

La phase de réglage est assez longue et fastidieuse. En attendant une traduction, voici les liens vers les explications en anglais sur le site de lasersaur: Page de réglage peu détaillée mais avec schémas: https://github.com/nordt/lasersaur/wiki/optics_setup

Page plus détaillée du processus:

<https://github.com/nordt/lasersaur/wiki/Calibrating-mirrors-and-lenses>

Un montage pour aider au réglage des miroirs avec un pointeur laser (pas testé):

<http://www.thingiverse.com/thing:639069>

Une explication d'une méthode de réglage: I'm a firm believer in NOT measuring the distance and assuming that's the right thing to do. You've gotta adjust incrementally.

One particular problem is that not all "75mm" lenses are really 75mm. Some of them are 3 inches - which is 76.2mm - but they aren't necessarily even that. We're not keen on spending \$300 for a lens from a 'reputable vendor' - when we can get them for \$60 from some guy in Israel who sells them on eBay! The cheaper lenses seem to have focusing ranges anywhere from maybe 72mm to 78mm depending on where they originally came from.

I have the older focussing tubes where you rotate the lens tube to adjust the focus. The Thor Labs parts have 40 turns per inch threads. I put a white dot on the edge of the lens tube and count the number of rotations up or down to get the thing in perfect focus.

So I measure off the 75mm "nominal" distance - and then cut a series of 10cm lines with the lens tube rotated in 2 turn increments (which is about 1.3mm) starting at 8 turns above the nominal distance and ending 8 turns below it. This is kinda tedious...but we only have to do it when we swap out a lens. We pick the best focussed line - and then try one turn above and one turn below that setting to get the very best.

The final step is to rotate up in 1/4 turn increments...that's because lenses get gradually damaged - and very often, by rotating the damaged part somewhat out of the way of the beam (which is somewhat elliptical after all of those mirror bounces) - you can sometimes get better results.

Also, focussing a millimeter or so higher than optimum gives the best compromise when our plywood is a little warped and won't lay perfectly flat on the bed.

We just bought one of the newer lens tubes that Nordt sell where the entire tube slides up and down and you can't rotate it to get precision adjustments - I was rather disappointed with it - and we're currently debating whether to return it or to persevere with it.

I suppose we could get similar repeatability & accuracy with a wedge slid under the tube, marked with it's thickness at various points...which is a tool that we could laser cut. But I'm not convinced because the retaining ring below the lens can easily get turned around when you remove the upper retaining ring to get the lens out for cleaning...that would mess up the focus. Since our lenses need cleaning every one or two days, that's an extra chore that we really don't need.

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Last update: **2017/12/21 19:13**

