# MA5: Control a robot (sensors + motor + transistors)

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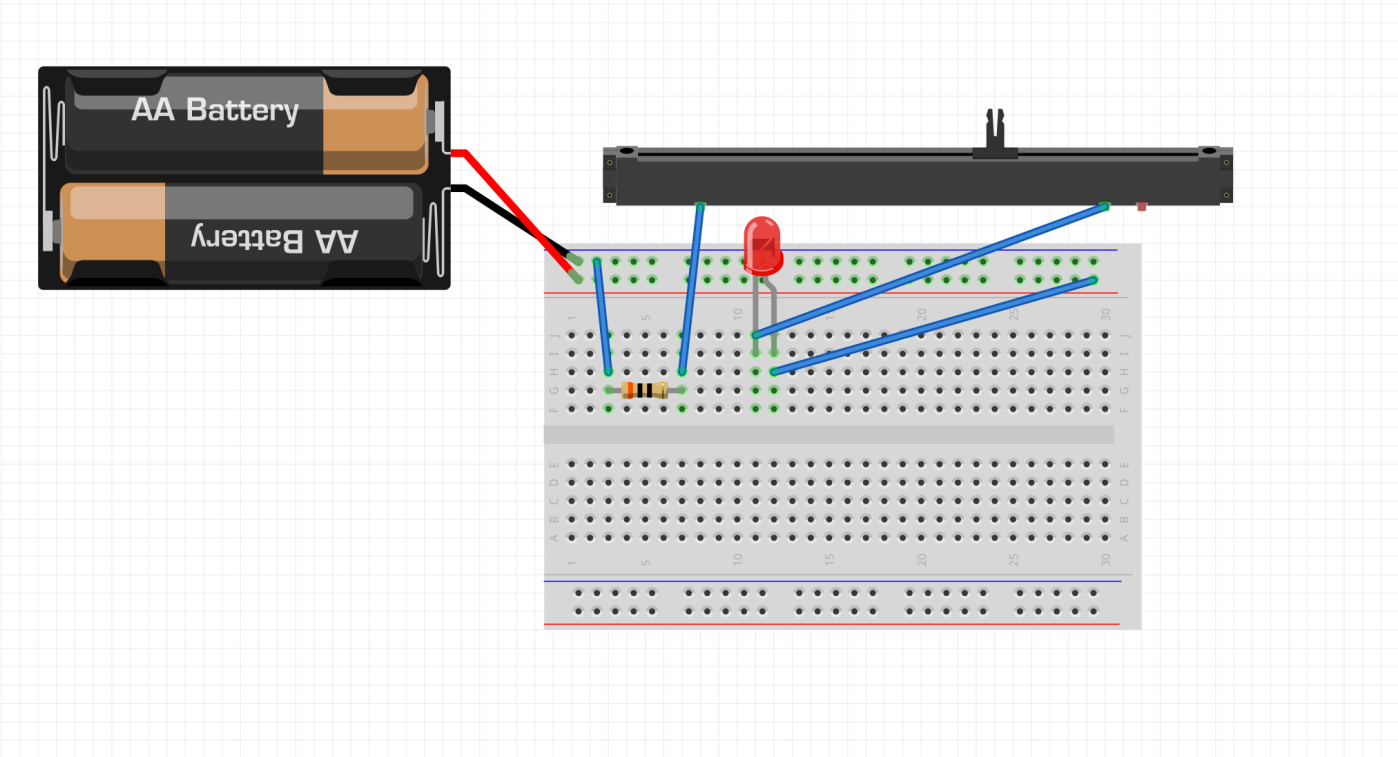
*Date: 10-03-2021*

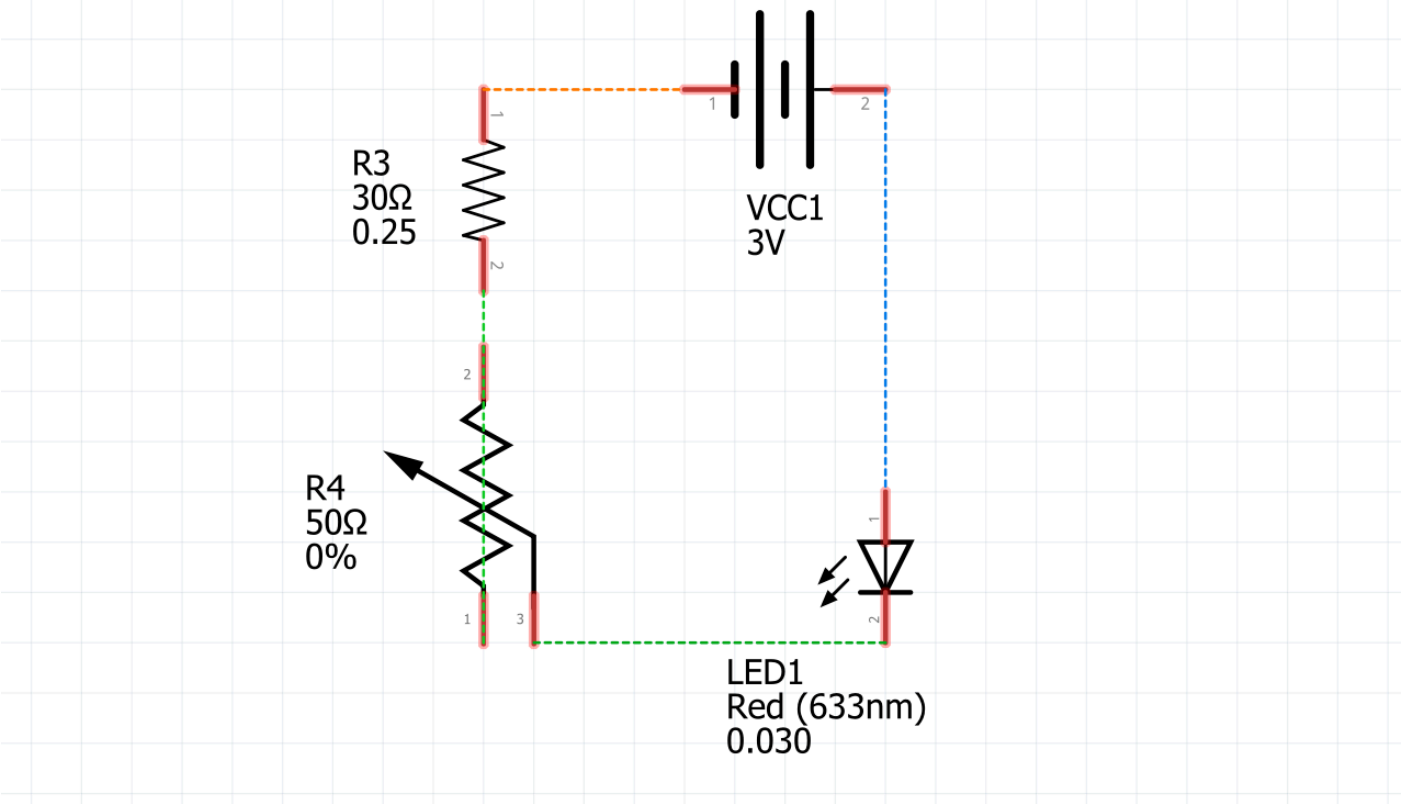
# Basic Sensor Circuits

- *Control LED intensity with a potentiometer*

This is our BB:

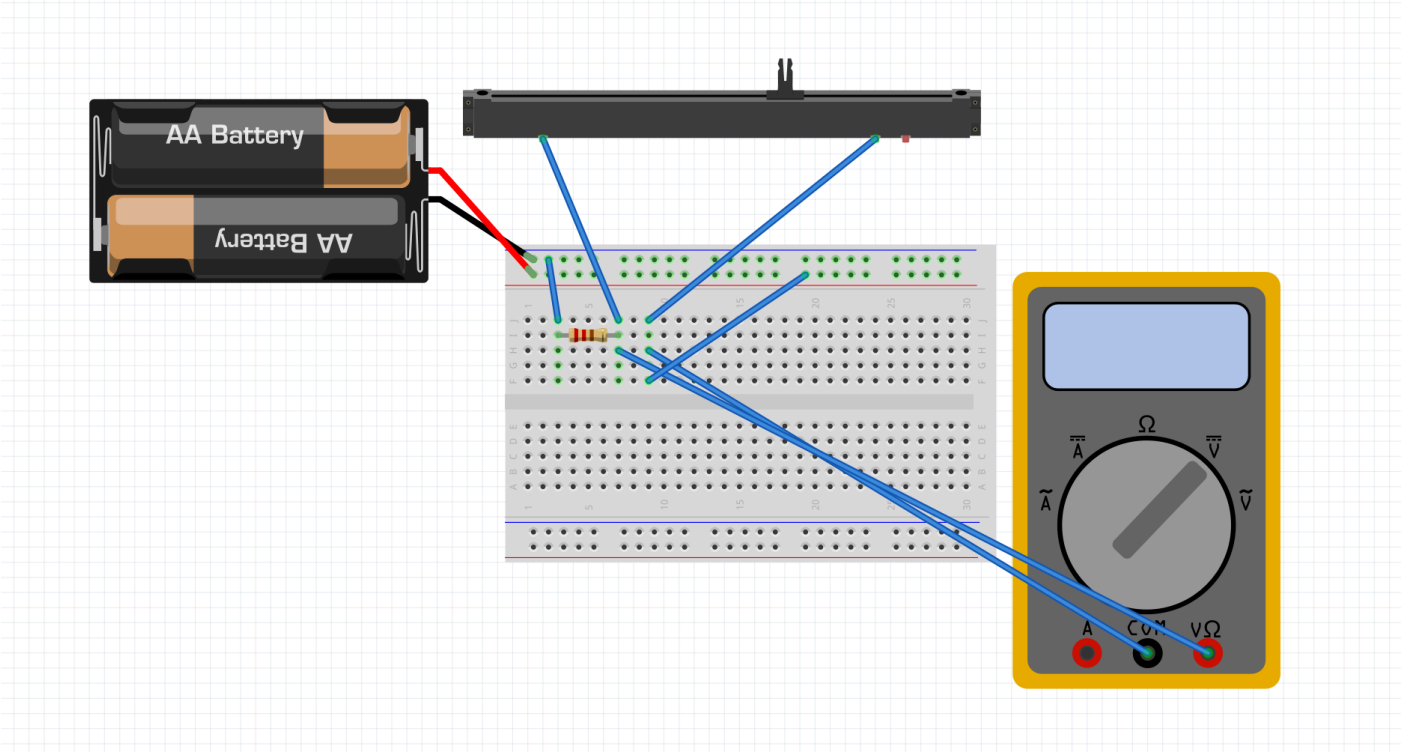



This is or SCH:

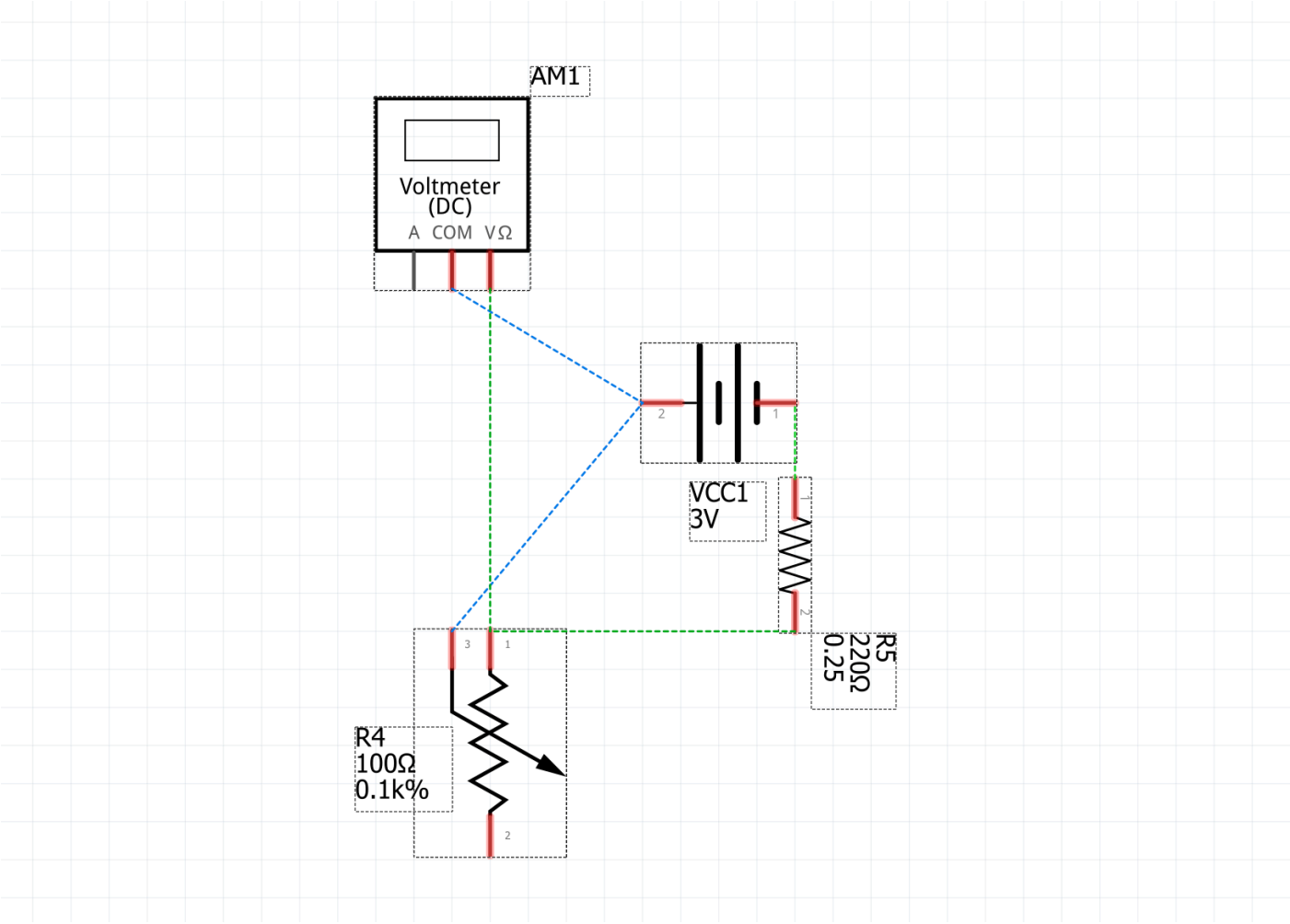



- *Read a potentiometer*

This is our BB:

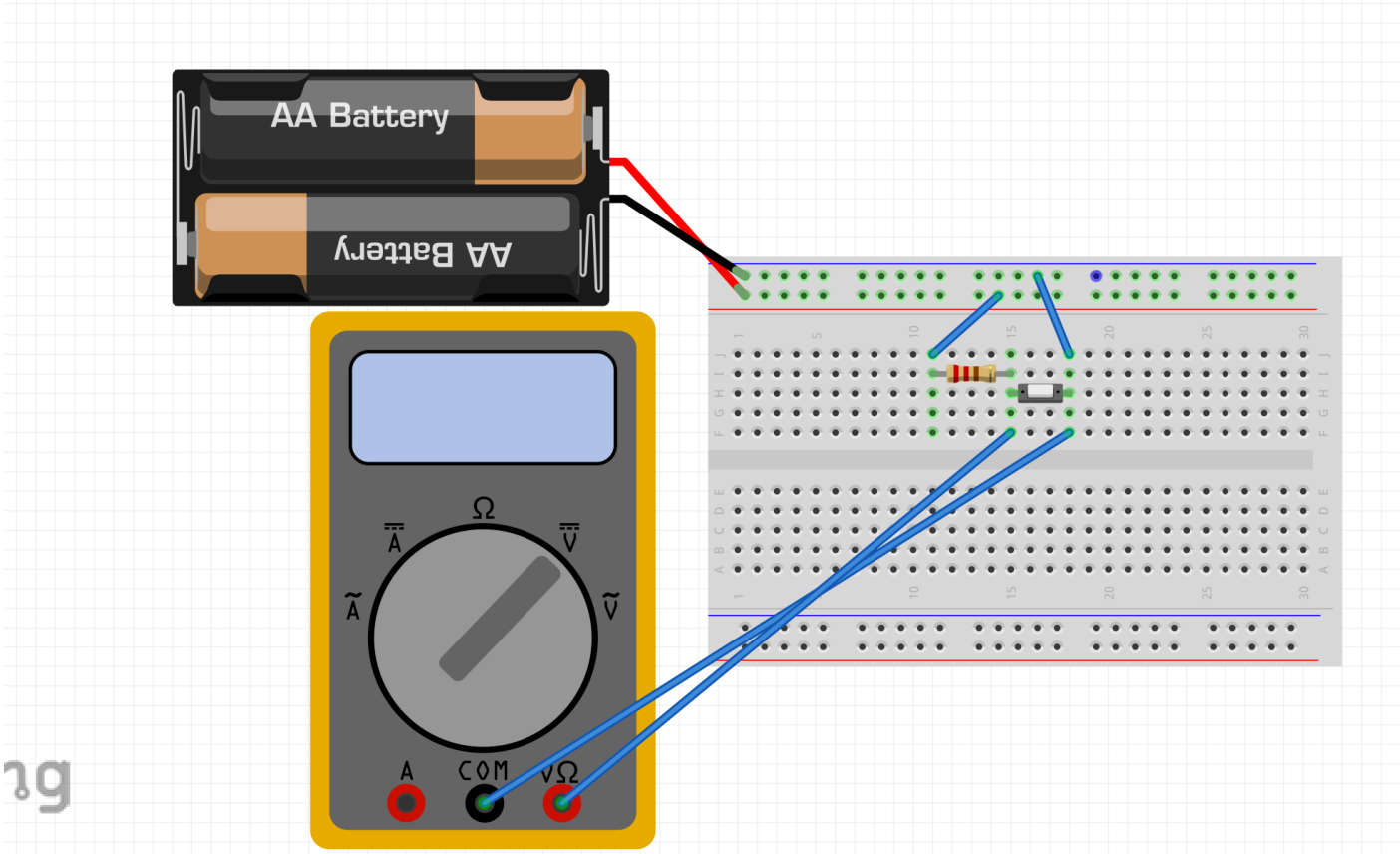



This is or SCH:




- *Read the status of a switch with a multimeter*

This is our BB:

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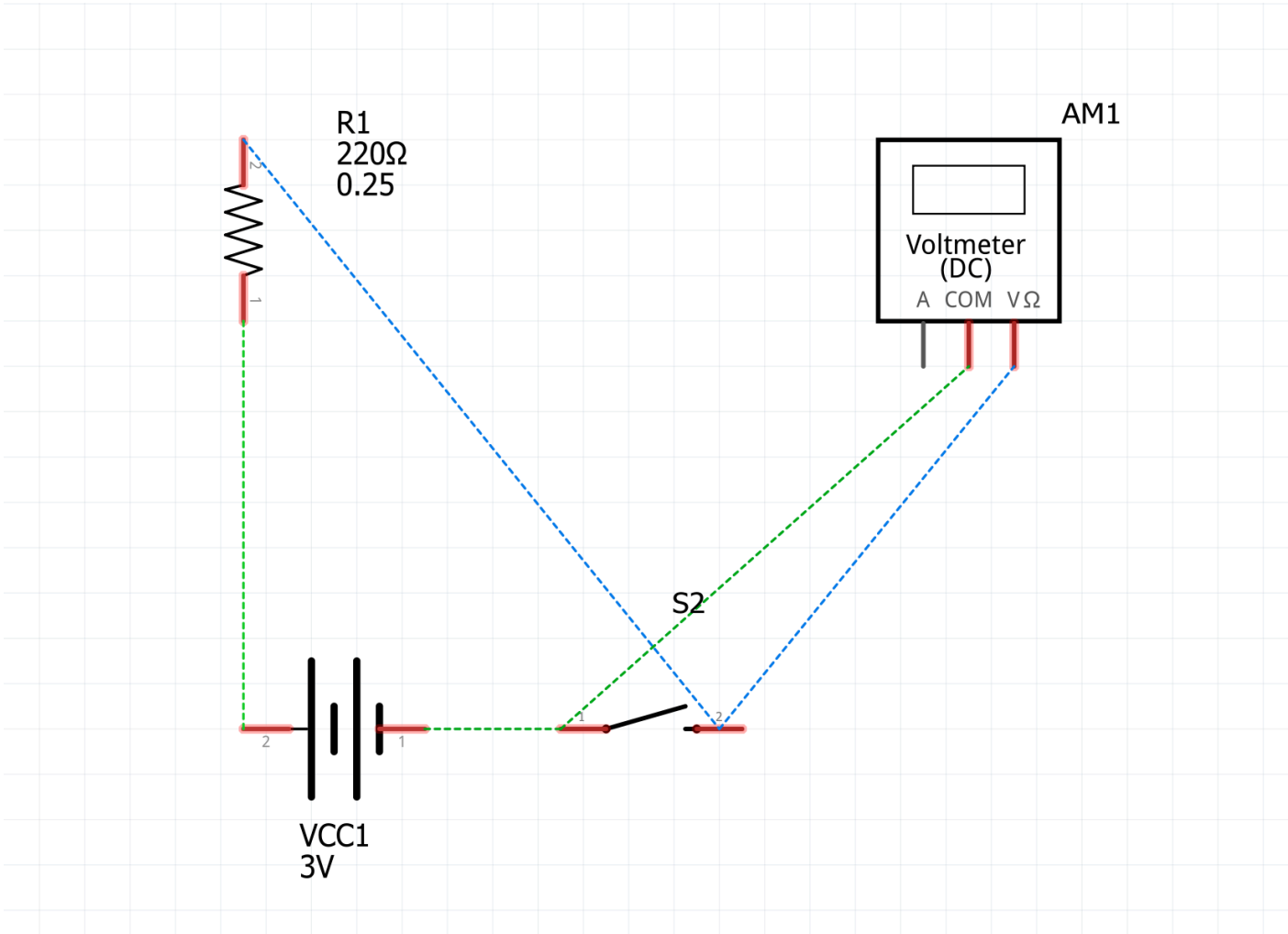
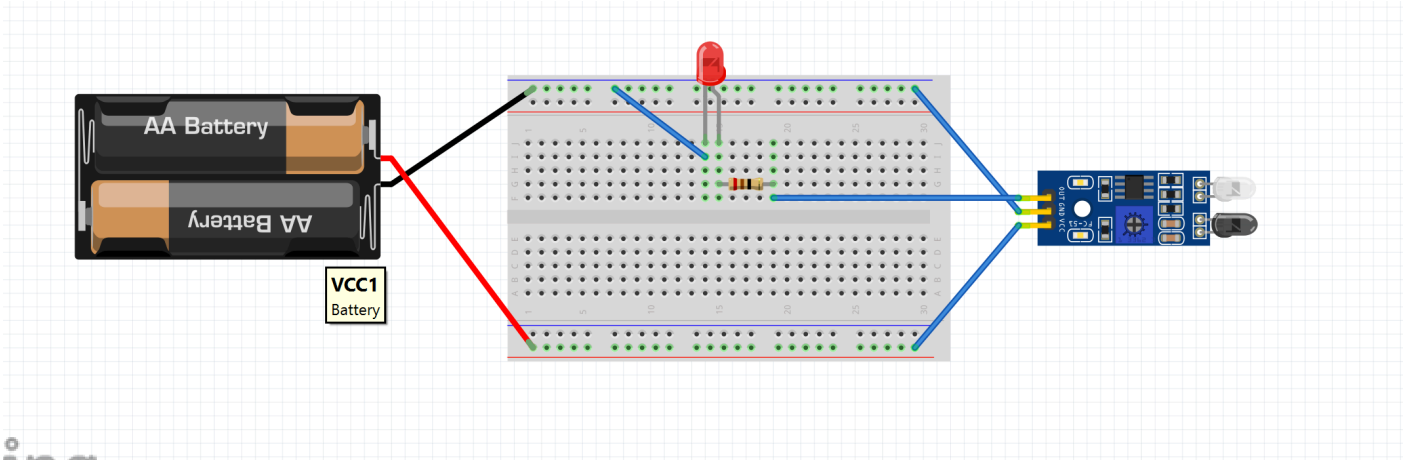


# Robot Controlling Circuits

- *A circuit to test a digital IR sensor FC-51*

This is our BB:

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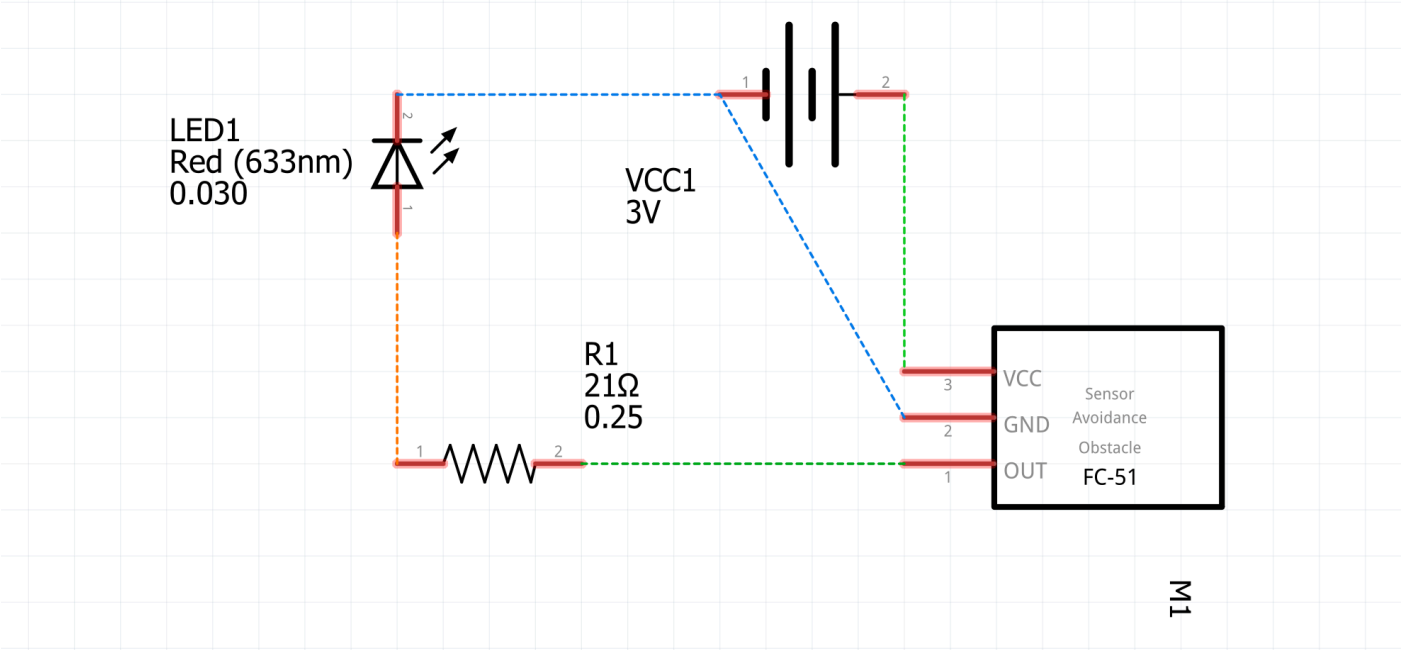
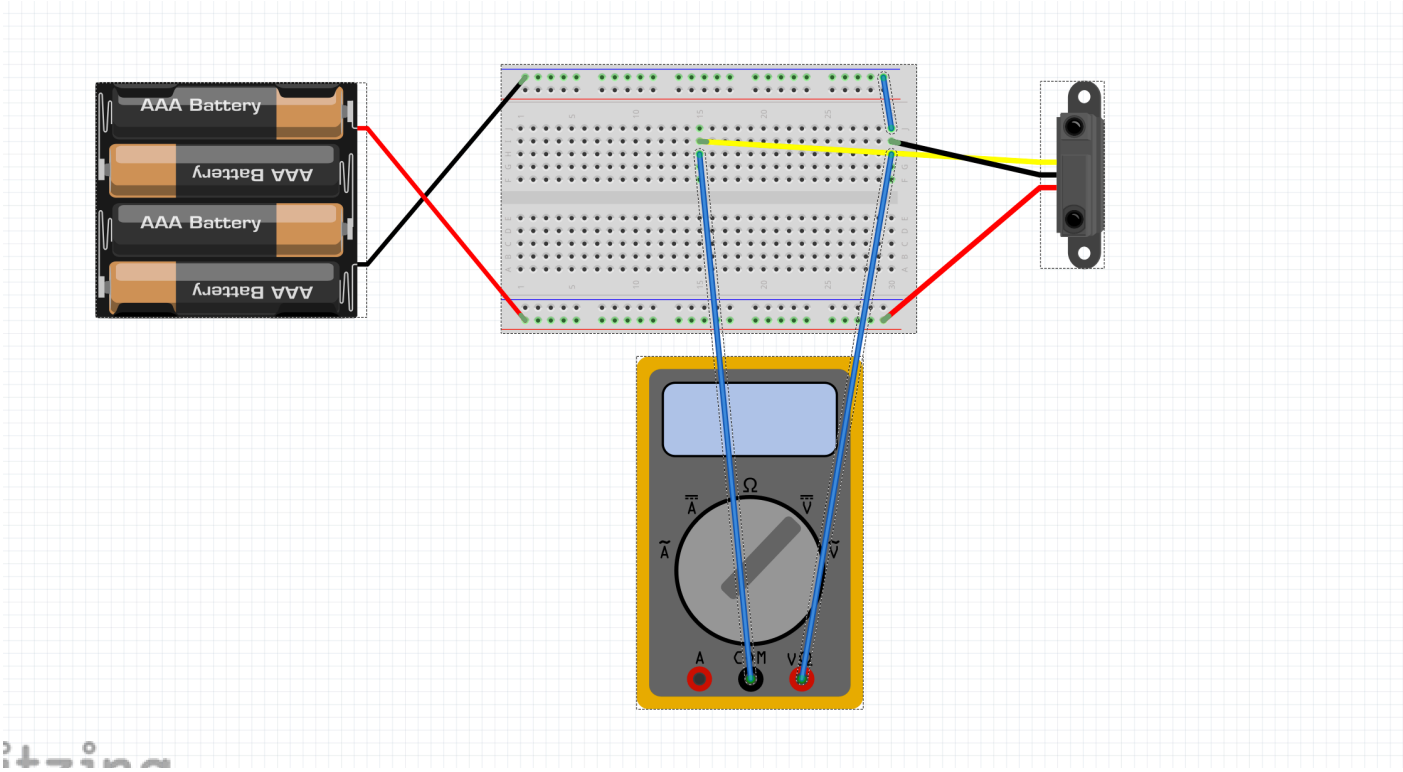



- *A circuit to test an analogue IR sensor*

This is our BB:

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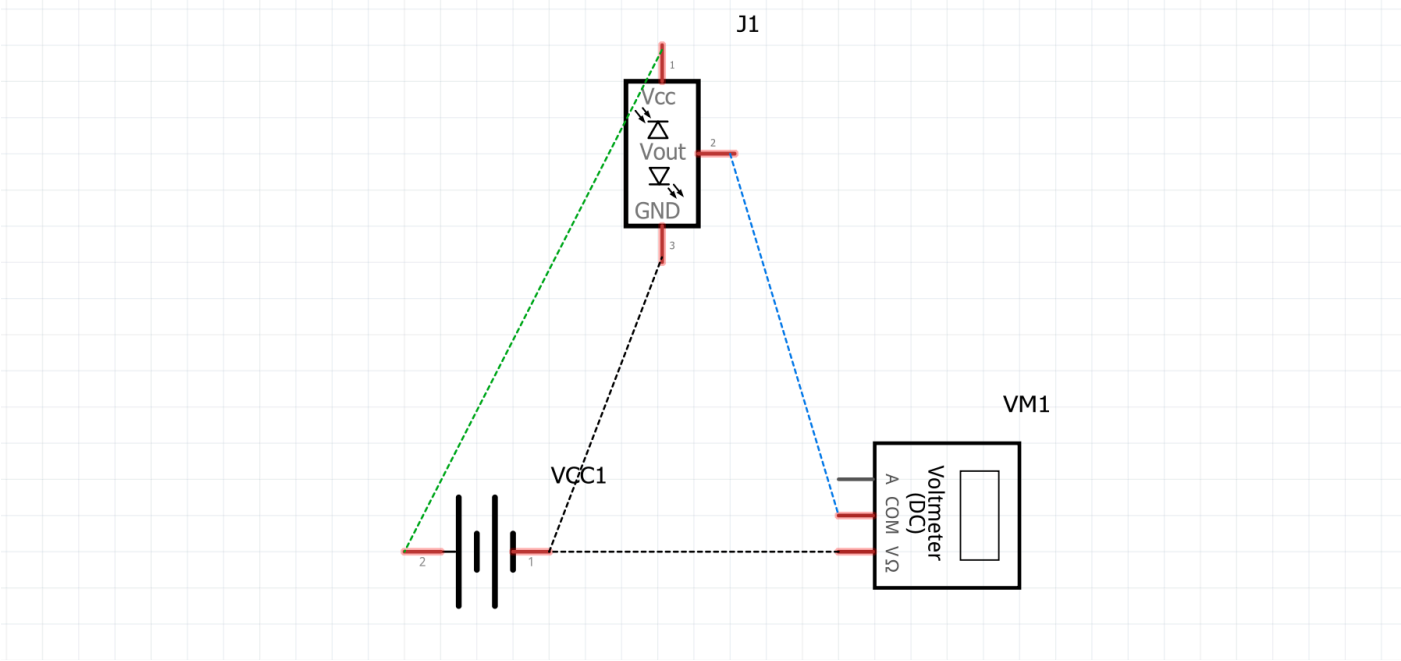
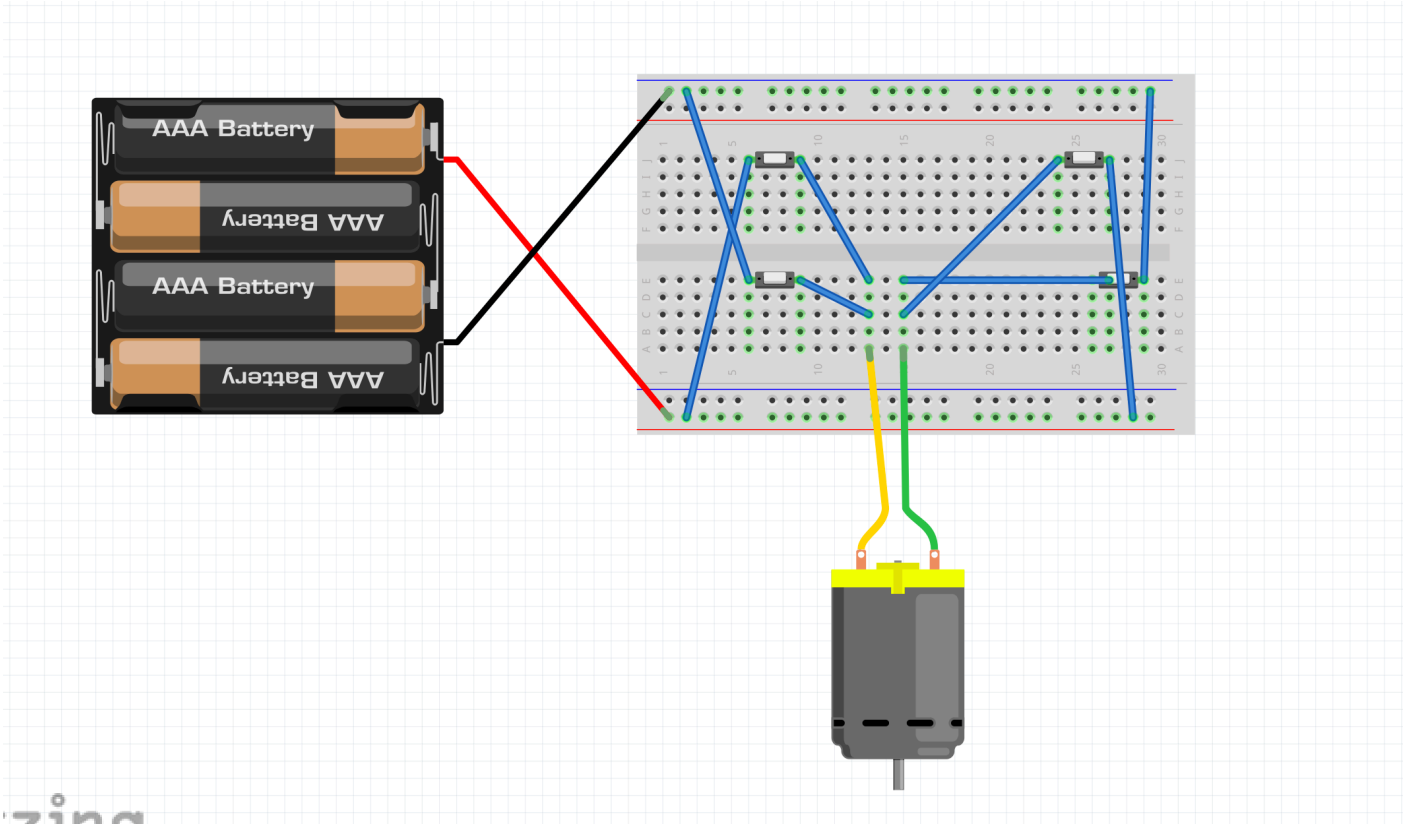



- *An H-bridge with switches and control a motor*

This is our BB:

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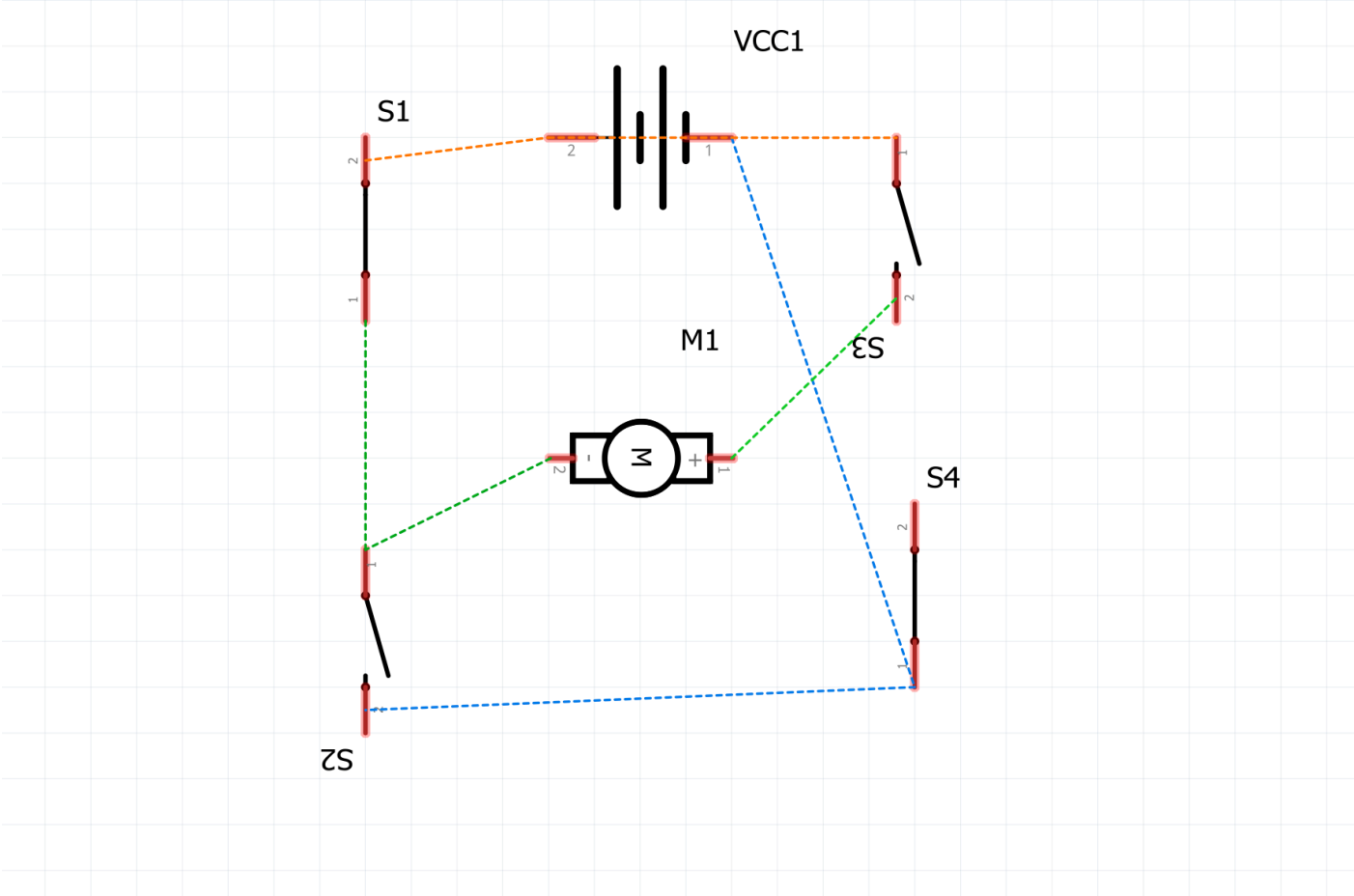
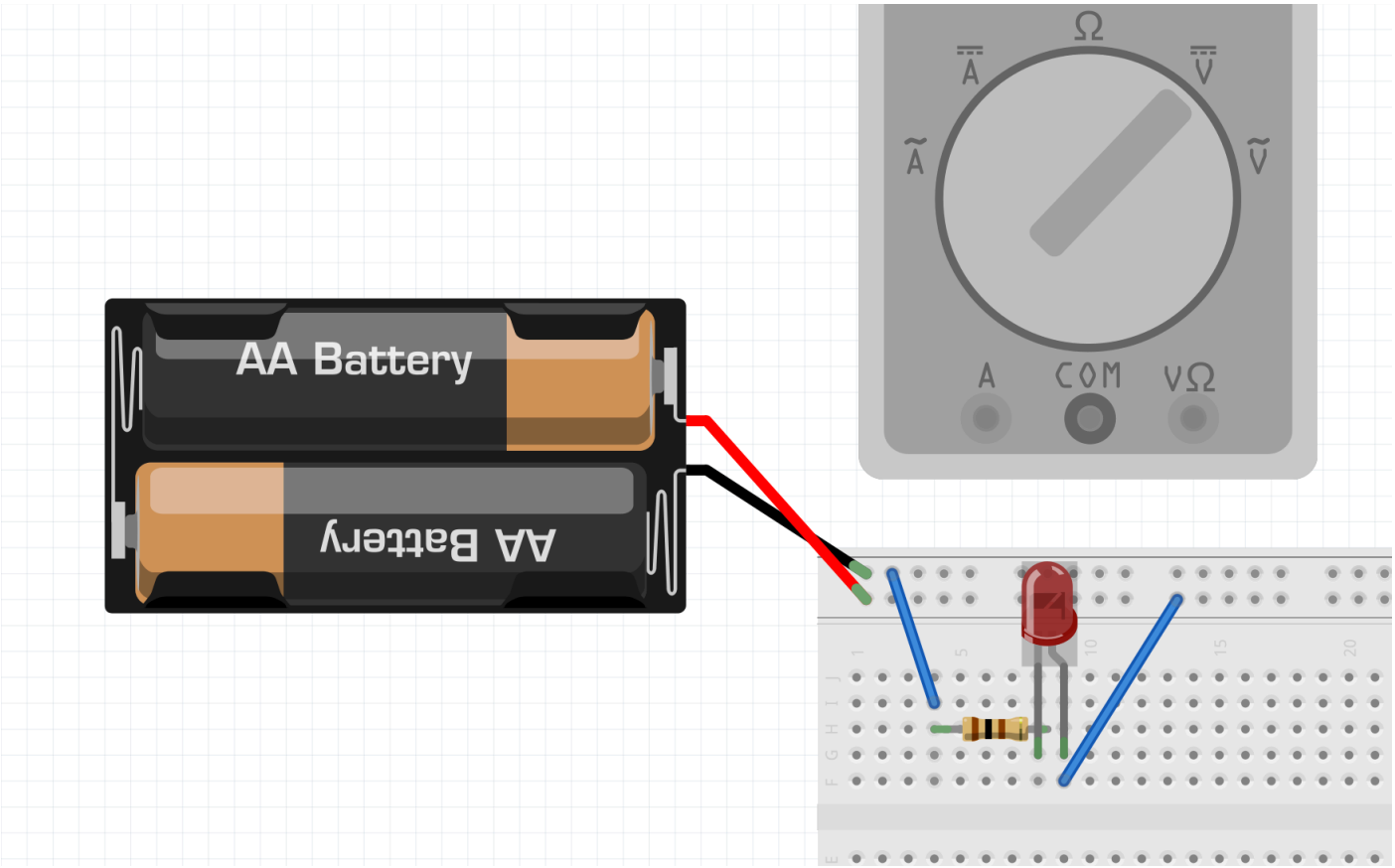


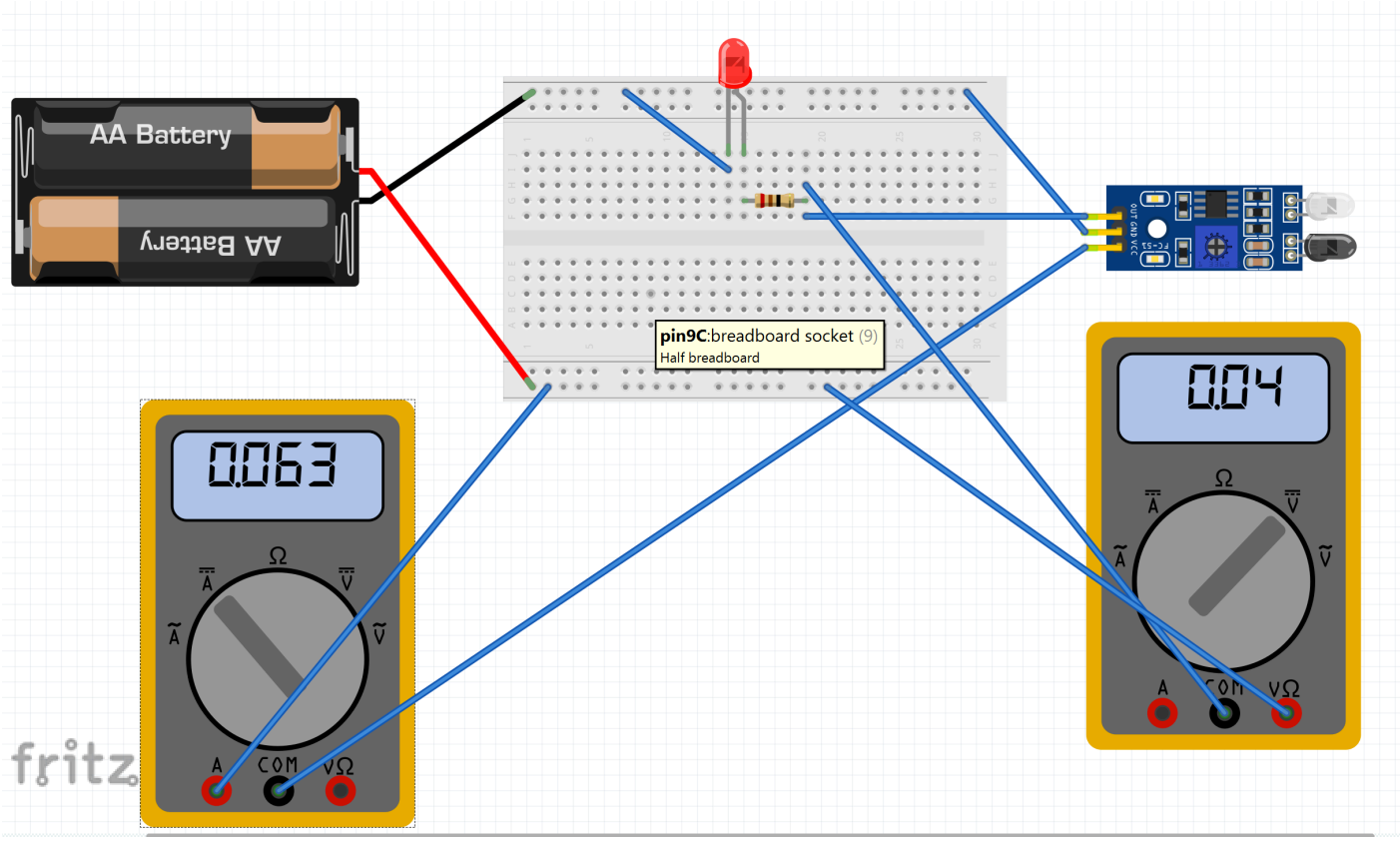
# Questions and misunderstandings

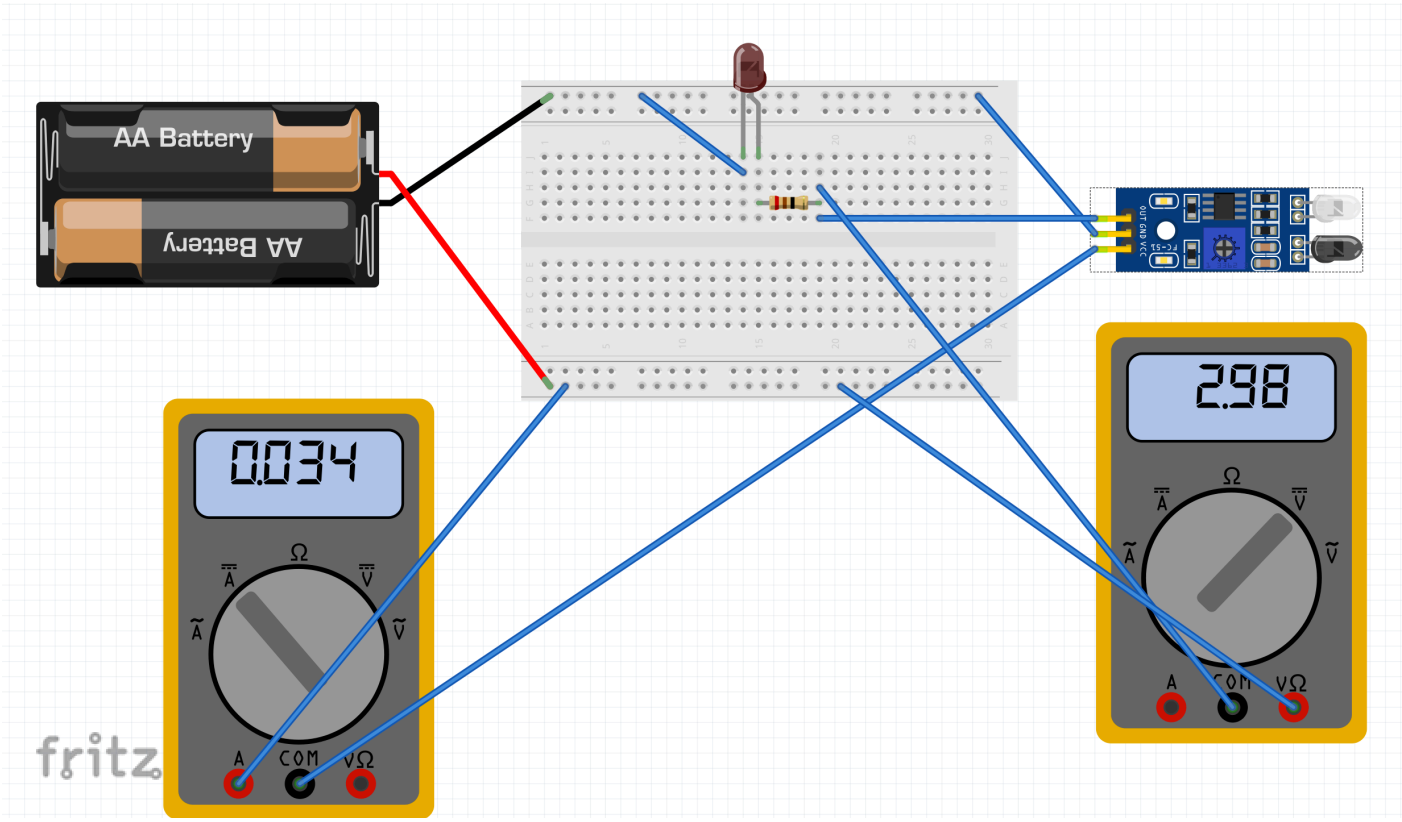
We had a hard time with Fritzing, mostly with applying OHMs law and calculate the different parameters of the formula.

1. How does a multimeter measure drop in resistance (slide 050-18)?
2. Why does red led not light up with circuit current of 30mA?




3. In circuit #4: why does it draw more current when the IR sensor does not detect anything, and less when it does?


AA Battery
AA Battery
pin9C:breadboard socket (9)
Half breadboard
0.063
0.04
fritz


AA Battery
AA Battery
0.034
2.98
fritz