POLYTECH NICE SOPHIA

Robotics,
Autonomous systems

UNIVERSITÉ CÔTE D'AZUR

Weekly Report N°2 for

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RubbleScout,

"Navigating Chaos, Saving Lives"

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During this session, we looked in more detail at the circuit that powers the lamp.
Unfortunately, after carrying out a few tests and inspecting the pcb, it is not possible to vary the brightness of the lamp using PWM, and as no information is available on some electronic components, it is not possible to readapt the circuit *(Fig 1)* either.
For the time being, we'll have to make do with a relay circuit to switch the lamp on or off, without variable brightness, which shouldn't pose any problems for tests where the robot will be powered by cable. A video of this electronic assembly *(Fig 2)* can be found [here] and PDF file of *(Fig 2)* [here].

Fig 1: Lamp Controller

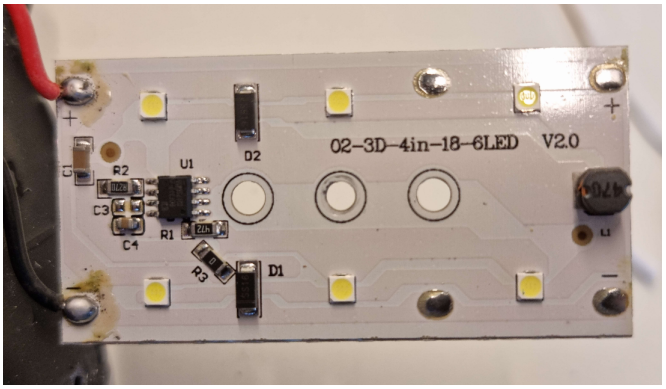
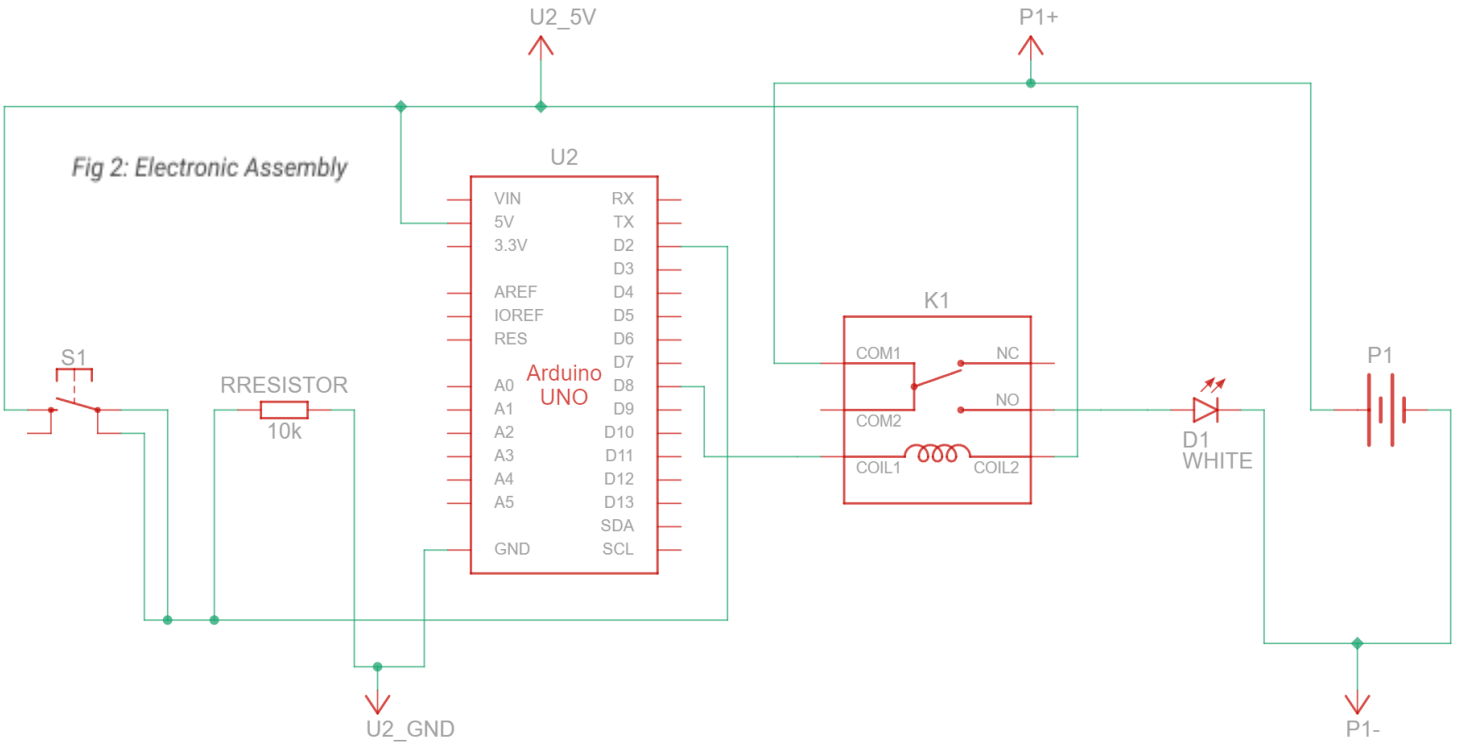
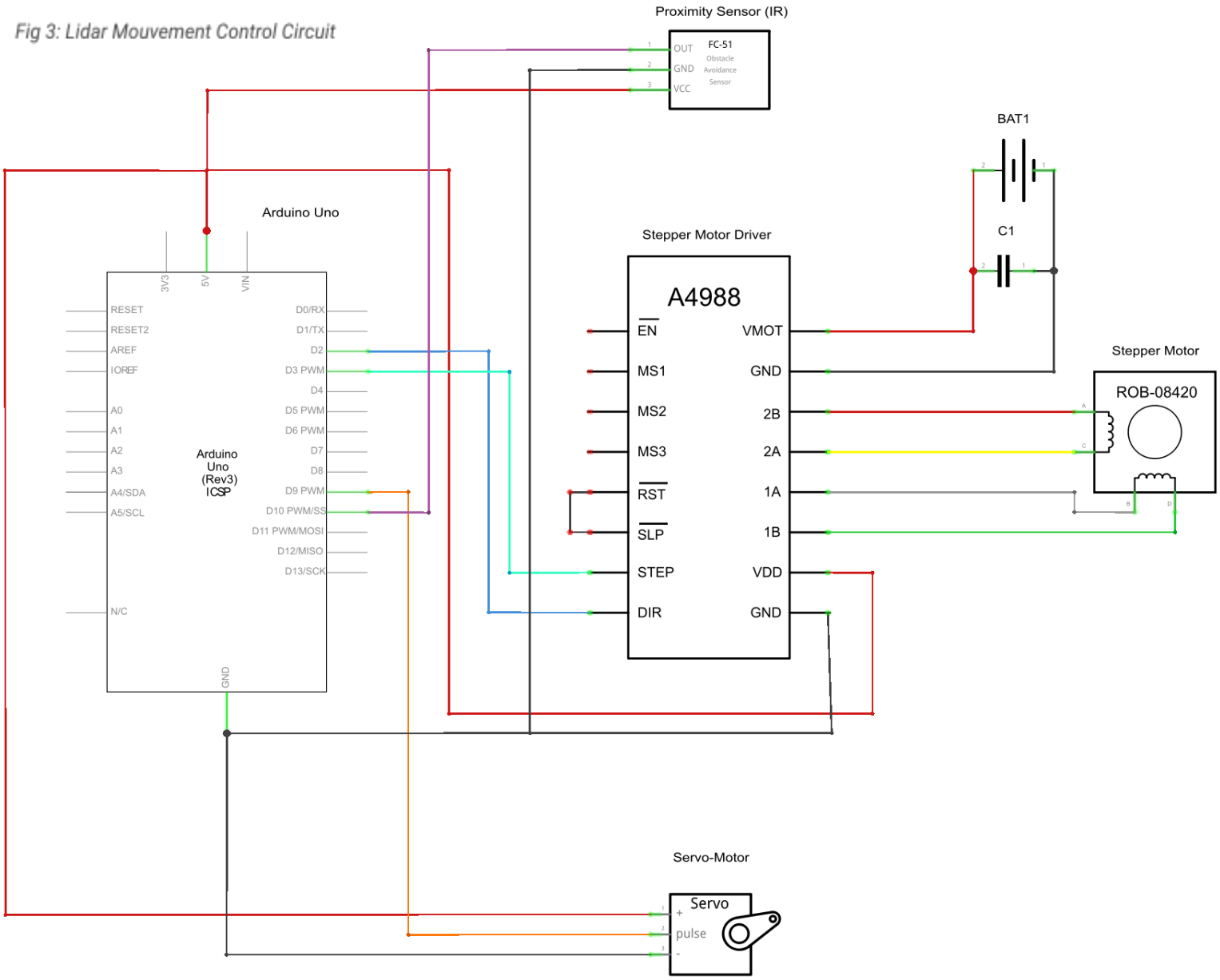


Fig 2: Electronic Assembly



Unfortunately, the search for a solution for the PWM, which turned out to be unsuccessful, took me longer than expected, so I didn't get a chance to make any progress on the lidar. However, I still had time to design a circuit to control the lidar's movements. *(Fig 3)*
An SVG file of *(Fig 3)* can be found [here].

Fig 3: Lidar Mouvement Control Circuit



In the end, I wasn't able to do much in this session, so for the next time, I'd like to make all the 3D drawings of the lidar motion controller using CAD software, so that I can print the parts in the next session and maybe try them out.
It would also be great to receive the chassis next week, so I can get started on the basic mechanics of the robot (movement).