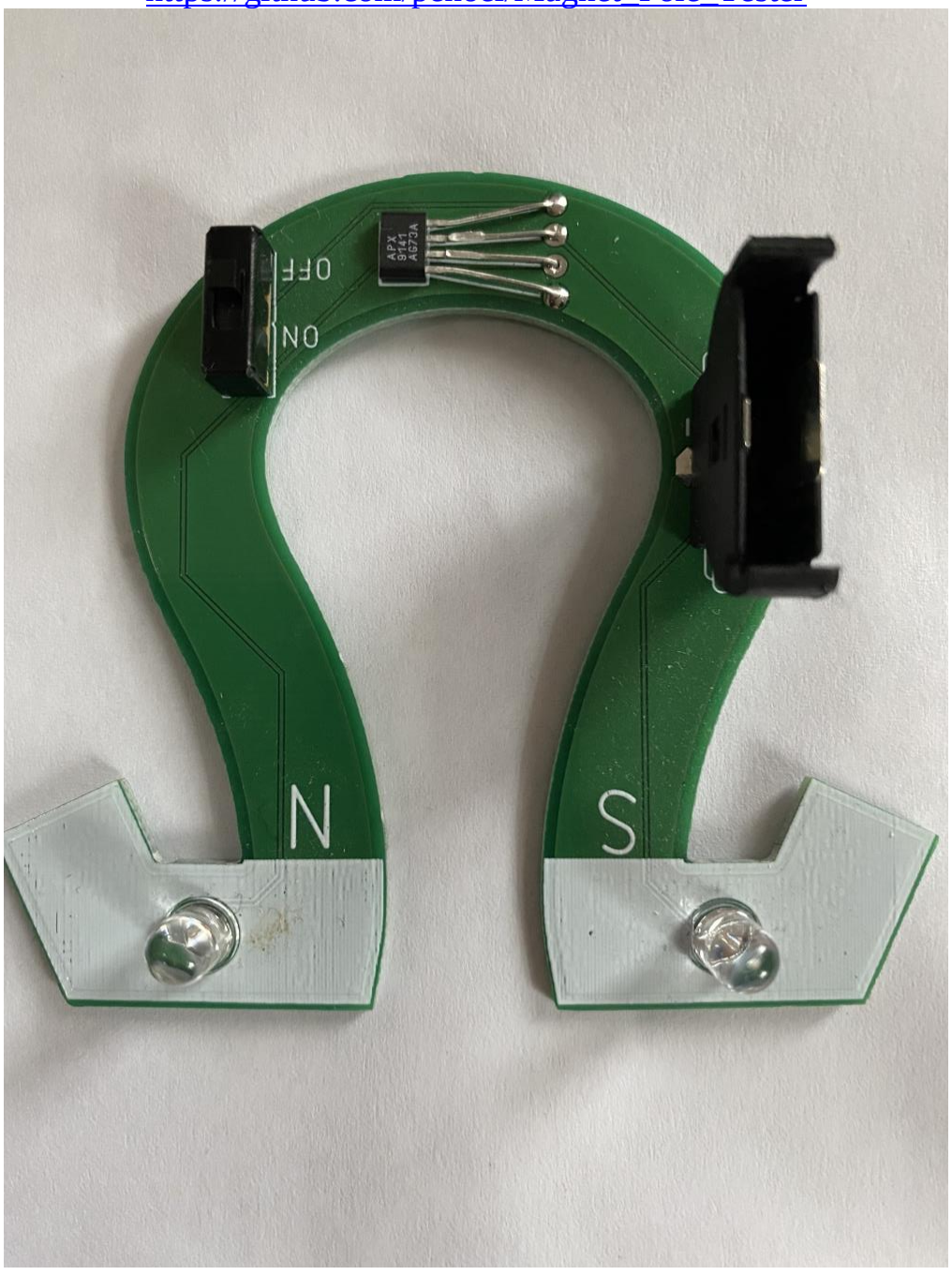
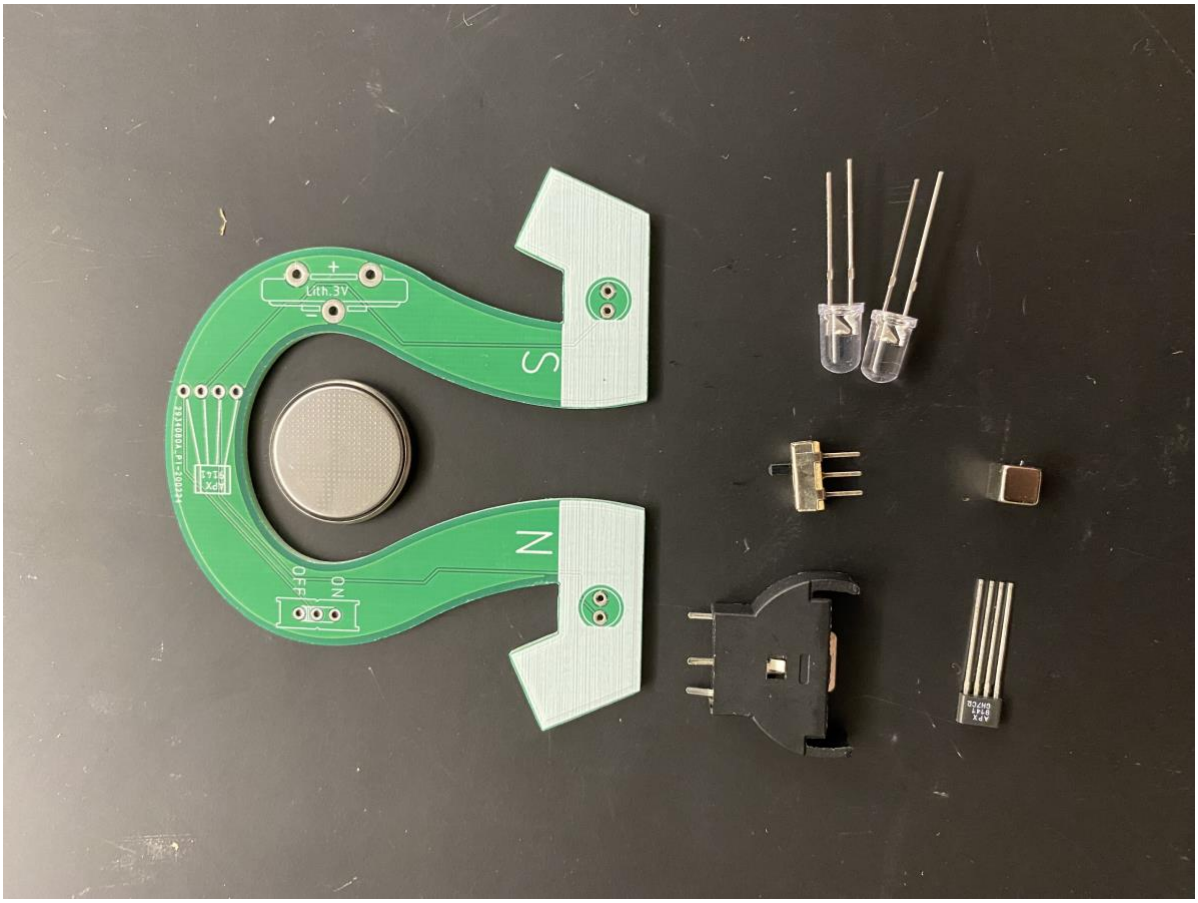
Magnetic Pole Tester

https://github.com/penoel/Magnet_Pole_Tester



The Magnetic pole tester does what its name states it test the pole of a magnet. It does this by using a latching hall sensor, so when a magnet moves close it senses the pole and stays on it until it senses a new pole.



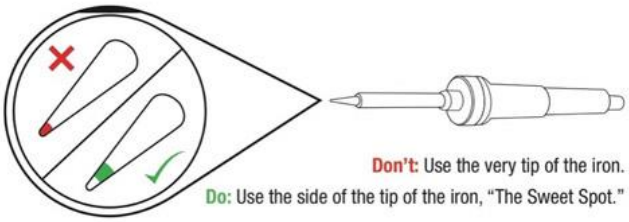
The Magnetic Pole Tester kit contains the following components:

- 1 – PCB
- 1 – Red led
- 1 – Blue led
- 1 – Switch
- 1 – Hall sensor
- 1 – Battery holder

- Take the pcb and hall sensor out.
- Bend the hall sensor legs enough for it to fit in the pcb.
- Put it in the holes and bend the sensor onto the silkscreen making sure the numbers are point up on the sensor.
- Tape the sensor and flip the pcb over. Solder the legs and clip the extra off.
- Put ther red led in the north hole making sure the flat side of the led matches the pcb.
- Solder and clip the legs.
- Repeat for the south blue led.
- Put the switch in and tape it down. Solder and clip legs.
- Tape the battery holder down. Solder and clip legs.
- Insert the battery.

Magnetic pole tester operation

You can bring any magnet close to the sensor and test the pole. You can also put the magnet on the opposite side and see the pole switch.



Don't: Use the very tip of the iron.
Do: Use the side of the tip of the iron, "The Sweet Spot."

Do: Touch the iron to the component leg and metal ring at the same time.

Do: While continuing to hold the iron in contact with the leg and metal ring, feed solder into the joint.

Don't: Glob the solder straight onto the iron and try to apply the solder with the iron.

Do: Use a sponge to clean your iron whenever black oxidization builds up on the tip.

A Solder flows around the leg and fills the hole - forming a volcano-shaped mound of solder.

B Error: Solder balls up on the leg, not connecting the leg to the metal ring.
Solution: Add flux, then touch up with iron.

C Error: Bad Connection (i.e. it doesn't look like a volcano)
Solution: Flux then add solder.

D Error: Bad Connection...and ugly...oh so ugly.
Solution: Flux then add solder.

E Error: Too much solder connecting adjacent legs (aka a solder jumper).
Solution: Wick off excess solder.