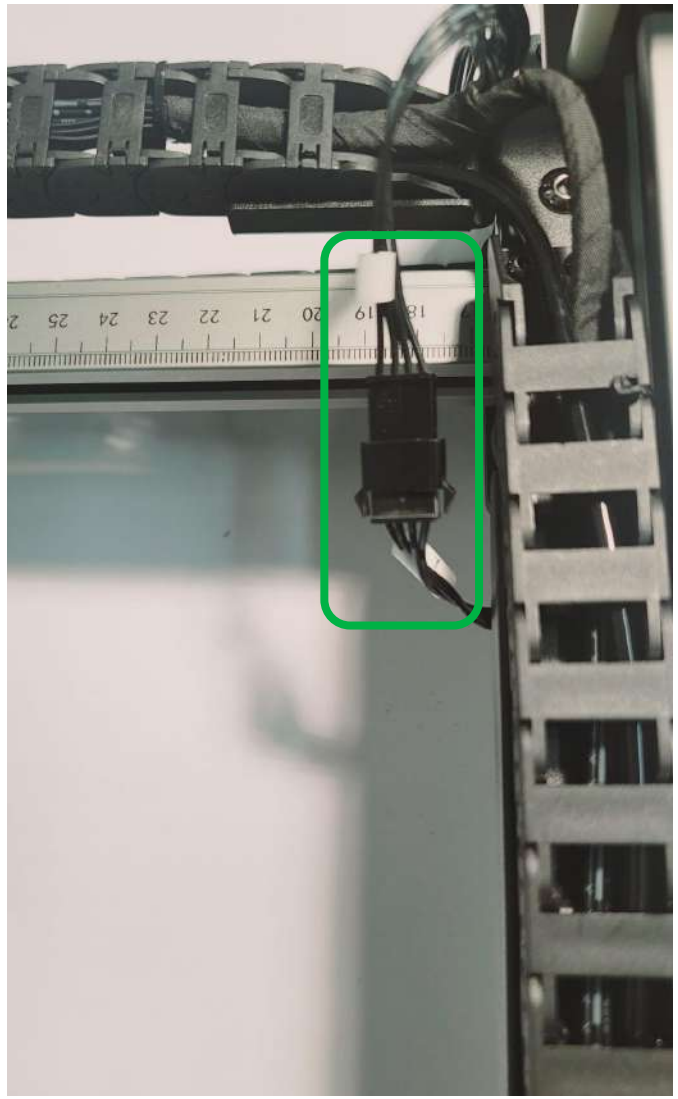
Part 2 Mechanical Installation

Step 23 1/6

Wire Connections -

At the Right Motor Assembly, connect the Y Axis Motor harness which is underneath the X Axis Rail.

Ensure that the wire is routed away from any rollers, using cable ties as needed.



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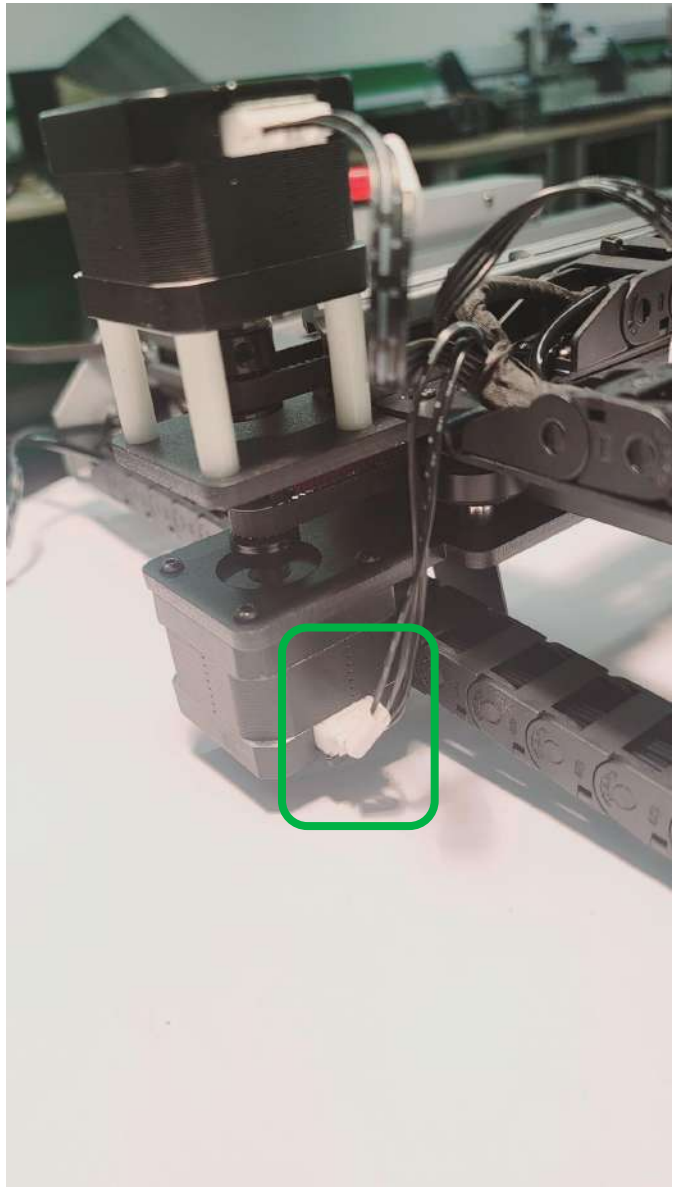
Part 2 Mechanical Installation

Step 23 2/6

Wire Connections -

At the Right Motor Assembly, connect the X Axis Motor (upper motor) and Y Axis Motor (lower motor).

Ensure that the wire is routed away from any rollers, using cable ties as needed.



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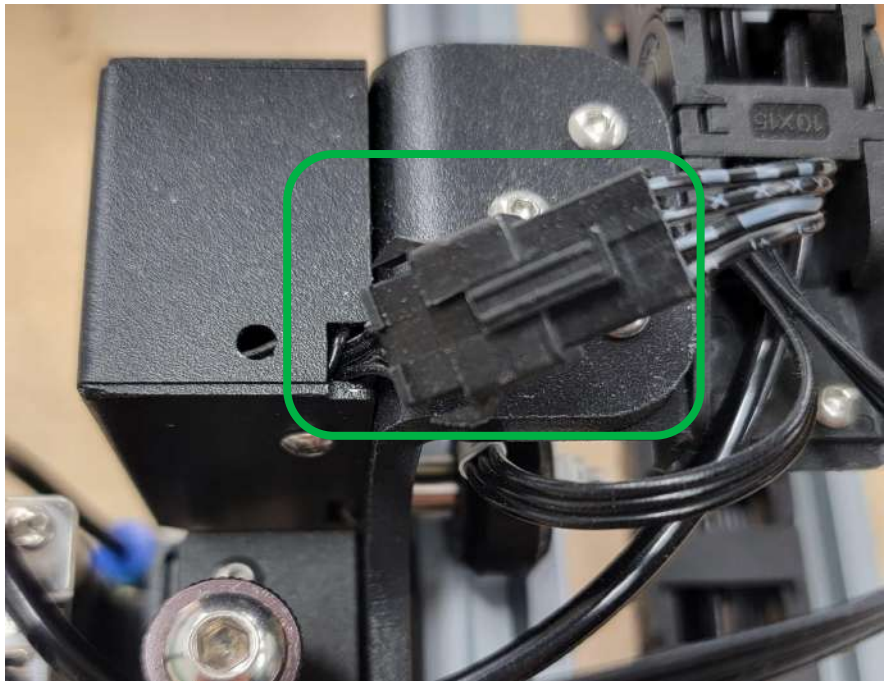
Part 2 Mechanical Installation

Step 23 3/6

Wire Connections -

At the X Axis Gantry, connect the Flame Detector Harness. Ensure that the wire is routed away from any rollers, using cable ties as needed.



NOTE: FLAME DETECTION

The 6550-Pro is equipped with a flame detection sensor, which will stop the machine in the event of fire detected in the engraving area (directly beneath the laser).

In some circumstances, such as direct sunlight, the flame detector may trigger in error. If this is preventing machine operation, the flame sensor may be unplugged to continue.

Important: Unplugging the sensor will remove ALL flame detection capability!

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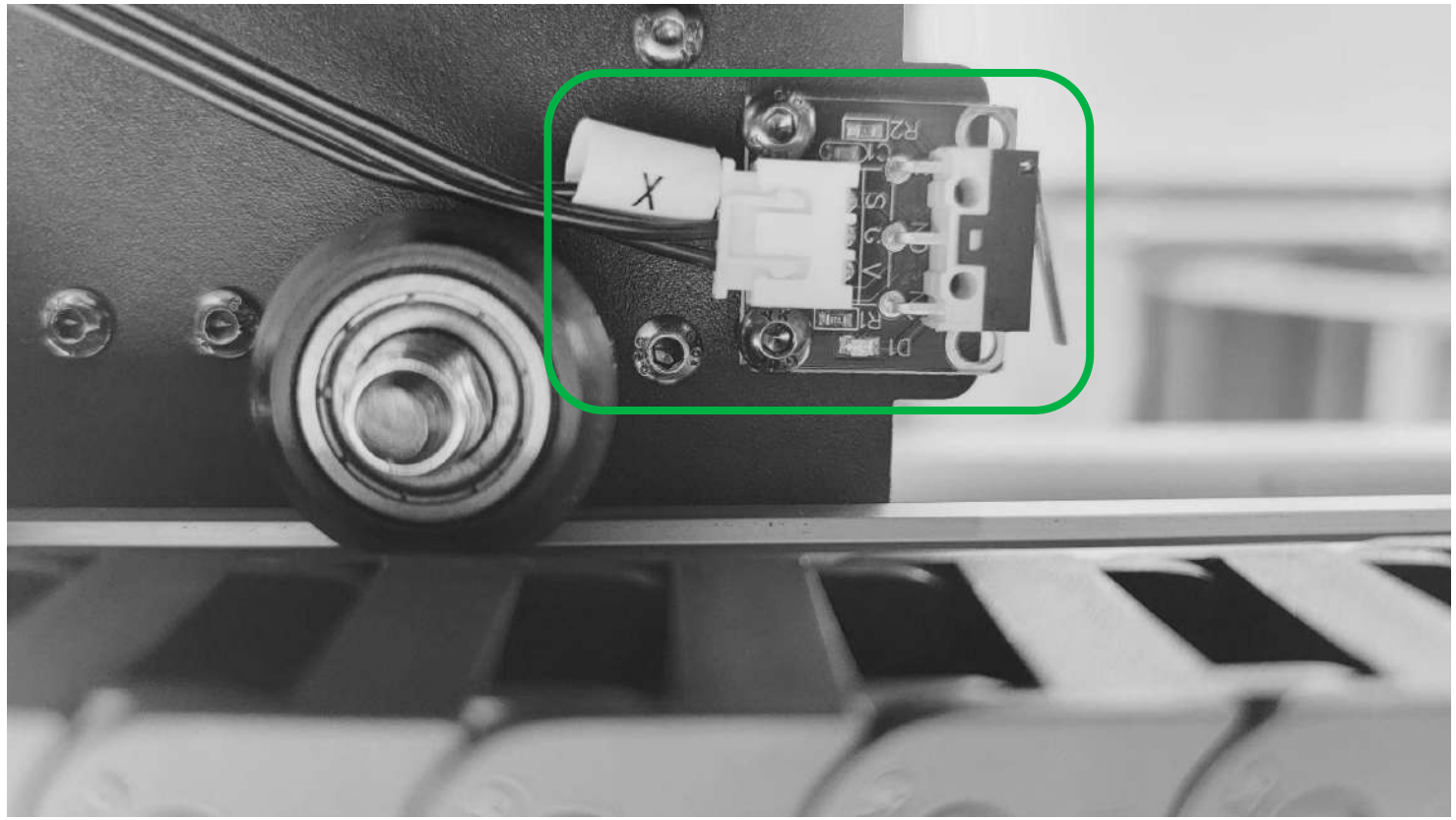
Part 2 Mechanical Installation

Step 23 4/6

Wire Connections -

At the rear of the X Axis Gantry, connect the X Axis Limit Switch harness.

Ensure that the wire is routed away from any rollers, using cable ties as needed.



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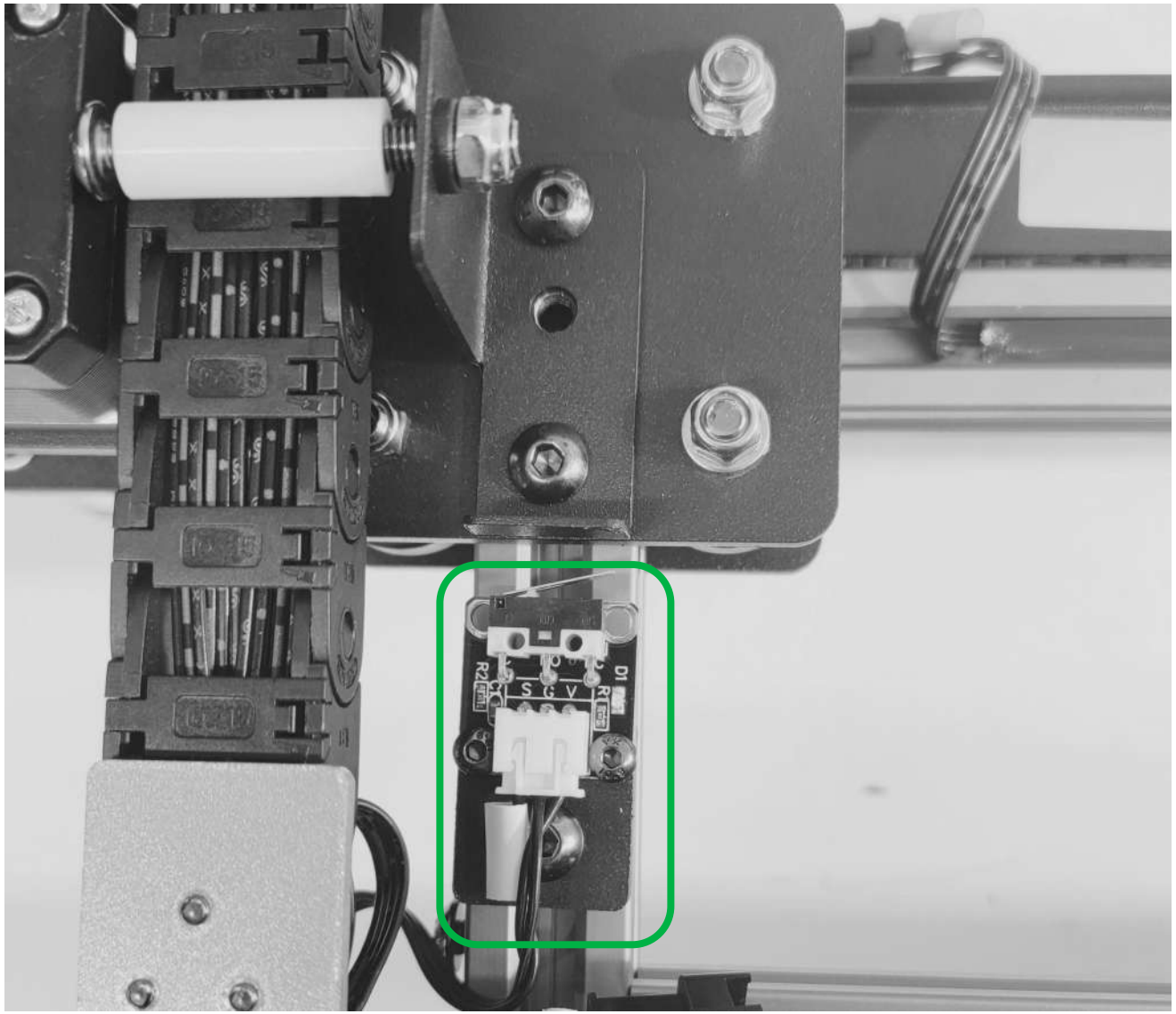
Part 2 Mechanical Installation

Step 23 5/6

Wire Connections -

At the right front corner, connect the Y Axis Limit Switch, which is underneath the Y Axis Rail.

Ensure that the wire is routed away from any rollers, using cable ties as needed.



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Part 2 Mechanical Installation

Step 23 6/6

Wire Connections -

In the front right corner of your machine, the stepper motor cable for your rotary can be plugged in to the provided 4-pin connector.

To activate the rotary connection, use the Rotary switch on the back of the controller.

Switching to the rotary will DISABLE both of the Y Axis motors; be sure to switch back to normal operation when not using the rotary.

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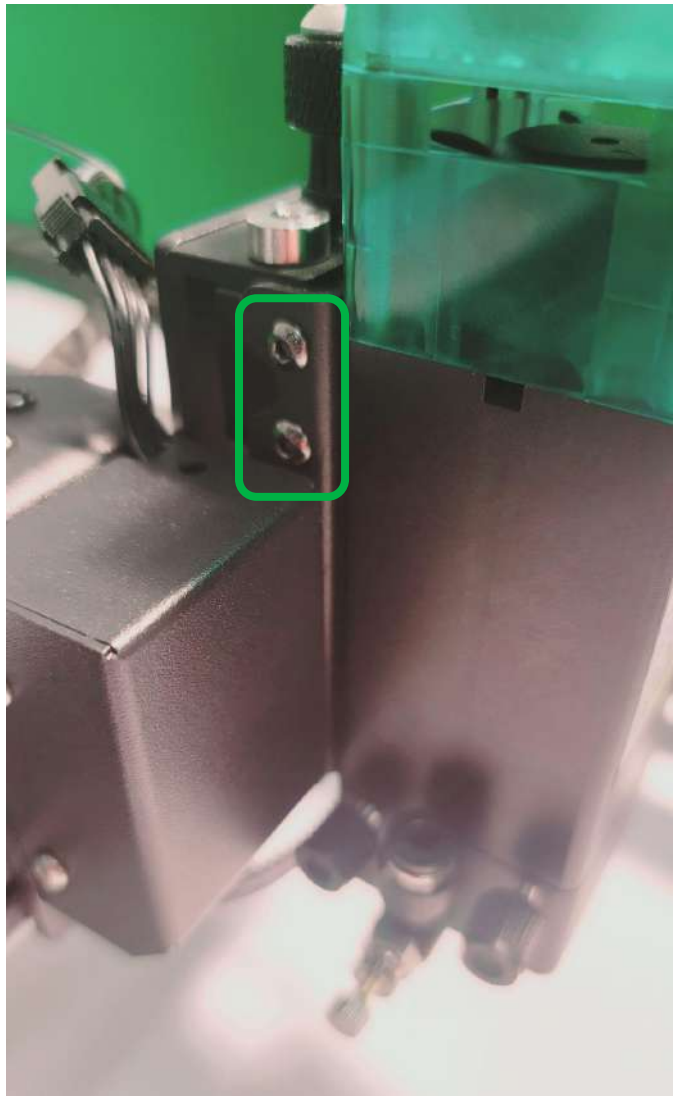
Part 2 Mechanical Installation

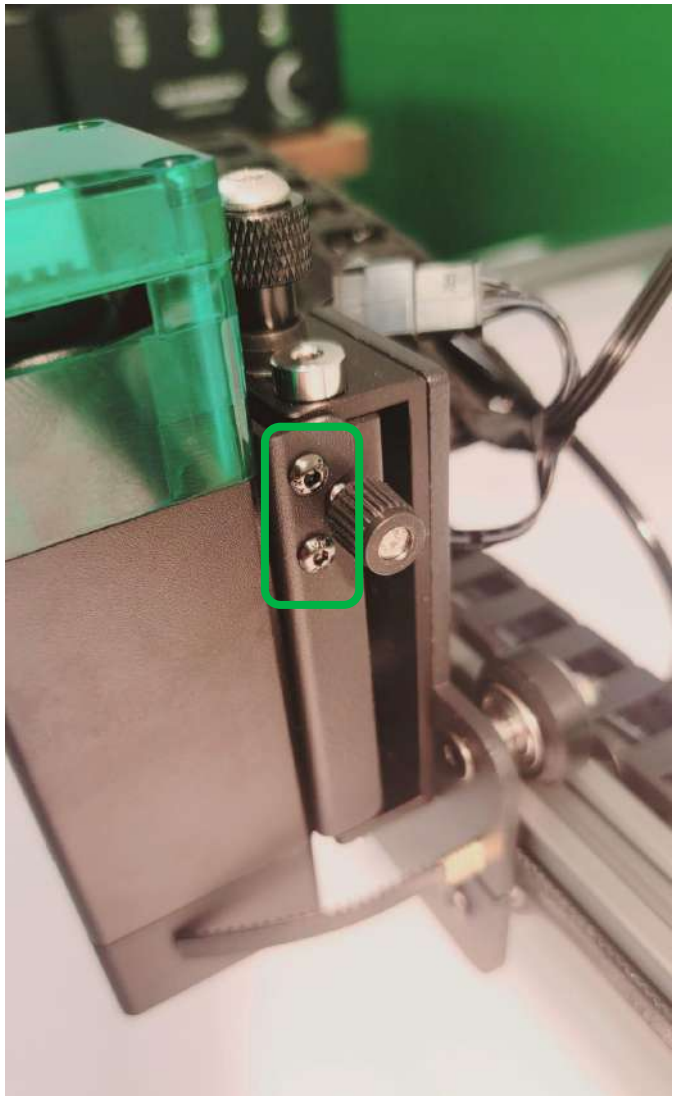
Step 24

Parts Required:

- ➔ Laser Module Assembly
- ➔ 4 M3x8 Screws

Using 4 M3x8 Screws, attach the Laser Module to the Z Axis, as shown.





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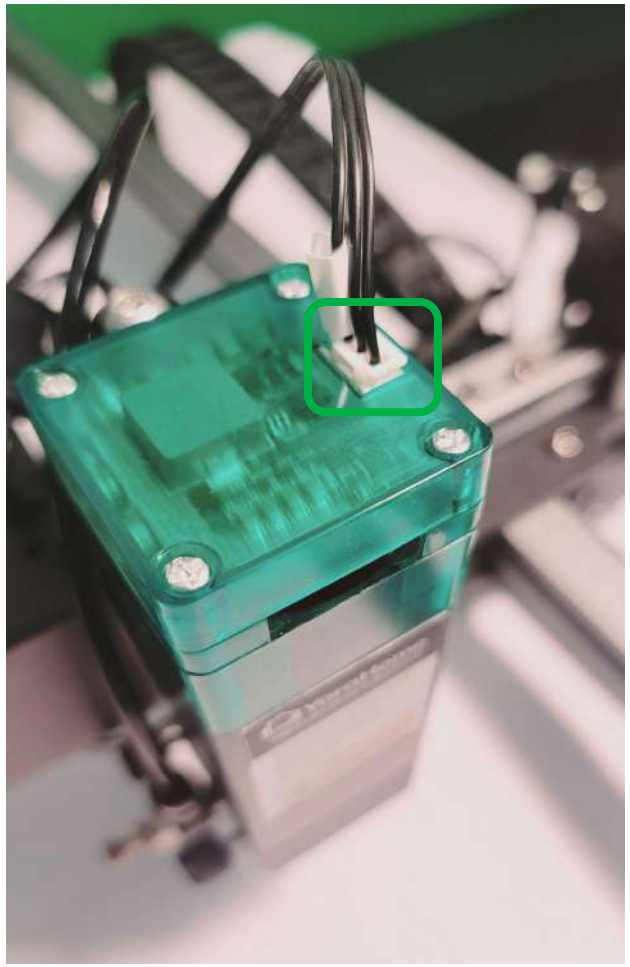
Part 2 Mechanical Installation

Step 25

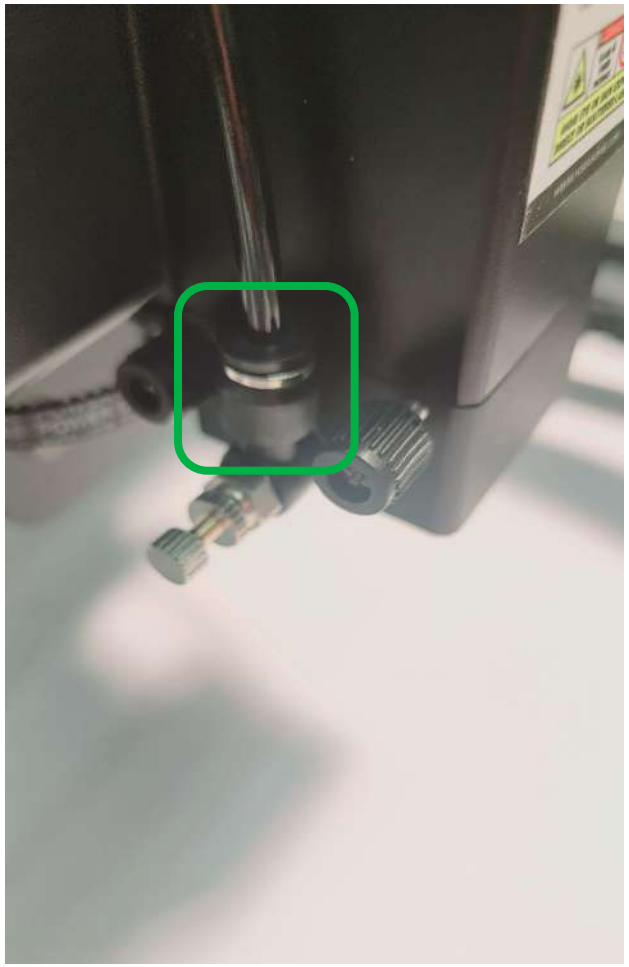
Connect the Laser Module wire harness to the top of the laser module.

Connect the Air Assist Tubing to the fitting on the bottom left of the laser module; this connection simply pushes in place.

Laser Module Connection



Air Assist Connection



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Part 2 Mechanical Installation

Step 26

Parts Required:

- ➔ Laser Height Gauge Holder
- ➔ 2 M5x20 Screws

Using 2 M5x20 Screws, attach the Laser Height Gauge Holder to the front left corner of the frame, as shown.

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Part 2 Mechanical Installation

Step 26

Parts Required:

- ➔ Air Pump
- ➔ Air Pump Power Supply

Attach the small length of tubing with the adapter fitting to the outlet of the Air Pump.

Connect the Air Assist tubing from the front right corner of the machine to the outlet port of the Air Pump.

This is the same push connect fitting as used on the laser module.

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Part 2 Mechanical Installation

Controller Information

The following controls/ports are on the controller housing:

Power: for 24VDC power supply
Connect: USB to computer
Memory Card: not used at this time
Power Switch: turn machine on/off
Estop - Emergency Stop: latches in safe position
Warning: indicates flame detection has been initiated
Offline Control (future use): will permit use of an offline controller module for machine operation.

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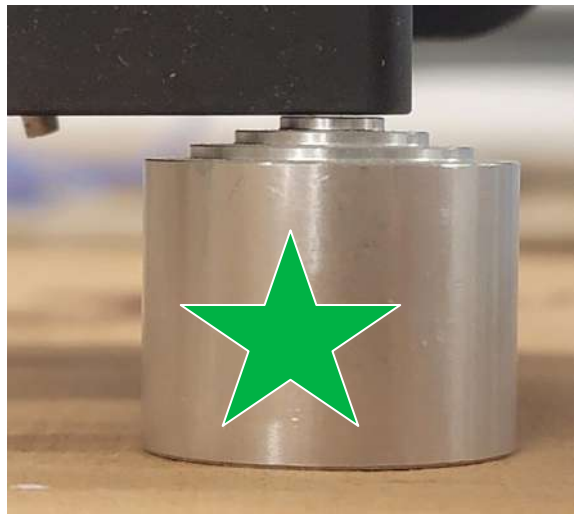
Part 2 Mechanical Installation

Laser Focus Adjustment

For proper laser operation, the focal height must be set from the work surface.

Using the provided Laser Height Guide, adjust the height of the laser using the Z-Axis thumbscrew; setting the distance between the work surface and the bottom of the laser housing. The magnetic shield must be removed to set the height.

Do NOT set the height to the air assist outlet nozzle or the shield; this will result in poor engraving quality!



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Part 2 Mechanical Installation

Feet Adjustment (To Lift the machine or To Use Your Rotary Module)

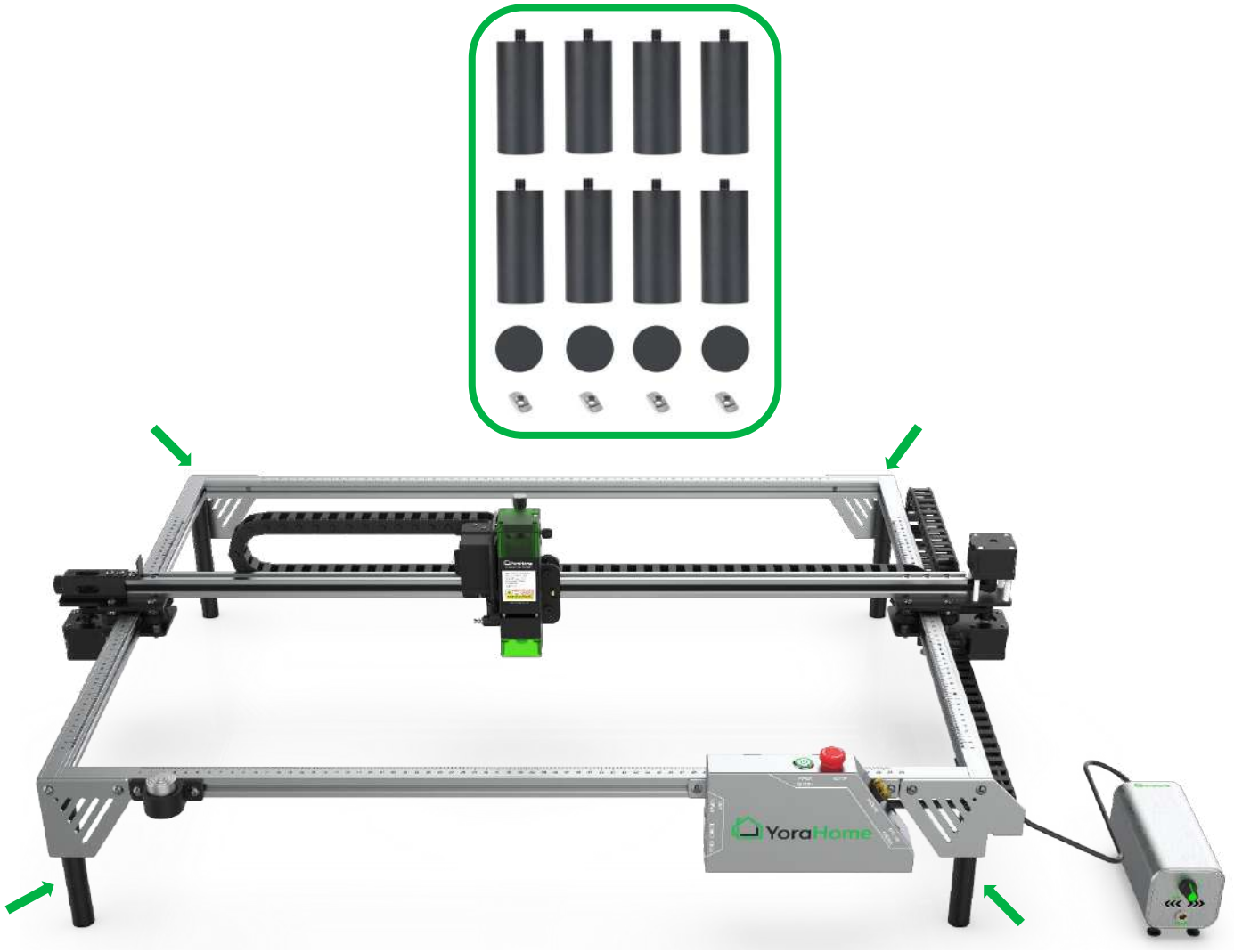
Parts Required:

- ➔ 8 Leg segments (50mm each)
- ➔ 4 T-slot nuts
- ➔ 4 Leg pads

Using the T-slot nuts, attach one leg segment (50mm) to each corner of the frame to raise the machine.

You can insert the second leg segment for additional height (100mm total).

Attach the pads to the bottom of the legs for greater stability.



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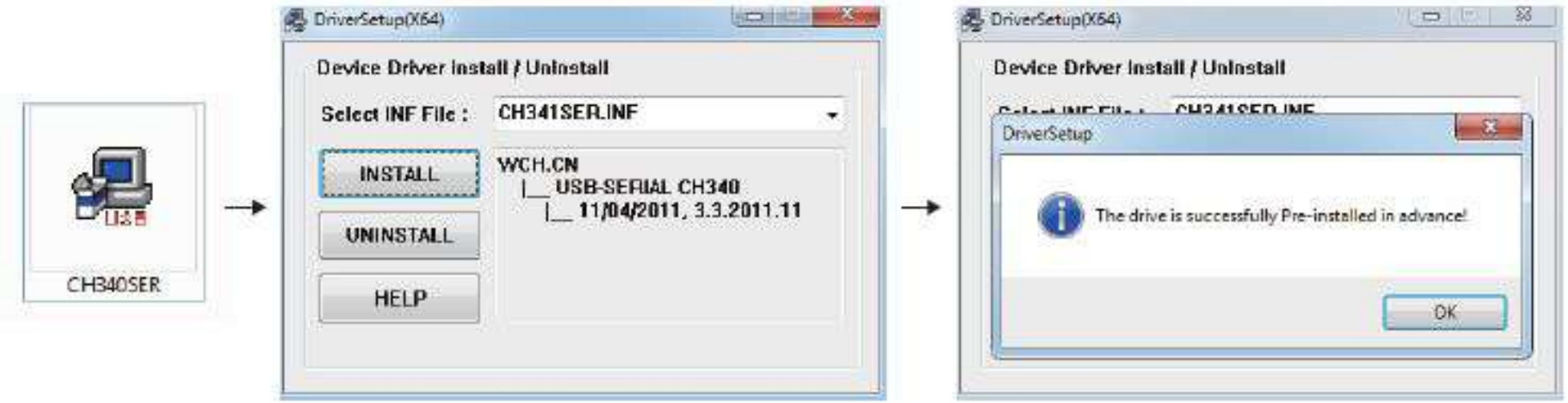
Part 3 Software Introduction

1. Install the machine's driver (CH340SER). Download it online here.
NOTE FOR MAC USERS: If your Mac is running Mojave OS or higher, do NOT install the driver, as the OS has native support for the CH340. If you are running Sierra or High Sierra, please contact YoraHome Technical Support for additional guidance.



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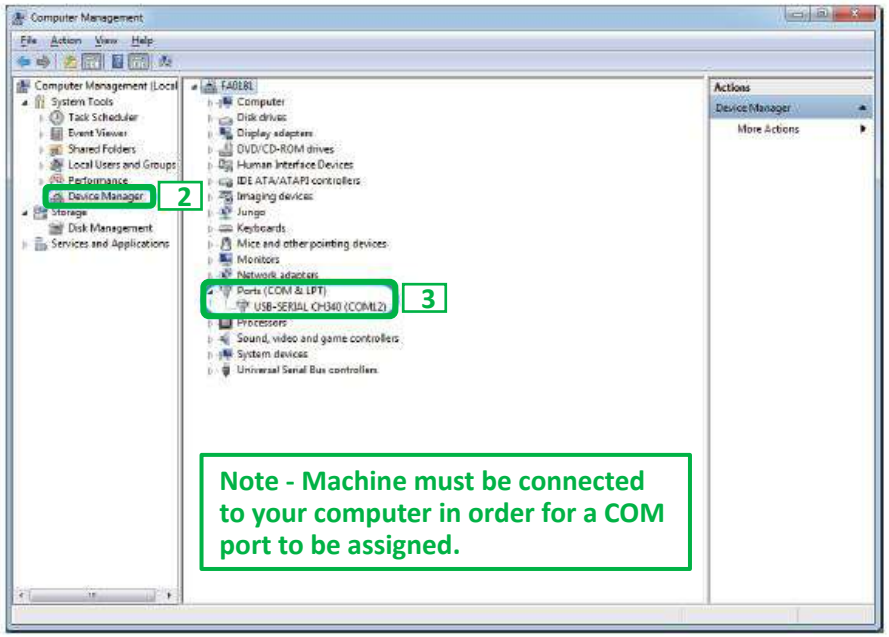
Part 3 Software Introduction

2. Determine your machine COM's port

- **Windows XP:** Right click on *My Computer*, select *Manage*, then *Device Manager.*
- **Windows 7:** Click on *Start* on the taskbar, right click on *Computer*, select *Manage*, then *Device Manager.*
- **Windows 10:** In the search box on the taskbar, type *Device Manager,* then select it from the menu.



In the tree, expand *Ports (COM & LPT).* Your machine will be identified by the USB Serial Port (COMX), where the "X" represents the COM number, for example COM3.

If there are multiple USB serial ports, right click on each one and check the manufacturer, the machine's should be "CH340".

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Part 3 Software Introduction

3. 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.

Only For Windows Users

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.

For Windows & Mac Users

In the next pages, we will provide a quick introduction on how to use LaserGRBL; followed by a quick introduction to the basics of Lightburn.

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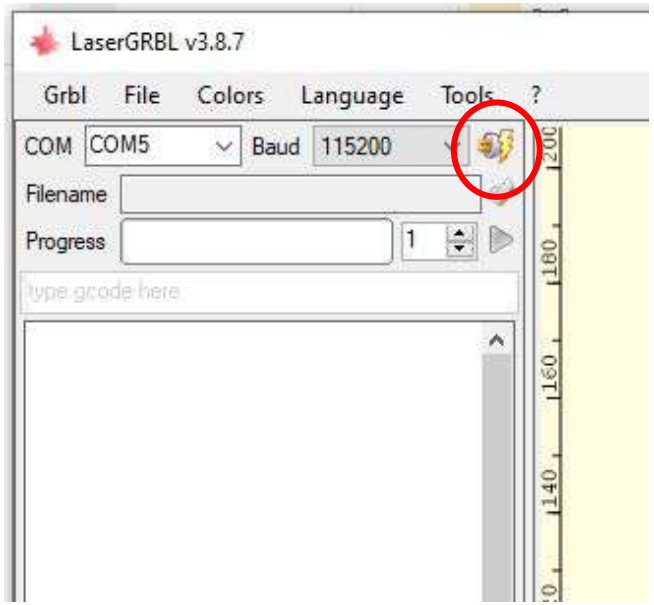
Part 3 Software Introduction - LaserGRBL

1. Open the LaserGRBL Software

2. Select the desired COM port, then click the “Connect” icon



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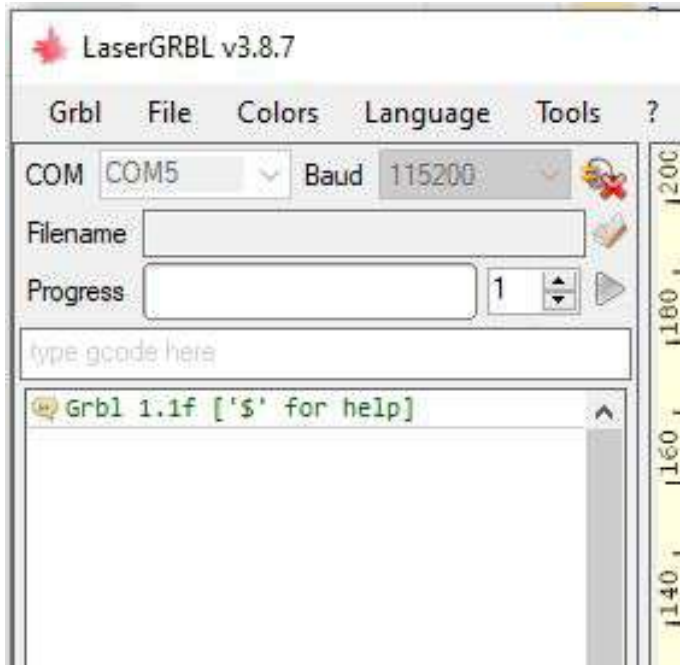
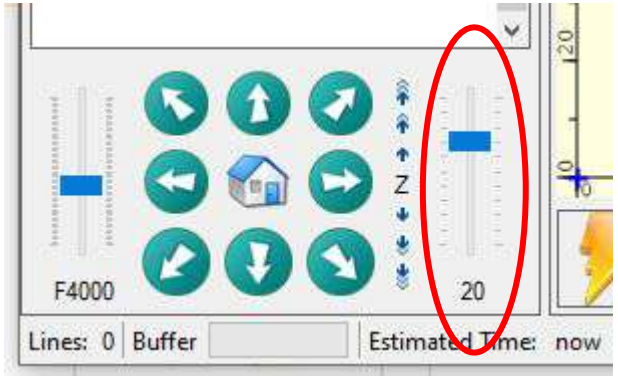
Part 3 Software Introduction - LaserGRBL

3. If the connection is successful, you will see the message below in the Console window



4. Test your machine for proper motion control using the “Jog” buttons - if the Y axis is reversed, switch the motor cable to the other white port on the control board.



The highlighted “slider” indicates the distance the machine will move when a “Jog” button is clicked; in millimeters

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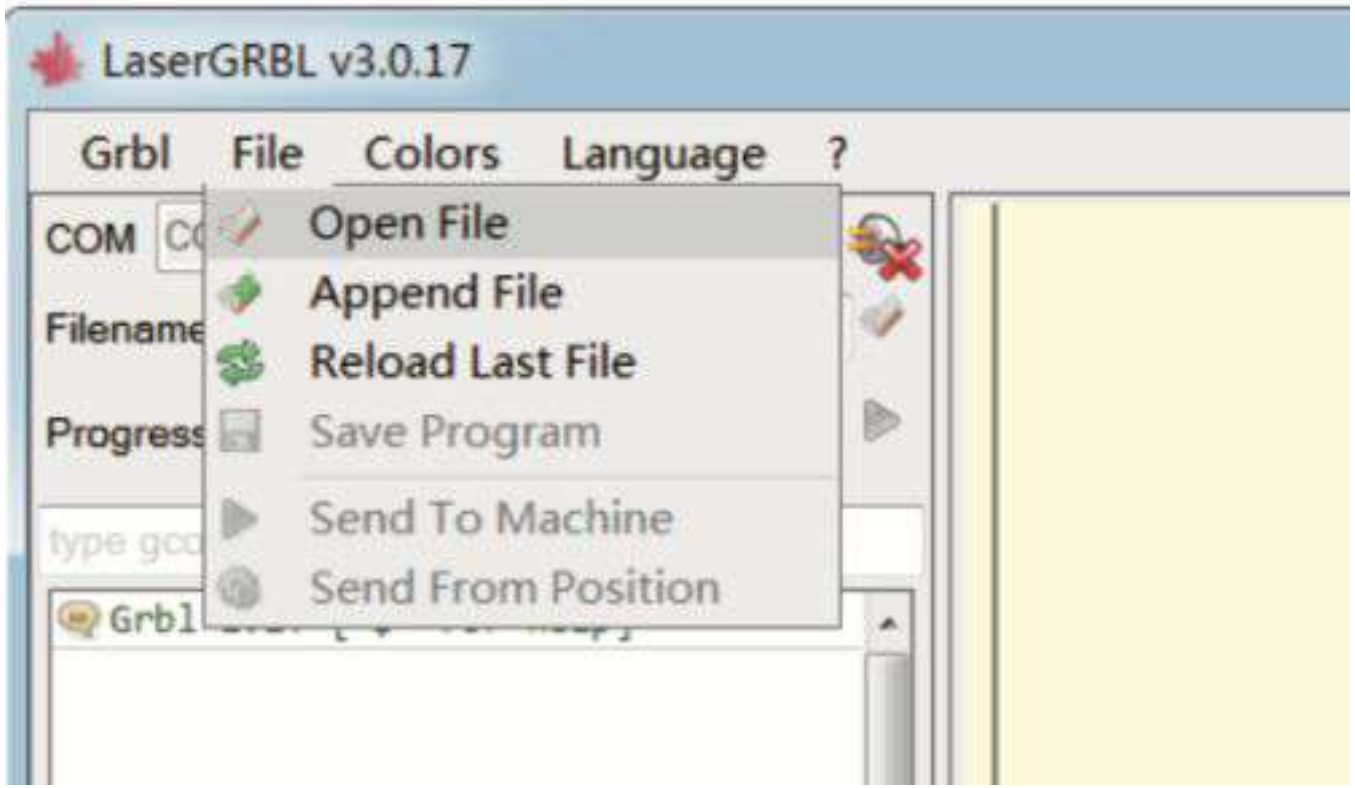
Part 3 Software Introduction - LaserGRBL

6. To load an image for engraving, click on the “File” menu, then select “Open File”. In the Windows Explorer window; navigate to the desired image file on your computer. Common file types are JPG, BMP, PNG, SVG.



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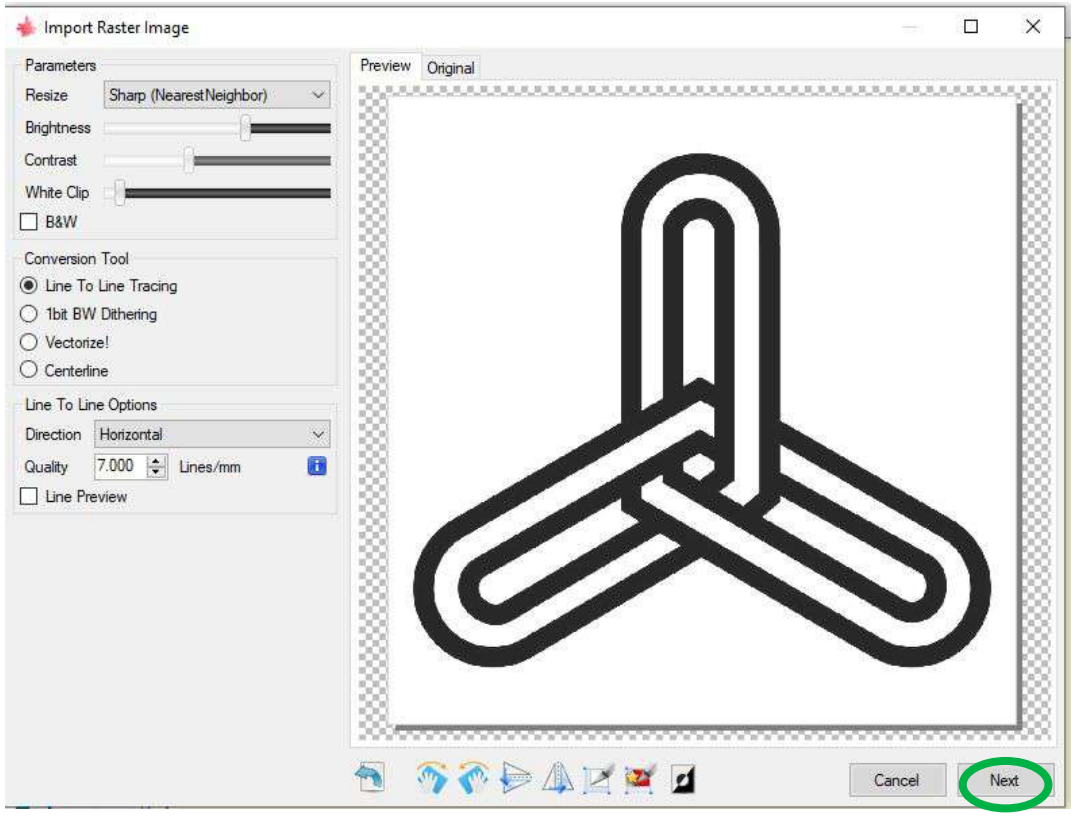
Part 3 Software Introduction - LaserGRBL

7. Parameters default, click next



You can use the default settings or adjust them - see our tutorial videos in YoraHome Facebook CNC Users Group or My YoraHome Knowledge Base for additional information.

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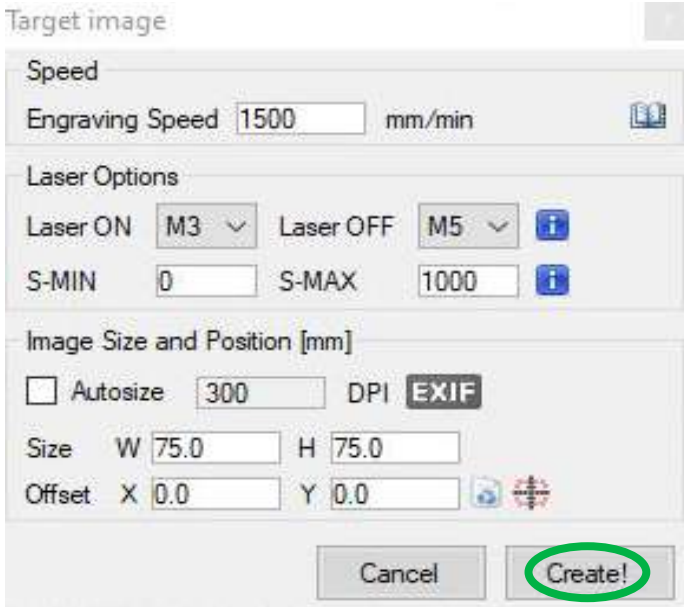
Part 3 Software Introduction - LaserGRBL

8. The engraving speed and MIN/MAX settings will need to be adjusted to meet the material being engraved.

Note that the size values will automatically update whenever one is changed in order to maintain the aspect ratio of the origin image.

Then click the “Create” button



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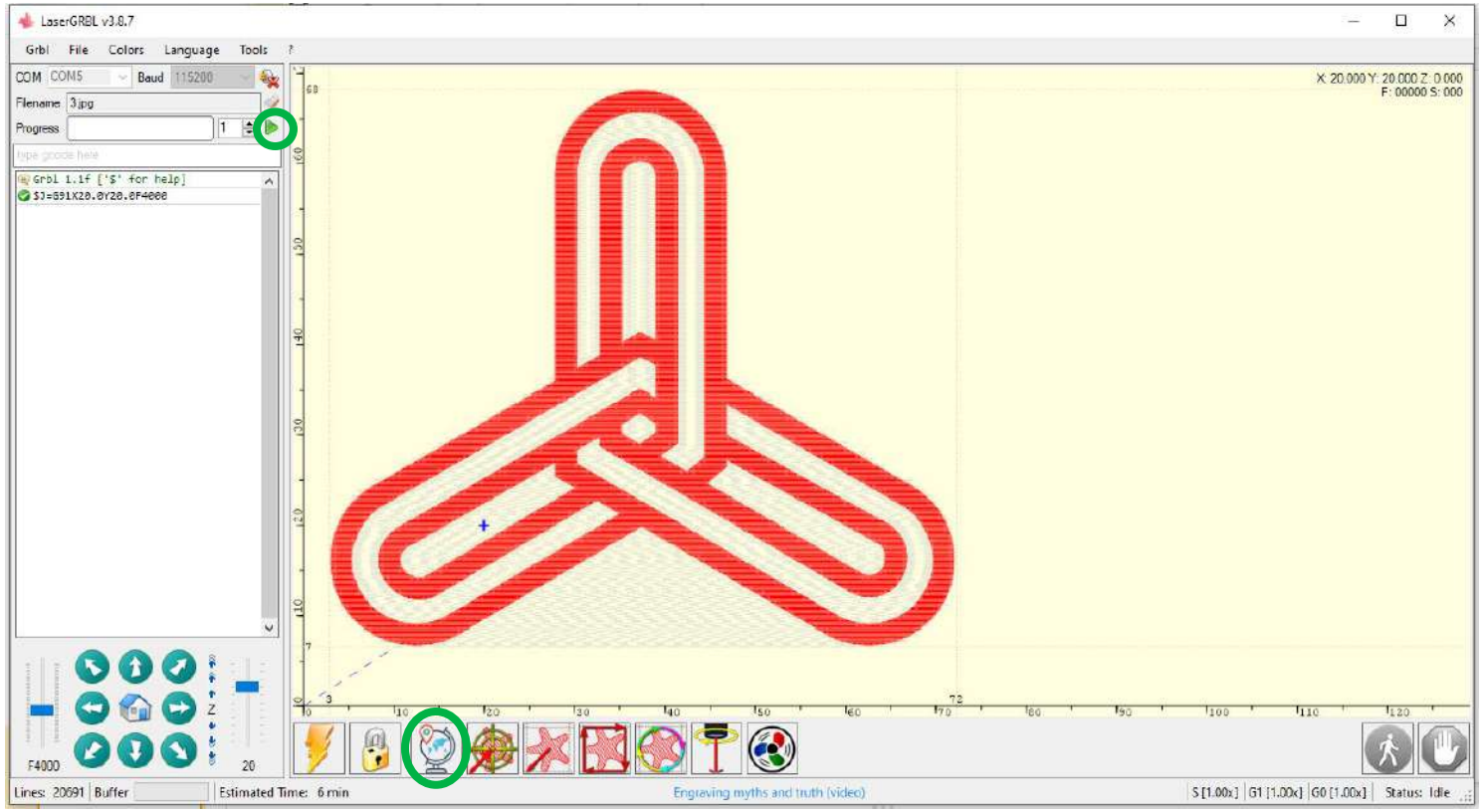
Part 3 Software Introduction - LaserGRBL

9. Using the jog buttons, position the laser to the lower left corner of the desired burn location; then click the “Globe” button to set the origin.
Then click the “Play” button to start the laser engraving process.



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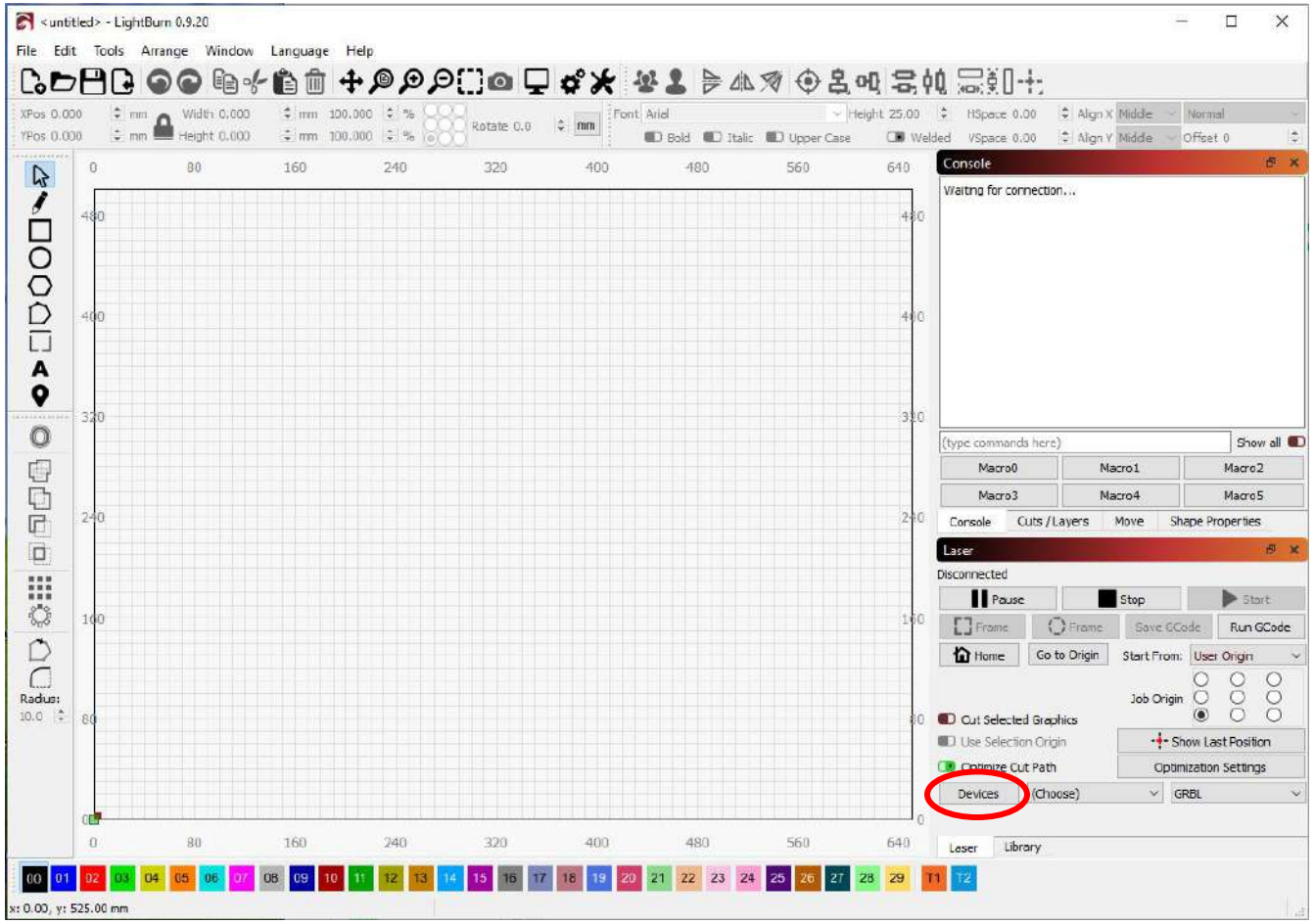
Part 3 Software Introduction - Lightburn

1. Open the Lightburn Software

2. In the lower right of the screen, in the “Laser” pane, click on “Devices”



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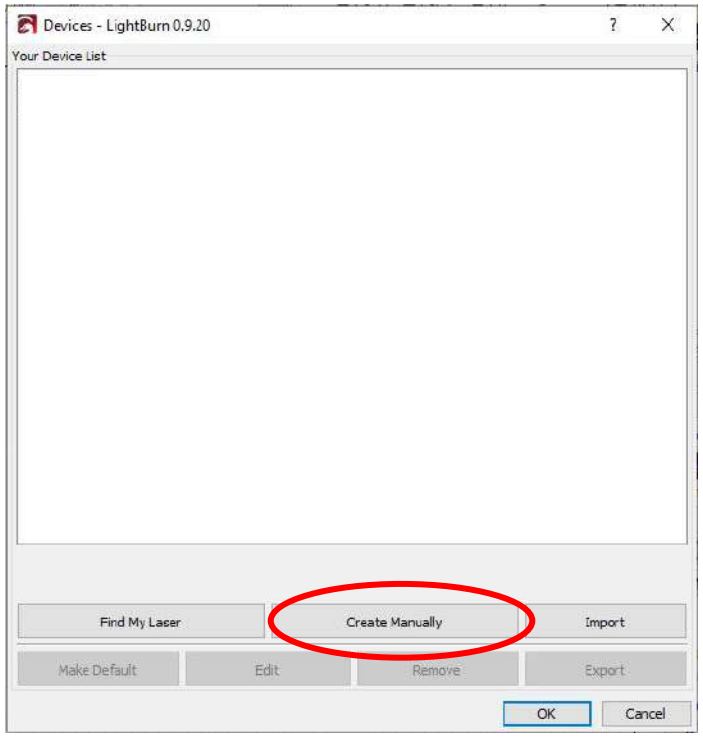
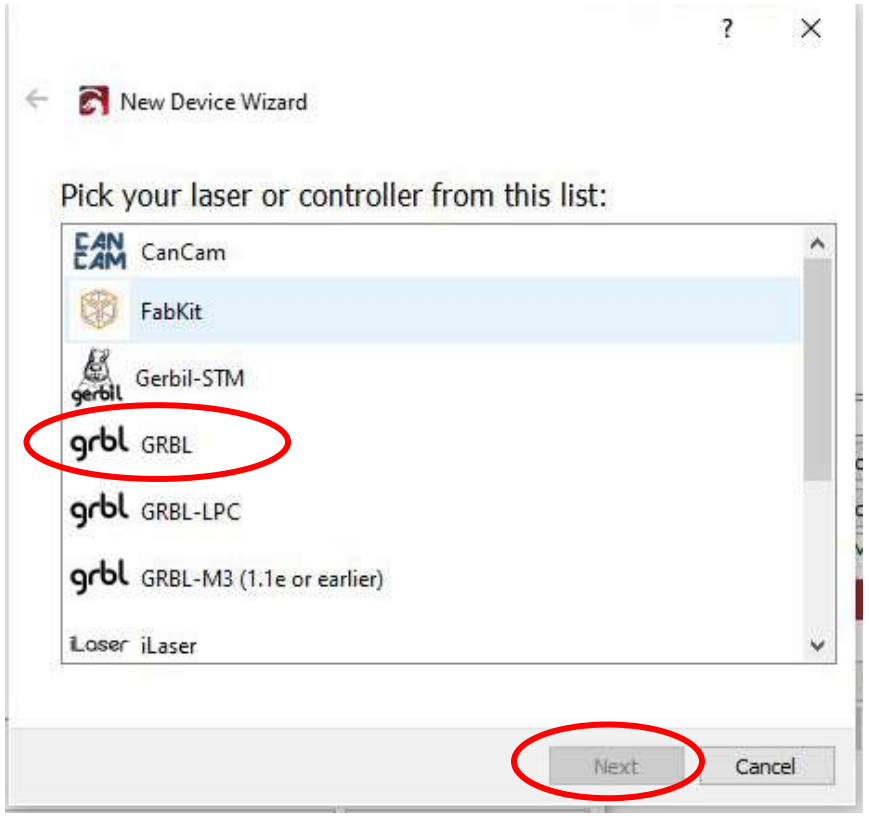
Part 3 Software Introduction - Lightburn

3. In the Devices dialog box, click on the “Create Manually” button.



4. The “New Device Wizard” will start - select the “GRBL” option, and click “Next”



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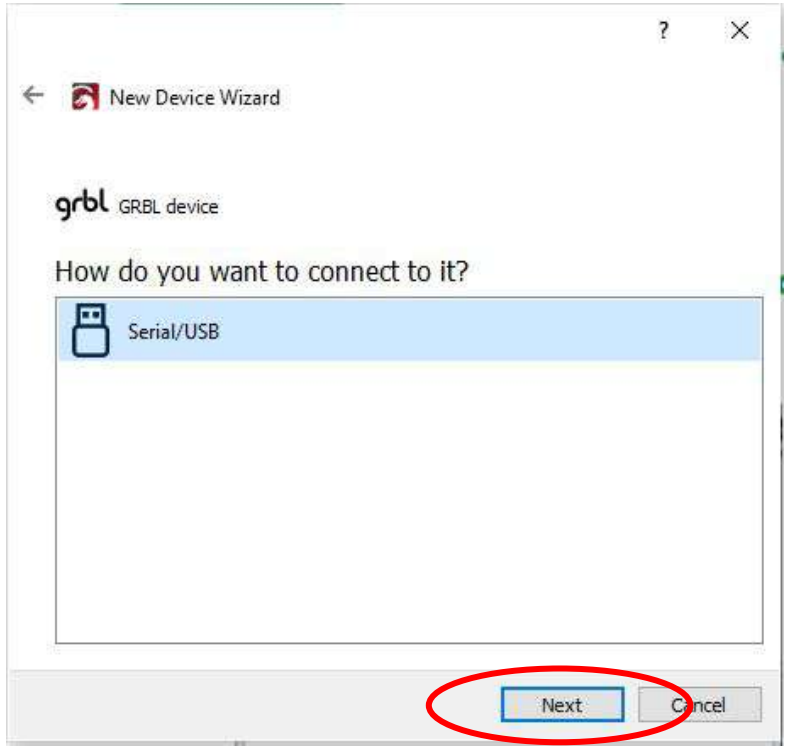
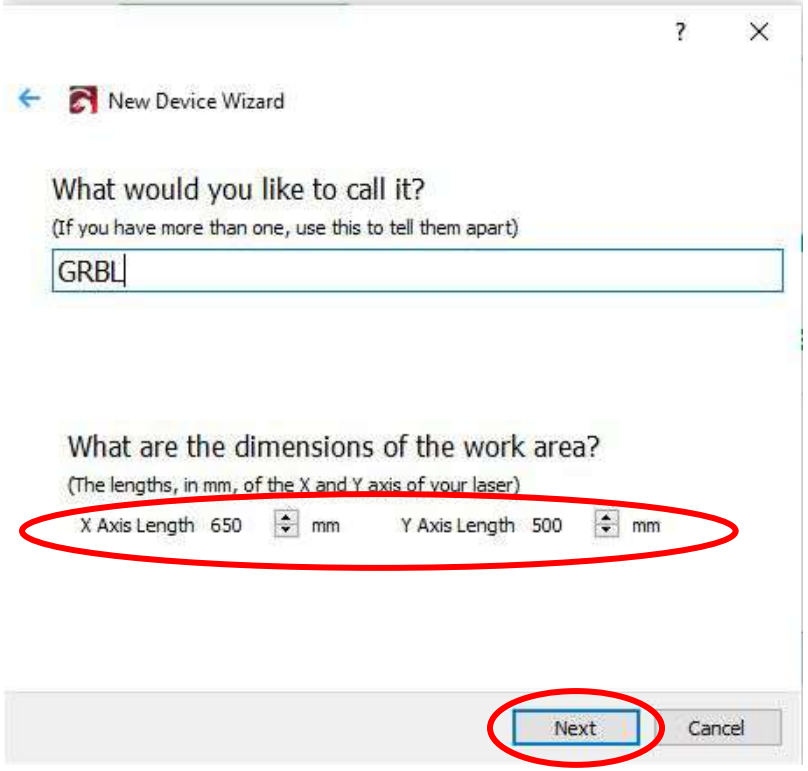
Part 3 Software Introduction - Lightburn

5. The default connection method should be “Serial/USB” - click “Next”.



6. If you would like to name the machine, you may do so here. Set the work area dimensions as shown - X=650; Y=500 - click “Next”.



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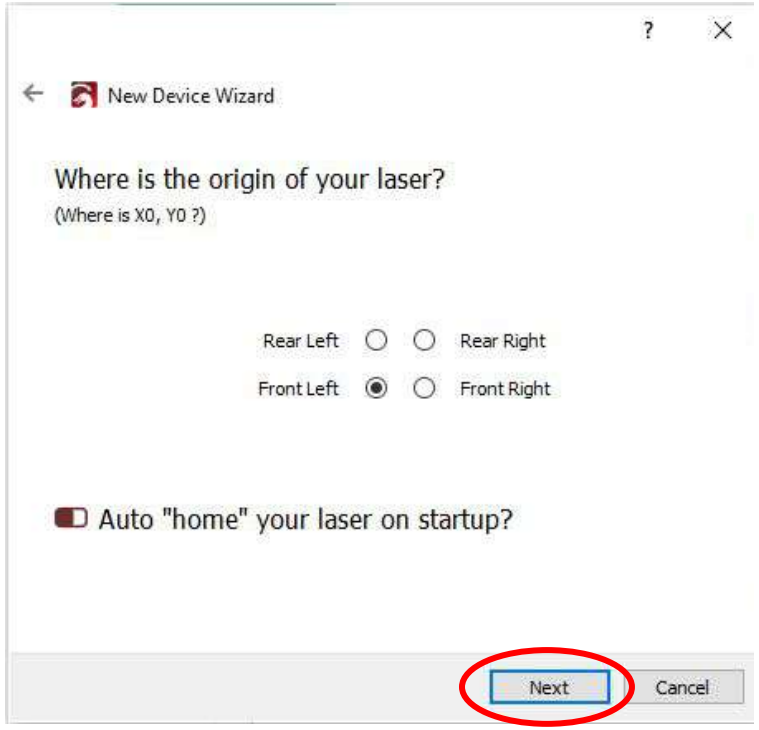
Part 3 Software Introduction - Lightburn

7. Set the origin for your laser - on the 6550, that is the Front Left. If you wish to use the Auto-homing function, set that toggle to “True” - click “Next”.



8. Confirm your settings, then click “Finish” to return to the Devices screen.

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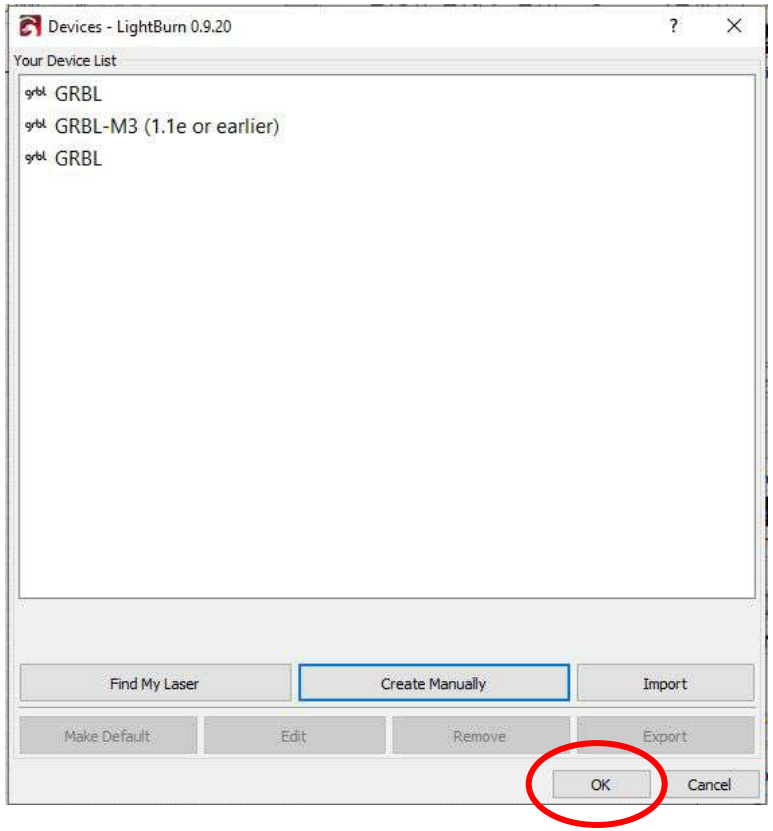
Part 3 Software Introduction - Lightburn

9. **Click on “OK” to return to the main Lightburn screen.**



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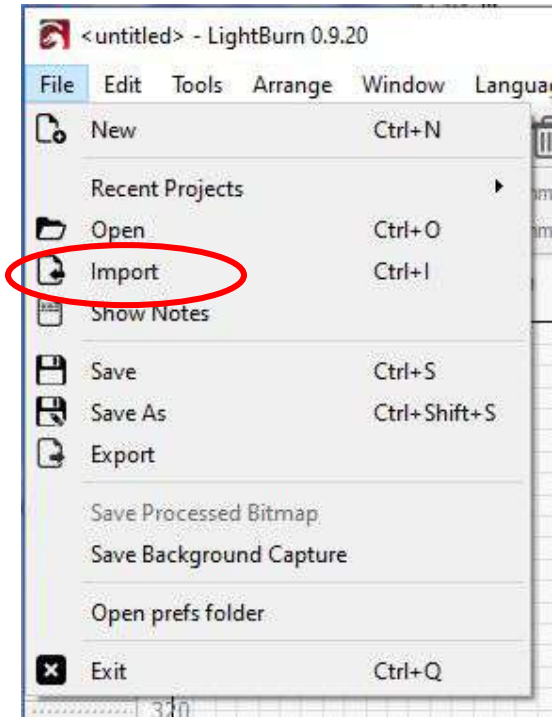
Part 3 Software Introduction - Lightburn

10. Click on the “File” menu, then select “Import” to open an image file.In the Windows Explorer window; navigate to the desired image file on your computer. Common file types are JPG, BMP, PNG, SVG.



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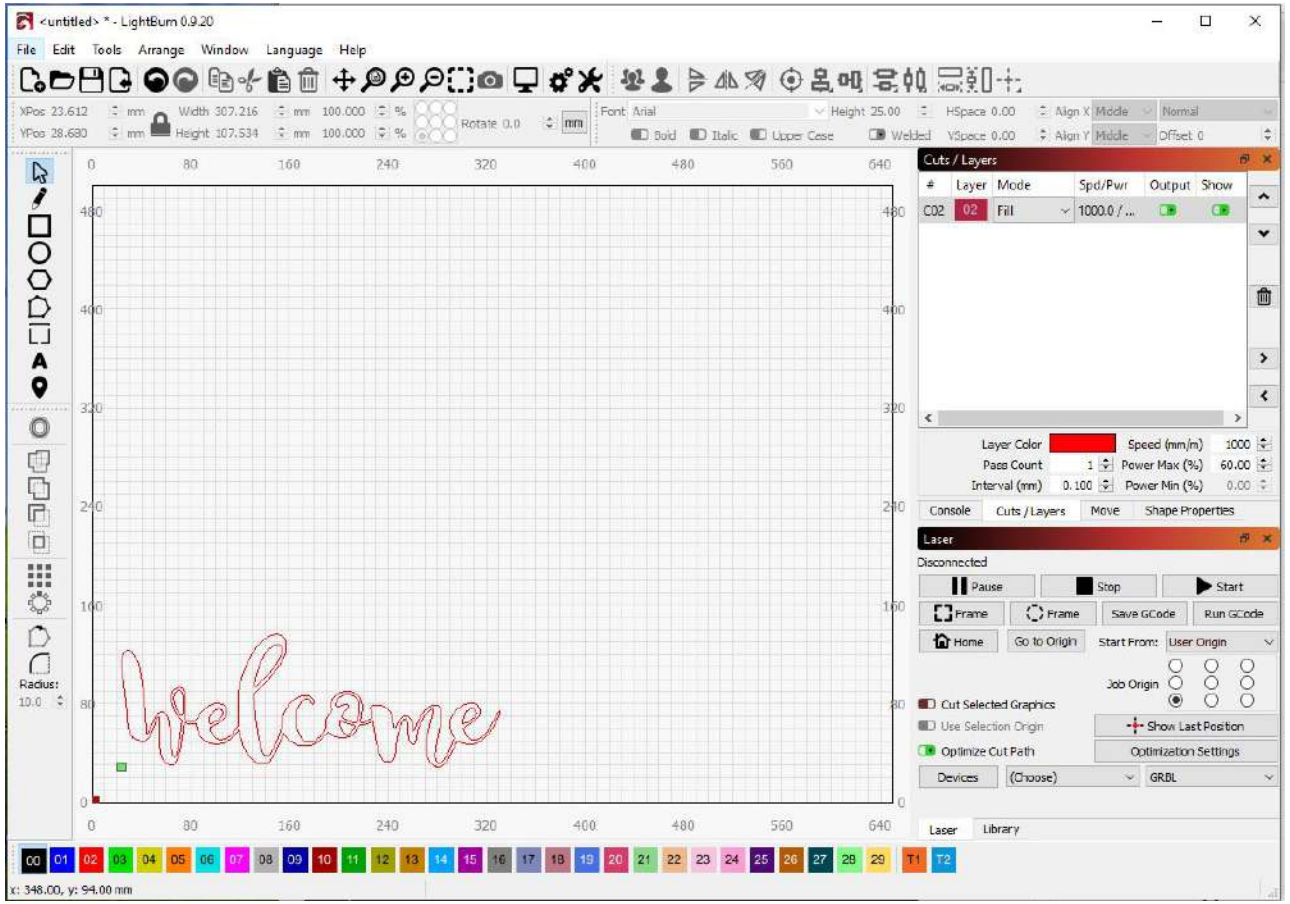
Part 3 Software Introduction - Lightburn

11. To set the engraving parameters, select the image on the grid, then go to the “Cuts/Layers” tab in the upper right pane (see next page for detail).



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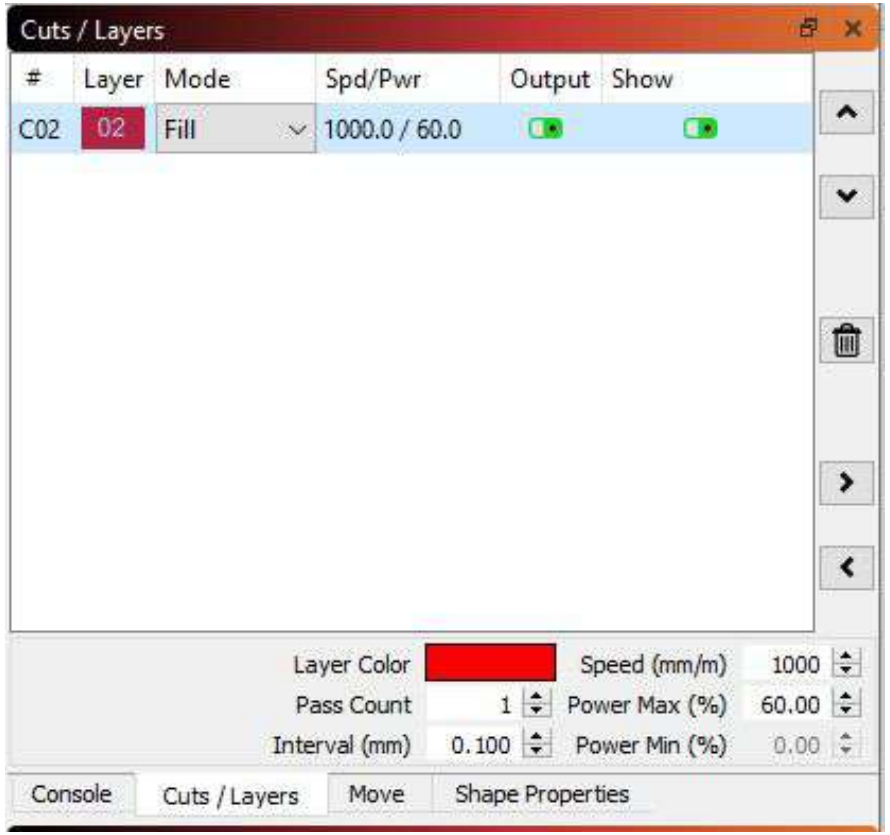
Part 3 Software Introduction - Lightburn

12. **Select your imported image, then select the parameters for your engraving - in the example below, we have selected a engraving speed of 1000 mm/min, at a power of 60%; with the mode set to “Fill”. This will direct the machine to burn the entire image and fill in the shape.**



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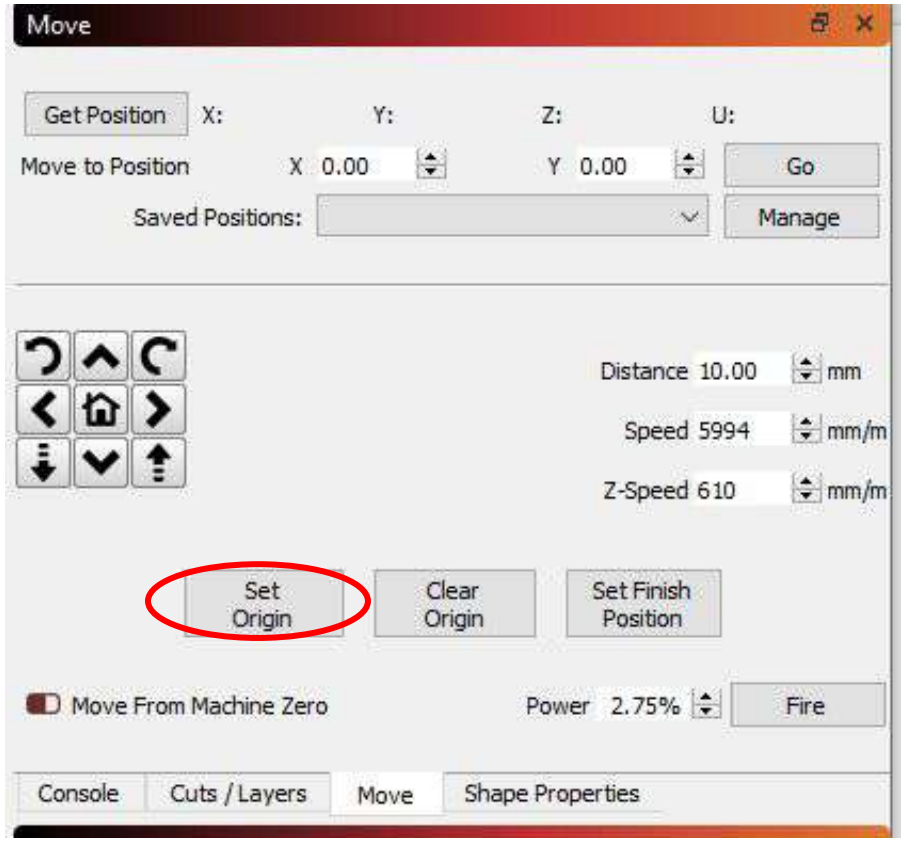
Part 3 Software Introduction - Lightburn

13. Select the “Move” tab, and use the jog buttons to position your laser at the lower left corner of where the design is to be burned. Click on the “Set Origin” button to set the start position.



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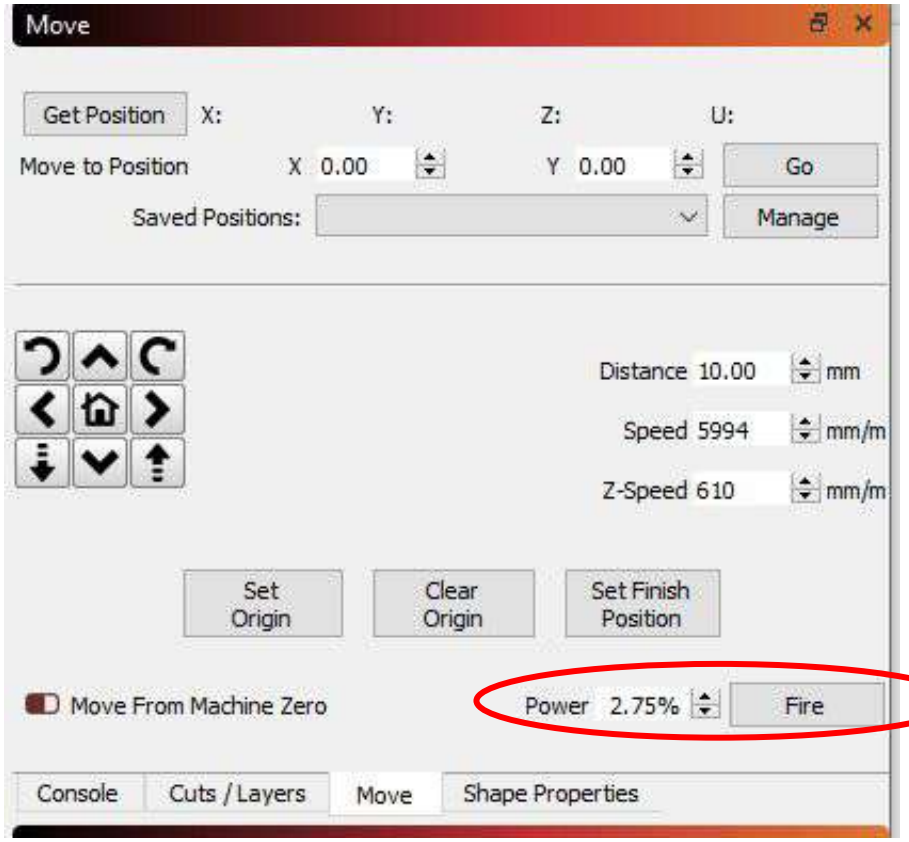
Part 3 Software Introduction - Lightburn

14. **Use the Power setting and the “Fire” button to turn the laser on at low power for focusing, click again to turn the laser off.**

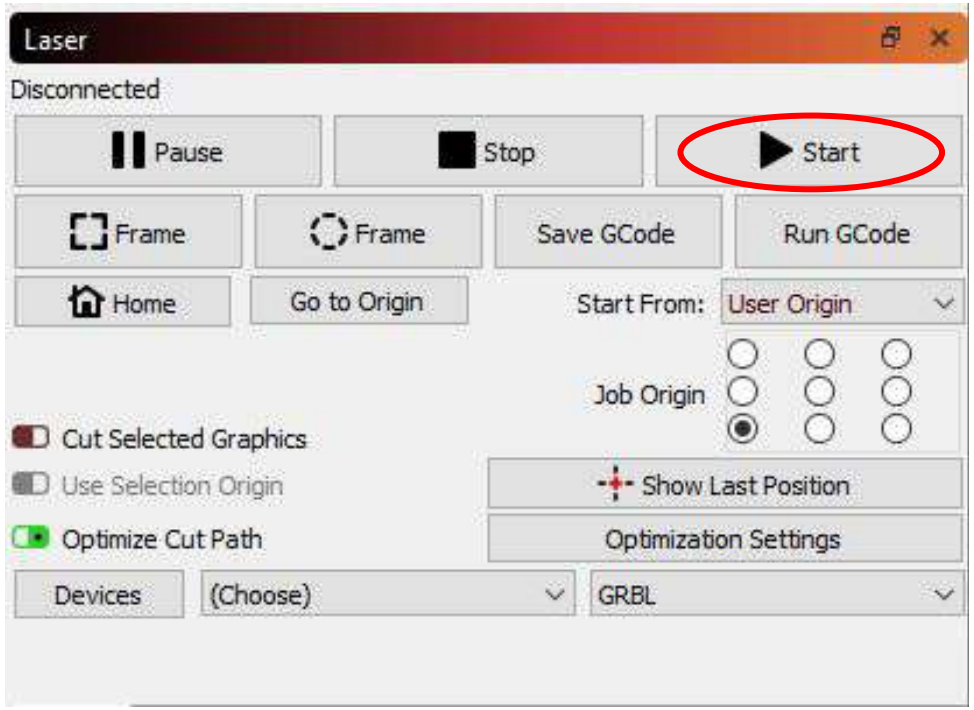


If the “Fire” button is not visible, go to the Device Settings on the “Edit” menu, and select the “Enable Laser Fire Button” option. Lightburn must be restarted to activate this option.

YoraHome

Part 3 Software Introduction - Lightburn

15. **Finally, click on the “Start” button in the Laser pane to start the laser engraving process.**



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Part 4 FAQ

Q. Where do I find GRBL settings or configuration?
A. In LaserGRBL software, select GRBL -» GRBL Configuration, then make a screenshot to save all the current and original settings of your board before making any changes.

Q. What do I check if my laser does not power up?
A. In LaserGRBL software, go to GRBL configuration. Find the $32 value and make sure it is equal to 1. If it is equal to 0, change it to 1, click on the Write button on the bottom of the window to store this information on the board, and reboot your machine.

Q. How tight should my timing belts be on the 6550-Pro?
A. Timing belts should be tight enough to not slip, but not so tight as to make smooth movement an operation's issue.

Q. What speed and max power do I need to use?
A. This is not a firm value we can provide for every situation; please check our blog page for recommended settings for some materials: https://yorahome.com/blogs/news/laser-engraving-settings

Q. What if we have missing or broken parts?
A. Please notify: support@yorahome.com

Q. Where can I find additional resources for the YoraHome 6550-Pro?
A. In our Blog https://yorahome.com/blogs/news, Knowledge Base https://my.yorahome.com/, Facebook group https://facebook.com/groups/YoraHome.CNC, and Forum https://community.yorahome.com/.

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