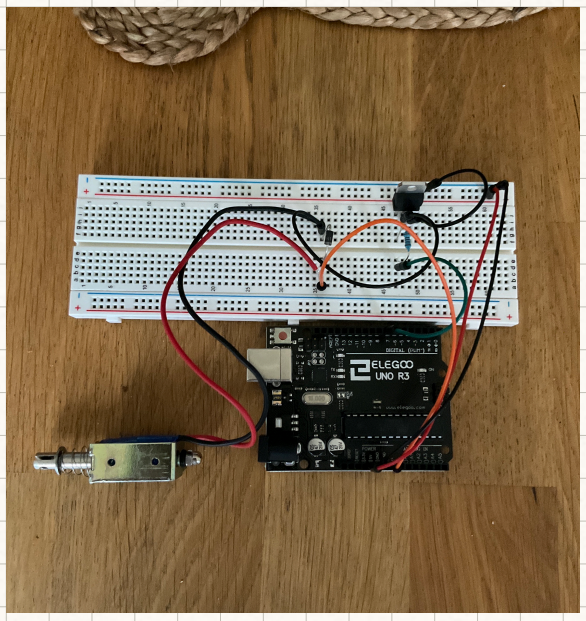
Electrical Assembly of AH activation device - Button Actuation

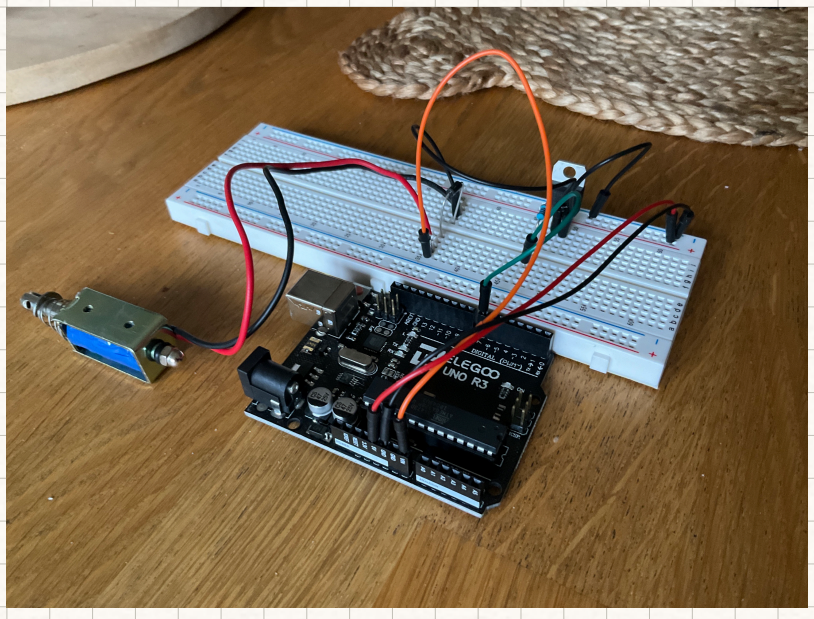
10 NOV 2024

Initial Build Design

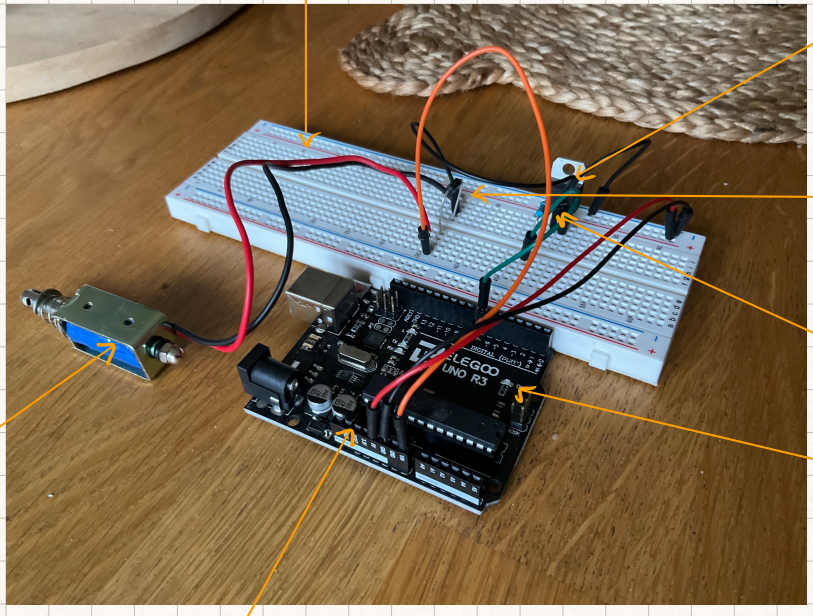
Due to the certainty found when reviewing the Model A assembly the team decided to switch to solenoid with a linear actuation This helped as it replicates AH guitar open source hardware project. We decided to use this mechanism and hook it up to a breadboard and get it running. Bellow shows a photo of the results and details of what the parts are.

Photos of electrical build with Arduino of linear Solinoid Actuation





Party link



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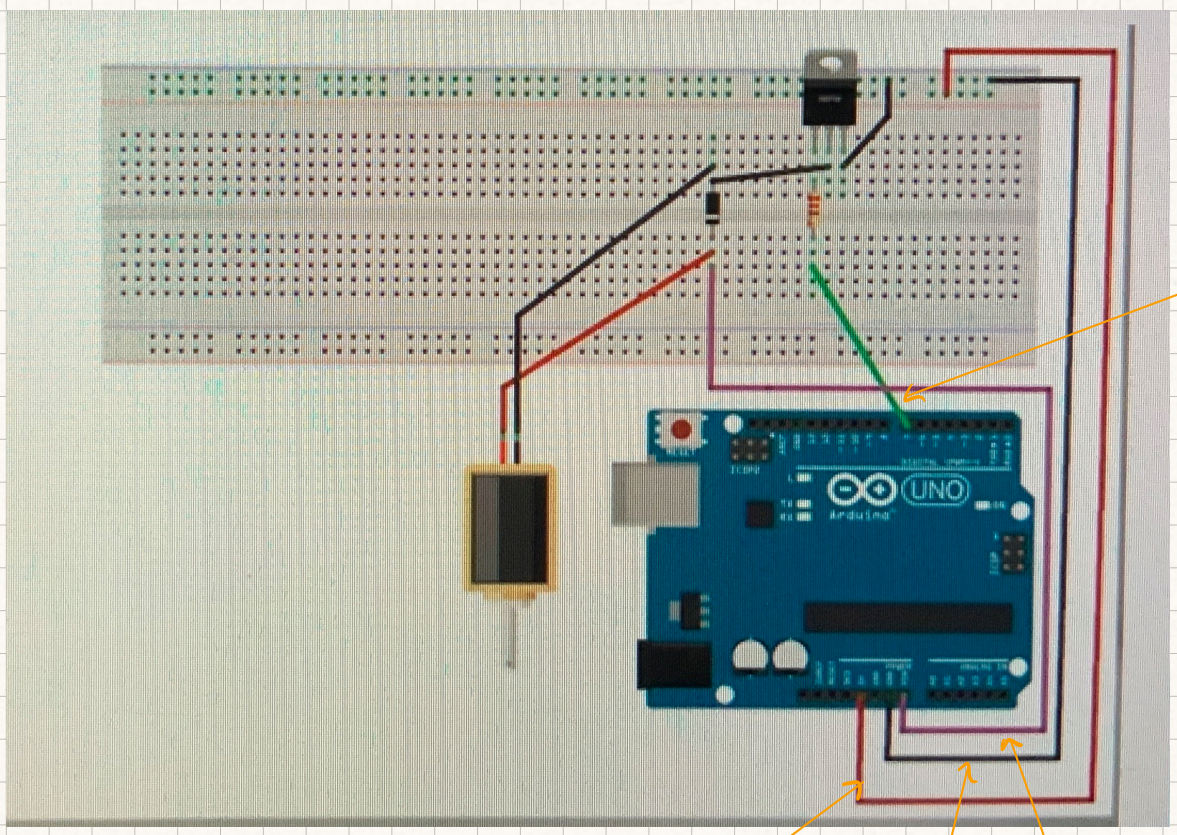
1. Hechen Solenoid Electromagnet HS-0338 DC6V 5N 10mm stroke push pull type open frame - £5.29 each
2. Jumper wires - £6.99 pack of 120
3. Elegoo Arduino UNO R3 board - £9.99 each
4. 1 kΩ resistor - £4.99 pack of 200
5. IN4001 Diode, 1A 50V - £2.20 pack of 100
6. TIP 120 transistor NPN 5A 60V silicon darlington transistor - £8.99 pack of 20
7. Haljia solderless plug in breadboard, 830 ties, 2 Power lanes, 200 PTS, 16.5 x 5.4 x 0.85 cm - £4.99 each

Board layout / Circuit Diagram



Pin 7
* you can change any pin you want as long as it is in the program

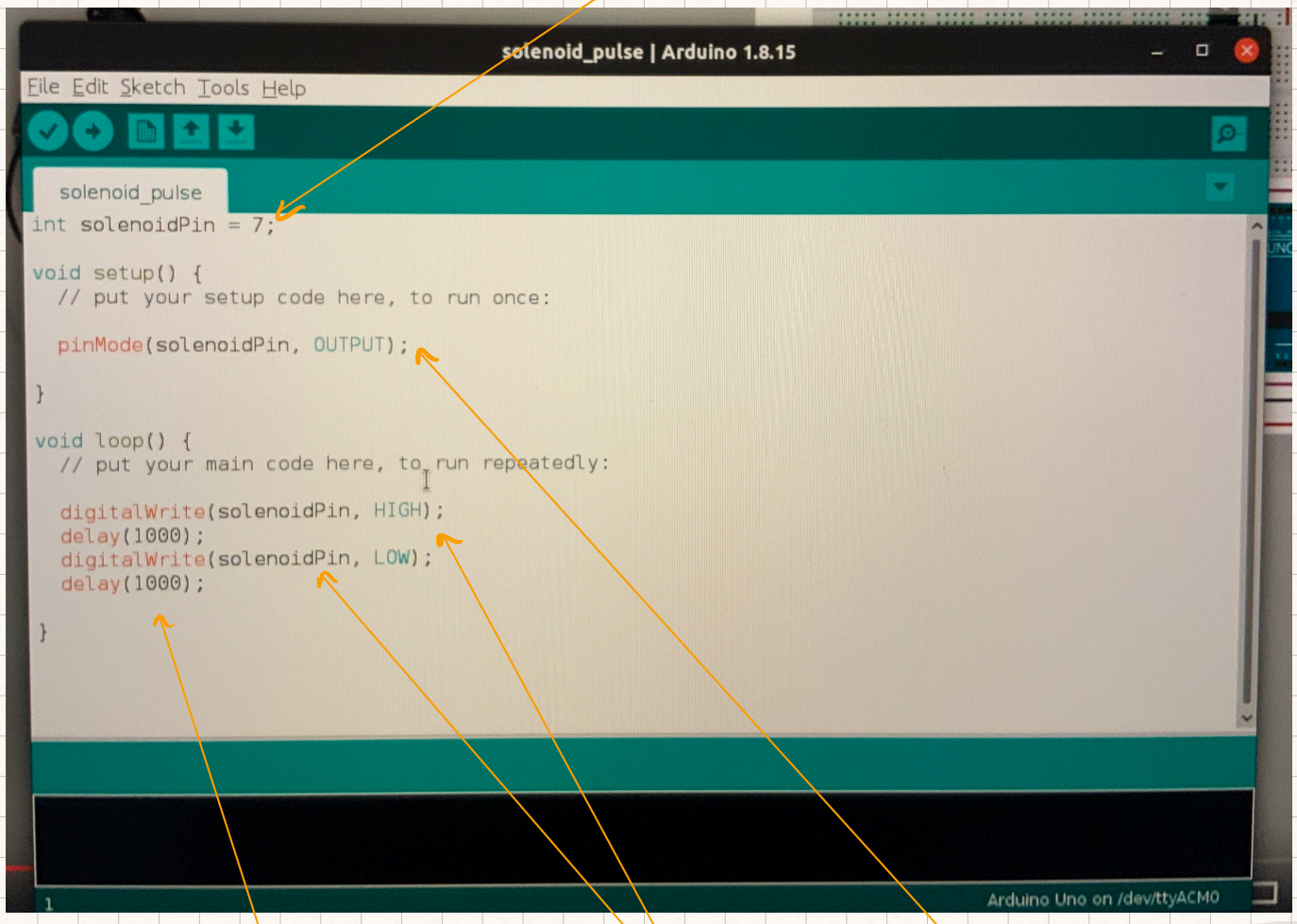
Credit: Arduino tension 4 - solenoid control using a transistor - DIY Tech Guy

Ground

+5V to board

Vin - to all more the 5V to go to this part of the circuit - we use the plug in here to now power the arduino

Code to run the program



Define pin variable

setup the pin to be an OUTPUT

write the value of the output to the pin

delay of 1second before the pin goe high / low