

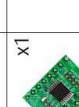
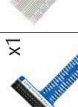
Freenove Kit for Raspberry Pi

Setting Up

First projects

More complex projects

ting Up

Raspberry Pi is NOT included in this kit!											x10		x4		x4		x1		x1
Download Needed: Tutorial and Code (No paper tutorial.)											x1		x1		x1		x20		x10
The download link can be found on the board											x3		x2		x4		x1		x1
	x2		x1		x1		x2		x2		x2		x1		x1		x1		x1
	x1		x1		x1		x1		x3		x1		x2		x1		x1		x1
	x1		x1		x1		x1		x1		x1		x1		x1		x1		
	x1		x1		x1		x1		x1		x1								
	x1		x1		x1		x3		x1										

Added notes about how to add network with the wpa supplicant file and how to enable ssh.....still need notes on vnc

Also need to add link and image of the extra wires i ordered, the joystick is chapter 12 is infinitely easier to comprehend and look up if you have 5 female to male wires

WiFi Setup on RetroPie

Link 1 provided above has an tutorial to use nettiny *connecting to wifi without a keyboard*. I've copied the body of it through into this post for you:

Do this with the RetroPie SD card attached to a desktop PC. Create a file called `wpa_supplicant.conf` in the `/boot` folder (boot partition) using the following template. This will be moved automatically at next boot of the RetroPie to the `/etc/wpa_supplicant/` directory.

```
### Important: Change country=US to your country
country=US
ctrl_interface=DIR=/var/run/wpa_supplicant GROUP=netdev
update_config=1

# RETROPIE CONFIG START
network={
    ssid="your_real_wifi_ssid"
    psk="your_real_password"
}
# RETROPIE CONFIG END
```

Make sure to include the `# RETROPIE CONFIG START/END` lines as shown to ensure that the RetroPie-Setup WiFi configuration module will be able to cleanly edit/delete your configuration, if you wish to change it later.

Linux GUI with VirtualBox VM

Just create a simple empty file named `ssh` on the Windows-accessible part of the SD card after writing Raspbian to it.



The Robotics Back-End

<https://roboticsbackend.com/enable-ssh-on-raspberry-pi/>

How to Enable and Use SSH on Raspberry Pi 4 ...

Still in the root folder of your SD card ("boot") create a new file named `"ssh"`, with no extension. That's it! This will enable `ssh` when you boot the Pi. Now, ...

First – Flash Raspberry Pi OS... New feature: Enable SSH...



Raspberry Pi Forums

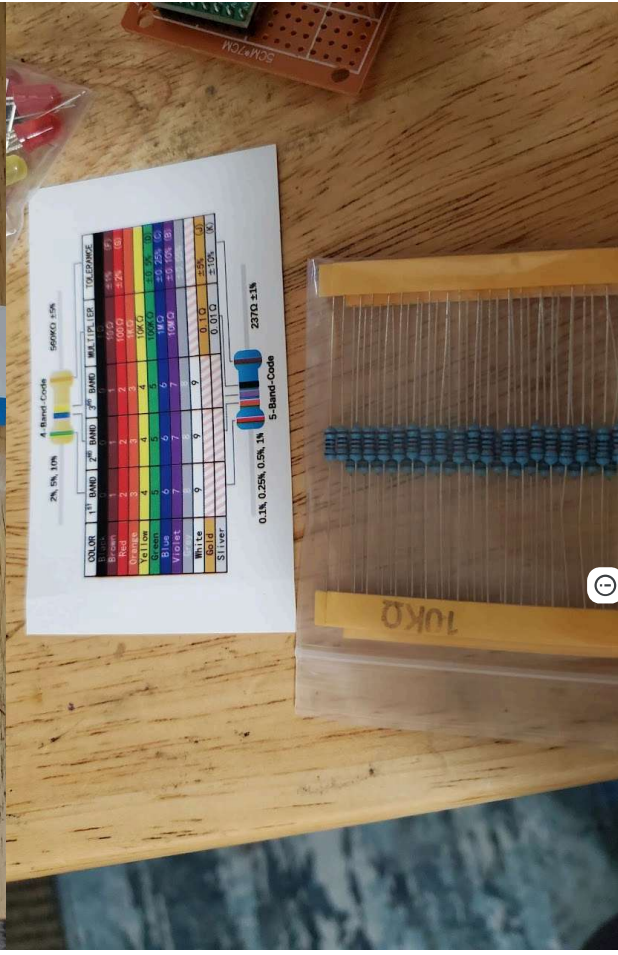
<https://forums.raspberrypi.com/...> Beginners>

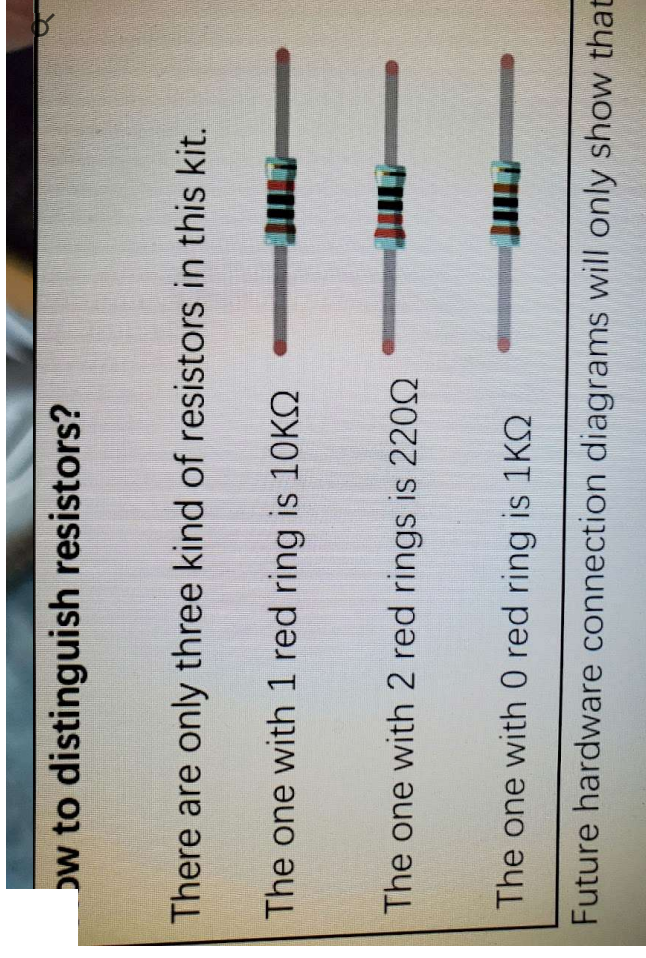
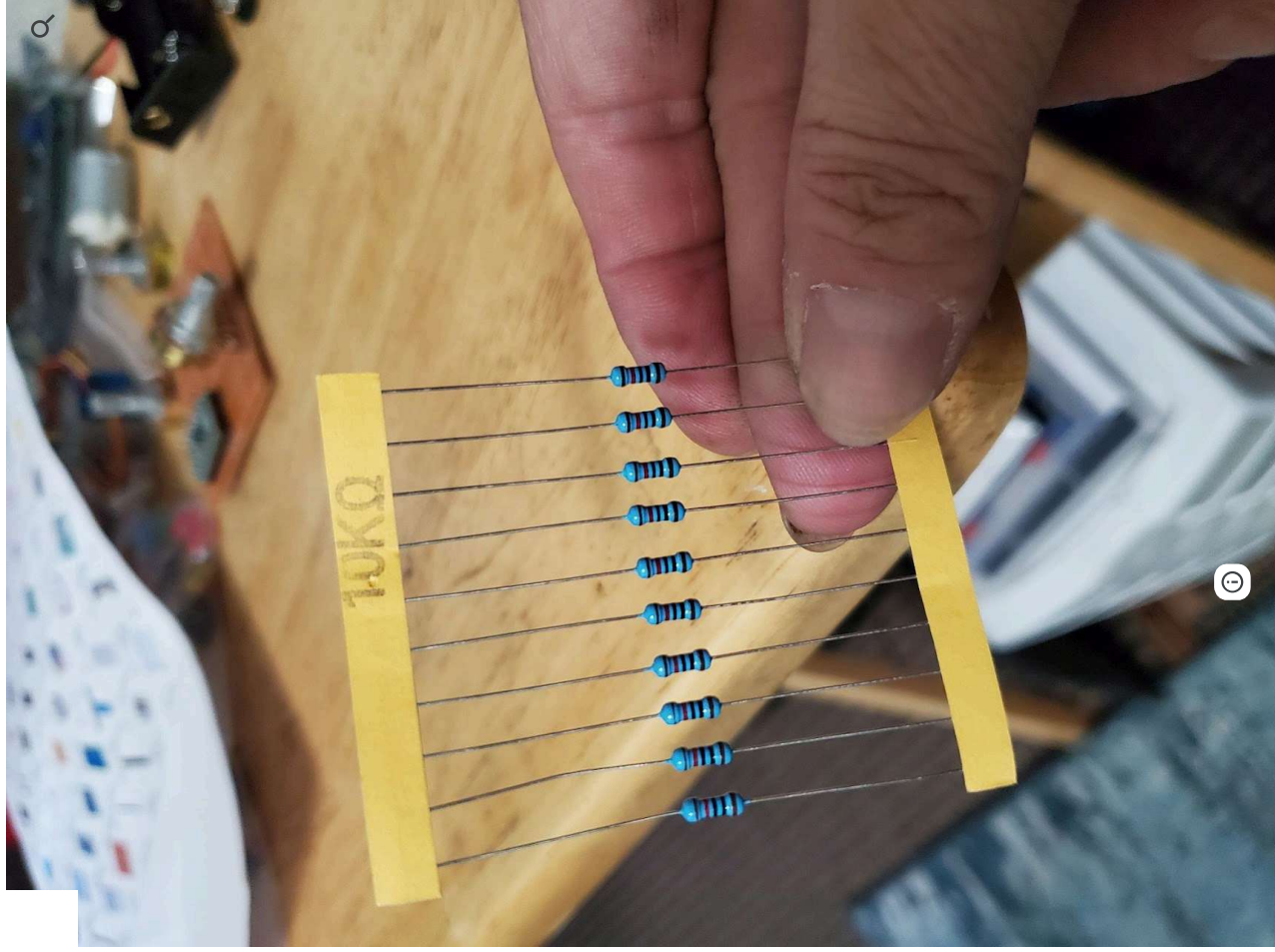
Placing SSH File on New SDCard

SSH can be enabled by placing a file named `ssh`, without any extension, onto the boot partition of the SD card from another computer.



...ple also ask i





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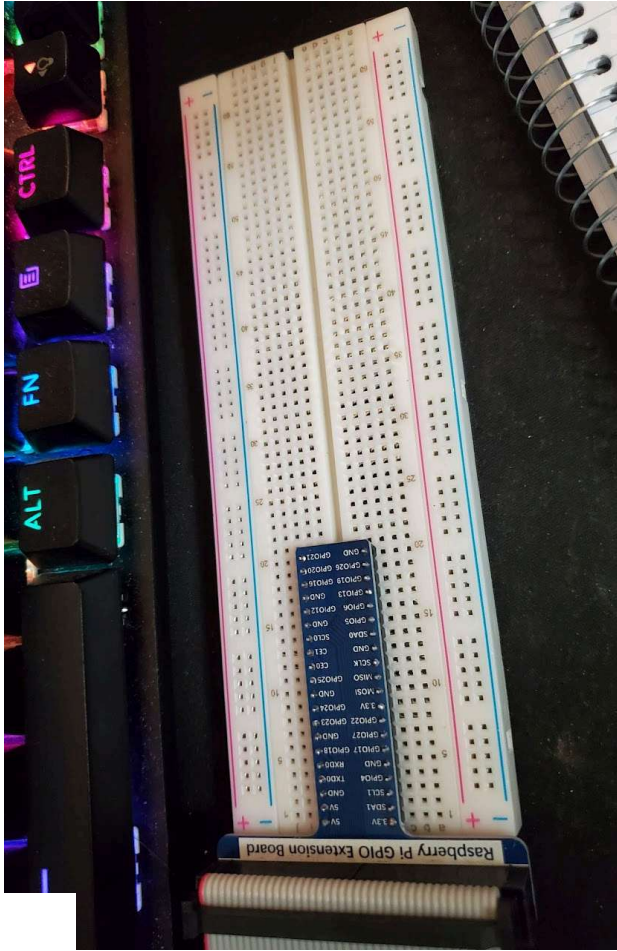
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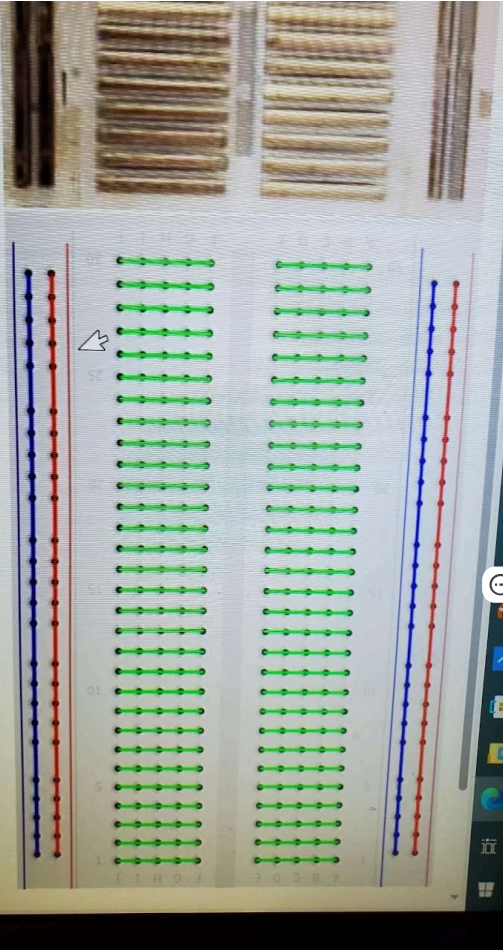


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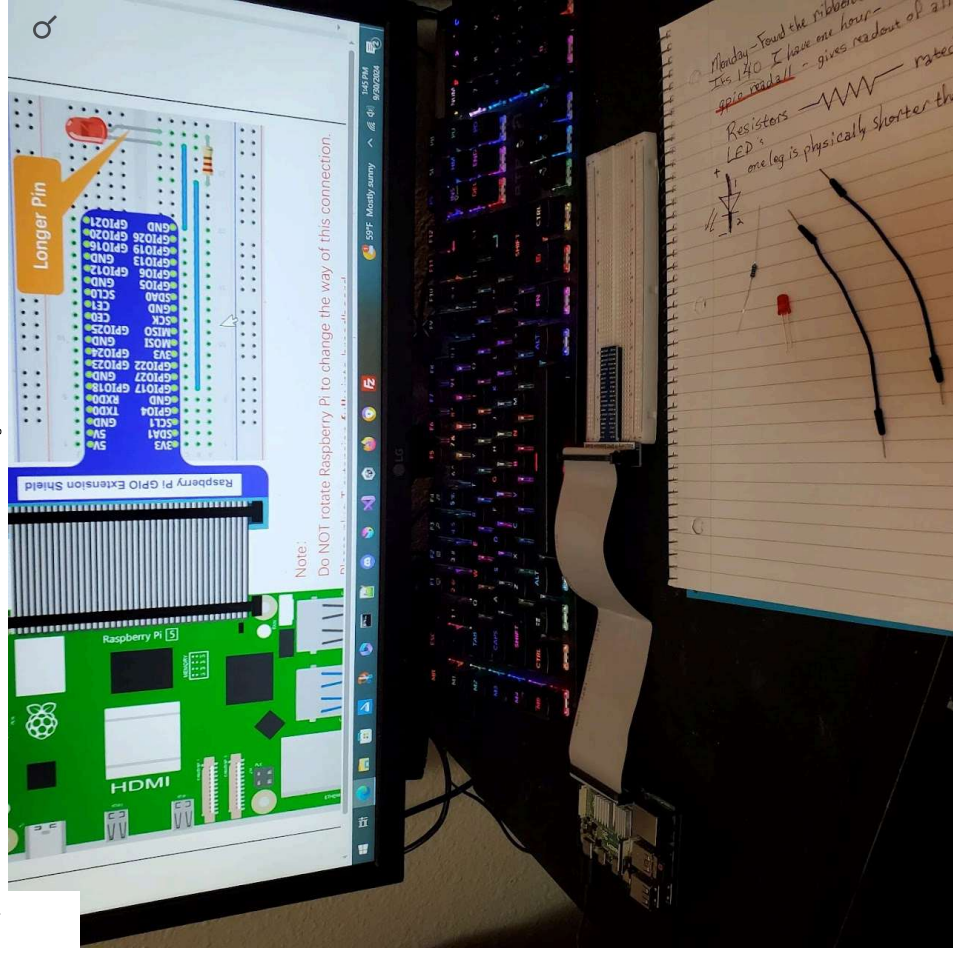
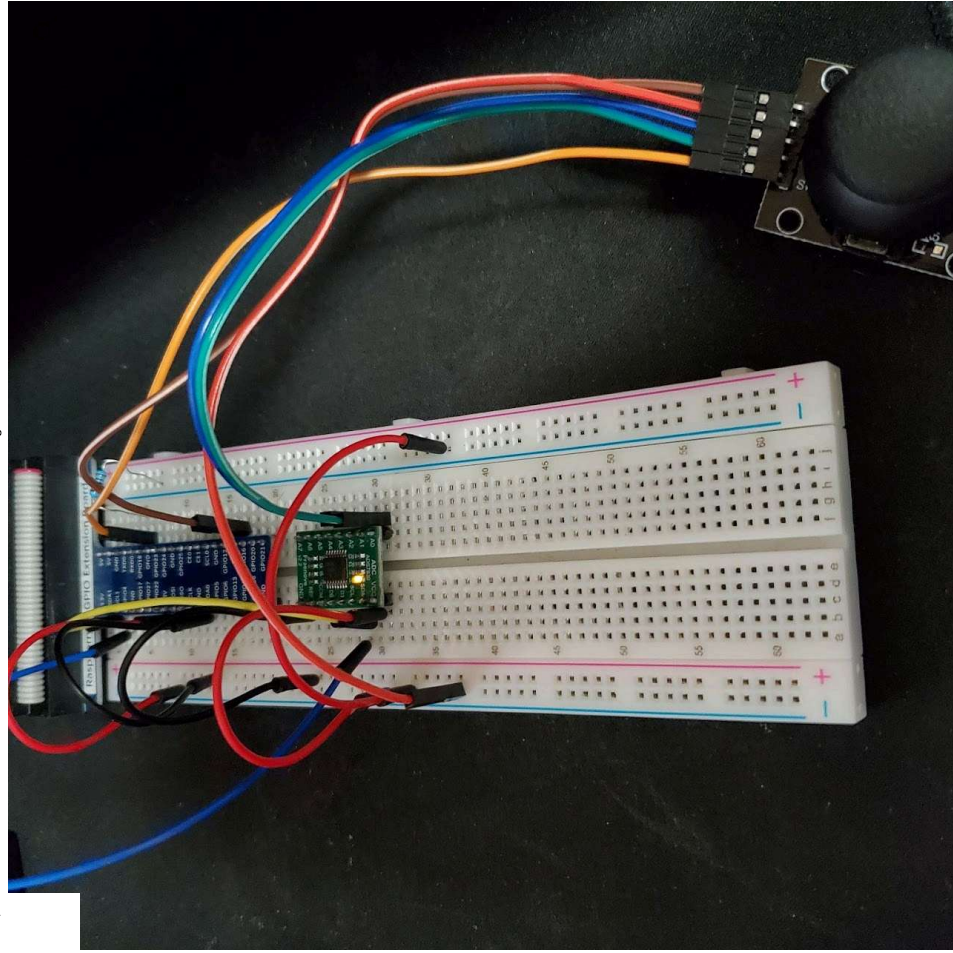


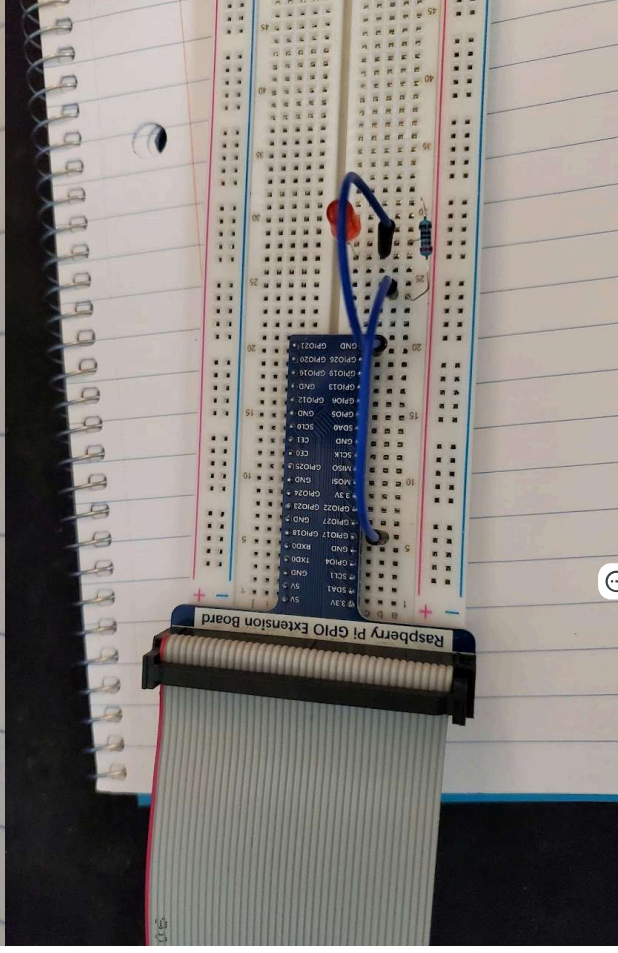
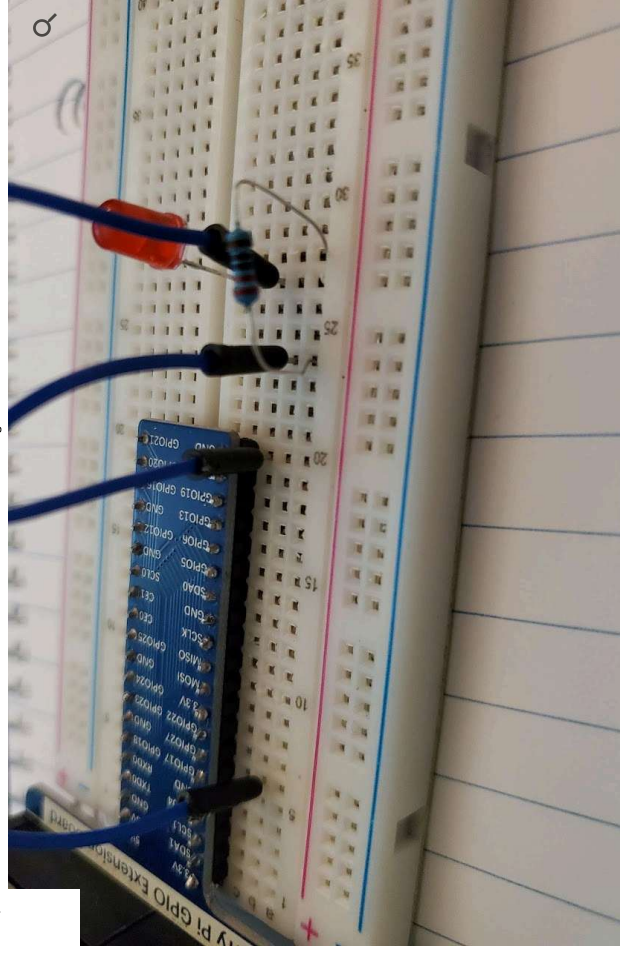
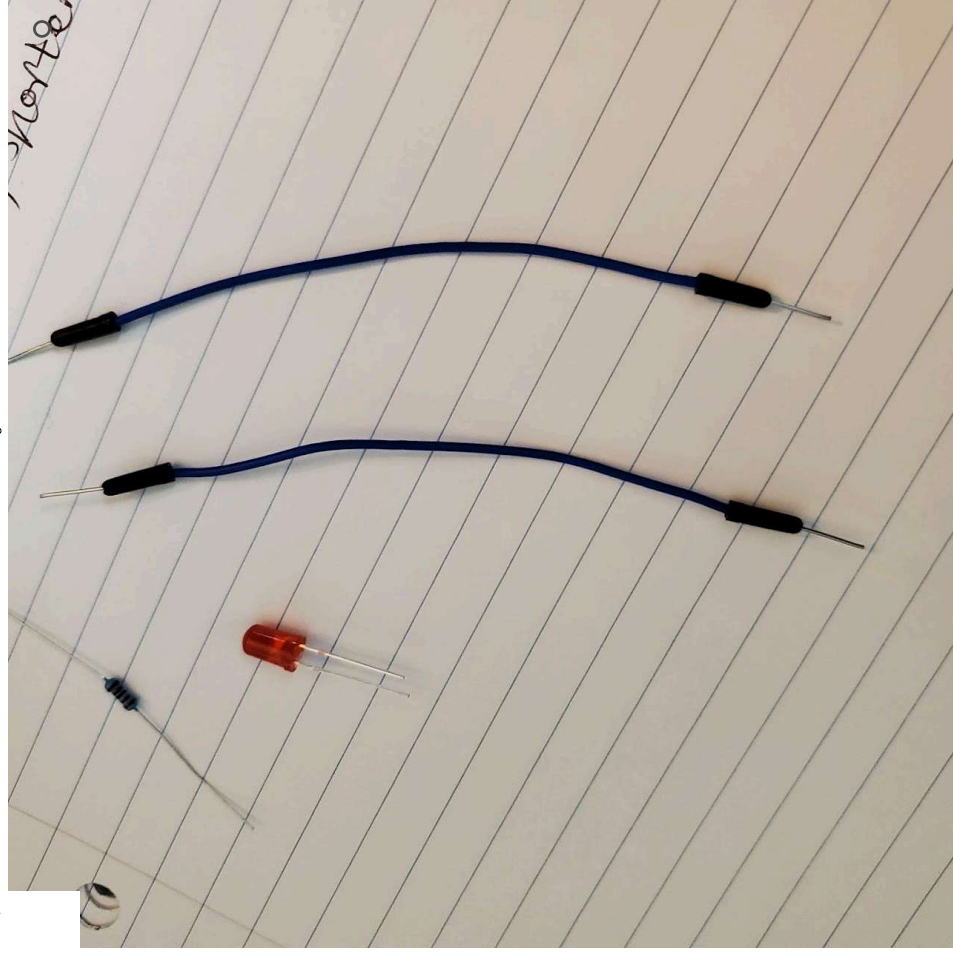
The left picture shows the ways the pins have shared electrical connection with the actual internal metal, which connect these rows electrically.



st projects

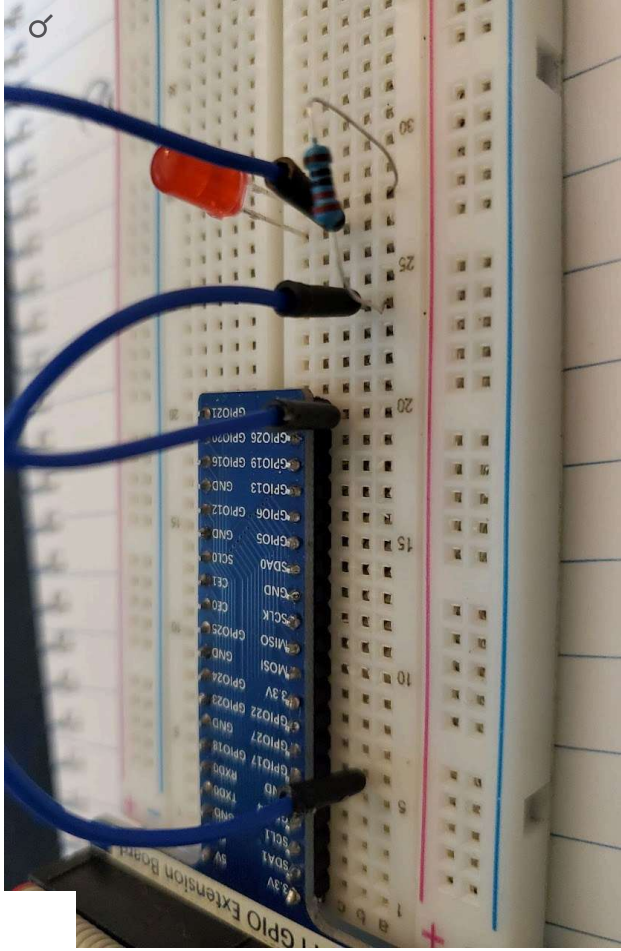
Beginner circuits, just getting used to hooking up the components and getting organized as we go. It feels repetitive but every project becomes more comfortable with the interface as the circuits become more complex. Reading through the code and making sense of it.





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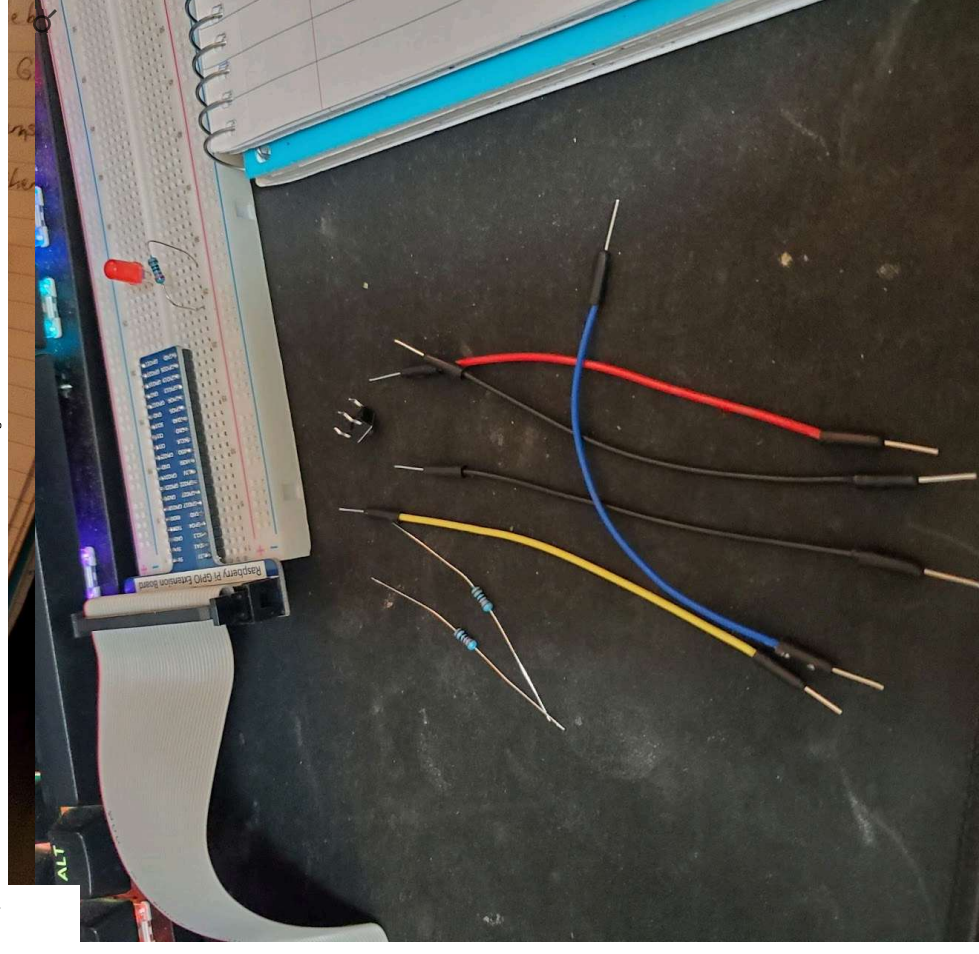
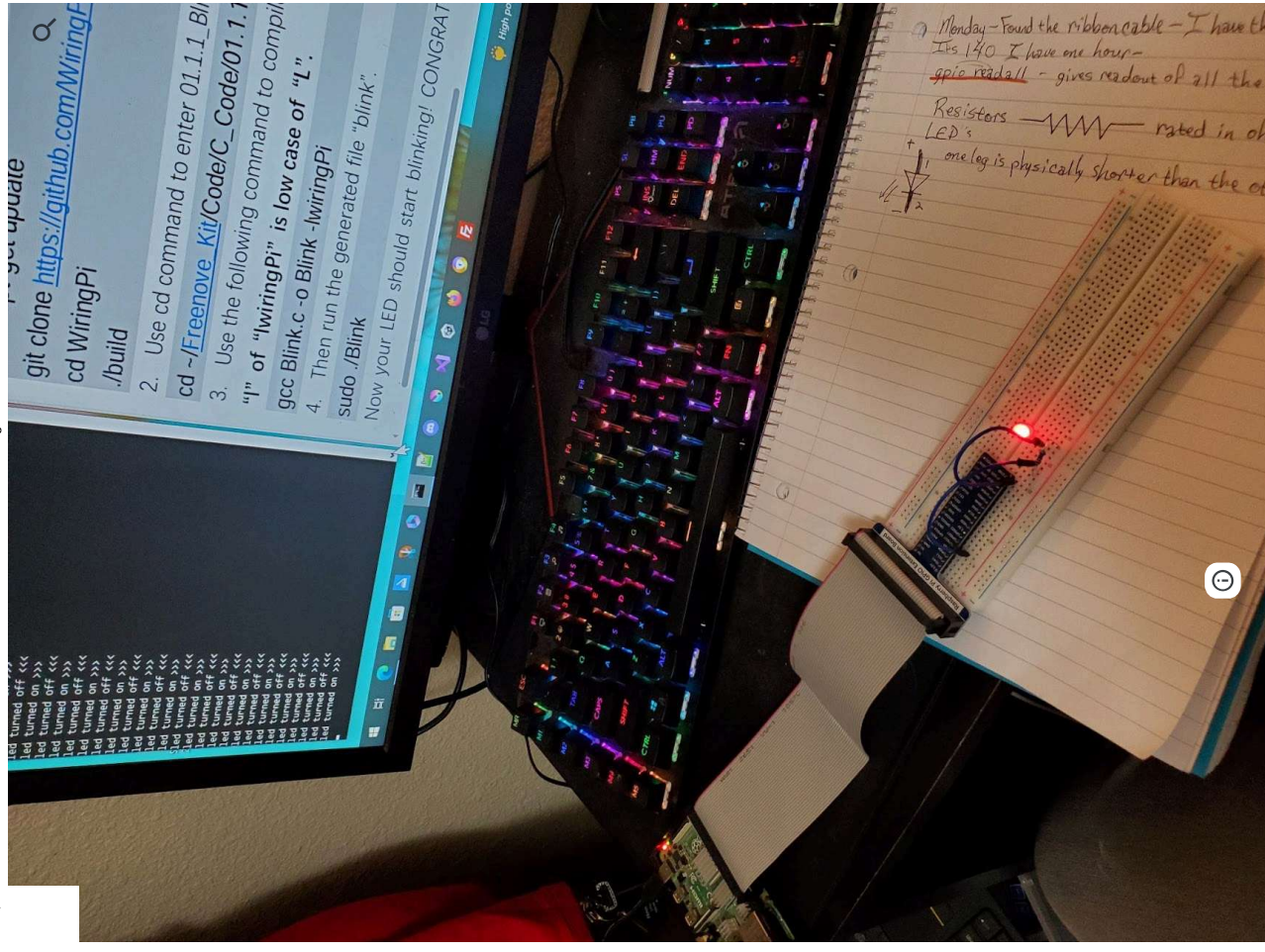
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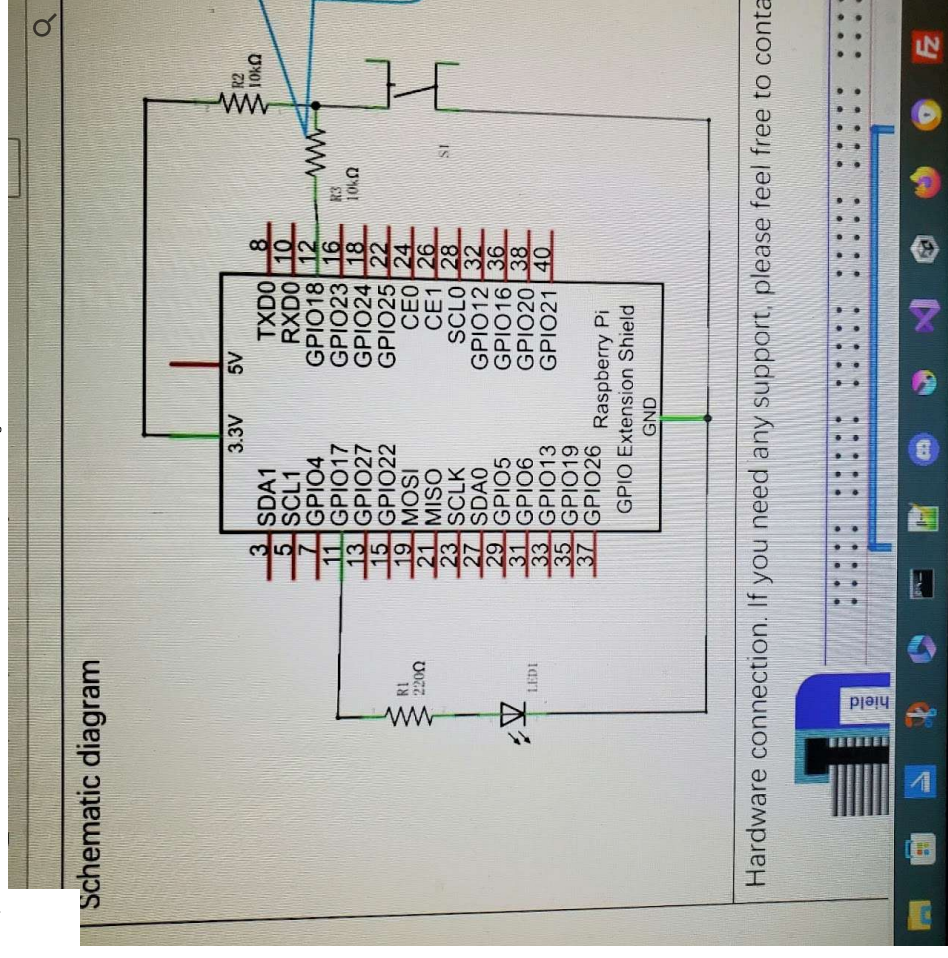
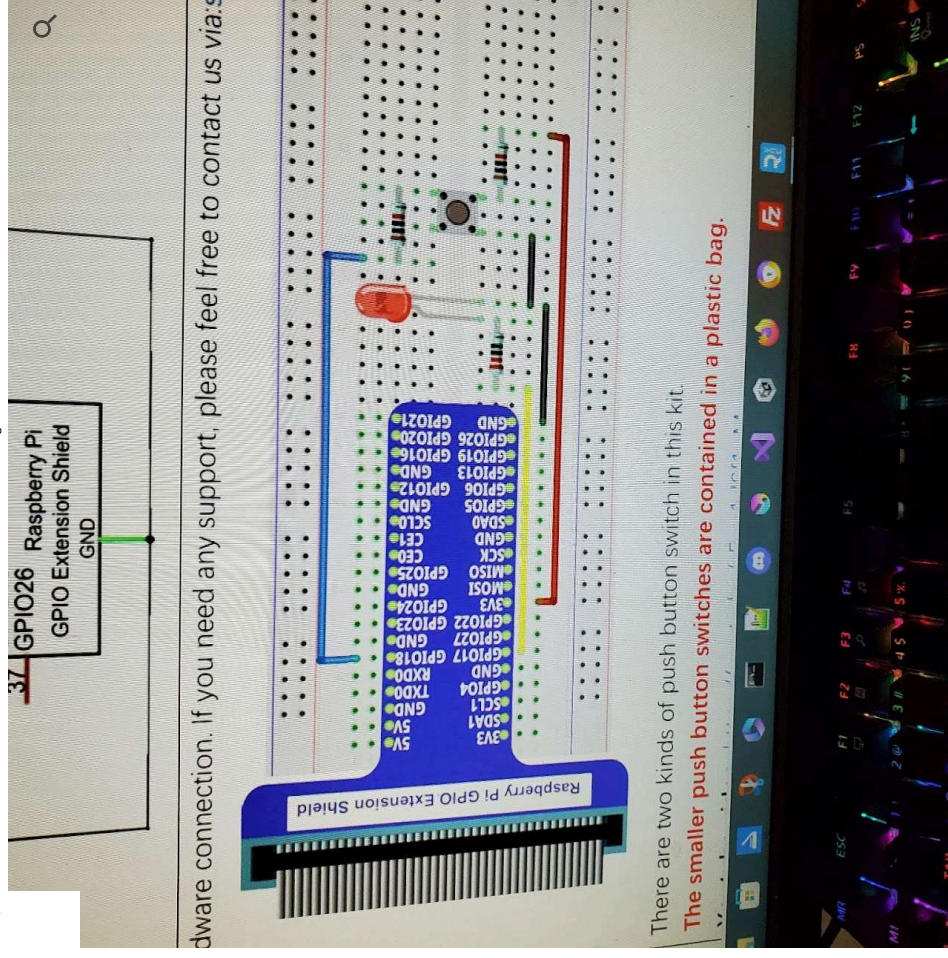


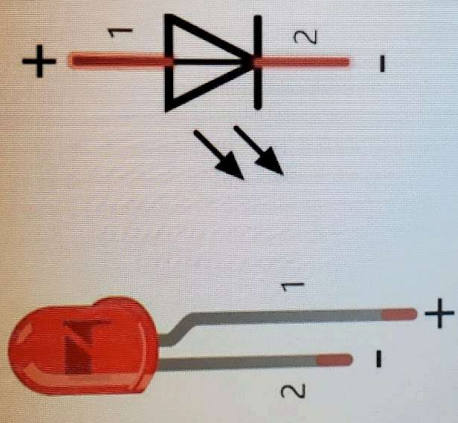
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Note: LEDs cannot be directly connected to a power supply, which usually ends in a damaged component. A resistor with a specified resistance value must be connected in series to the LED you plan to use.

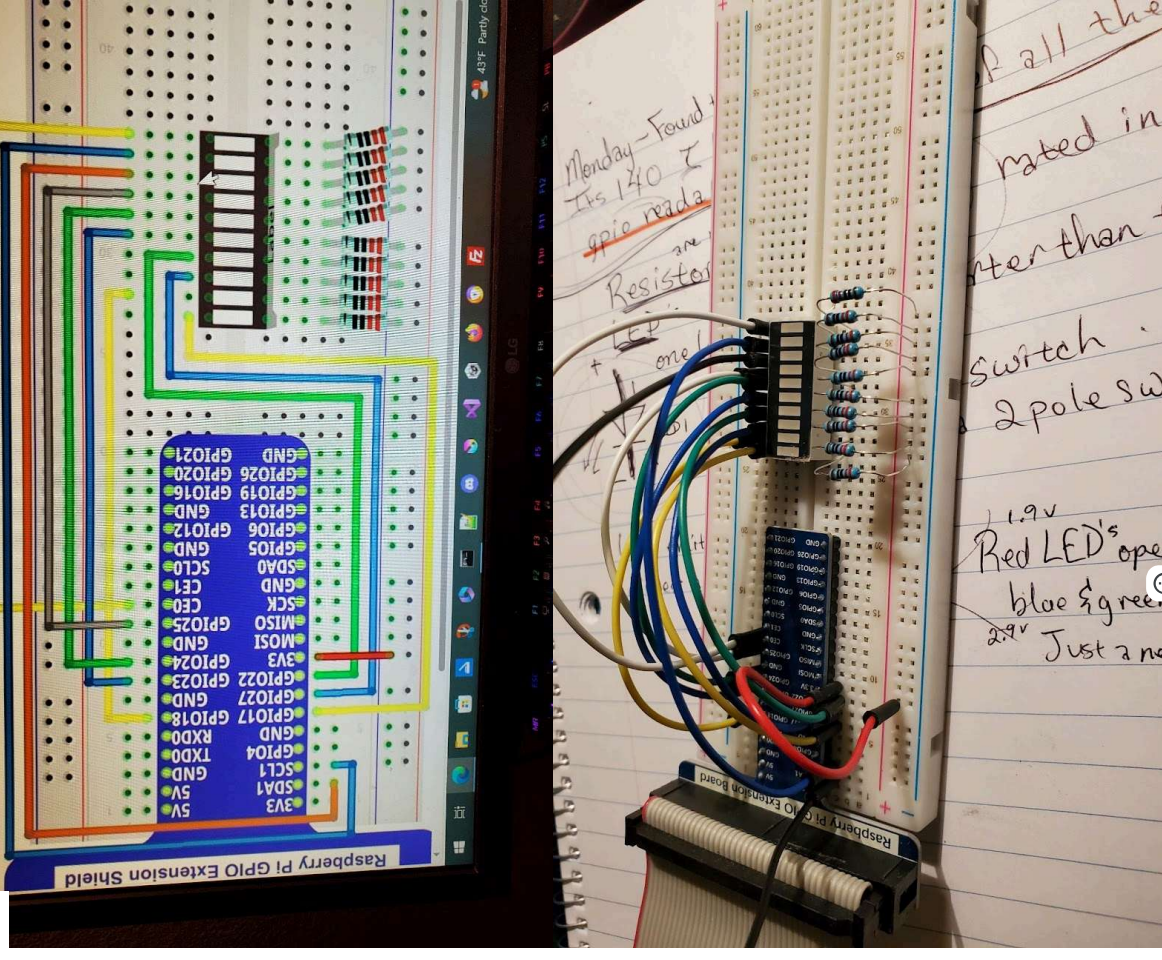
This type of component is known as "Polar" (think One-Way Street). All common 2 lead diodes are the same in this respect. Diodes work only if the voltage of its positive electrode is higher than its negative electrode and there is a narrow range of operating voltage for most all common diodes of 1.9 and 3.4V. If you use much more than 3.3V the LED will be damaged and burnt out.

LED	Voltage	Maximum current	Recommended current
Red	1.9-2.2V	20mA	10mA
Green	2.9-3.4V	10mA	5mA
Blue	2.9-3.4V	10mA	5mA

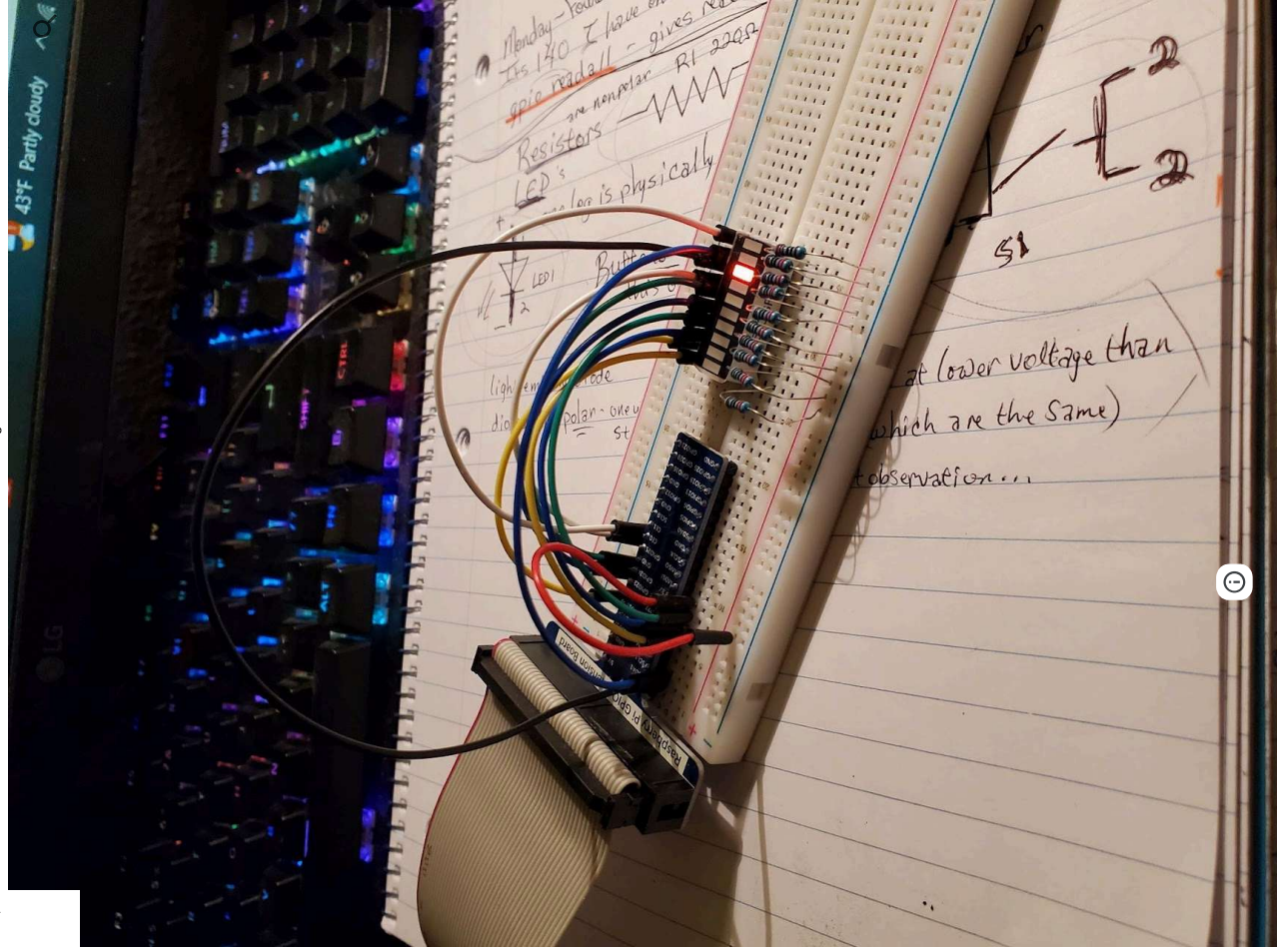
Volt ampere characteristics conform to diode

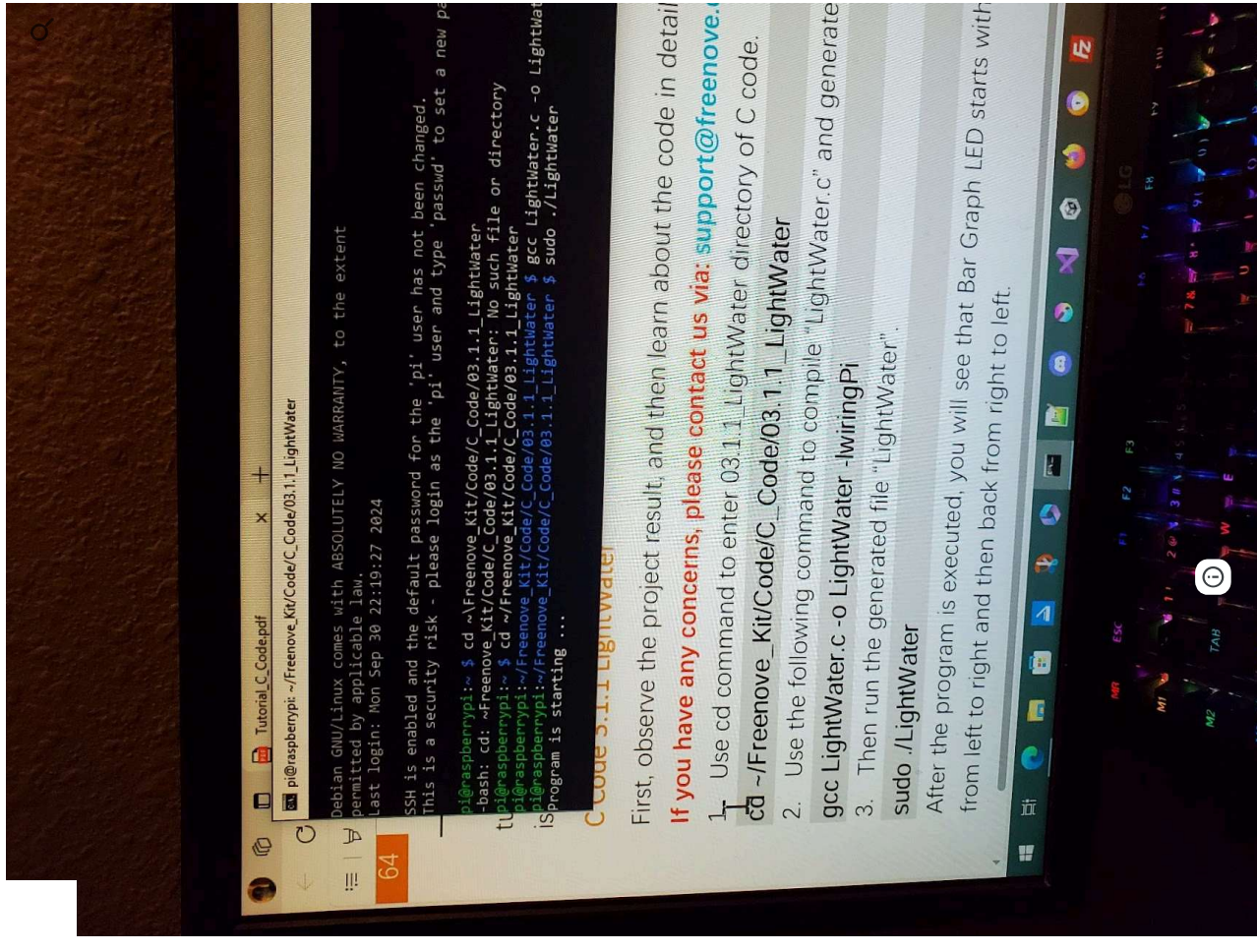
Note: LEDs cannot be directly connected to a power supply, which usually ends in a damaged component. A resistor with a specified resistance value must be connected in series to the LED you plan to use.

Resistor
Resistors use Ohms (Ω) as the unit of measurement of their resistance (R). $1\text{M}\Omega = 1000\text{k}\Omega$. $1\text{k}\Omega = 1000\Omega$.

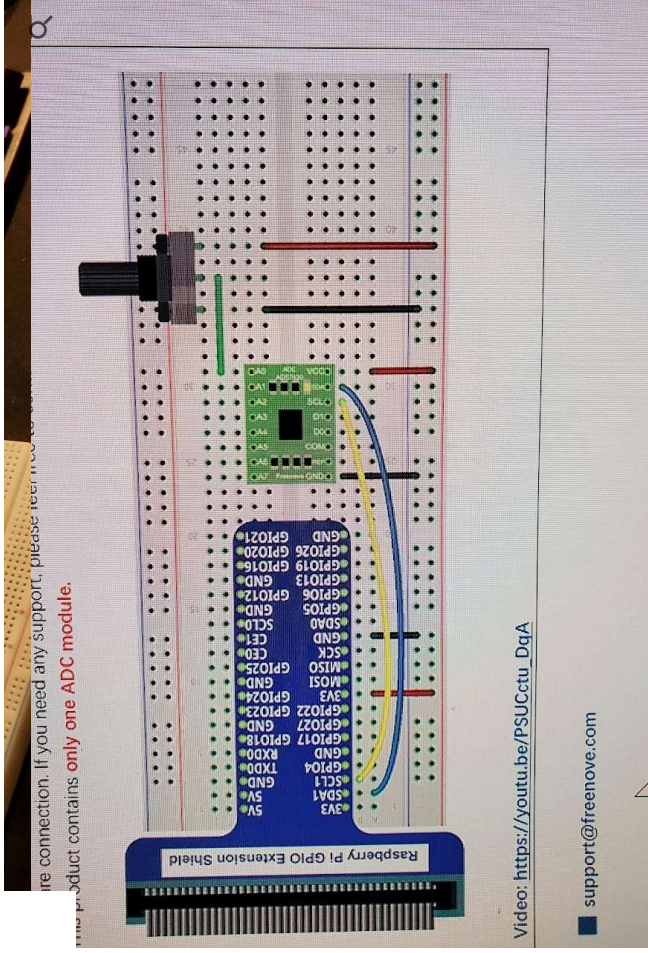
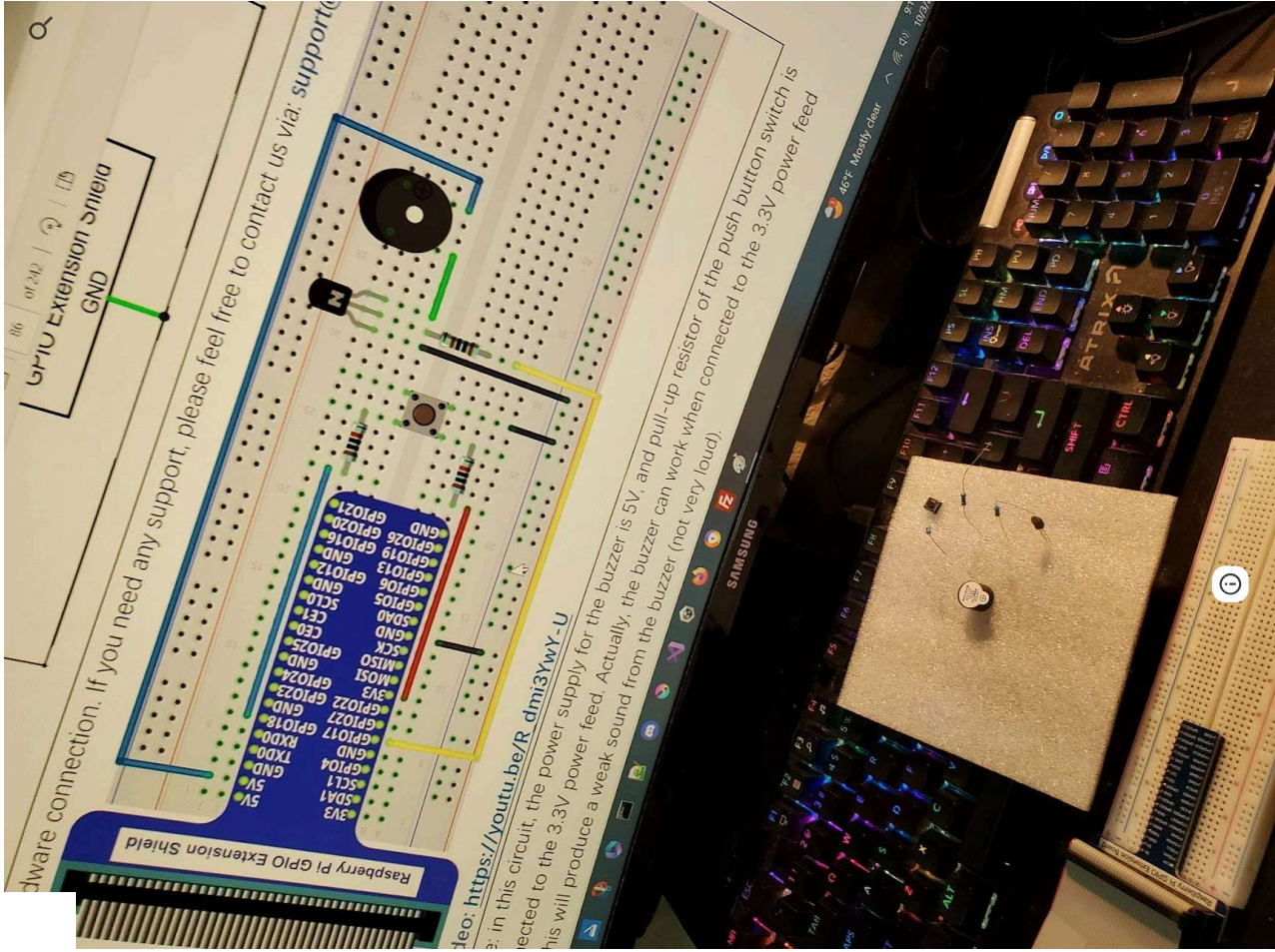


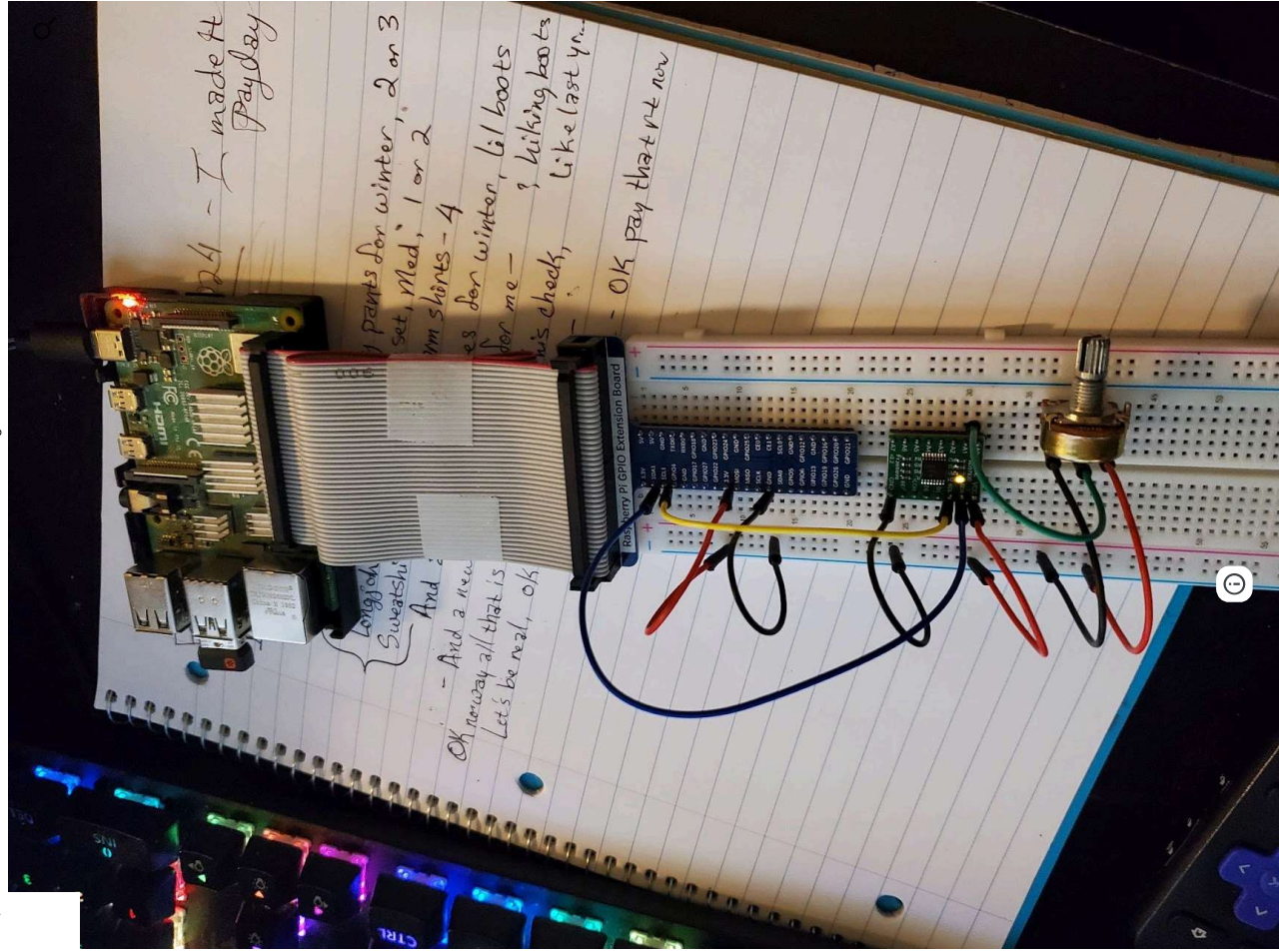
Monday-Friday
Its 140 Ω
gpio reads
Resistor
LED
+ 1 ohm
P all the
rated in
ter than
Switch
2 pole sw
1.9v
Red LED's ope
blue & green
2.9v Just a ne

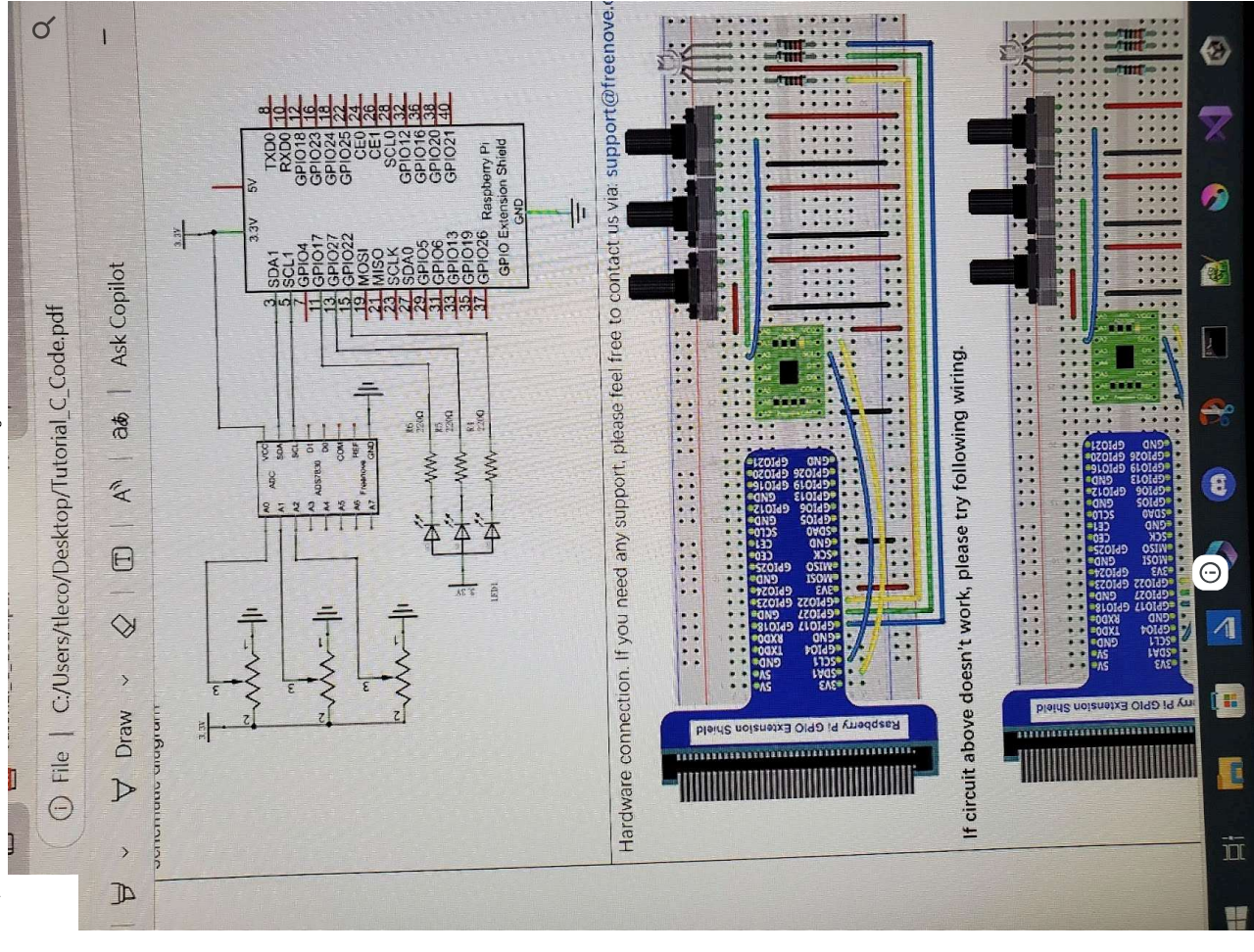


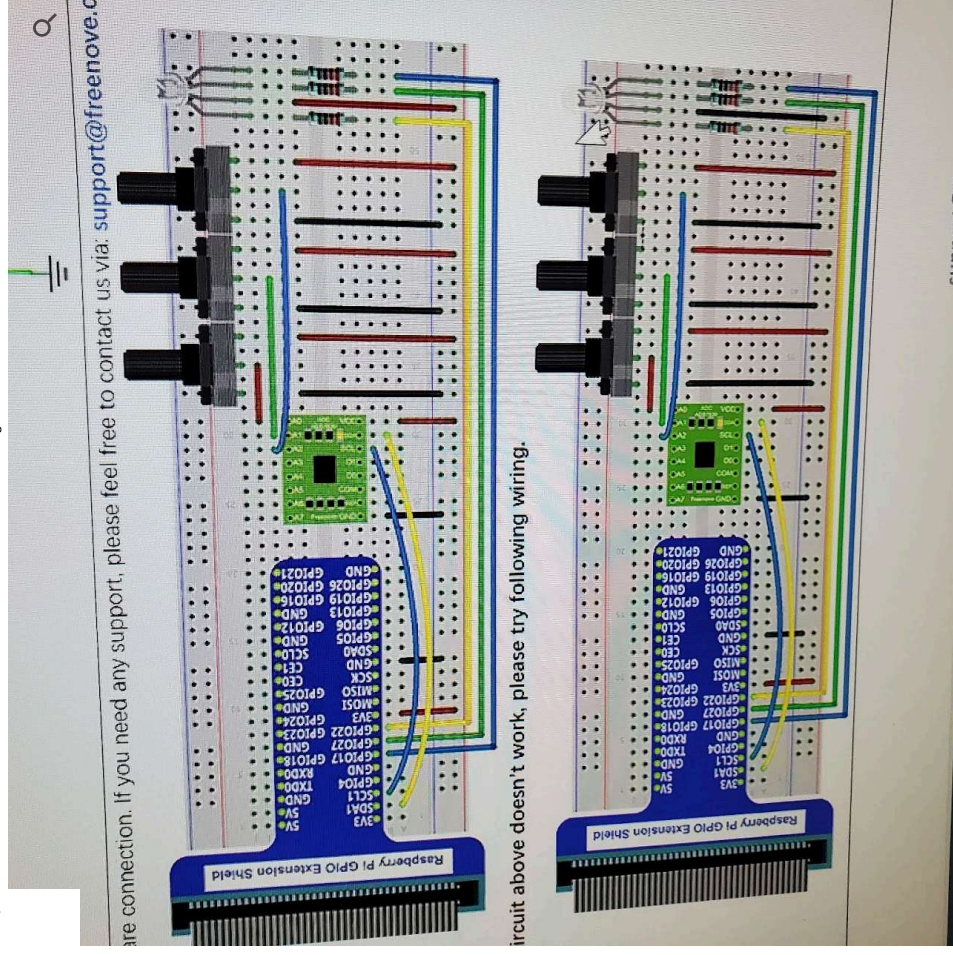
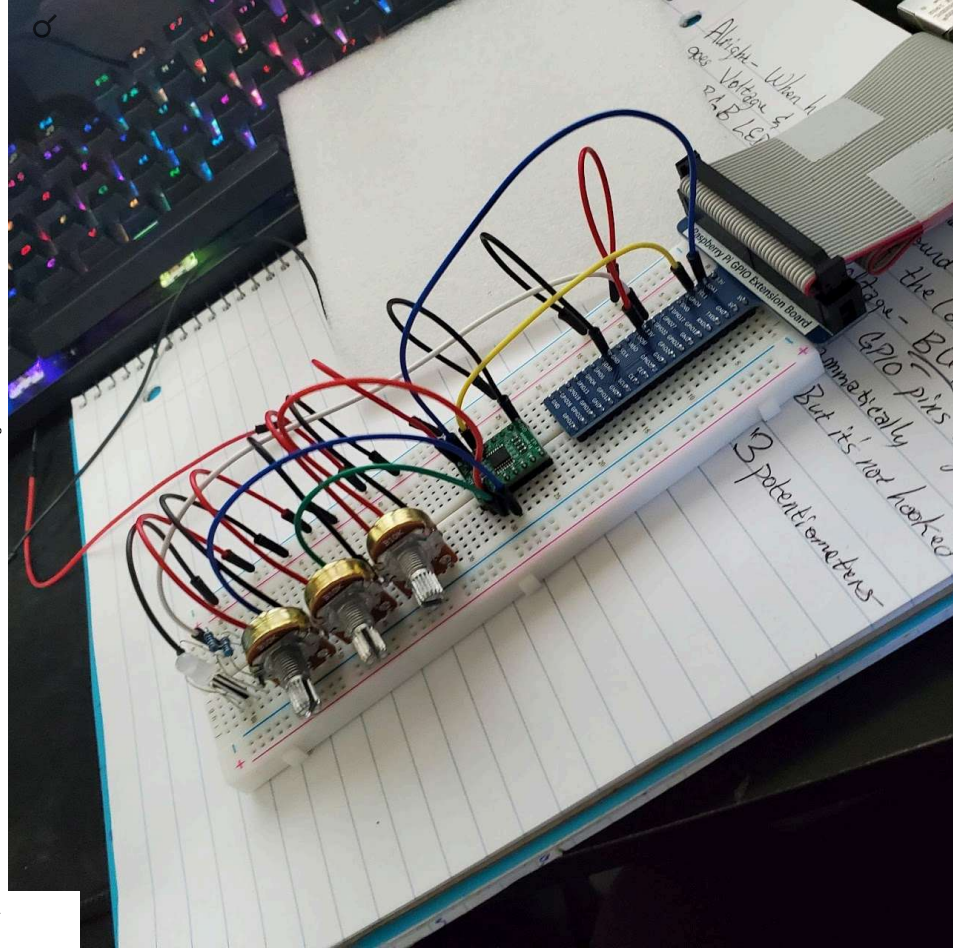


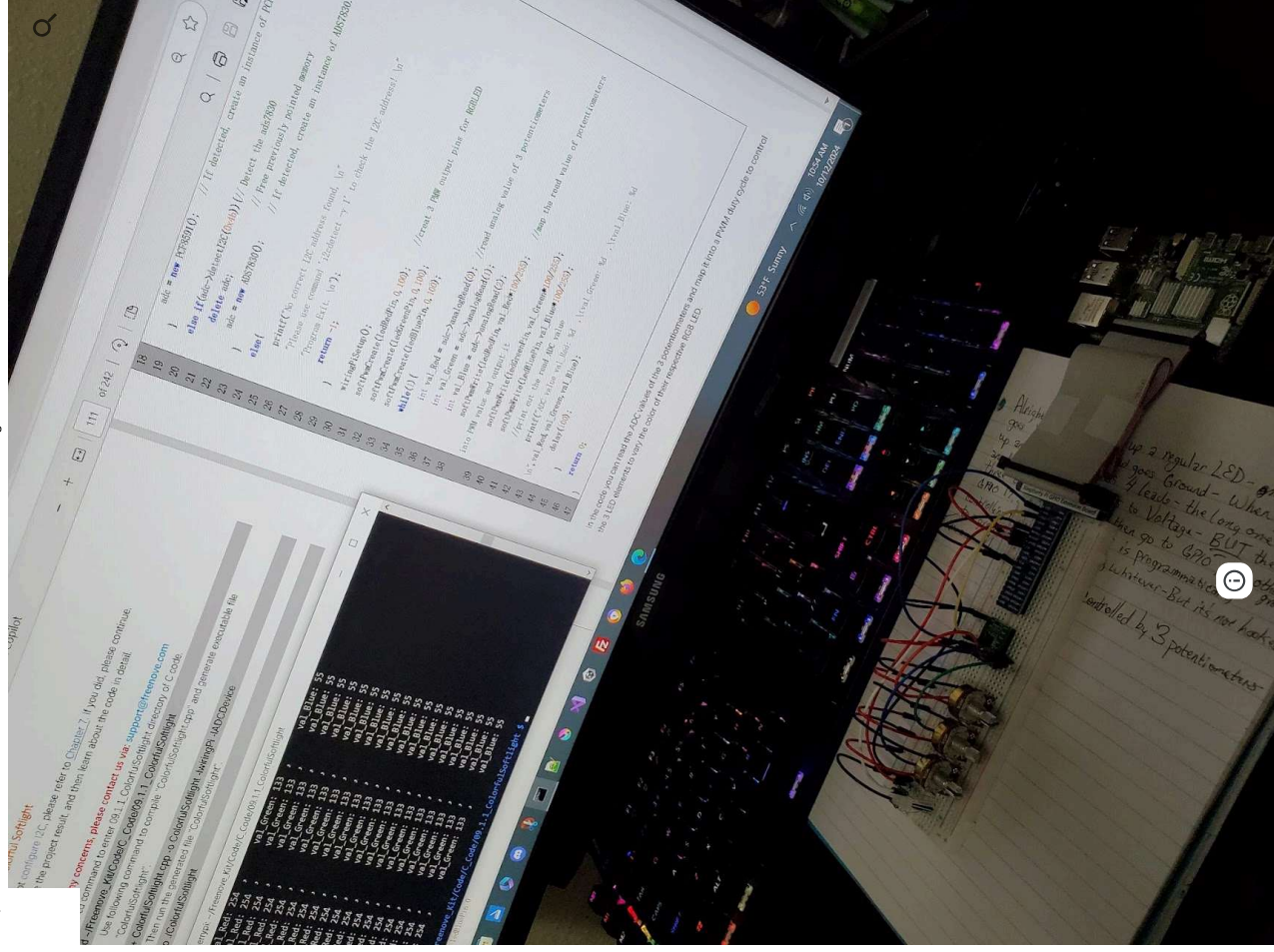
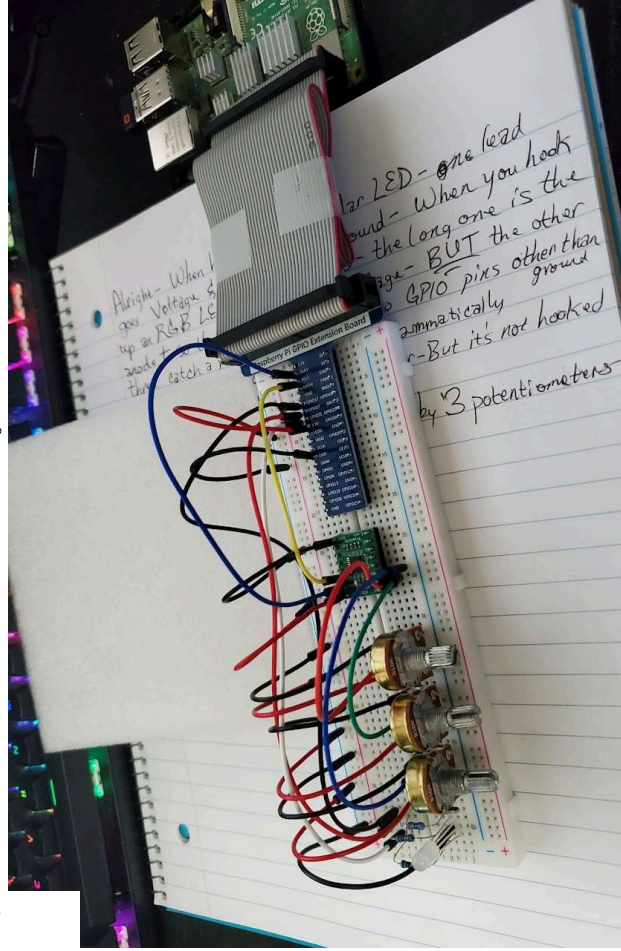


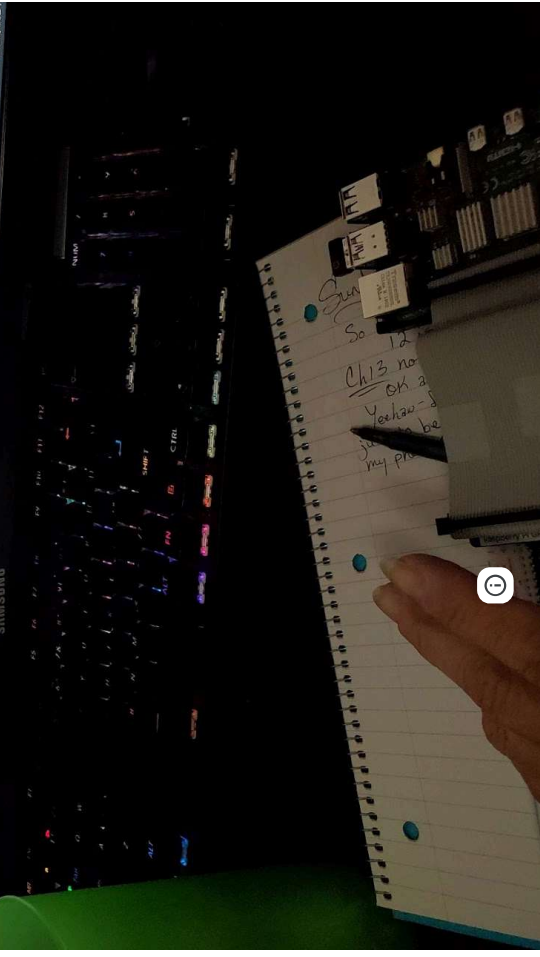
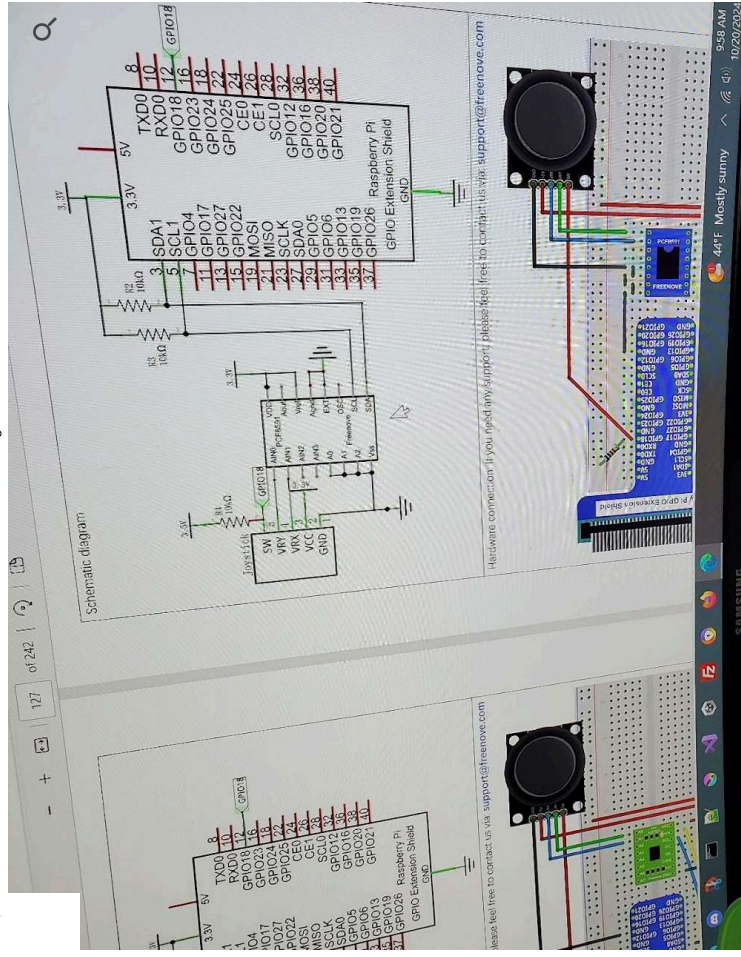


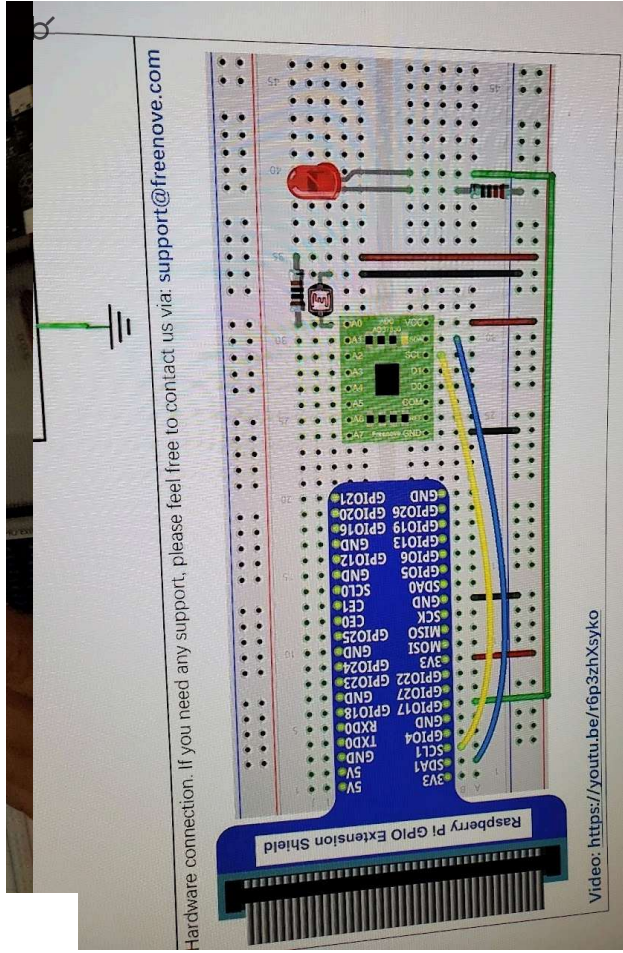


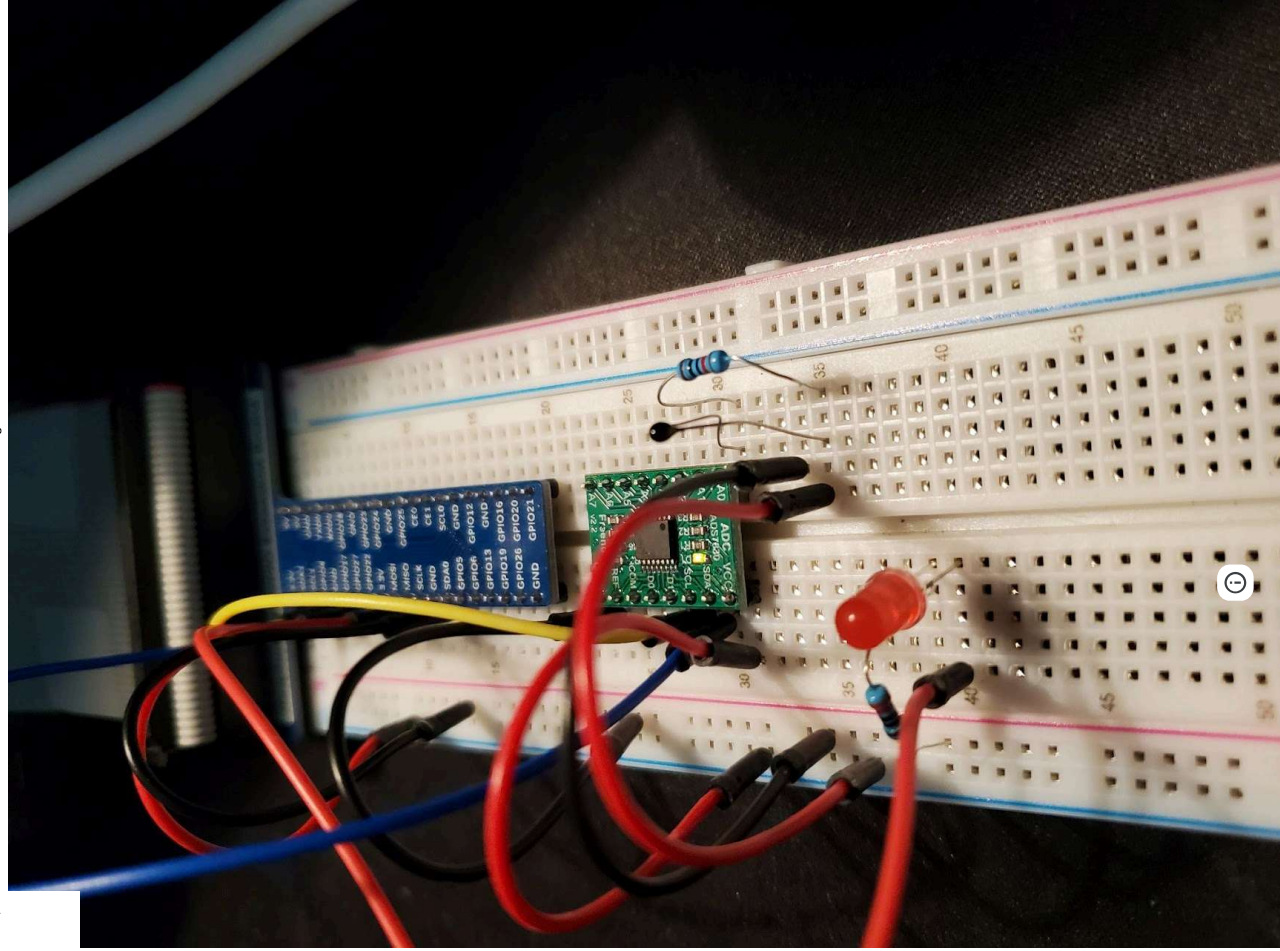


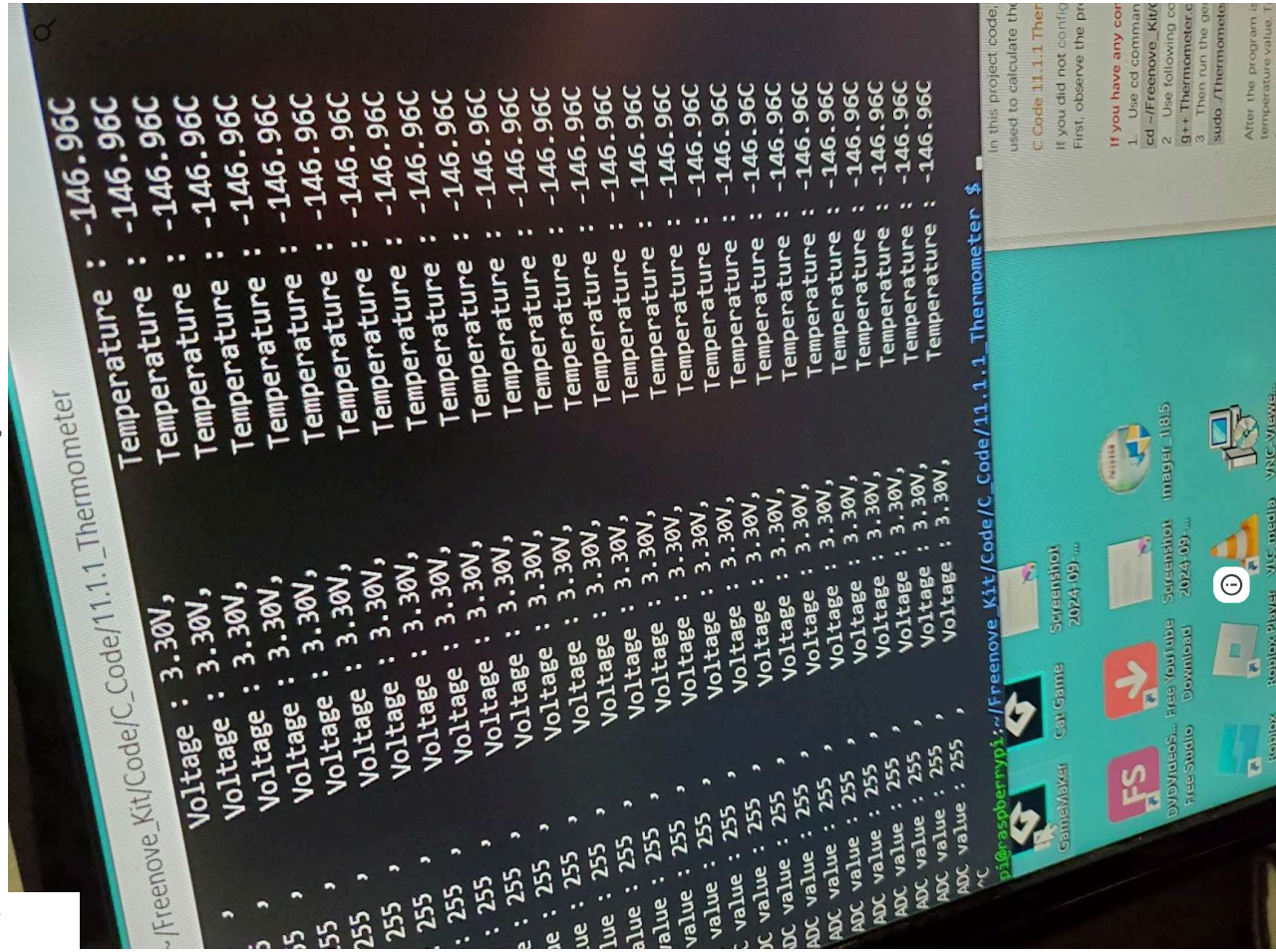


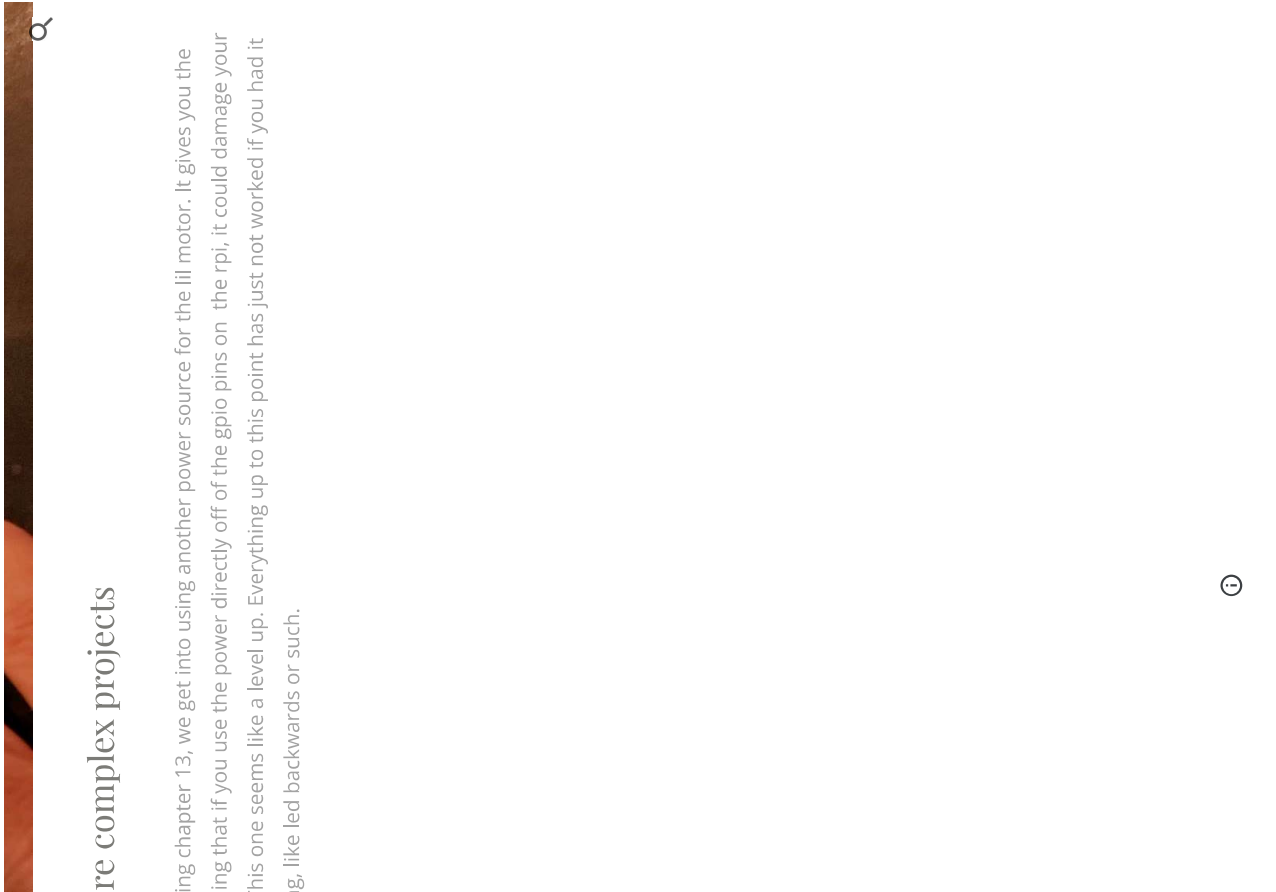
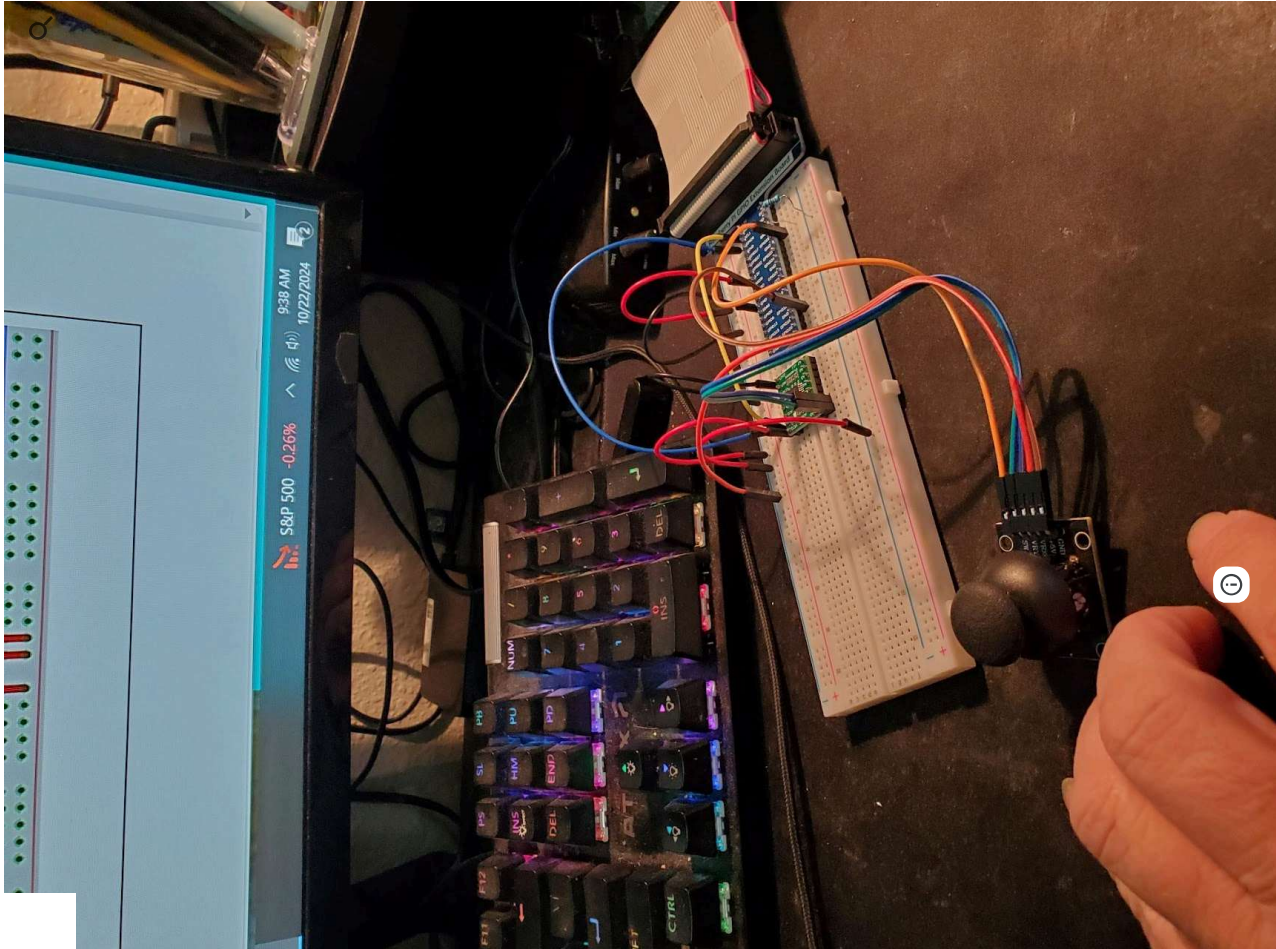










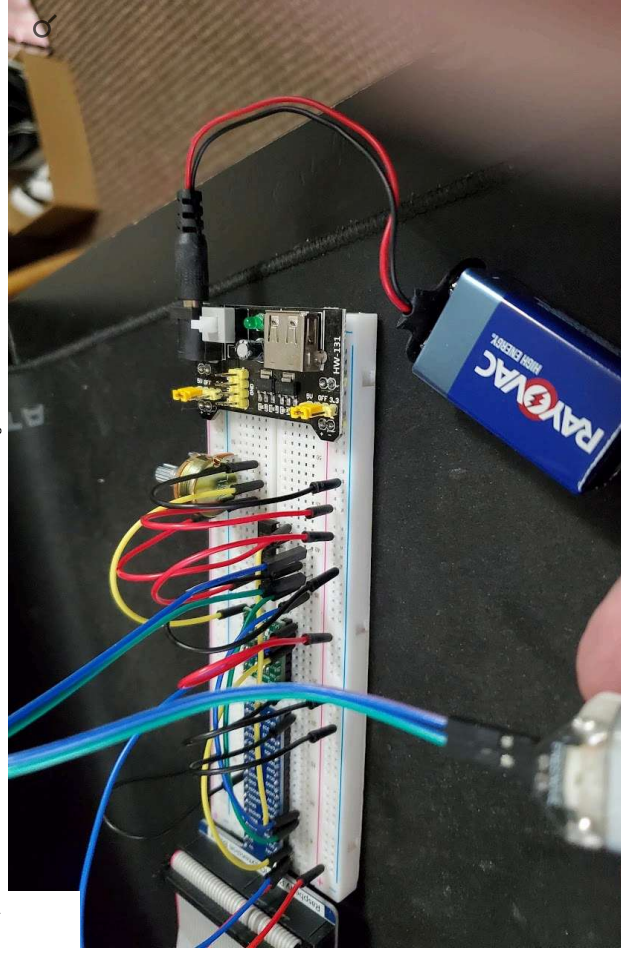


More complex projects

Starting chapter 13, we get into using another power source for the lil motor. It gives you the warning that if you use the power directly off of the gpio pins on the rpi, it could damage your rpi. This one seems like a level up. Everything up to this point has just not worked if you had it wrong, like led backwards or such.

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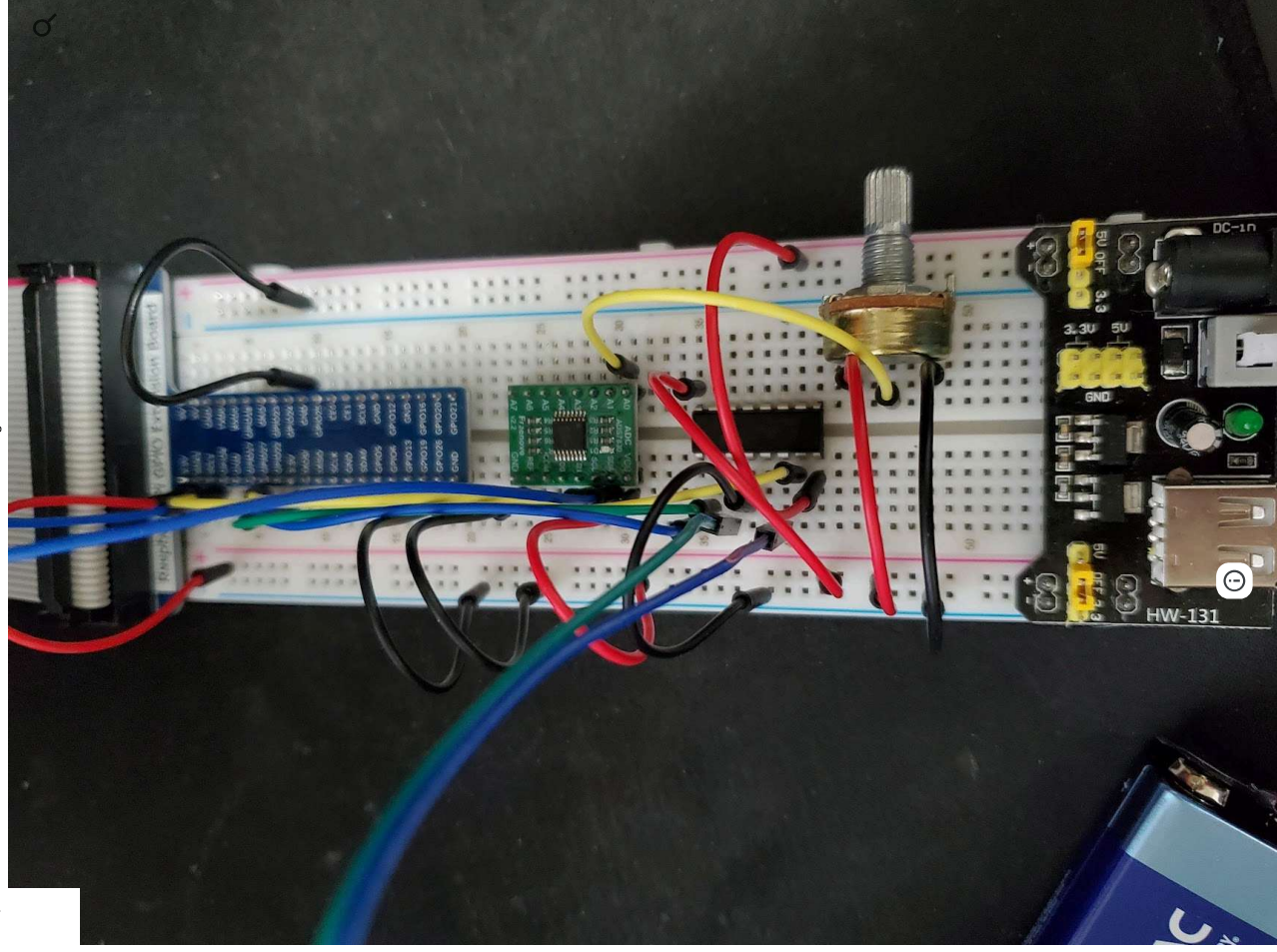


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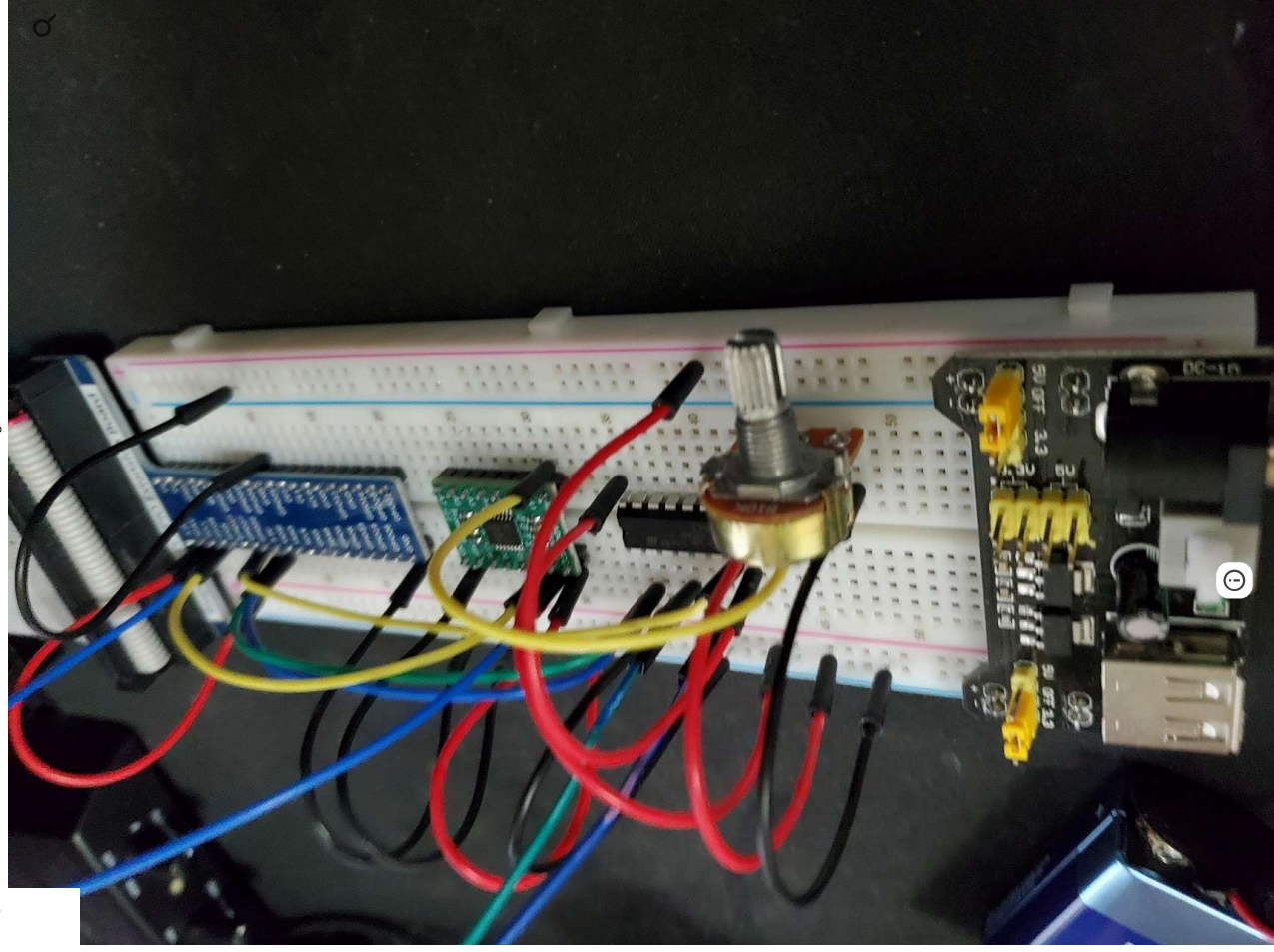
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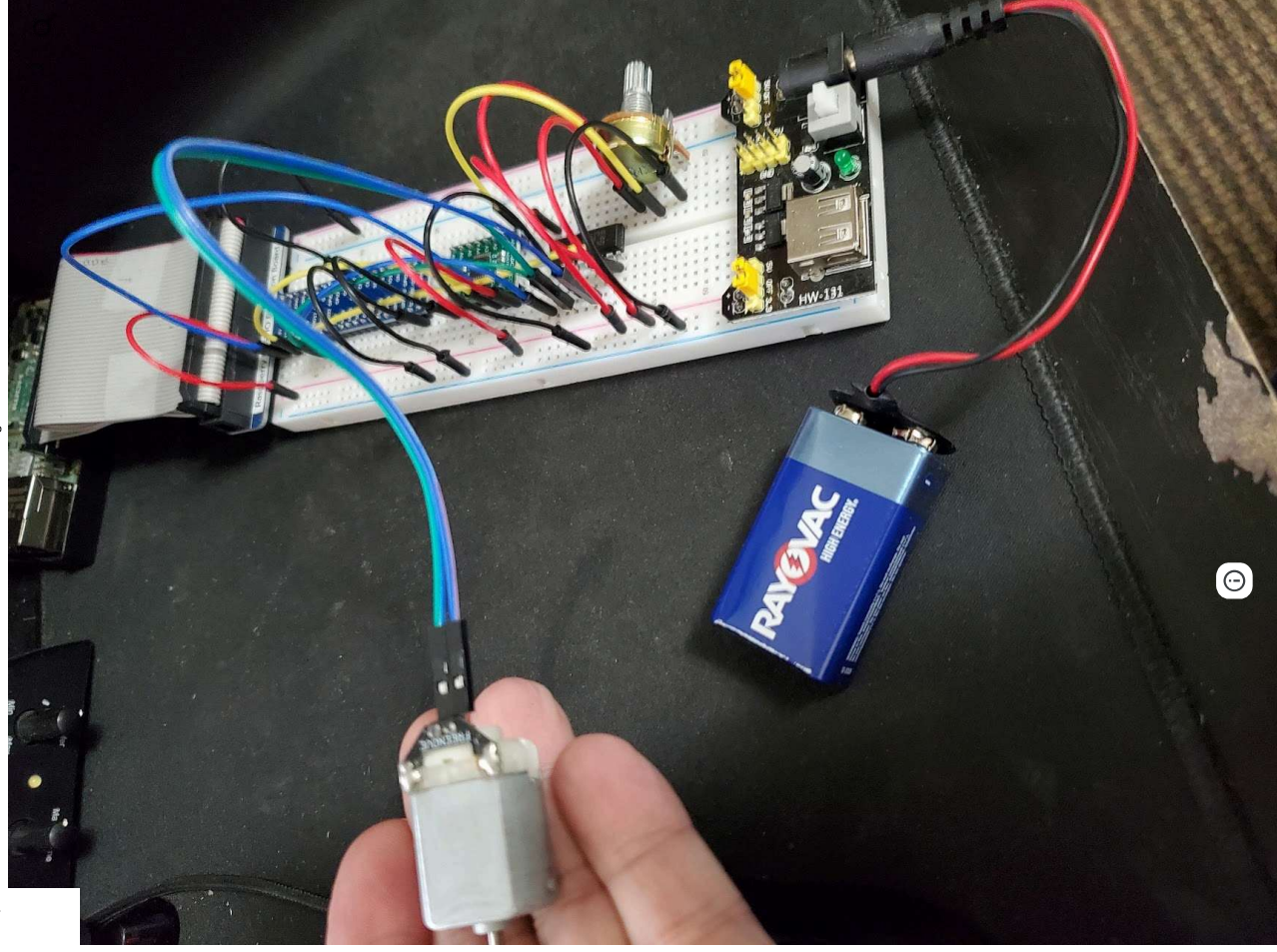
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