

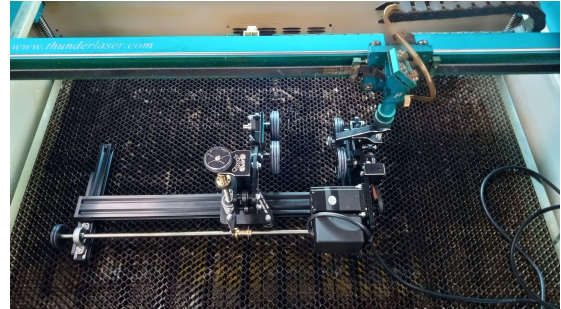
Rotary Tool with Thunder Laser

We have the Rotoboss Jr, on a Nova 35/100 laser. If you look up videos, some may be for different models.

Set Up the RotoBoss Jr.

Open the laser cover, and turn on the power. When it is done homing, move the bed down (Z/U, Z move, left arrow key) at least 6".

Place the RotoBoss Jr. on the honeycomb bed with the motor on the left side. It has magnets on the base, so it will stay where you put it.

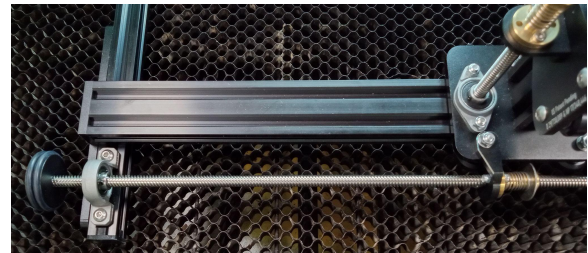


Plug in the wire. The socket is on the left side next of the bed. There is a notch in the plug, and a matching bump in the socket at the bottom.

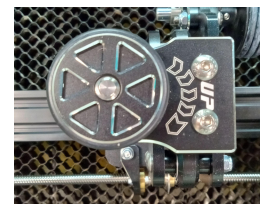


Turn on ("-") the switch beside the socket. This will make the Y axis rotate the RotoBoss. (It is a | and O but the switch is sideways.)

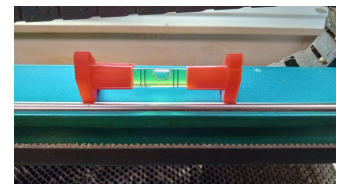
Move the laser head over the RotoBoss, and put in your material, mug, glass, can, etc. Turn the screw on the right side base of the RotoBoss to get the right side plate close to the end of your material. It should not rub.



Use the control knob at the top of the RotoBoss to adjust the material to be level. Use the RotoBoss level to check. Our laser is not level on the floor, so put the level on the gantry (the bar the head runs on going across) to see how far off the gantry is, then match it on your material by turning the right side elevation wheel.



Move the laser head toward you or away from you by hand to center the head over the material (mug, etc.) Use the Z move to get the head within reach of the material, and adjust focus as normal. The X axis works like normal, using the buttons. Be sure the laser is aligned on the X axis, or your engraving will be crooked.



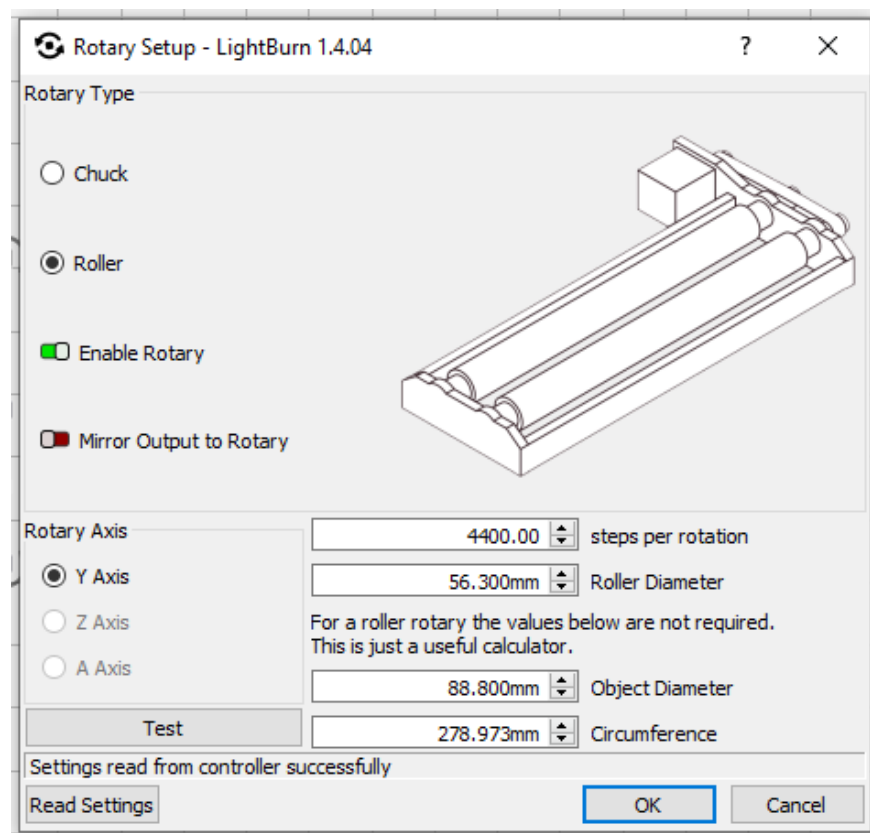
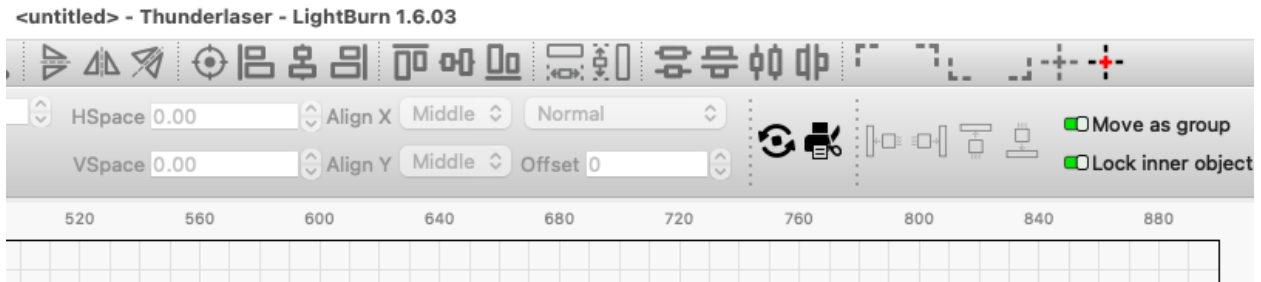
Beware! The red dot guide laser does not shine straight down. It is aligned on the focus at 6MM.



Software Setup

Lightburn on the PC at Hack.RVA is set up, but if you need to set up you own computer, or someone has messed up the settings, this is what they should be:

Go to the **Laser Tools** menu, **Rotary Setup** or click the rotary button that looks like 2 arrows chasing each other at the top of the screen:



- Rotary Type: roller
- Enable Rotary: On
- Rotary axis: Y Axis
- 4400 steps per rotation (This value fine-tunes the shape distortion.)
- 56.3mm Roller Diameter
- (The other numbers do not matter. They calculate the circumference from the diameter. Use that to scale your art.)

This is a one-time setup. Check it anyway. You have to turn it on there. When it is on the rotary button icon will have a green dot on it.

Important: The machine must be put back after the rotary is used. The calibration for the Y axis will be messed up after the rotary has been set up as above. To fix it, remove the RotoBoss, flip the switch by the honeycomb to O, open the Rotary setup in Lightburn, turn off Enable Rotary, and cycle power or hit the red RESET button on the laser.

Art Setup

Your art will be engraved exactly the same as you see it, so if you want text to go around your cup, it will need to be rotated 90° clockwise.

Do not do multiple passes. Alignment is not likely to be perfect for the second pass.

Suggested settings:

- Glass: Fill or Line, 200/15

To test your placement and size, you can put a layer of foil tape on your material, and then a layer of masking tape. The laser will burn the tape but not the foil.



Set the Origin to Current Position in the Laser panel. Absolute does not work right with the rotary.

We have some accessories that help with special kinds of mugs, etc. They are in the box marked Rotary Accessories. There is a spacer for the bottom of the work, and another that attaches under the spring loaded wheel. https://www.youtube.com/watch?v=P7Gb_nHm8eM

Removing the RotoBoss

- Unplug the cable.
- Set the switch to **O**.
- Remove the Rotoboss Jr.
- **Very important!** Go into Lightburn, Laser Tools menu, Rotary Setup, and turn off Rotary enable.
- Turn off the Thunder Laser. This is needed to reset the movement values for the Y axis.
- Turn it on and after it has homed, press the up and down buttons to test the Y axis for complete movement.

In case the Y axis is not moving like it should:

- Be sure the switch on the right side of the bed is set to **O** (off).
- Go into Lightburn, Laser Tools menu, Rotary Setup, and turn off Rotary enable.
- Turn the laser off, wait a few seconds, and turn it back on.

