SOP

EPILOG 32 FUSION PRO LASER

Training is required before using this equipment

Reservations are required when using this equipment

Closed Toed Shoes required
Eye Protection required

NEVER LEAVE THE LASER UNATTENDED
WHEN IT IS OPERATING

SOP

EPILOG FUSIONPRO LASER

Training is required to use this equipment
You must stay with laser while it is in use
Make sure ventilation is on prior to use

V 4.0

FUSION PRO 32 SPECIFICATIONS

MAXIMUM MATERIAL DIMENSION – 30” x 20”

MAXIMUM MATERIAL THICKNESS FOR CUTTING – ¼”

APPROVED MATERIALS

Acrylic (Acrylite, Altuglas, Chemcast, Lucite, Optix, Perspex, Plexiglass, Repsol, Setacryl)
Plywood
Basswood
Balsa wood
Solid wood (raster only)
Chipboard
Mat Board
Poster Board
Paper
ABS Plastics
Laserable Stamp Material
Glass
Corian
Anodized Aluminum
Powder Coated or Painted Metals
Metals with Etching Tape Applied

BANNED MATERIALS

Materials containing chlorine (PVC, Moleskin)

Polycarbonate (Barlo, Calibre, Hyzod, Lexan, Makralon, Palsun, Sustanat, Tecanat, Tristar, Makroclear, Arcoplus)

Fr4 Boards (resin reinforced fiberglass composite)

Fiberglass

Glass and metal can be etched but not cut on the laser.

Unless the metal is painted, anodized, or powder coated, a special CerMark spray or tape is required.

SAFETY

Make sure ventilation is on prior to use. The button to start the ventilation is located on the west wall and pulls to activate. This will pull smoke from all the lasers.

Unlike other NIS lasers, which have an external fan, the FusionPro has an internal fan to blow air at the point where the laser makes contact with the material.

2" Flame is okay for short lengths during a cutting pass. If the flame persists or your material is on fire, push the pause button the top of the laser.

If the flame persists, open the laser and mist the flames with plain water from the spray bottle.

You may also blow on it, or smother it with scrap plywood. If a fire extinguisher is needed, contact NIS staff immediately.

The laser will not fire when the lid is open.

Never leave the laser while it is in operation.

Never operate more than one laser simultaneously.

TURN ON THE LASER

The Epilog FusionPro turns on with a key on top of the laser.

The laser must be turned on to receive your job.

SETTING UP YOUR FILE TO PRINT

Open your project using Adobe Illustrator. Make sure your project's artboard is the same size as your piece of material.

Your artboard is the white area in your design in Illustrator.

MAXIMUM MATERIAL SIZE IS 32" x 20"

To Vector (cut) lines must have a stroke size of .21 points or smaller. NIS recommends .001 stroke width to avoid confusion and for consistency between AutoCad and Illustrator.

To Raster [engrave) stroke lines must be .22 points or thicker.

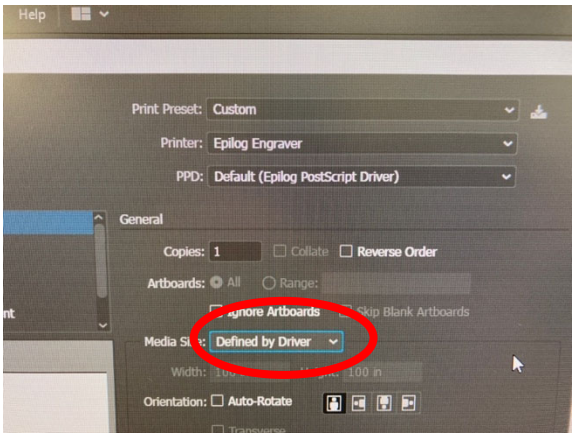
The FusionPro 32 allows you to raster different parts of your file with different intensities (speed/power). To do that, simply make each section of the project a different color.

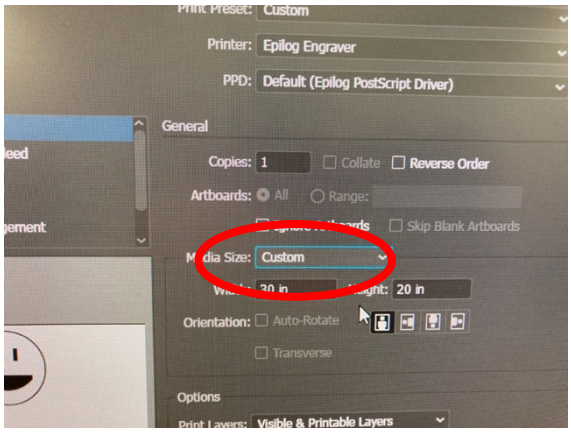
SENDING YOUR FILE TO THE JOB MANAGER

Make sure your file is saved to a name you will recognize.

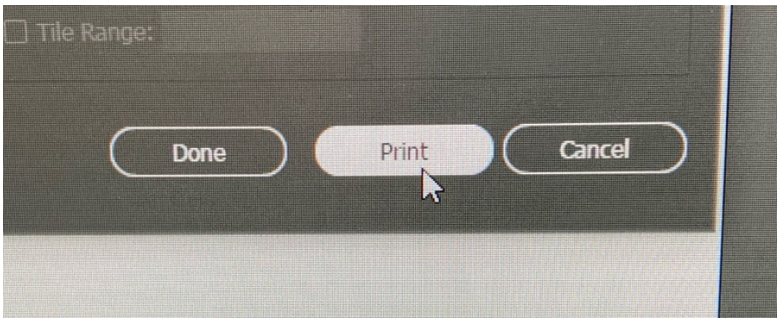
1) In Illustrator, **FILE >PRINT**.

2) The media size default is 100 x 100 in. Under **MEDIA SIZE** use the drop down menu to change the setting from **DEFINED BY DRIVER** to **CUSTOM**

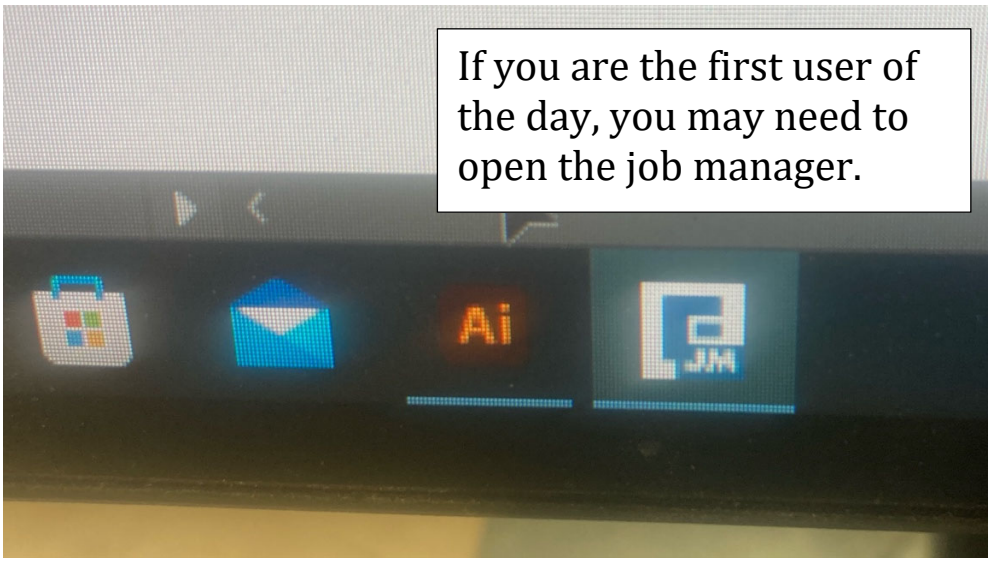




This will resize your artboard to the correct size and place it properly on the laser.



3) Click **PRINT** to send the file to the **JOB MANAGER.**


If you are the first user of the day, you may need to open the job manager.
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SETTING UP YOUR MATERIAL IN THE LASER

Before running your job, you will need to **FOCUS** the laser and **SET THE HOME POSITION**.

The FusionPro is equipped with a camera on the underside of the lid. You will use this to set the home position and place your project exactly when you want it on the material.

Because the camera has a very wide-angle lens, the image can become distorted in the corners of the laser bed. Ideally, the material should be centered in the laser, under the camera. If it's large enough, you can push your material to the back edge of the laser.

To move the laser, go to the **CONTROL PANEL** and press the **JOG** button.

Push this icon and then use the joy stick to move the laser.

Use this icon to turn on the laser light showing the position of the laser.

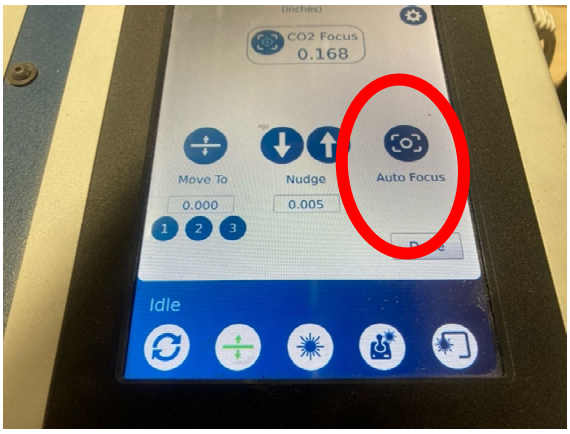
FOCUSING THE LASER

To focus the laser, use the Auto Focus function.

1) Press the joystick icon and then use the joystick to navigate the laser head over your material.

2) Use the up/down arrow button and joystick to lower the laser bed if necessary.

3) Press the AUTOFOCUS button. The laser bed will rise up and depress a plunger on the laser housing.



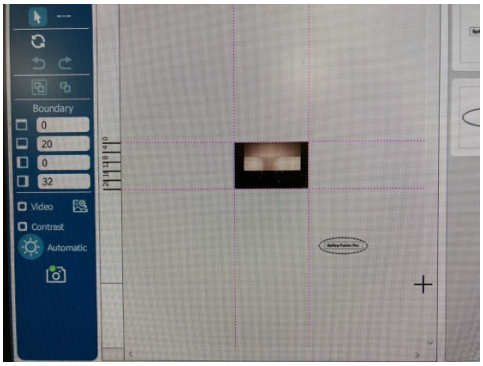
4) Press DONE.

5) The **PARK** icon will send the laser back to the top left corner. If you do not park the laser, the laser arm may block the view of the camera and make setting the home position more difficult.

USING THE JOB MANAGER

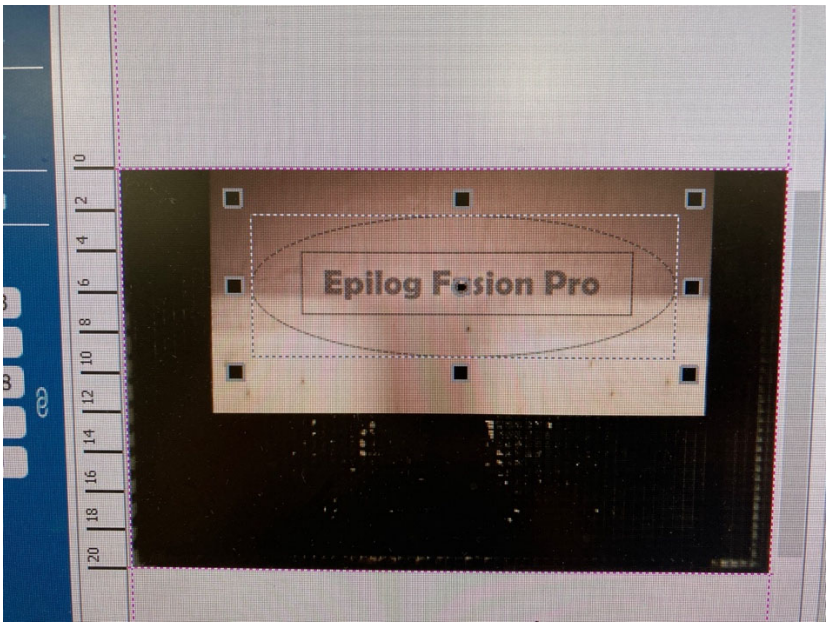
If the lid of the laser is closed, you will see your project overlaid on the material. Since the home position has not been set, you will need to move it to the desired position.

If you don't see your project, use the scroll wheel on the mouse to zoom out until you find it.

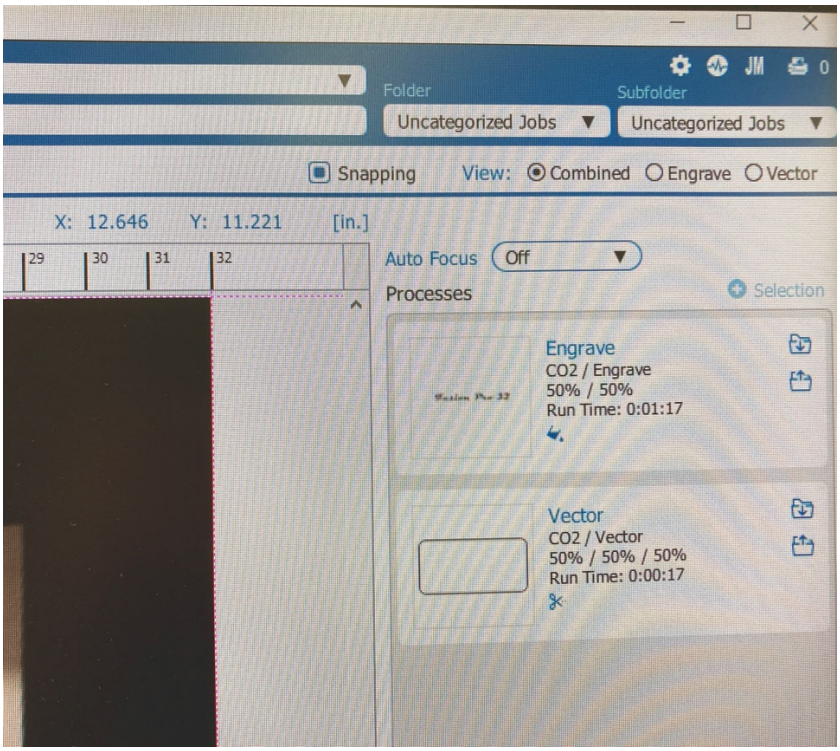


You can move, resize, rotate, and change the aspect ratio of your artwork by using the mouse or by typing different values on the left side of the display.

Use the arrow keys on the keyboard to fine-tune the position.



The **JOB MANAGER** will create separate box for **ENGRAVE** (raster) and **VECTOR** (cutting) for your Illustrator file. Click on each one separately and enter the speed and power and (for vectoring) the frequency.

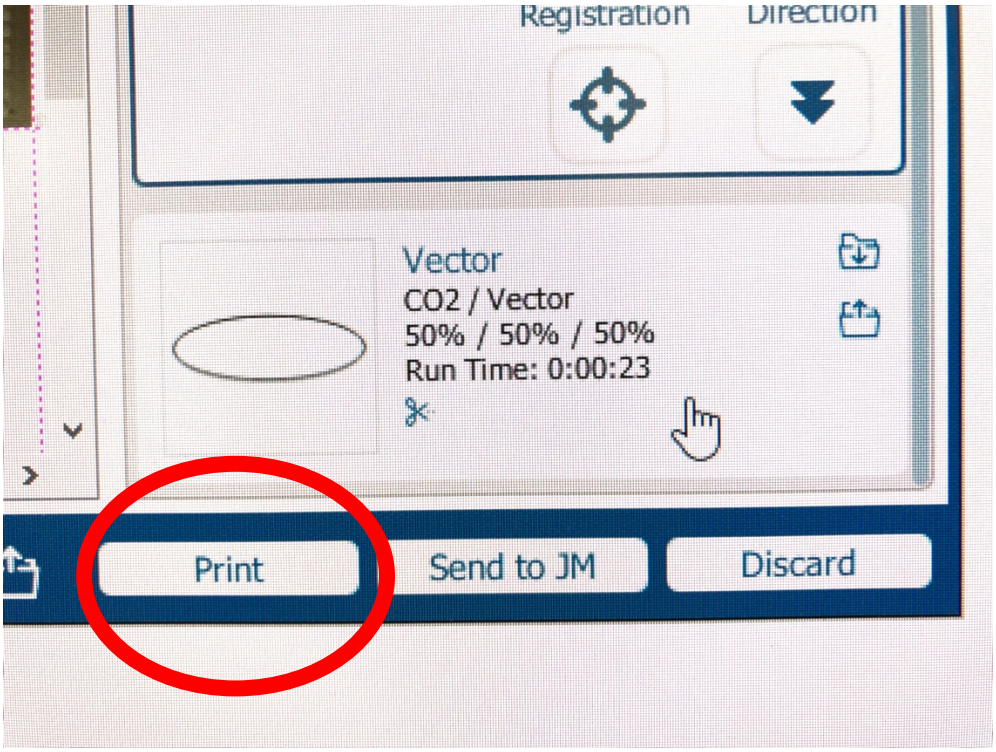


The Fusion Pro 32 is a 60-watt laser.

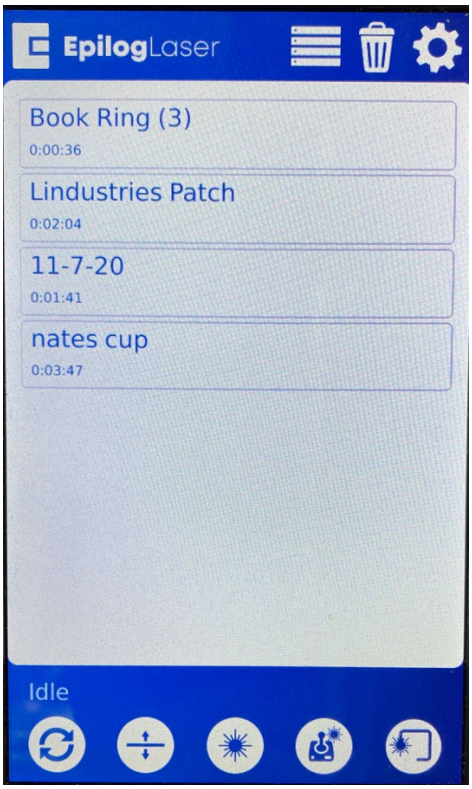
If you decide to you don't want to either **ENGRAVE** or **VECTOR,** use the drop down menu and choose **NONE.**

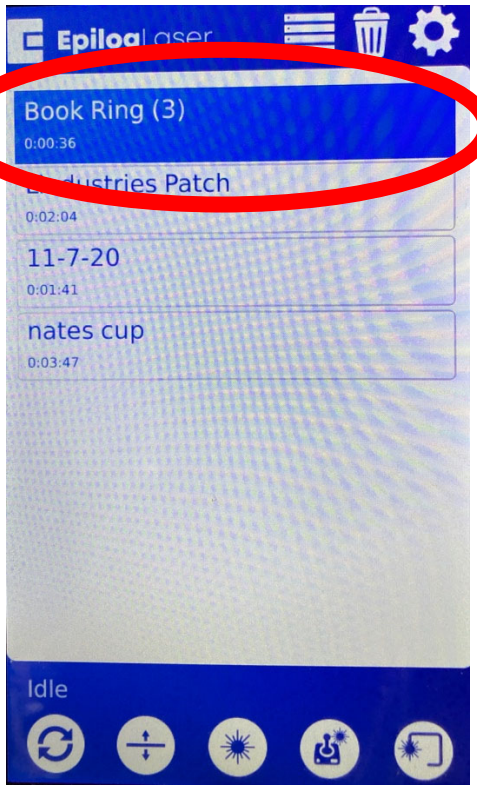
PRO TIP: If you want to use different raster or vector speeds and power color code your Illustrator file accordingly. When JOB MANAGER opens, there is an option to divide your file by color.

After inputting the raster and vector settings, click **PRINT** to send your project to the laser where you will see it listed on the display screen.



The control panel is on top of the laser. When you have sent your file to the laser, your job will appear there. The newest files will appear at the top.





You should see your project in the list of jobs on the laser **CONTROL PANEL**, along with the amount of time it will take.

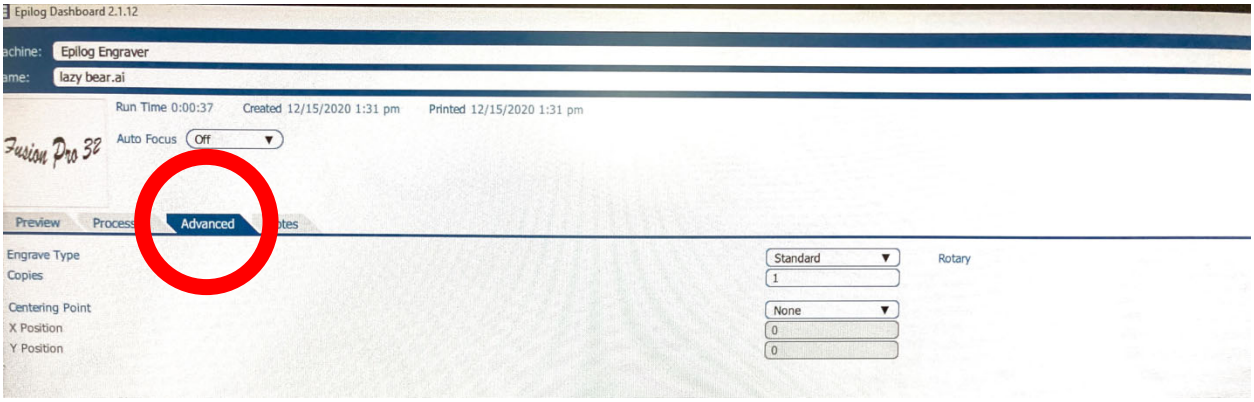
Touch the job you want to run. Your project will be highlighted. Simply press the **PLAY/PAUSE** button to start the laser. Once the laser has started you can also use this to pause the laser.

NOTE: Make sure the lid is closed securely. If the laser arm is moving and the laser is not firing, chances are good the lid is not closed properly.

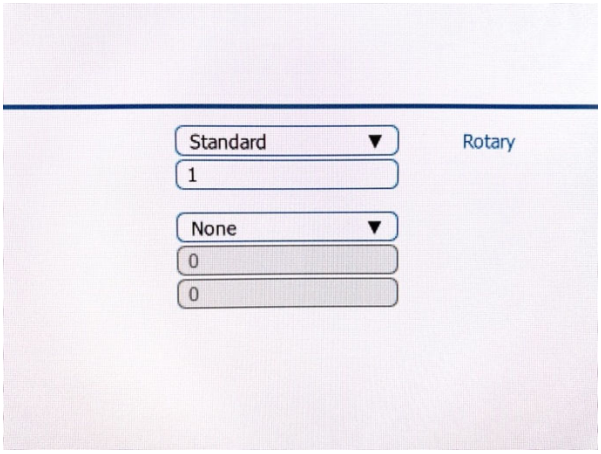
MANUALLY SETTING THE HOME POSITION

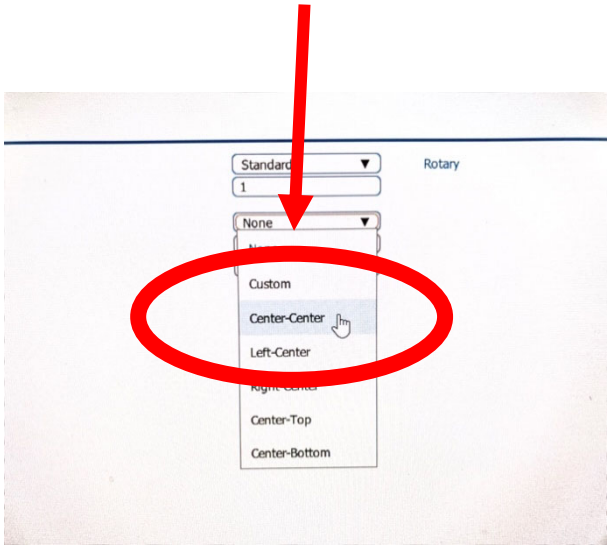
If you want to manually set the **HOME POSITION** using the laser, it is a three-step process.

1) In the **JOB MANAGER**, click the **ADVANCED** tab.

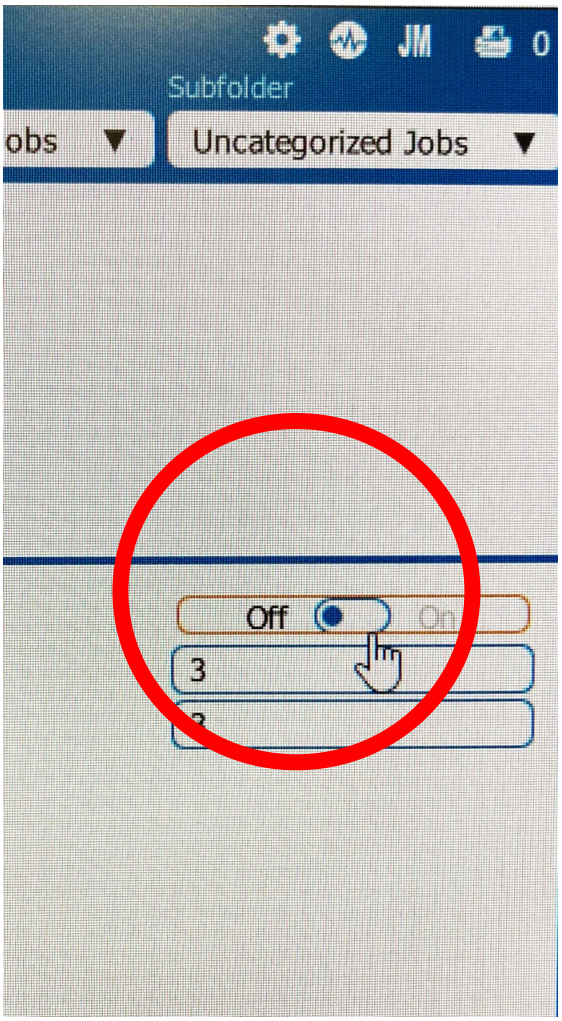


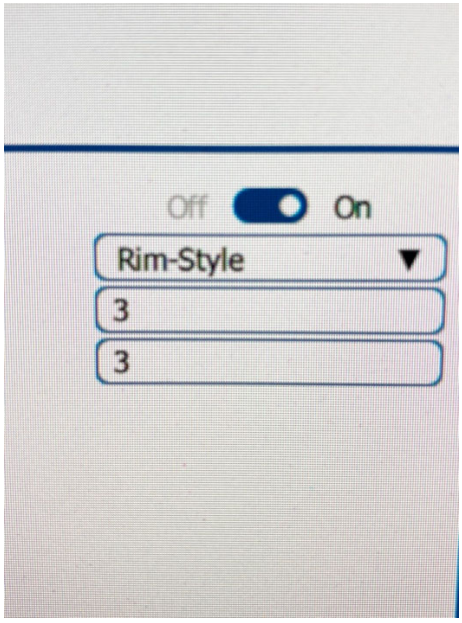
2) Use the drop down menu and select **CENTER-CENTER.** This will define the point that represents the center of your project.





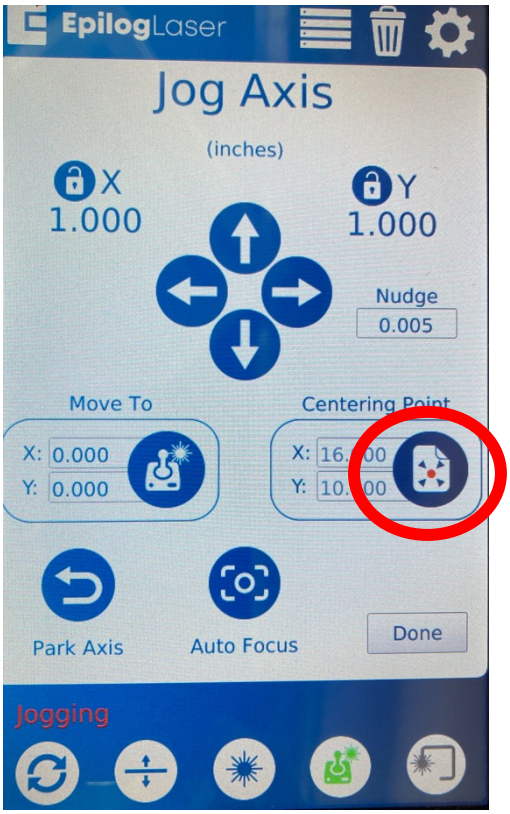
3) If you are using the **rotary tool**, you also need to change this setting at the top right of the screen. Click on the blue dot to change the setting from off to Rim-Style or Chuck rotary tool.





4) **After** you send you job to the laser, click on the project on the display screen.

5) use the joystick to maneuver to the center of your design and push the red dot under **CENTERING POINT** on the screen.

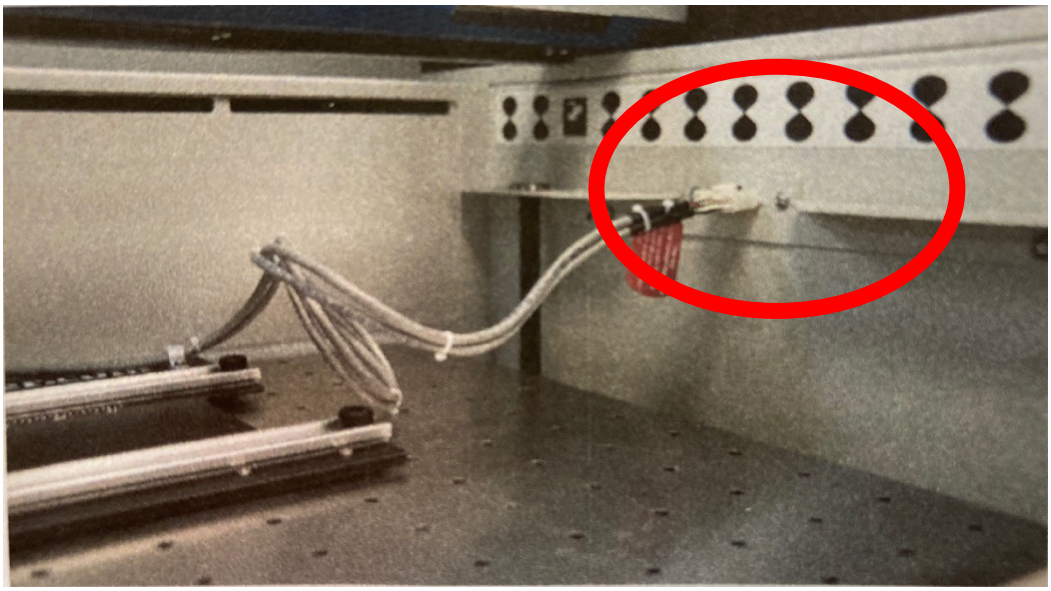


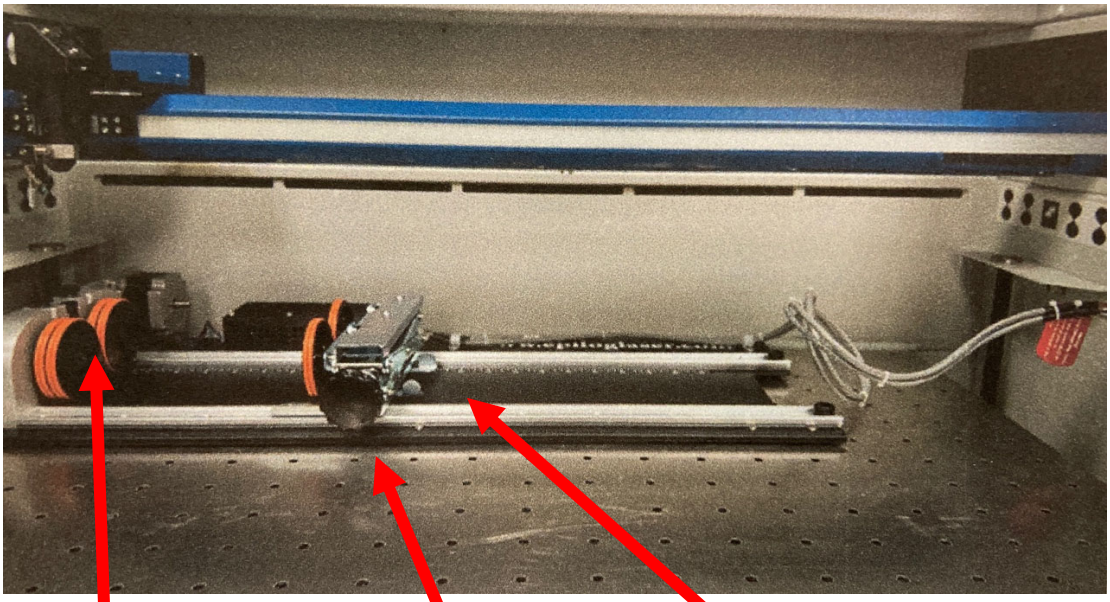
6) Press **DONE**.

7) Press the **PLAY** button to start your job.

USING THE ROTARY TOOL

To use the rotary tool, turn off the laser and remove the vector grid (with the Fusion Pro 32 only the grid itself needs to be removed, not the tray beneath it). Replace it with the baseplate. Plug the rotary tool in and push the rotary tool all the way to the top left. Turn the laser back on.





Clip the lip of your glass here.

Rotate the knob to raise or lower the back of your glass.

Squeeze the tabs to move the back of the rotary tool in or out for long or shorter glasses.