

Lab 4 Report

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Describe any difficulties/experiences during the laser cutting and assembly.

- When saving the solidworks assembly file as a .dxf file, the scaling of the components do not scale 1:1, as observed when opening the .dxf file in CorelDraw. What we did to solve this was to manually adjust the whole drawing to our desired size (i.e. hole of diameter 4mm).
- When we wanted to send our print job in CorelDraw, although we did set all components to be RGB red colour (which means cutting), we did not verify that the RGB red colour settings under the pen tab that the speed, power and PPI are correctly set. This caused our first cut to only engrave the acrylic board instead of cutting through it. We solved this by adjusting the RGB red colour settings using a preloaded laser cut parameters file in the fabrication lab computer and verifying the values of the parameters after loading the file.
- We did not laser cut a fixed base to screw our Hoeken's linkage on. We only realised that we required a fixed base after the first session. We booked a second session to laser cut the base.
- After fixing the bolts onto the linkages, we realised that we needed to use spacers for certain joints in order for the linkages to turn freely without obstruction. To solve this problem, we disassembled the affected joints and reassembled them with spacers.

Videos of linkages are in the submission folder.

