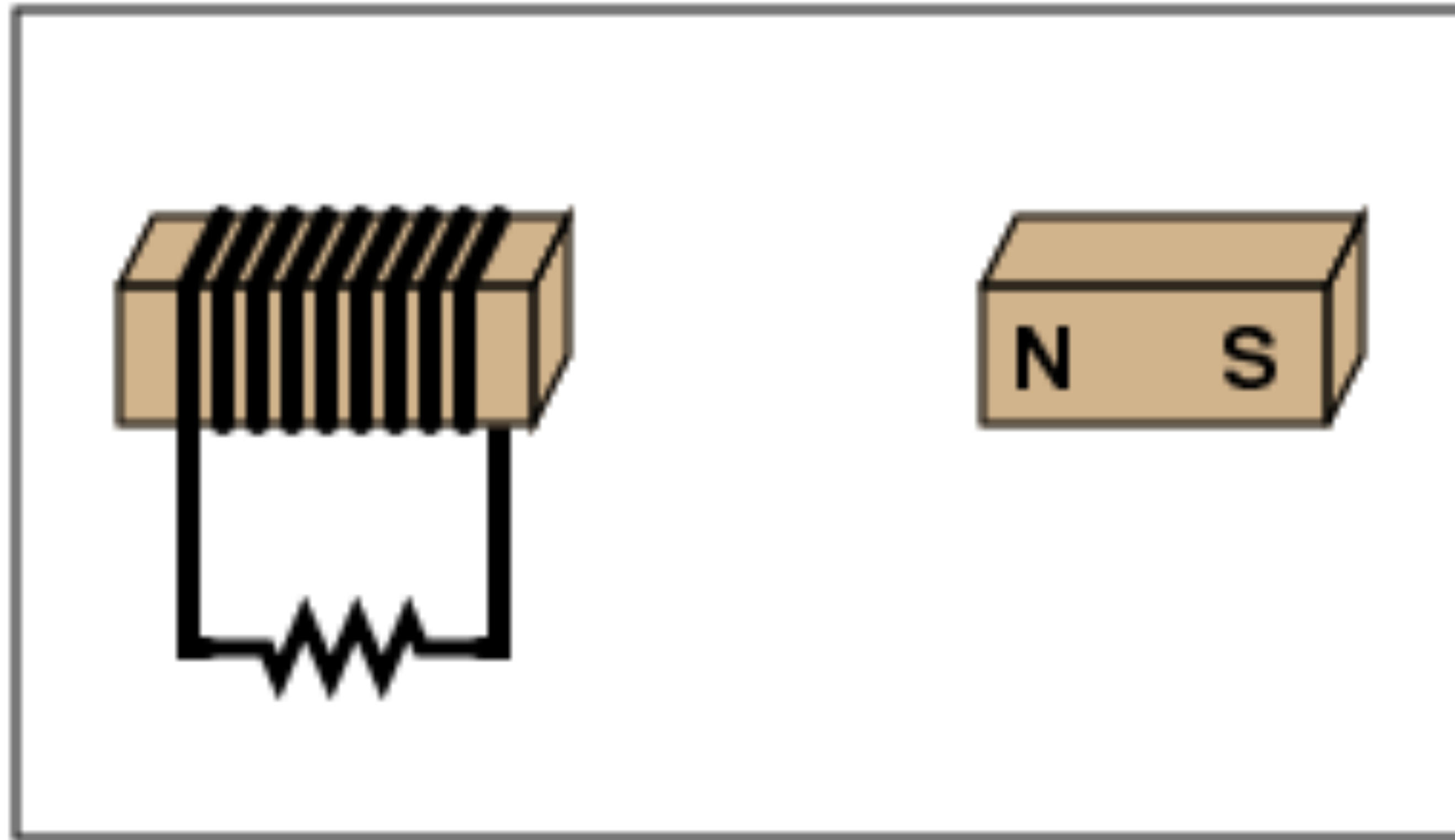


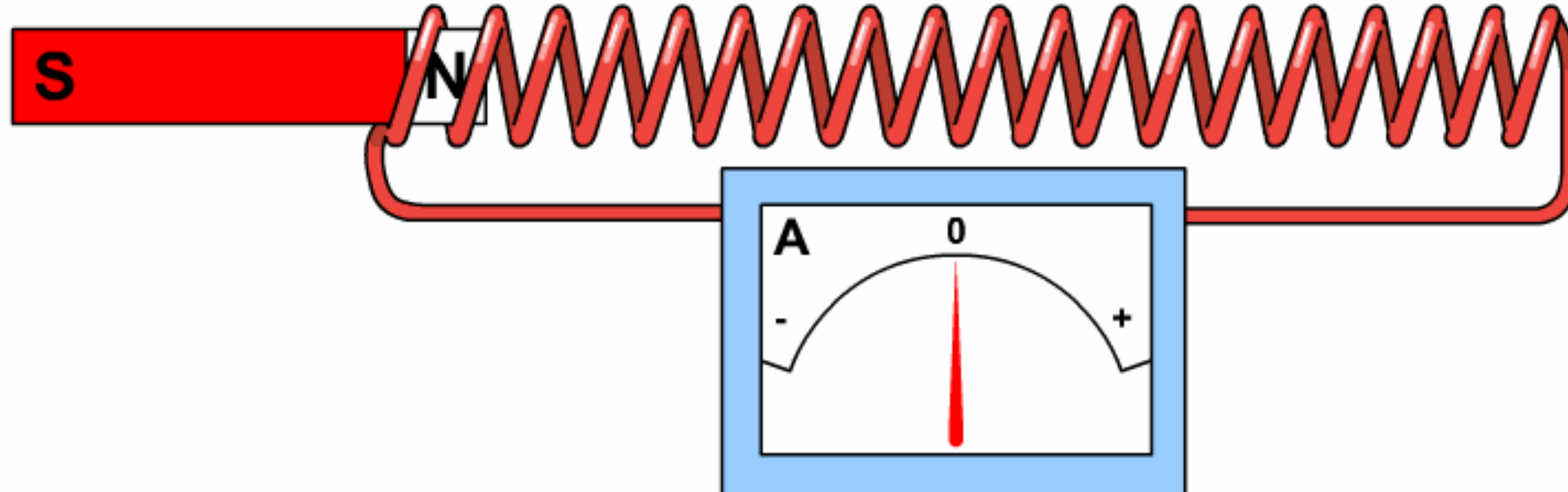


Electromagnetism

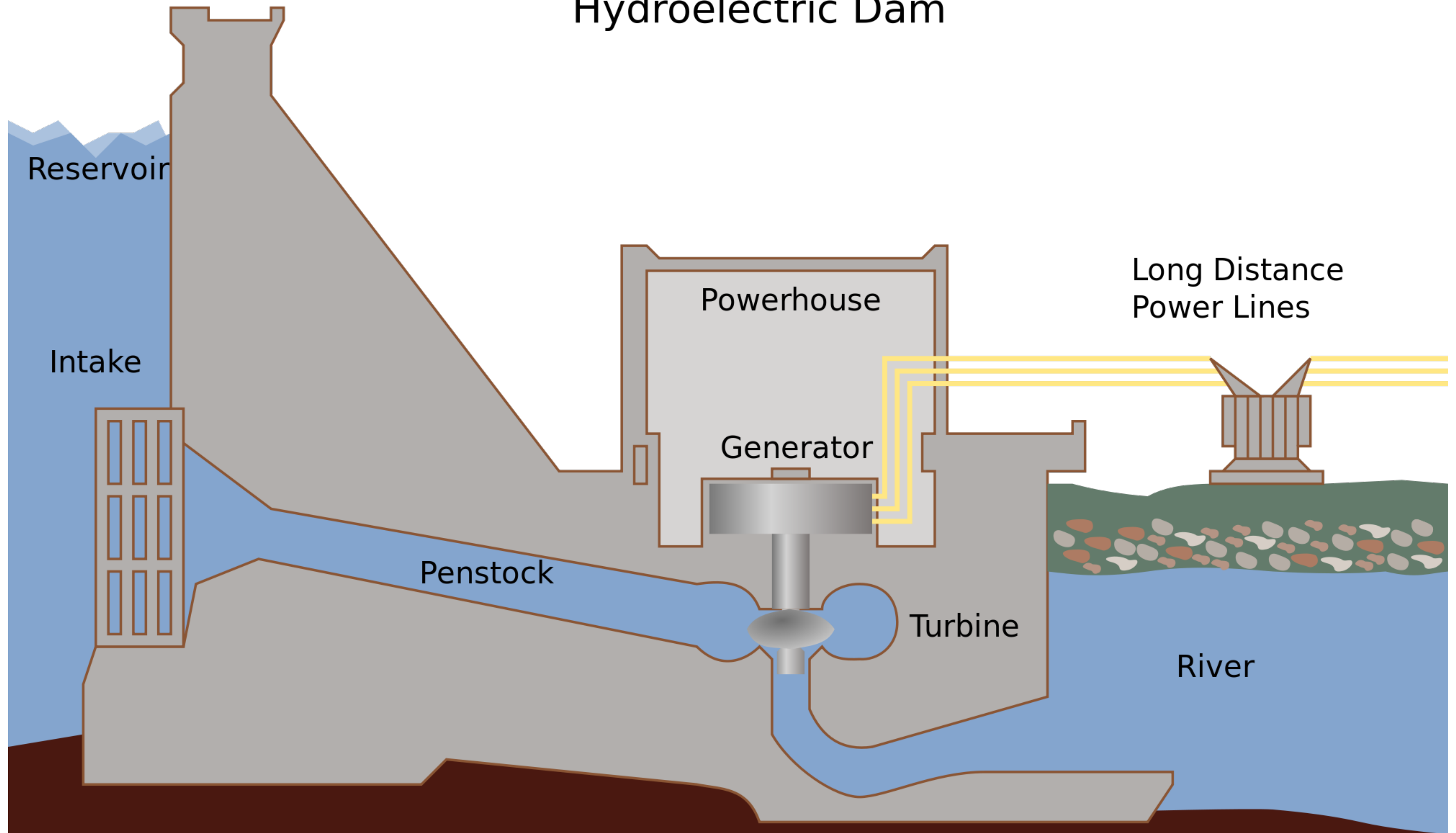
Induction: induce a magnetic field by sending current through wire



Induction: also create electricity by moving a magnet through a coil of wire

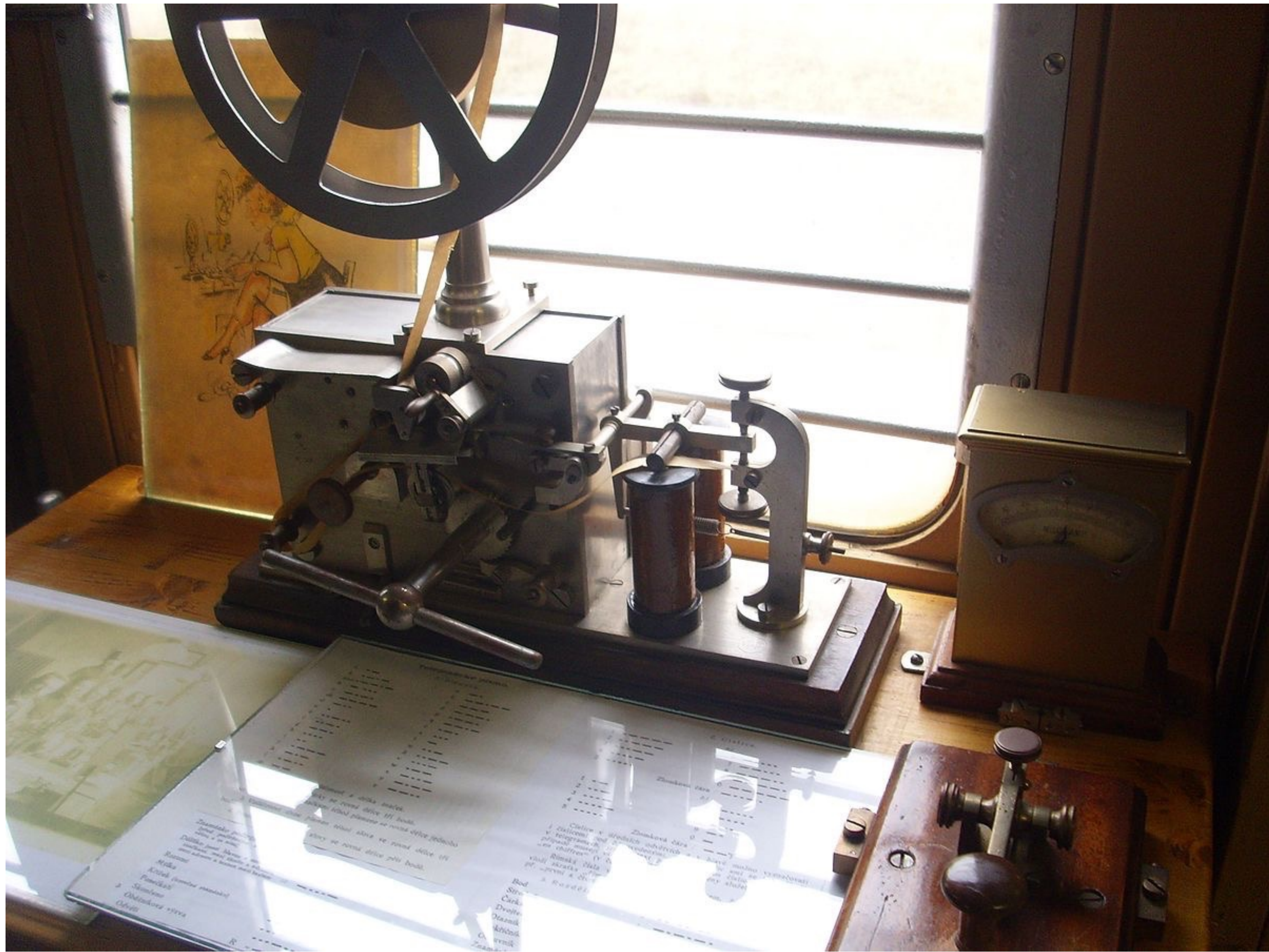


Hydroelectric Dam

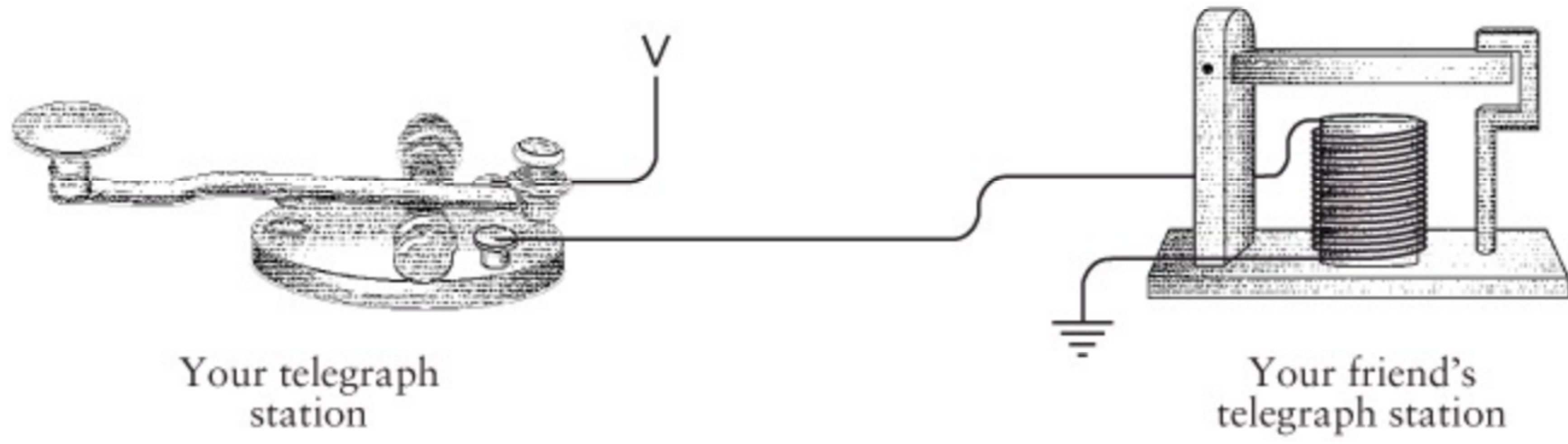


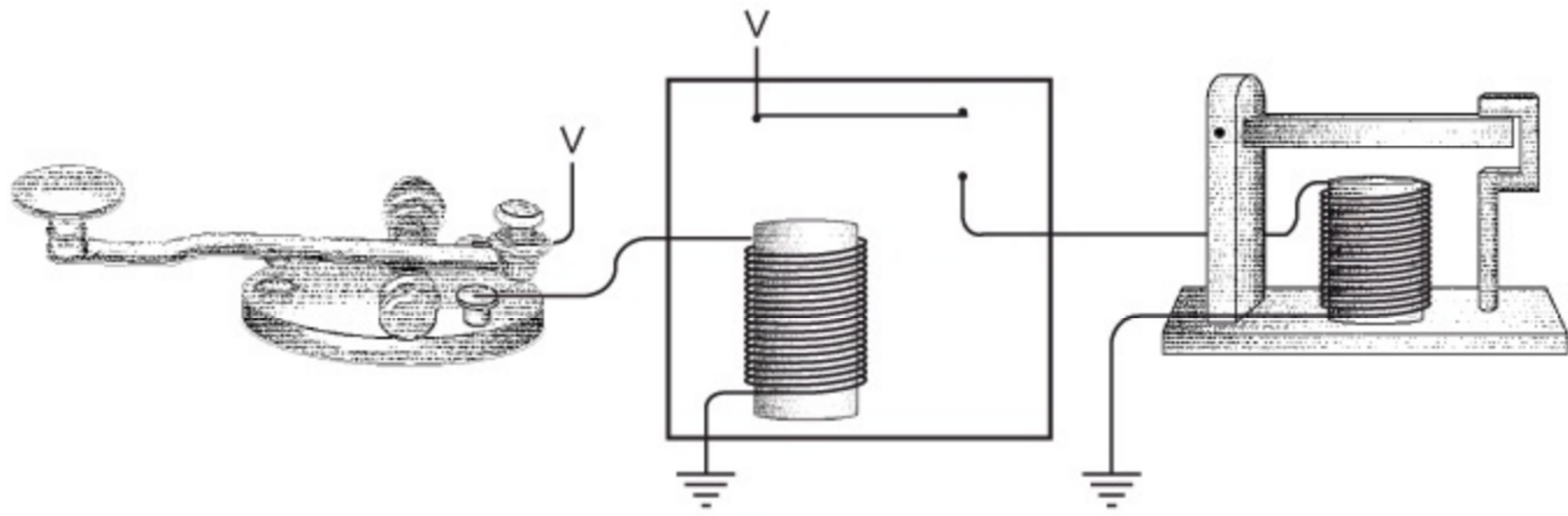
Motors

Inspiration: <https://vimeo.com/7235817>





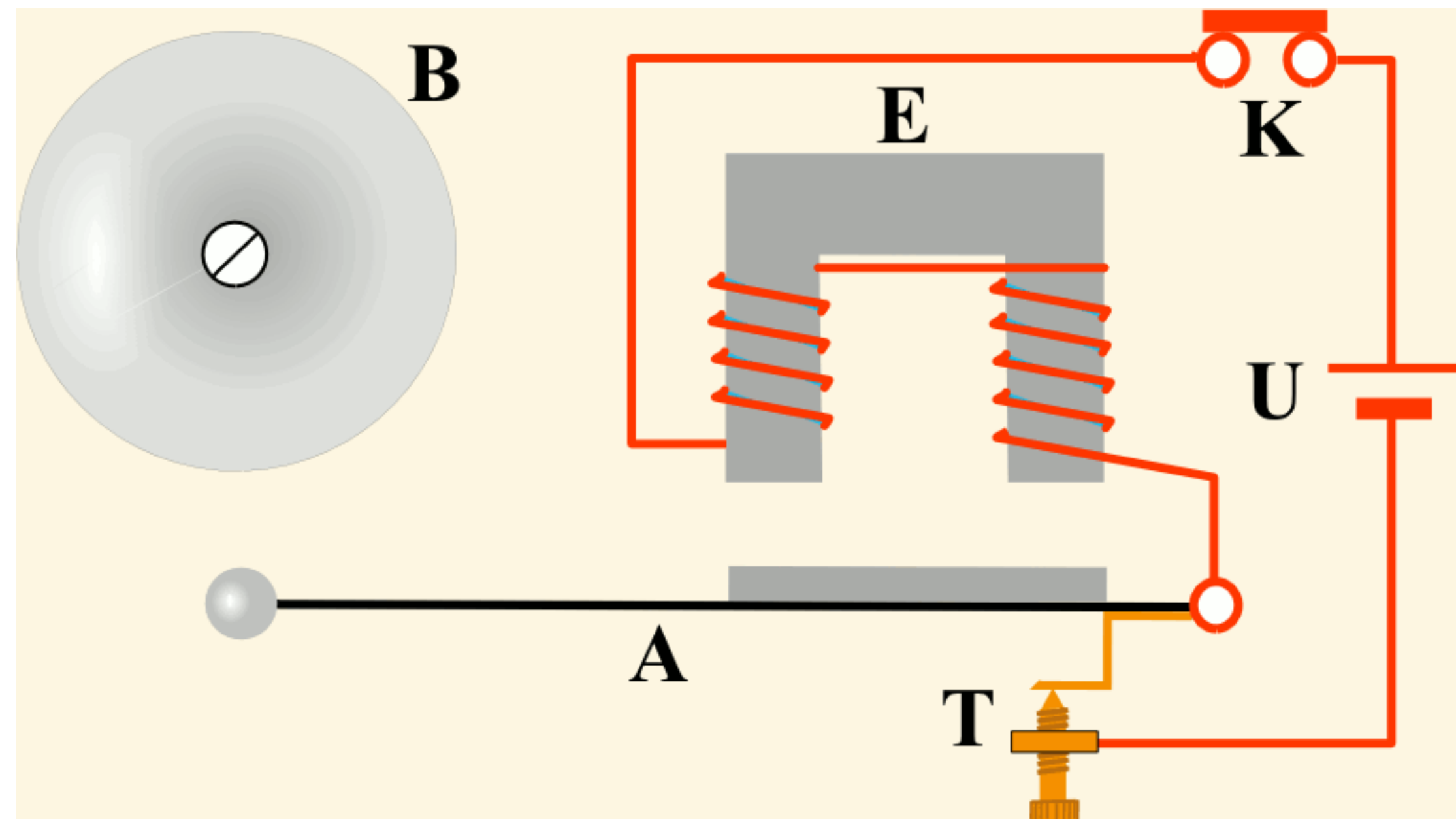


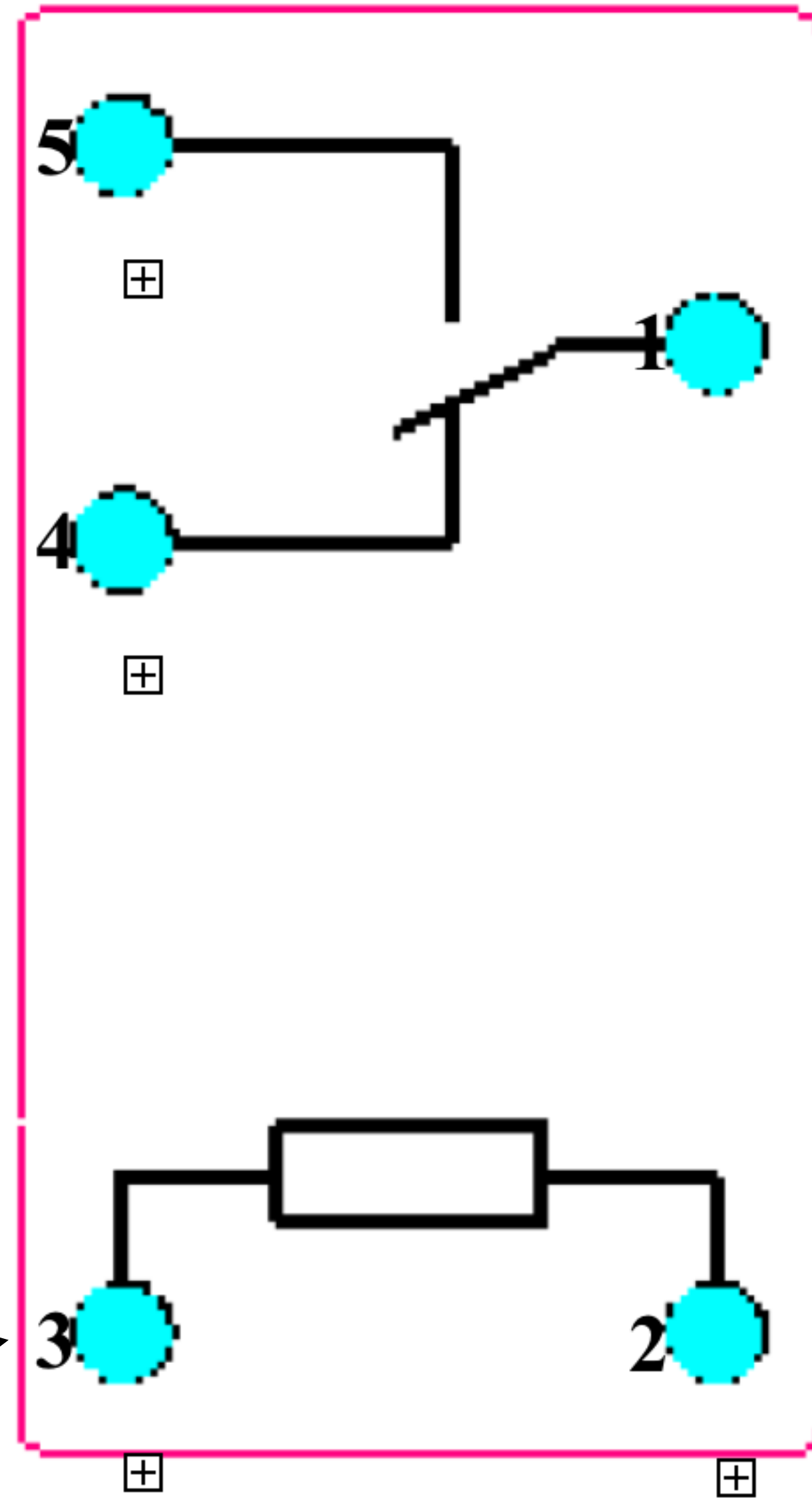


Your telegraph station

The relay station

Your friend's telegraph station





High Voltage you want to control

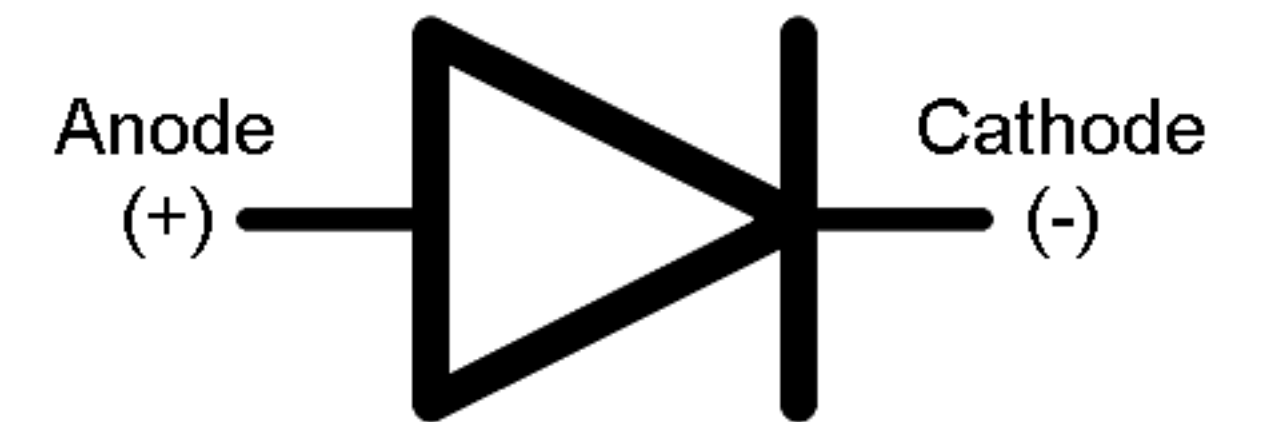
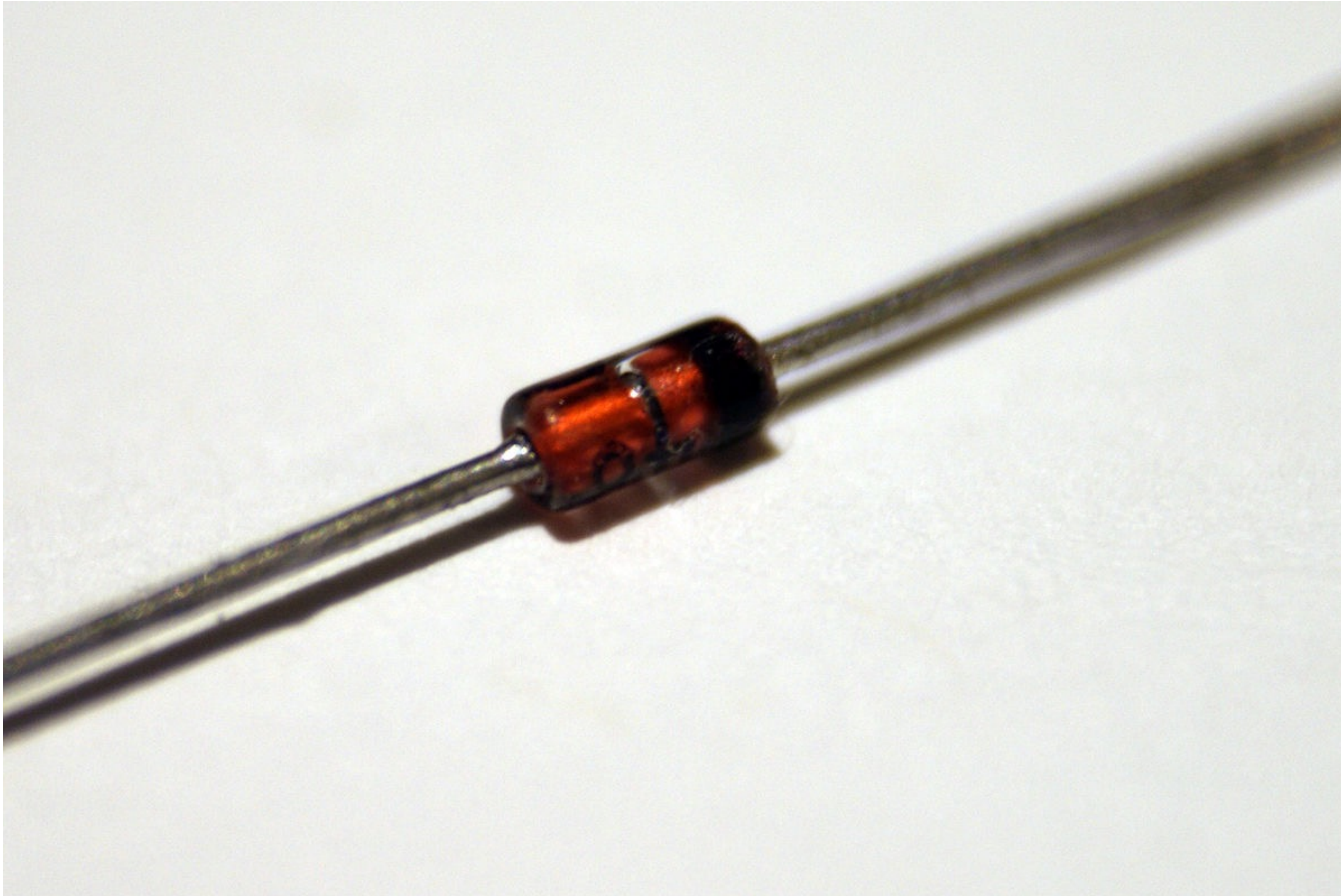
Arduino Digital Write

Ground

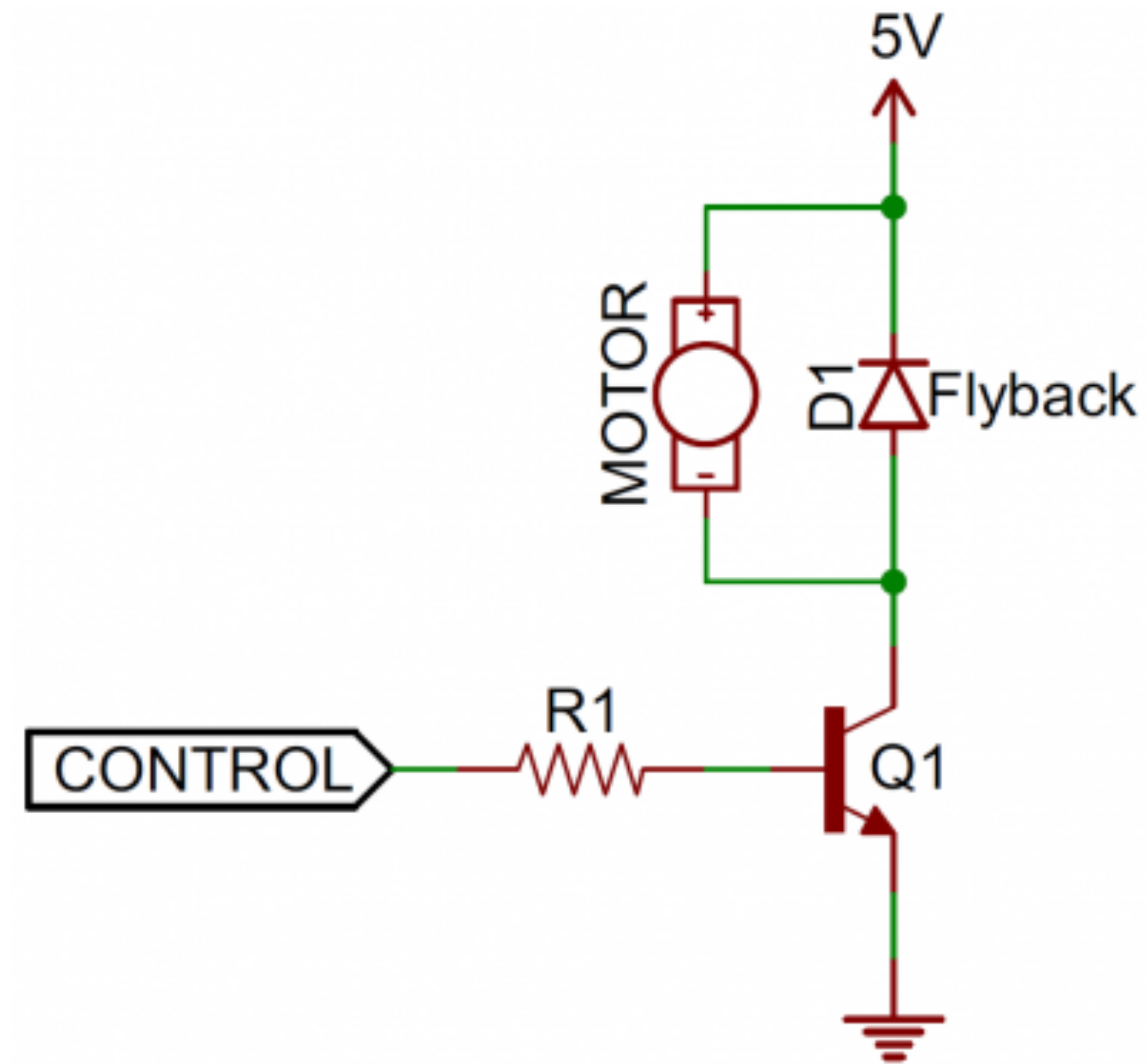


Can I hurt myself???

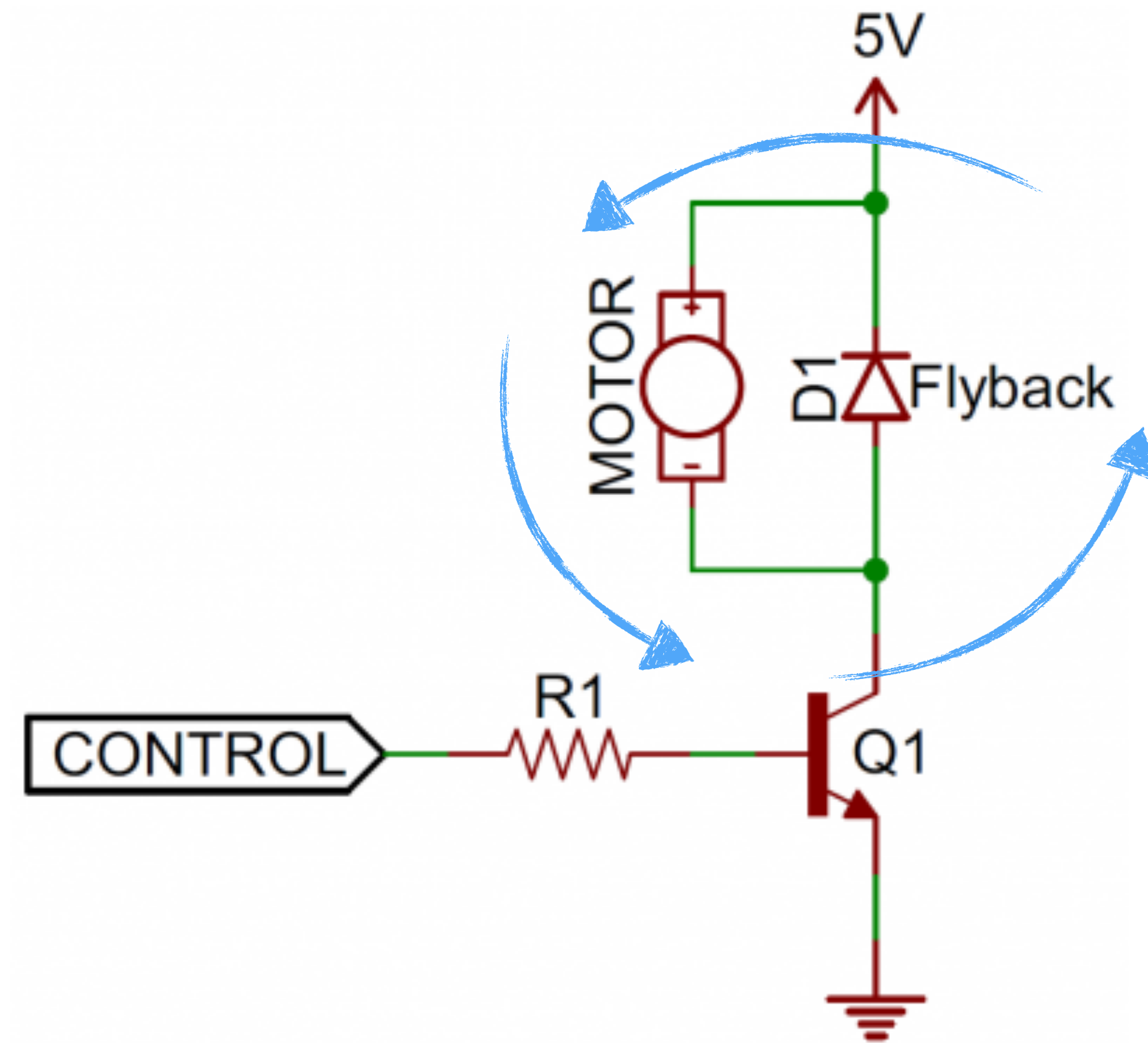
Diode

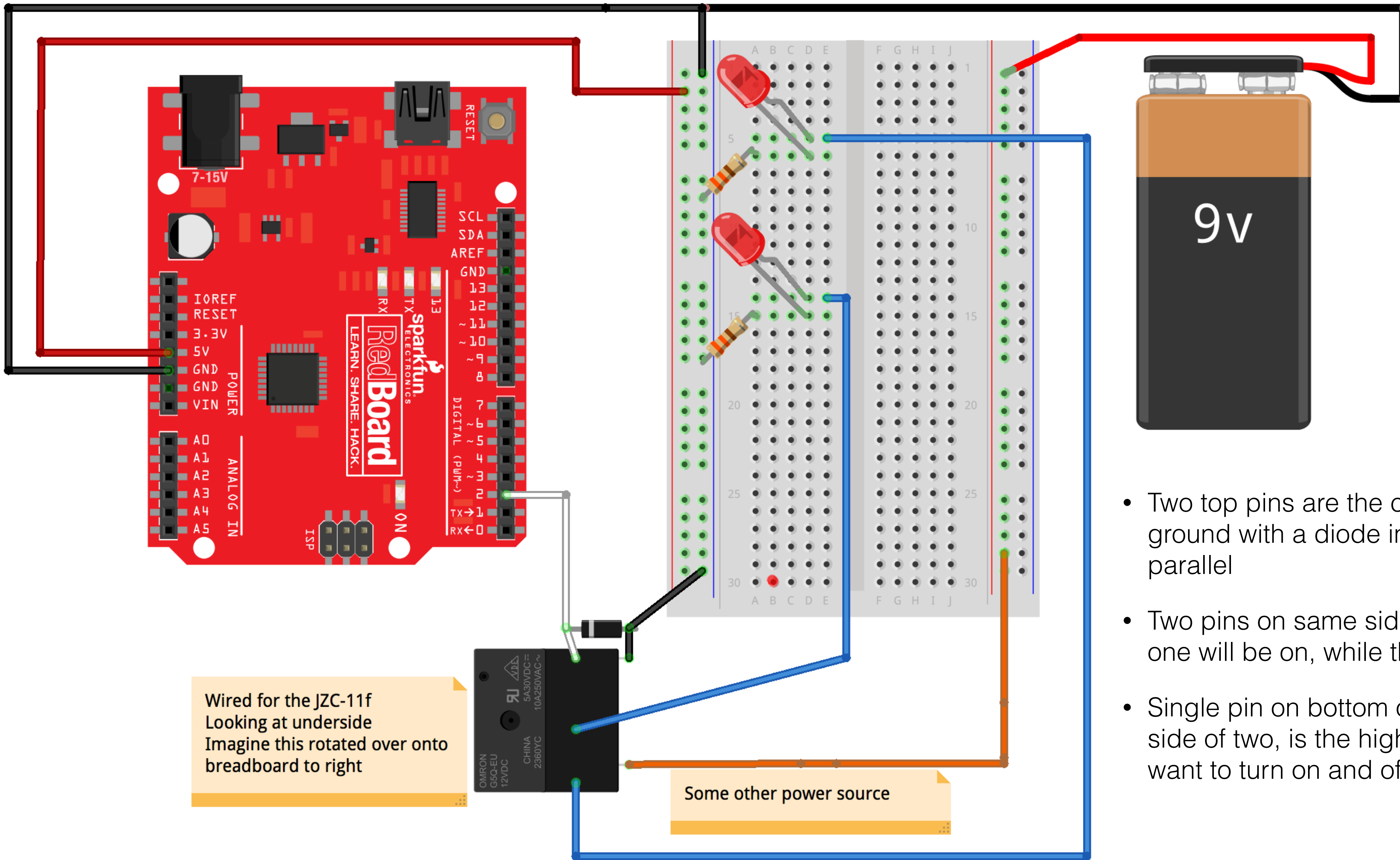


Flyback diode prevents a voltage spike from damaging our circuit when an inductor is turned off.



Flyback diode prevents a voltage spike from damaging our circuit when an inductor is turned off.

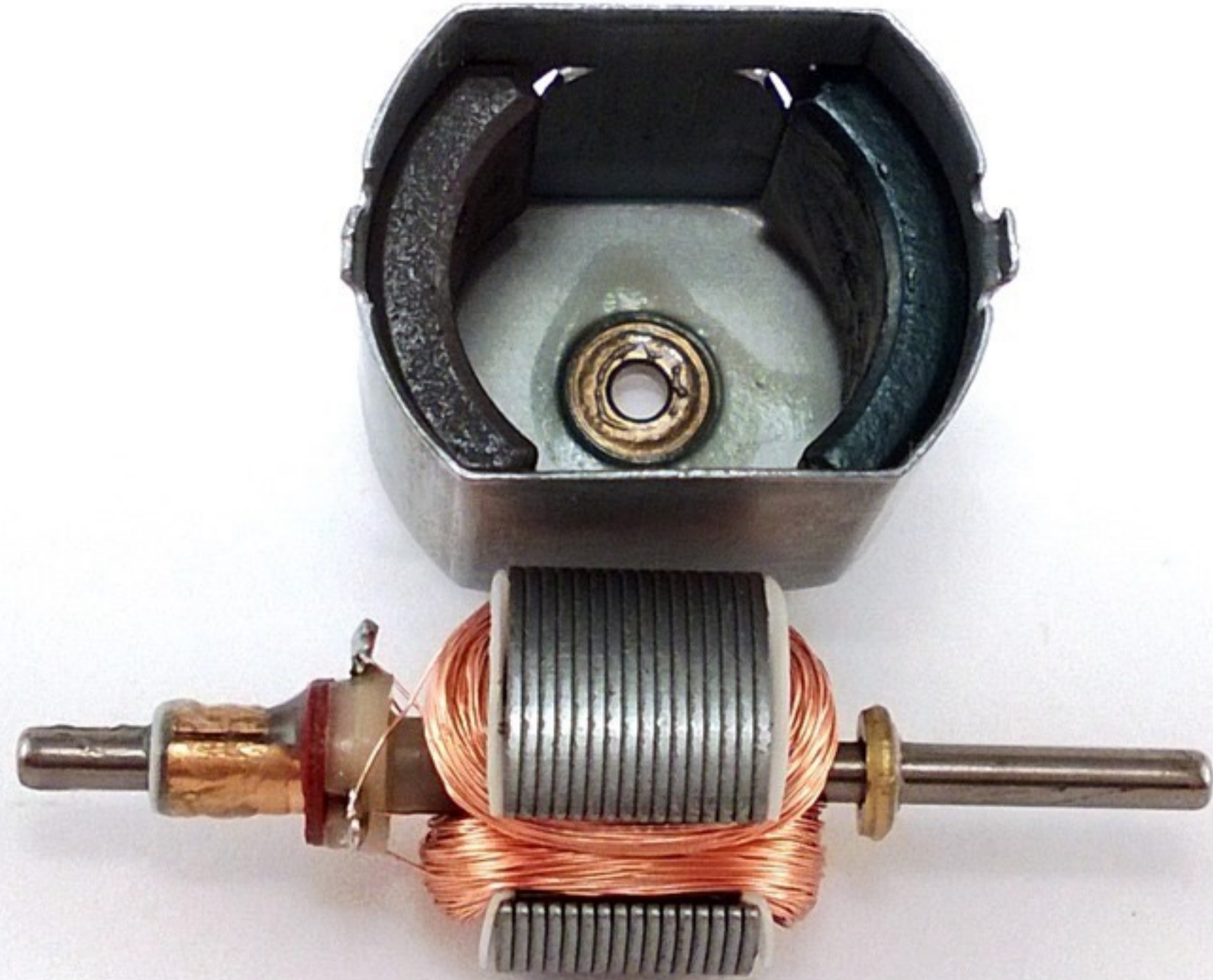


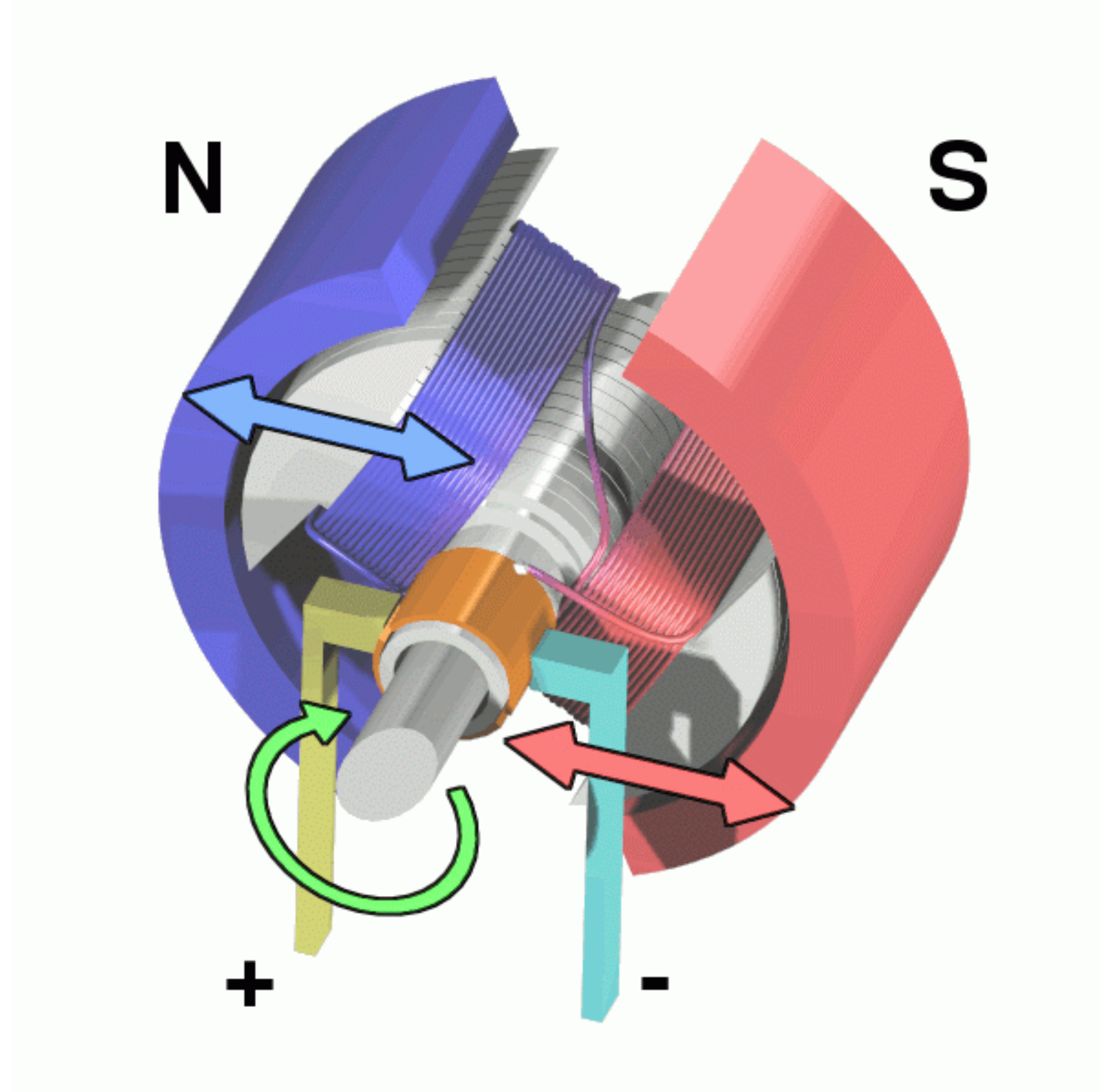


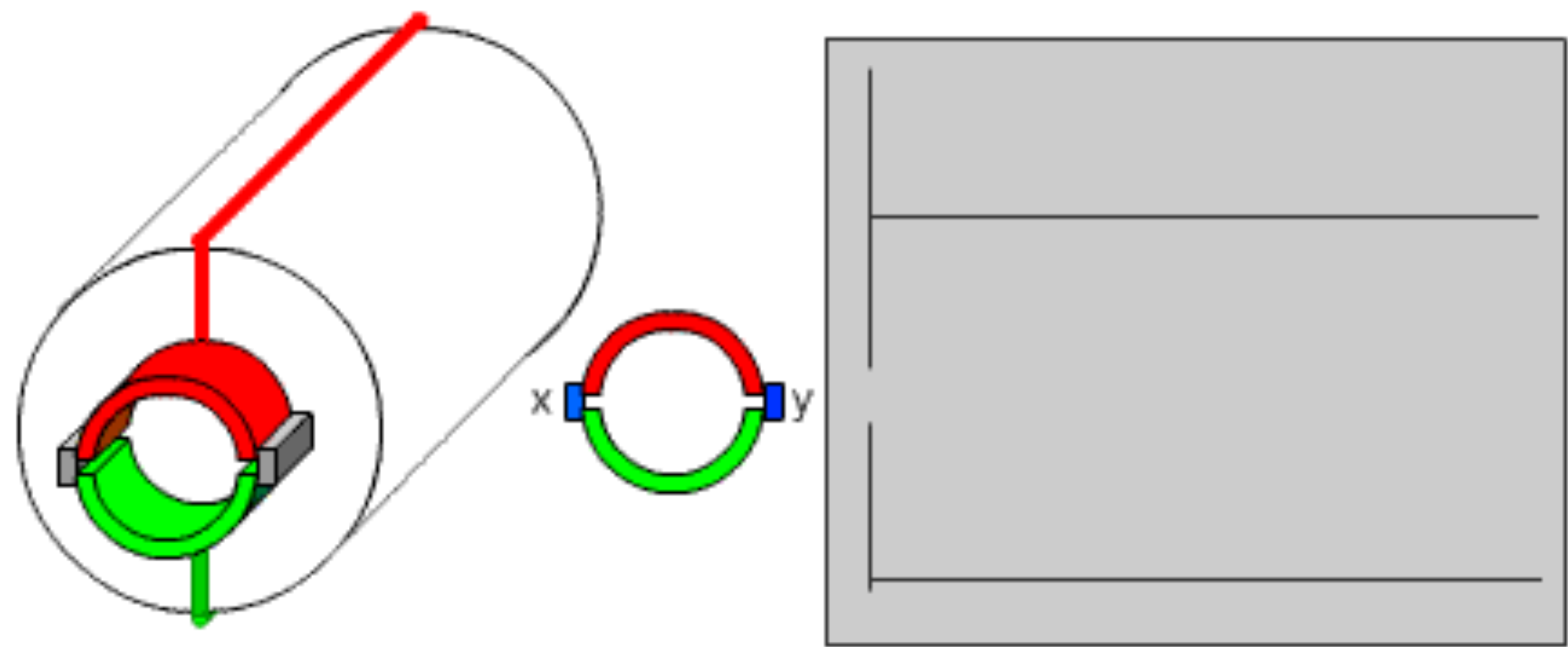
Wired for the JZC-11f
Looking at underside
Imagine this rotated over onto
breadboard to right

Some other power source

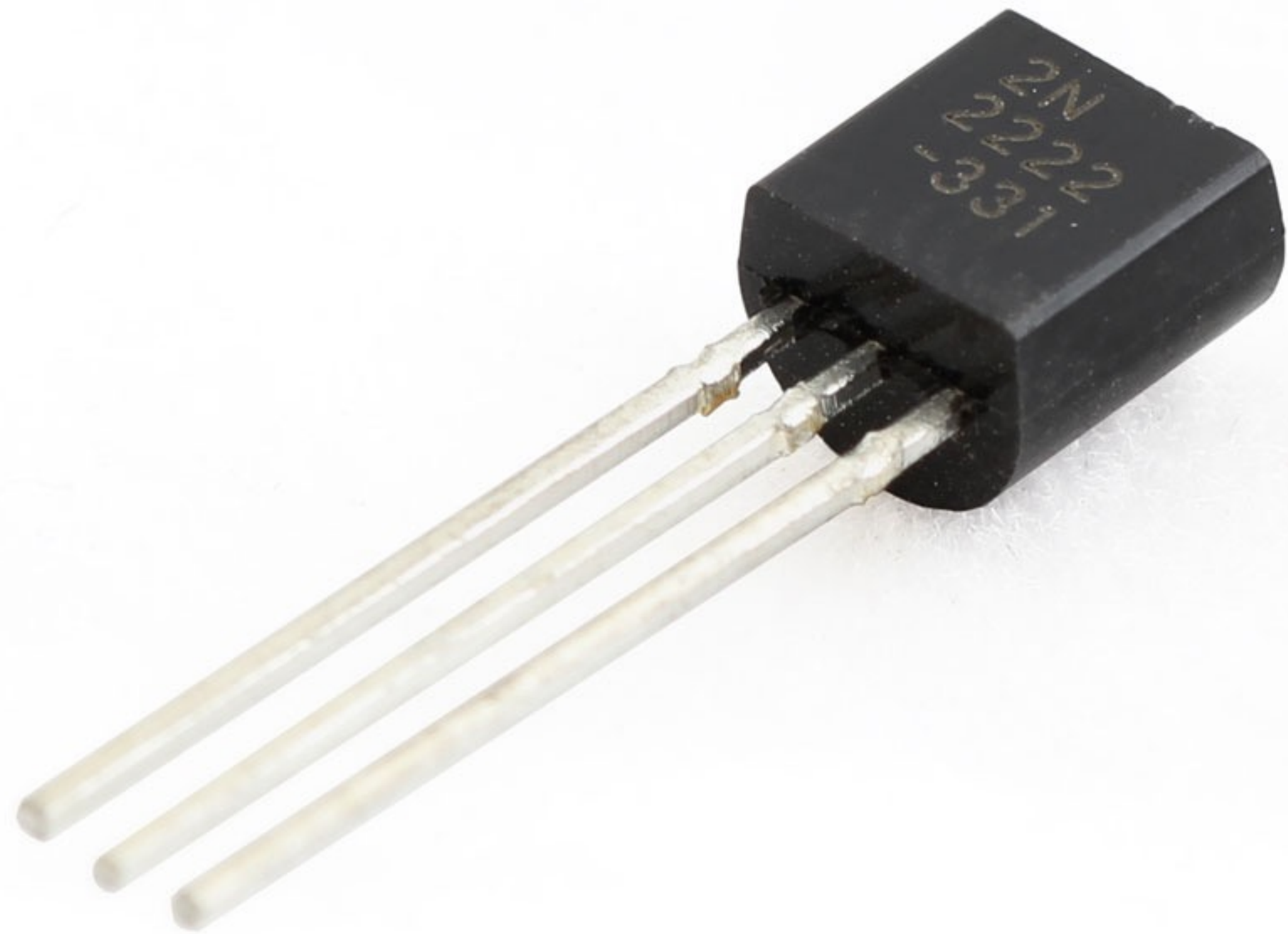
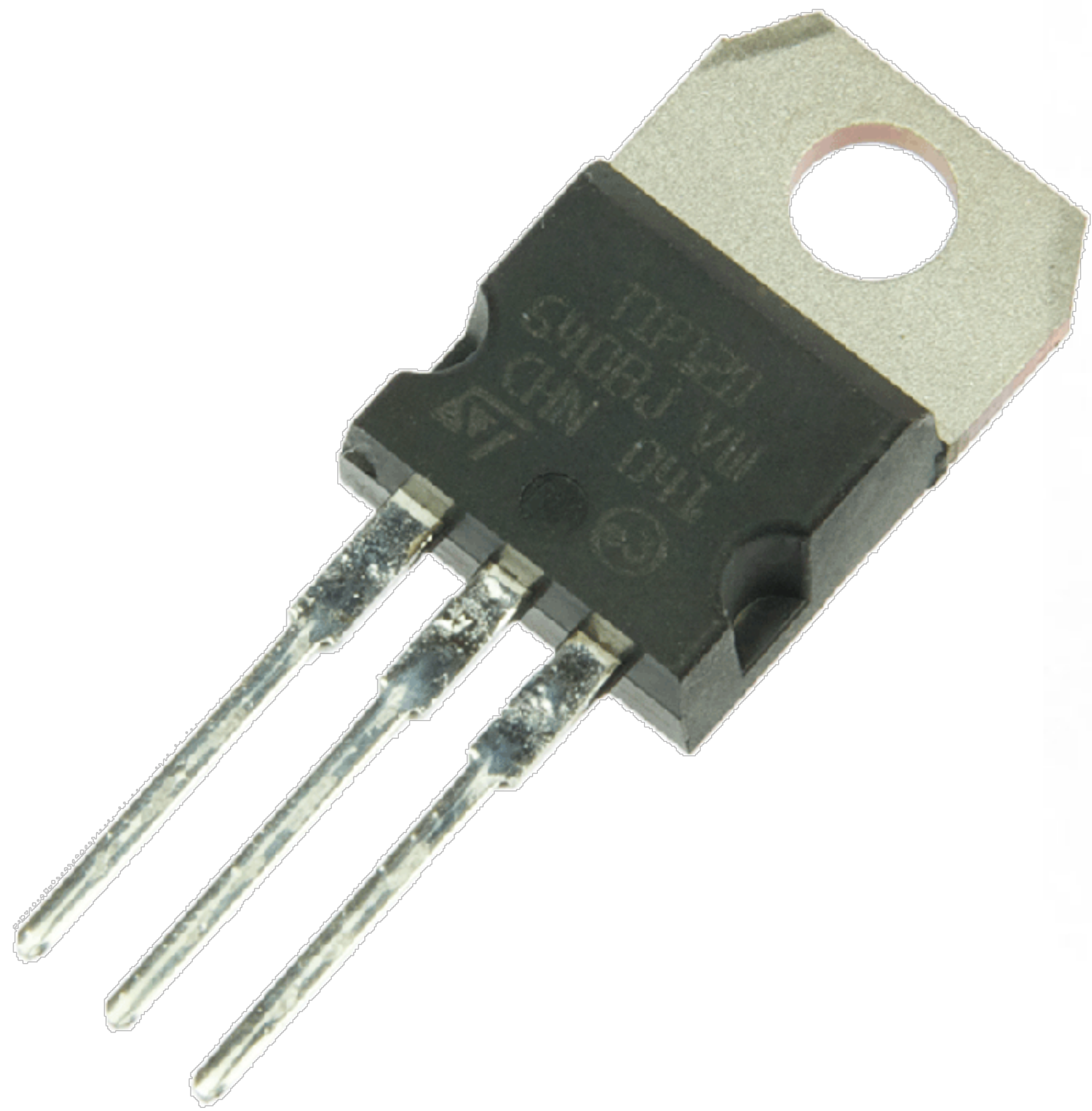
- Two top pins are the control and ground with a diode in reverse parallel
- Two pins on same side at bottom: one will be on, while the other is off
- Single pin on bottom on opposite side of two, is the high voltage you want to turn on and off

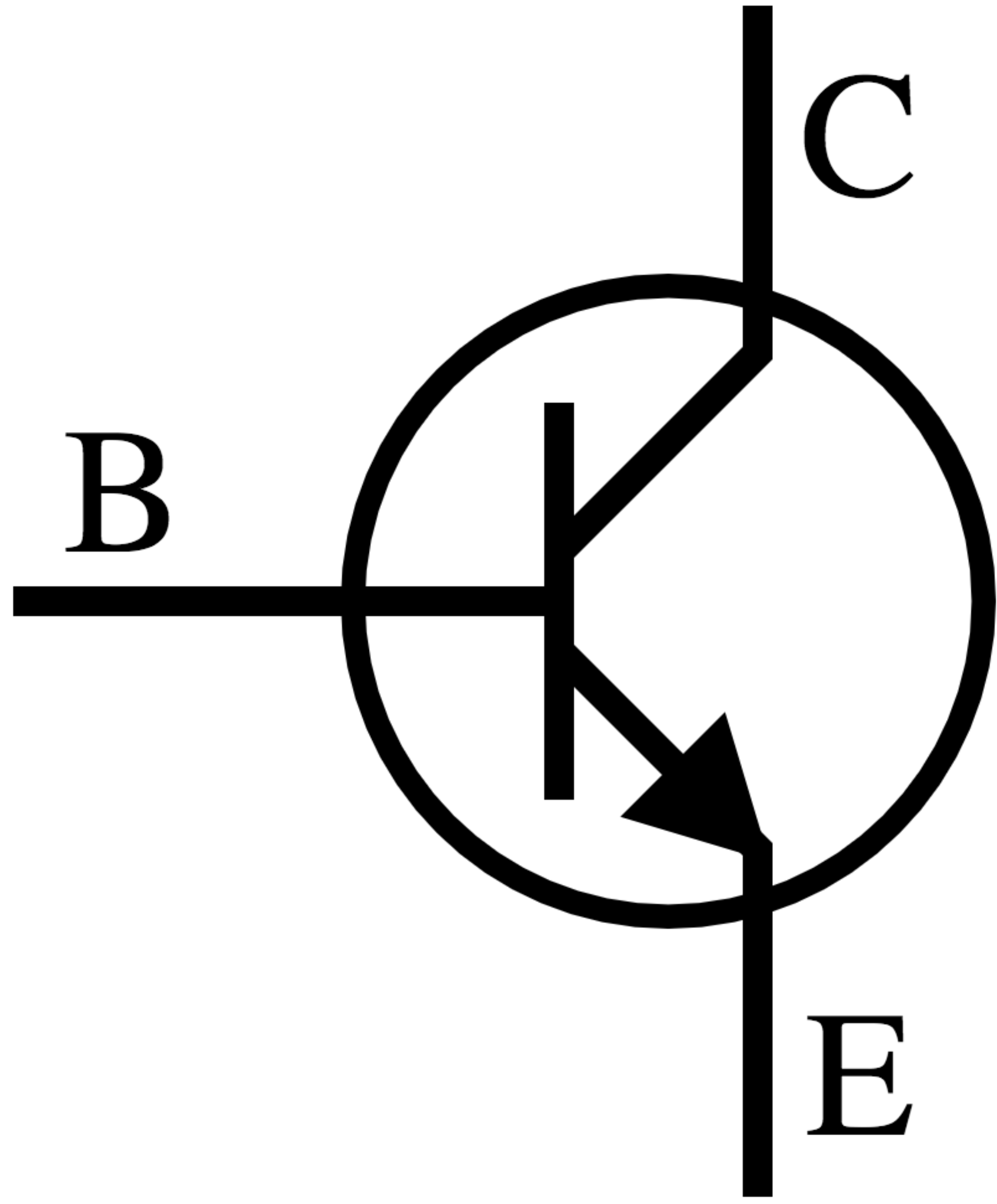


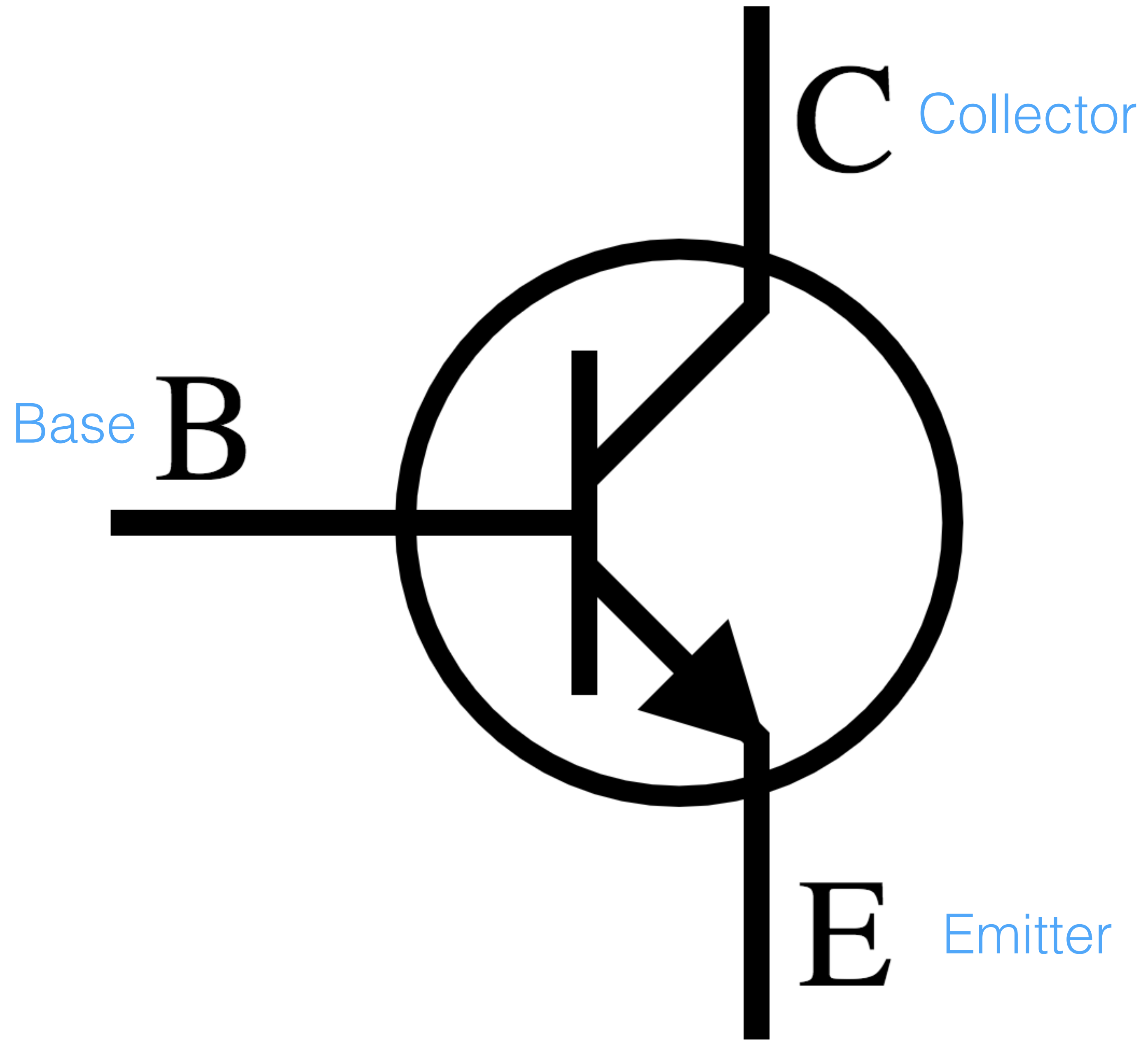


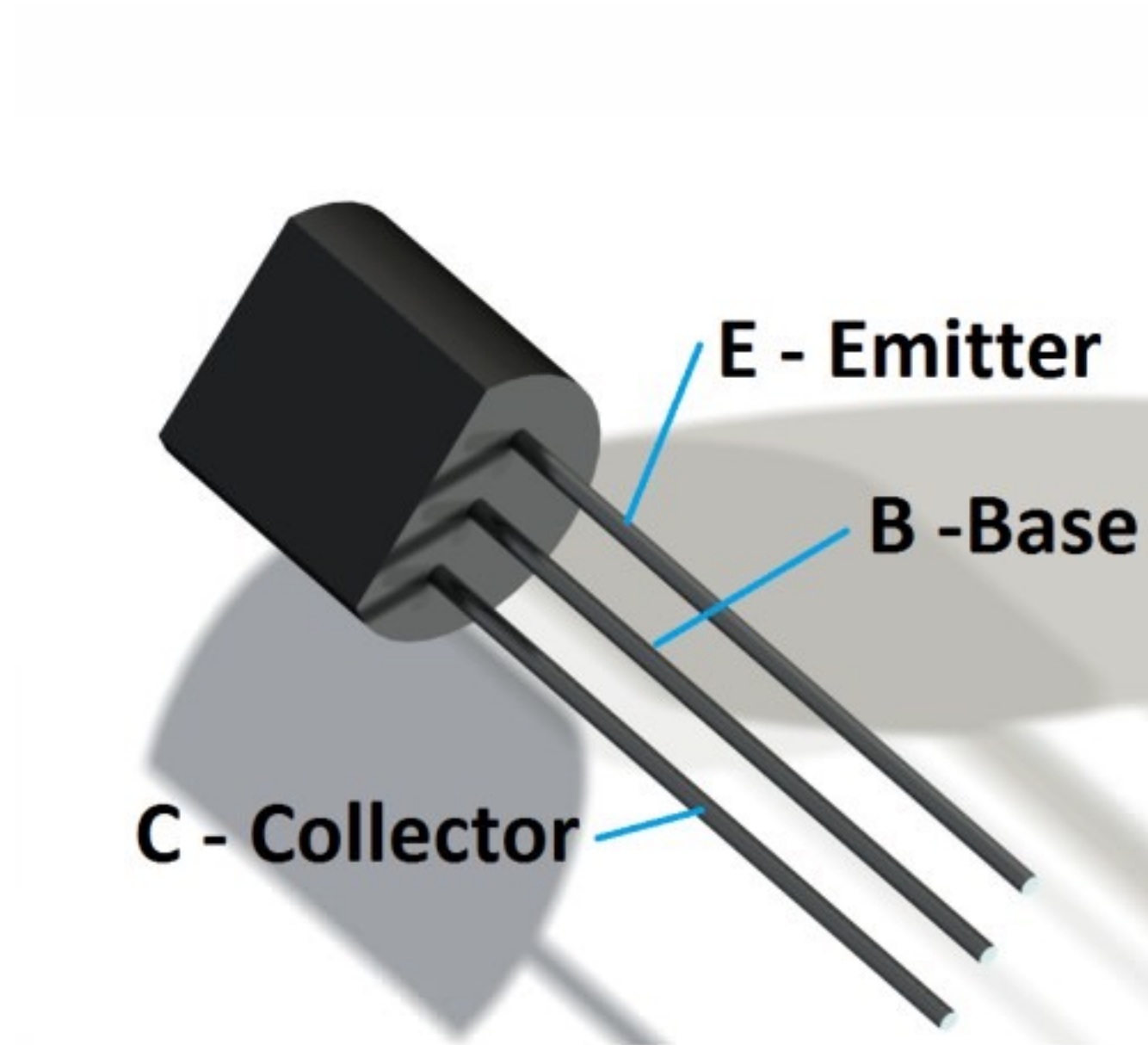
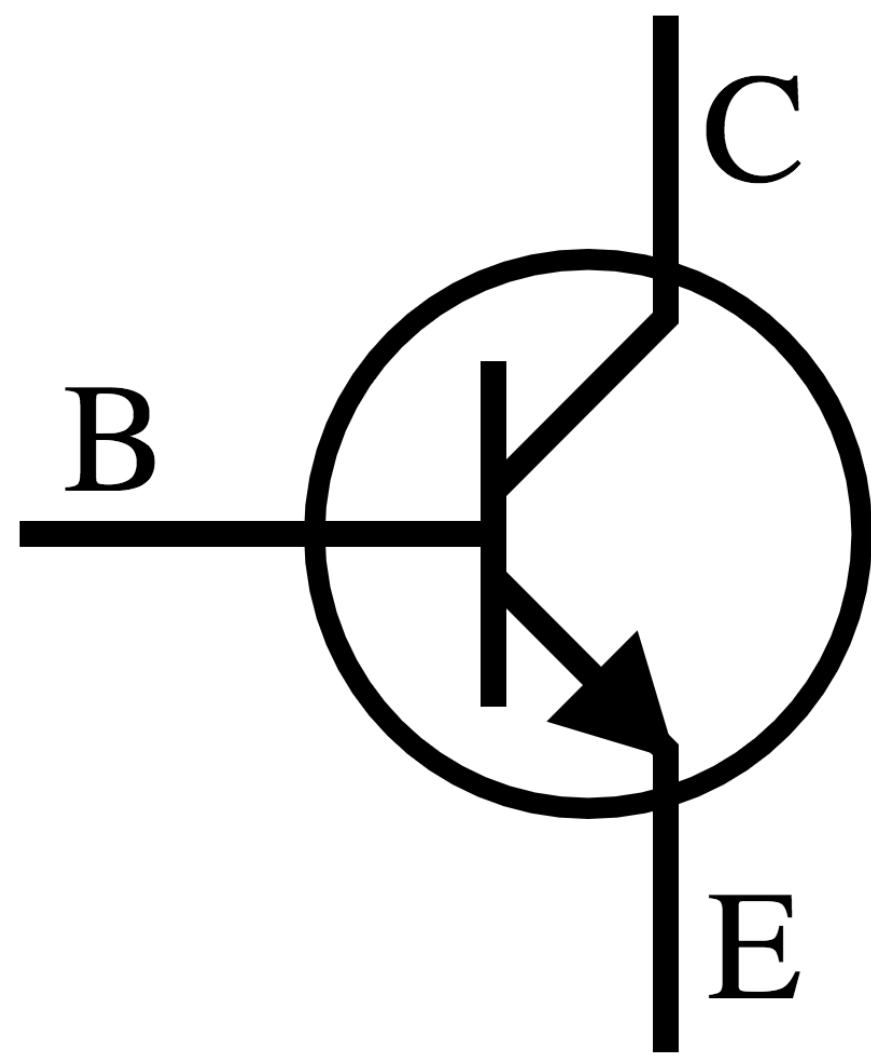


- Voltage: below optimal you get less power, above rating will burn out
- Torque: measure of strength of motor
- Speed is given as RPM, Rotations Per Minute (our motor is about 6000 rpm)

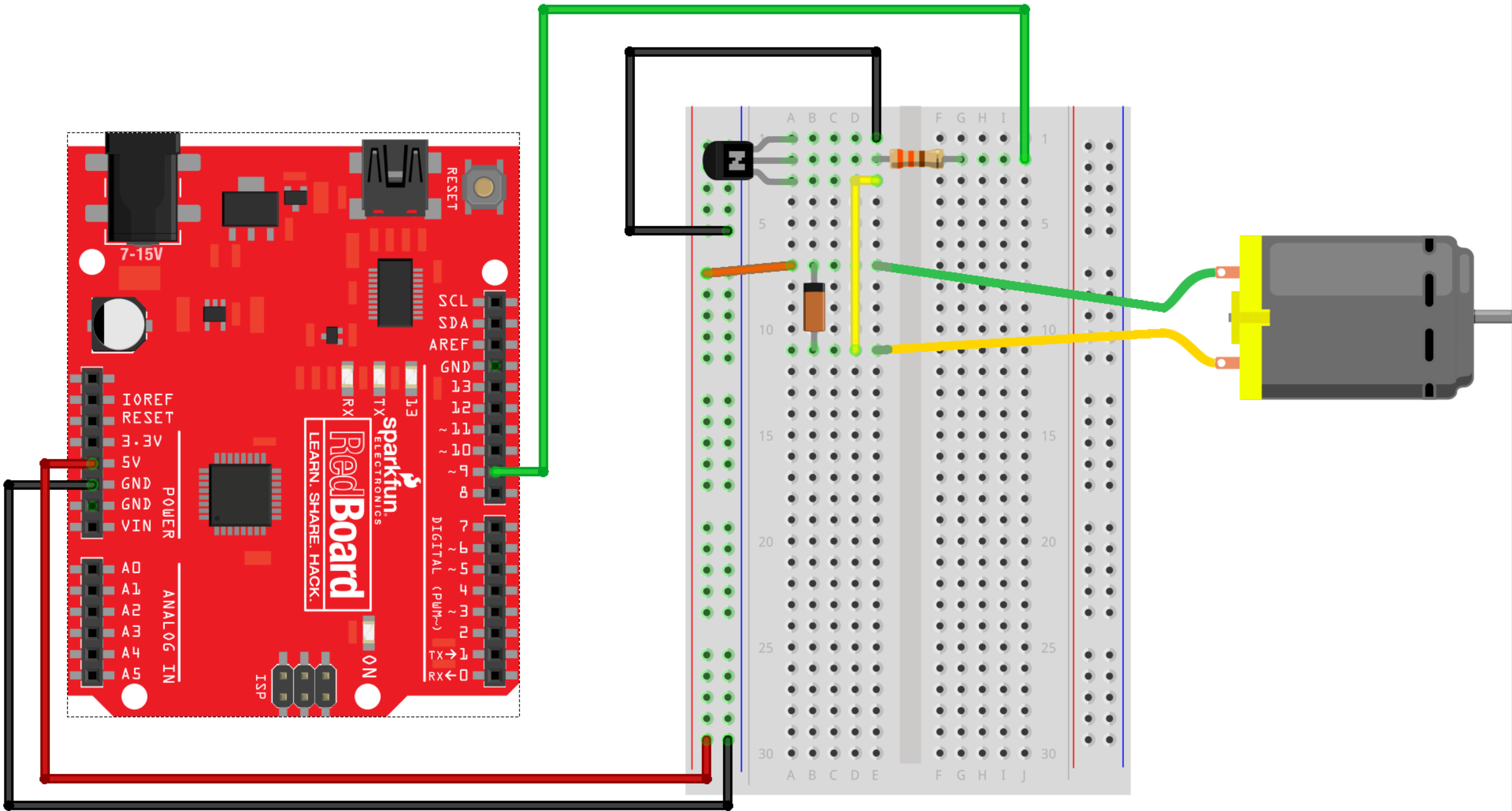






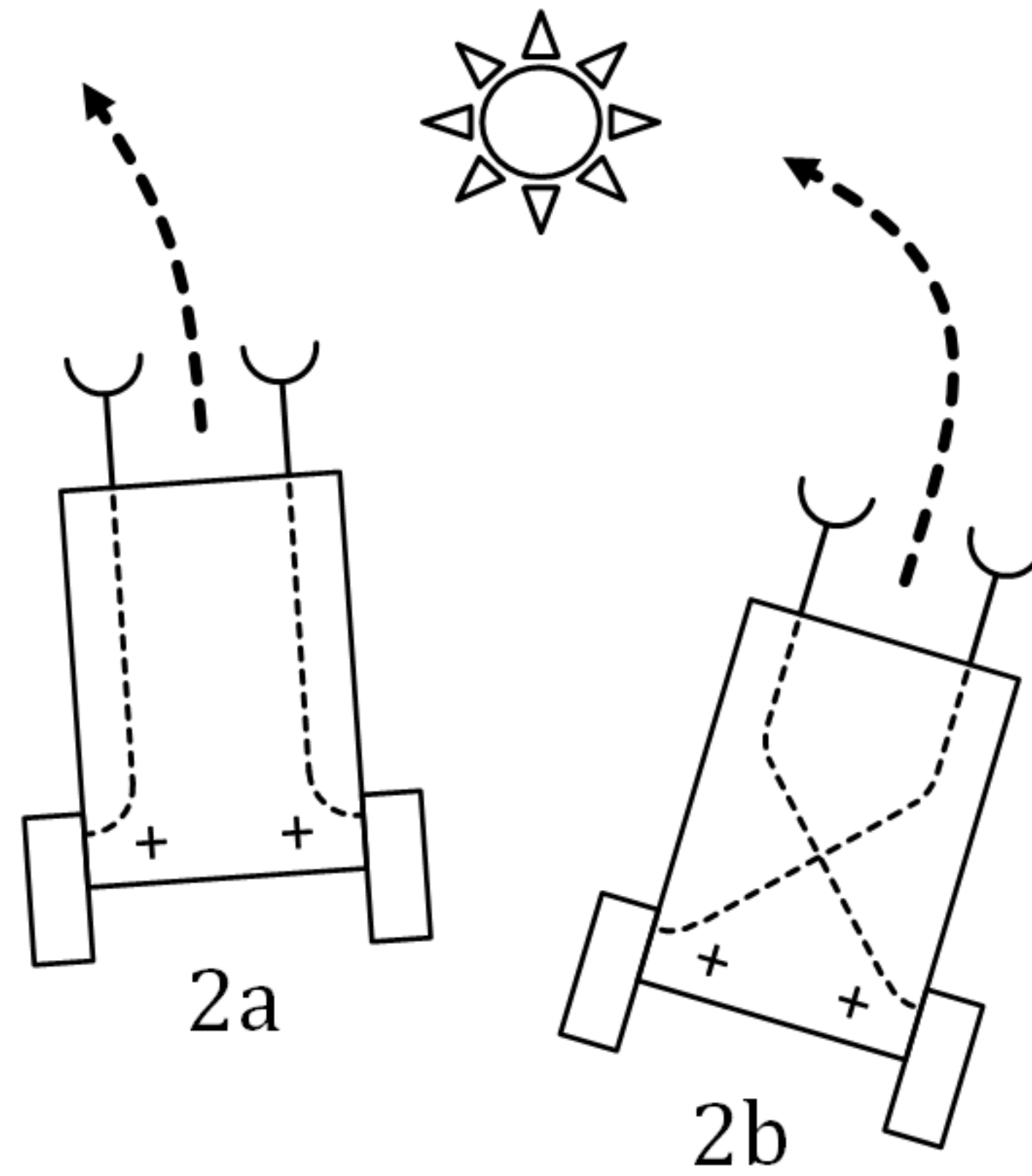


P2N2222A
BC337

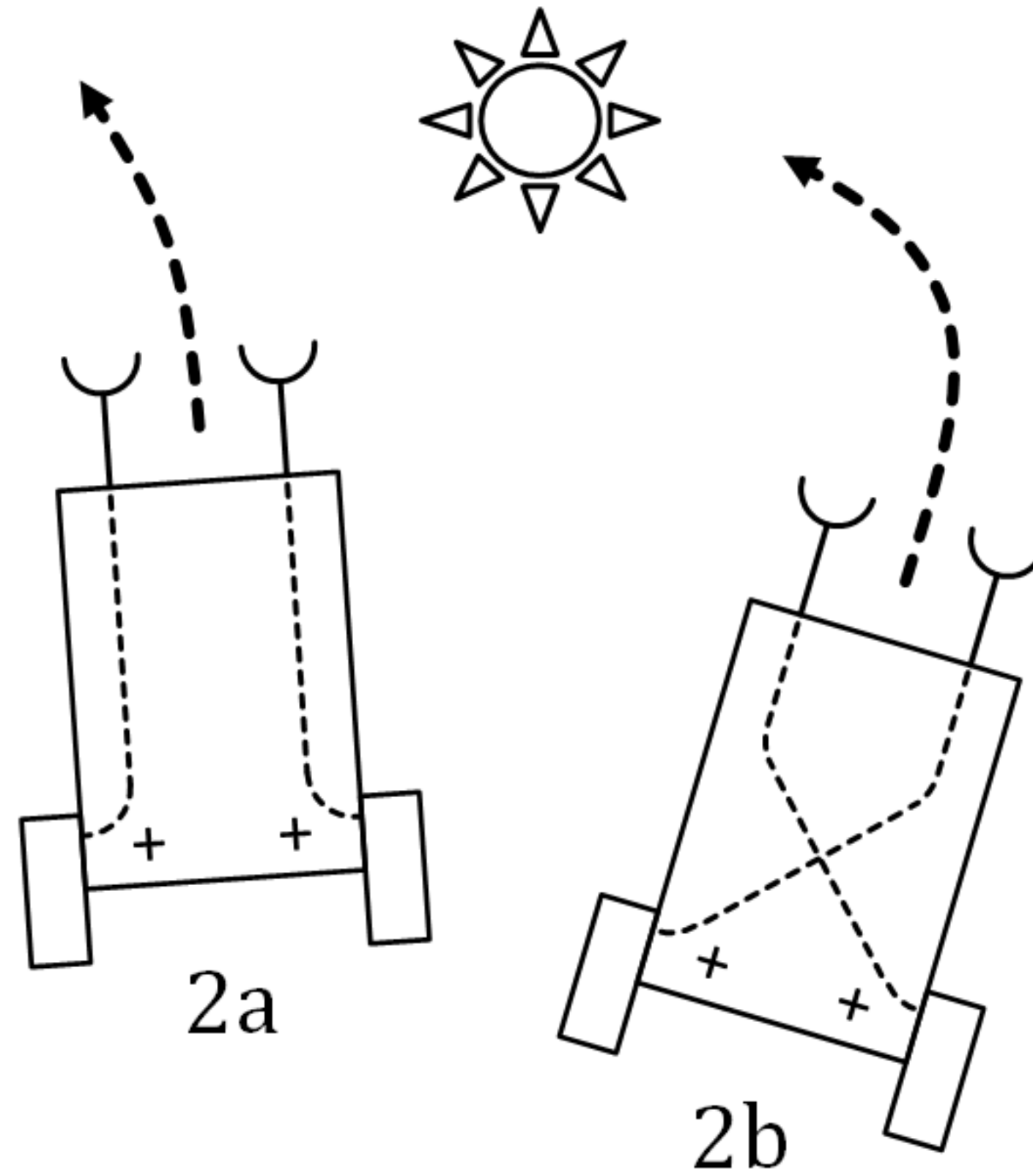


- Solenoids
- Stepper Motors

Braitenberg Vehicles



Goes fast when stimulus is strong - fear & aggression



Goes slower when stimulus is strong - love

