

Endy 250LB (LightBurn Edition)



Thank you for purchasing / having a look at one of my rotaries. Please get in touch if you have any queries, suggestions or issues assembling, connecting or using it and I'll do my best to assist 😊

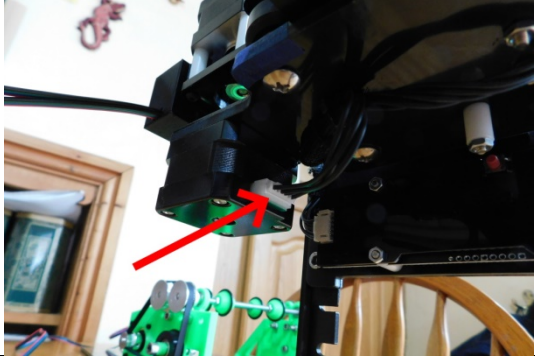
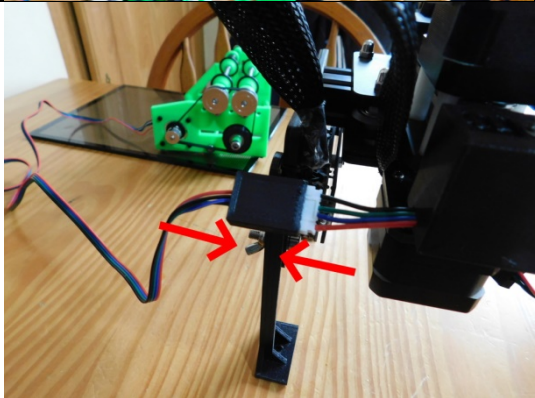
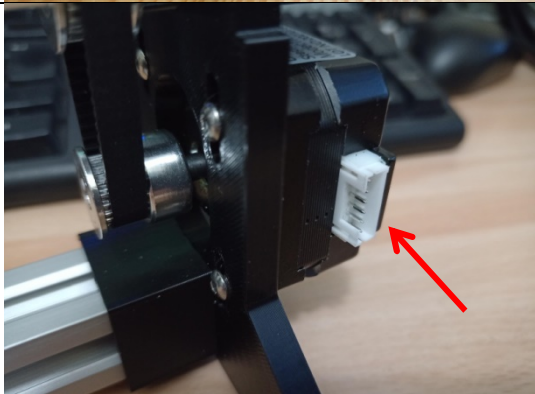
Assembly

I'm keen to re-use packaging wherever possible so your Endy250LB may need a little assembly. Depends on the size of box I have available 😊

<p>Remove the nut from the spindle and insert the spindle in the headstock, washer needs to be at the pulley end. Secure the nut on the other end – finger tight is fine.</p>	
<p>Hook the belt over the two pulleys, slide the motor downwards to adjust the tension and secure the motor bolts in place with an allen key.</p>	
<p>Remove the bolt and washer from the end of the aluminium extrusion and slide the headstock on. Secure with the bolt and washer.</p>	

Connecting the Endy250LB

If you have purchased a switch along with your Endy250LB please follow the instructions supplied with the switch.

<p>Ensure the engraver is powered off. Locate the 'Y' axis stepper and remove the white plug.</p>	
<p>Connect the white plug to the black socket on the supplied cable.</p>	
<p>Connect the white plug on the supplied cable to the motor on the Endy.</p>	

Powering up

Before powering up ensure the switch (if you have one) is in the 'R' (rotary) position. If you are using a Neje 2S Max ensure the right hand 'Y' axis motor is either disconnected or switched off.

When you power up or connect the engraver to Lightburn the engraver will attempt to home. You can either trip the 'Y' axis limit switch by hand or gently move the gantry to trip the switch. Moving it to its normal home position should trip the switch and stop the rotary rotating.

There is an option in LightBurn to turn off homing which I will investigate and add here. If anyone's used this option feel free to let me know how it works☺

Initial Setup in LightBurn

The maximum 'Y' axis speed on my engraver is 9000mm/min. This should be fine if you are engraving pens and smaller objects but with a large tumbler attached is likely to result in either the motor skipping steps as it tries to accelerate to that speed, the tumbler slipping or the rotary catapulting itself across the room 😊.

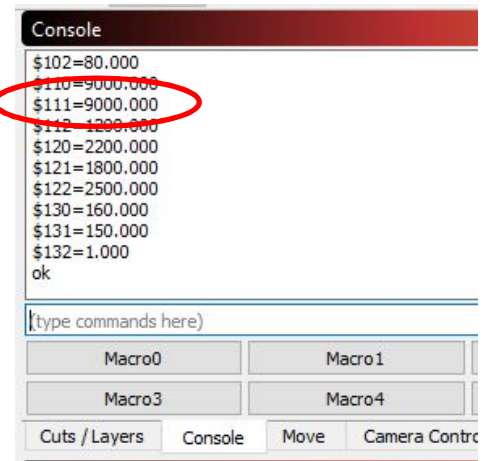
Changing the 'Y' axis speed should only affect travel moves and vector engraving. The 'X' axis speed can be set to anything as that controls the laser head.

In my case I changed this to 800mm/min which ensured the mug stayed in place.

These steps need to be followed when the laser is connected.

Step 1. Make a note of the current maximum 'Y' speed setting so you can reset when you go back to standard engraving. Bring up the LightBurn console window, enter \$\$ and hit return. This will list your GRBL setup.

Scroll down and find \$111, this is your maximum 'Y'. Mine is 9000mm/min.



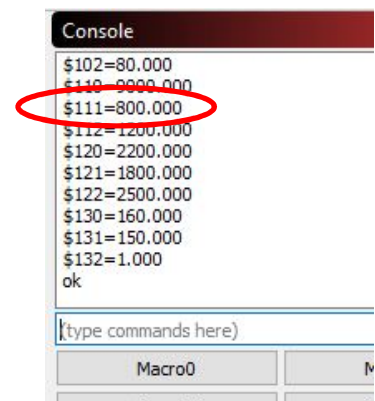
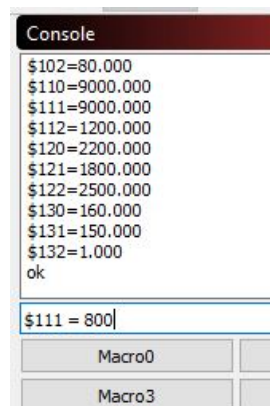
Step 2. To change this to a subsonic speed enter:

\$111 = 800 and hit return.

Entering the \$\$ command again should show this value changed.

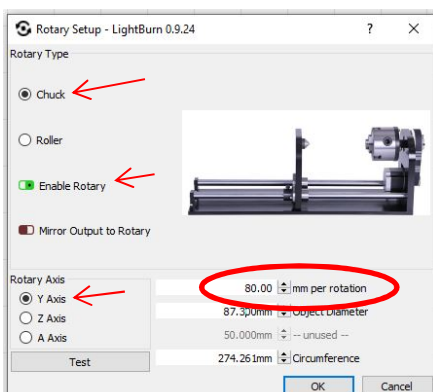
To reset to standard simply enter the command:

\$111 = 9000 and hit return.



Step 3. Enabling the Rotary function. You can show LightBurn's 'Rotary Setup' by click the option on the 'Tools' menu or holding down CTRL and SHIFT and hitting 'R'.

Make sure the 'Chuck' option and the 'Y' axis are selected. Change the 'mm per rotation' to 80. Don't forget to 'Enable Rotary' 😊.

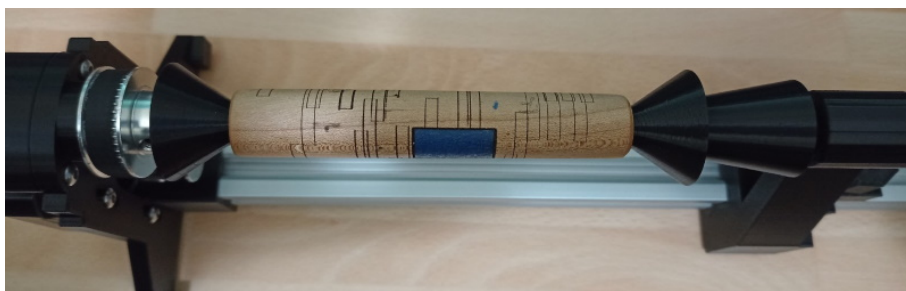


Mounting your item

As well as the mug mounts there are a few other parts you can screw on to either the headstock or the tailstock for mounting most items.



The cones are ideal for pen blanks or anything with a dip or hole in the centre.



The cups deal with anything vaguely round, Christmas baubles spring to mind (they're in box somewhere!)



The pen nib holder for – wait for it – pen nibs☺



Bottle top mount does bottle tops and anything else that needs a wider cone.

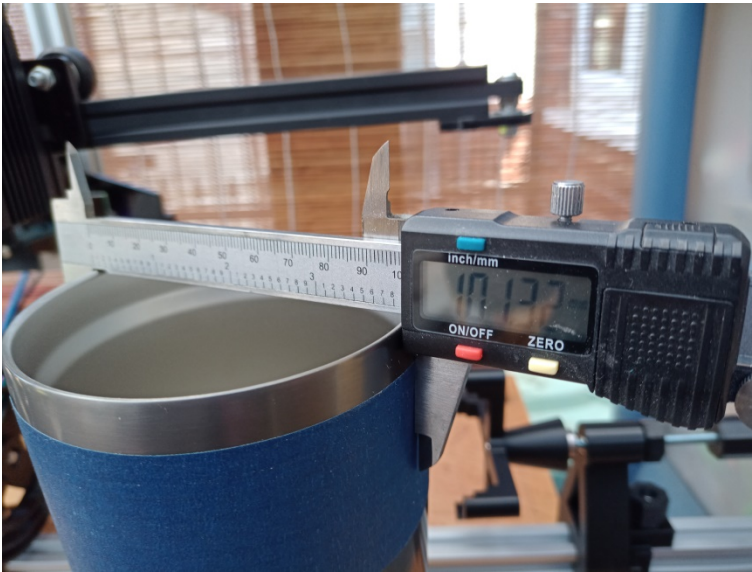


Engraving

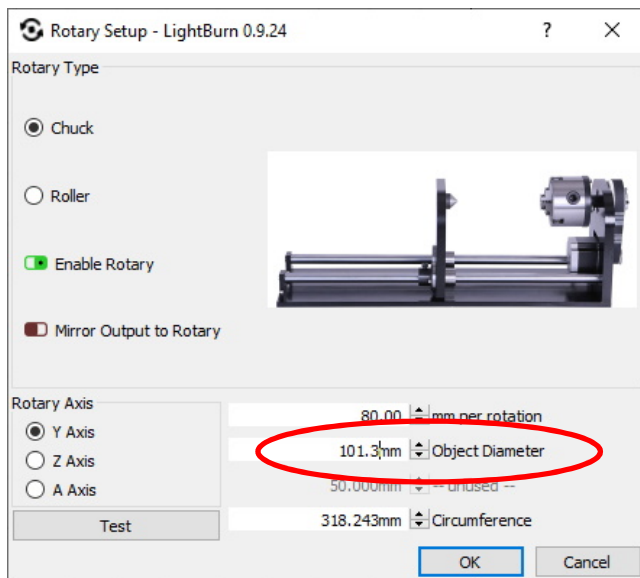
Finally we get to the part where you actually get something productive done 😊

Load your design into LightBurn, select your power and speed.

Measure the diameter of your work piece.



Enter this measurement in the 'Rotary Setup' object diameter - CTRL-Shift & 'R' (or the 'Tools' menu) – Click OK



Frame it and Burn it 😊

And finally...

I sincerely hope you have as much fun using this jig as I've had designing and making it.

Any issues, suggestions or problems please do get in touch: james@jafweb.co.uk or take a look at

the facebook group. <https://www.facebook.com/groups/2150167618622948/>