We'll start out by describing what we know about the projects, holes we still have and understanding who can help solve them.

DOD: list of questions, requirements and set plan of next steps for project.

## Background

the cartestian-polar-plotters are two plotters, the cartesian in a cnc gantry style and the polar in a polograph style. Both are controlled by 2 wheels that affect the 2 motors of the plotters (xy location or r1r2 location). The wheels are connected to encoders whose signal is sent to an Arduino. The Arduino sends a signal to the motors to move accordingly.

Finally, clicking on the left wheel (x or r1 depending on the plotter type) activates the end effector, namely the UV light that draws on the photosensitive canvas.

Stages of setup:

## discussion points

Lay out the problems with the project and what needs to be done (not necessarily code!)

From what I understood, the problems are:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Feature/bug fix | Reach? | Impact | confidence | effort | score |
| Encoder drift in xy |  |  |  |  |  |
| Polar calibration |  |  |  |  |  |
| UX of uv light activation |  |  |  |  |  |
| General code refactoring |  |  |  |  |  |
|  |  |  |  |  |  |

### Problem descriptions

- xy plotter: encoder problems that causes drift over time, limiting span of travel. source of problems:

- initial calibration problems

- encoder problems

- polar plotter: sometimes faulty calibration with metal detectors.

- both: unintuitive activation of UV light (left wheel click)

- general code refactoring – cleaning up the code to be more maintainable.

### Things I need

- test kit and how to work on it.

- numbers of people and how to access them.

- how can I be involved in other parts (printing, design & engineering)