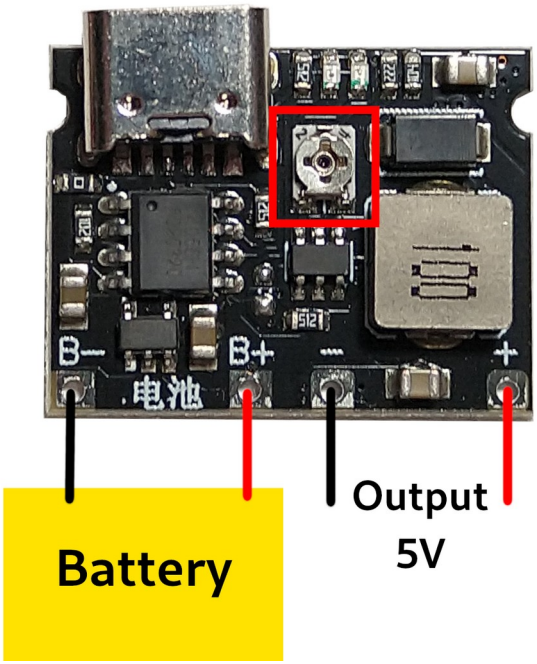
PHAZER TECH
LED Controller
Build Documentation

Battery Version

Do not wire the rest of the circuit until completing this step first



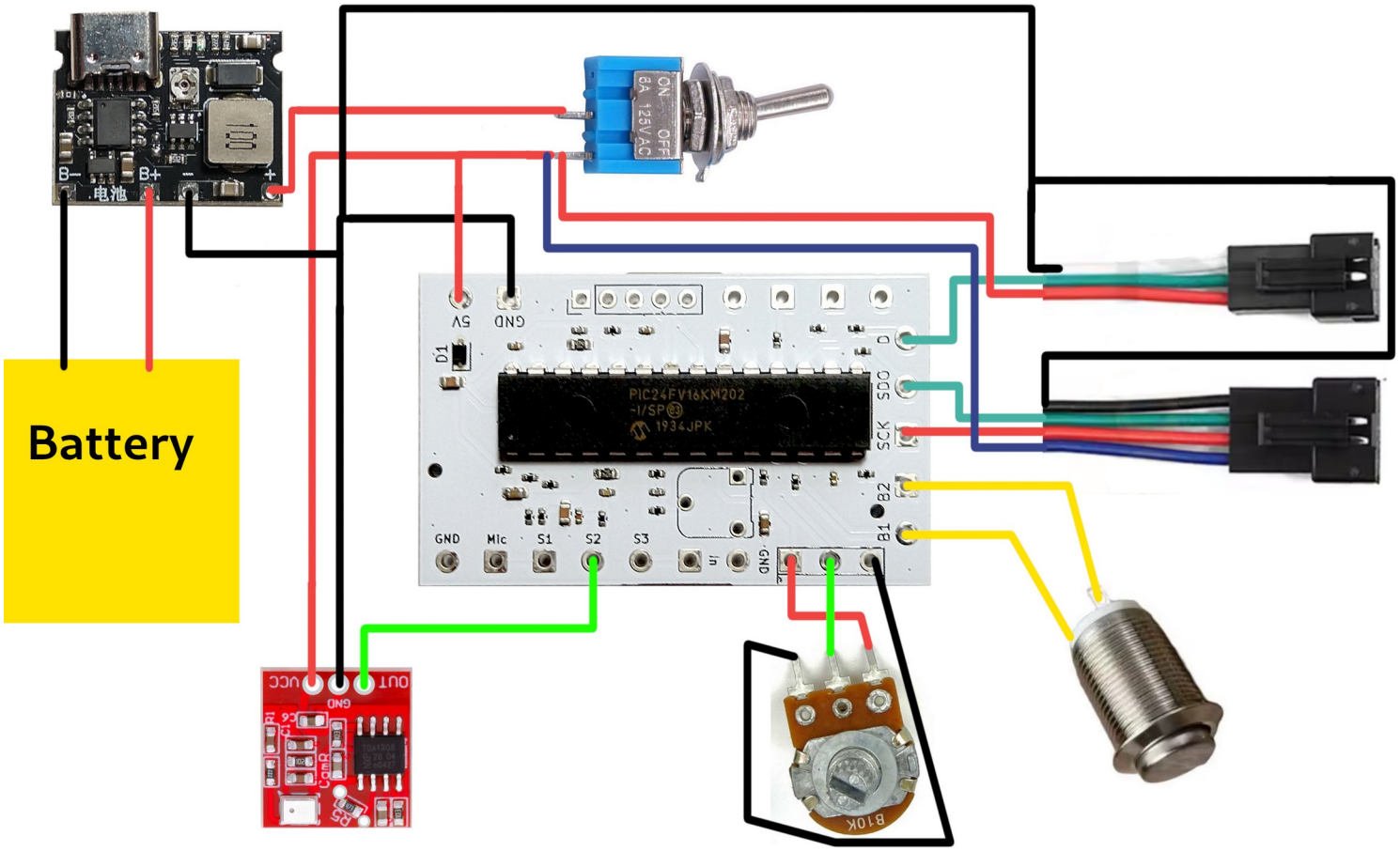
Connect the battery and charge it.

Measure output voltage and use a trimmer tool to adjust the trimmer outlined in red. Adjust until output is 5V.

Included module supports 3.7V rechargeable batteries (LiPo or 18650)

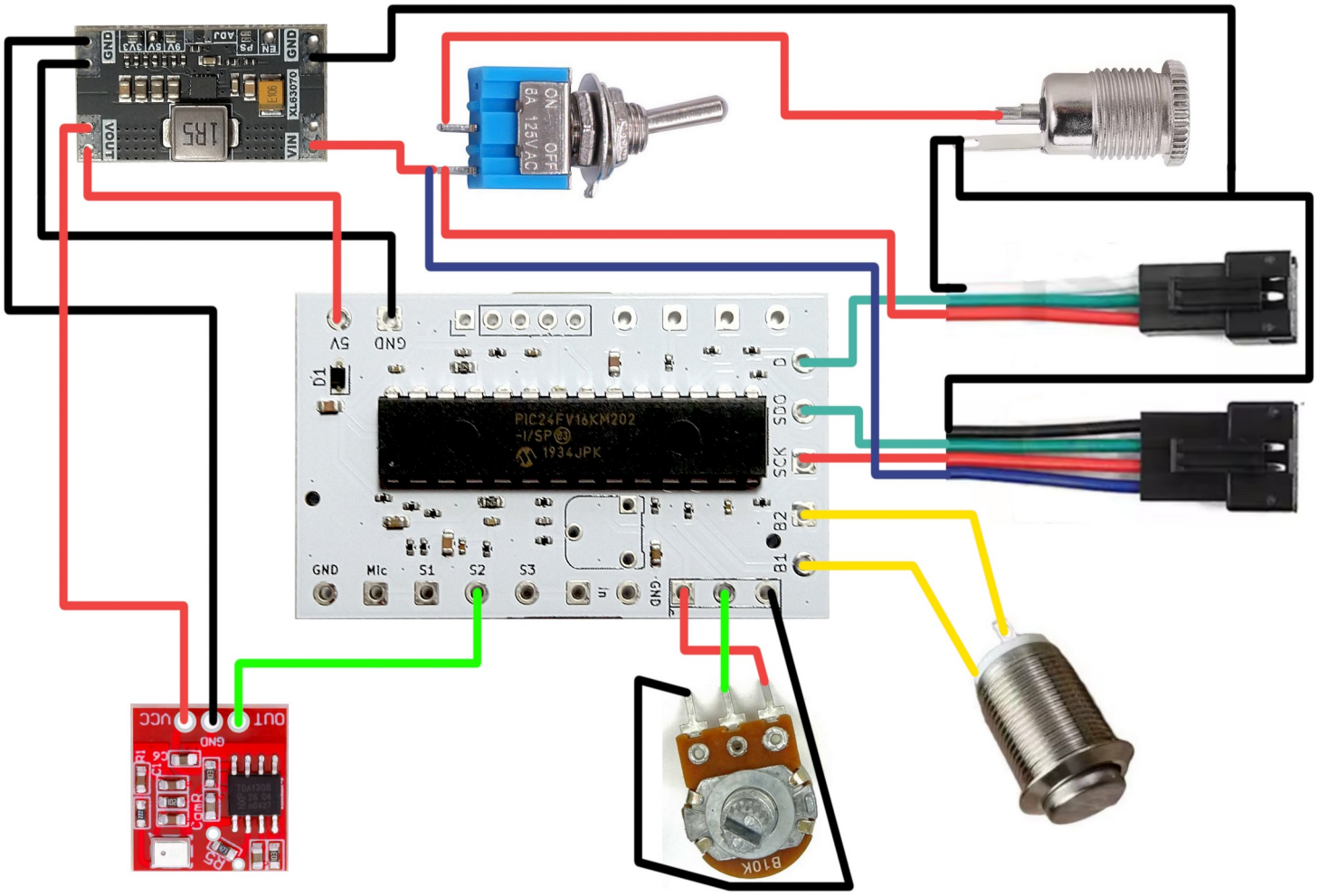
USB-C port used for charging

Max output current: 1A



Mic

Power Supply Version



Mic

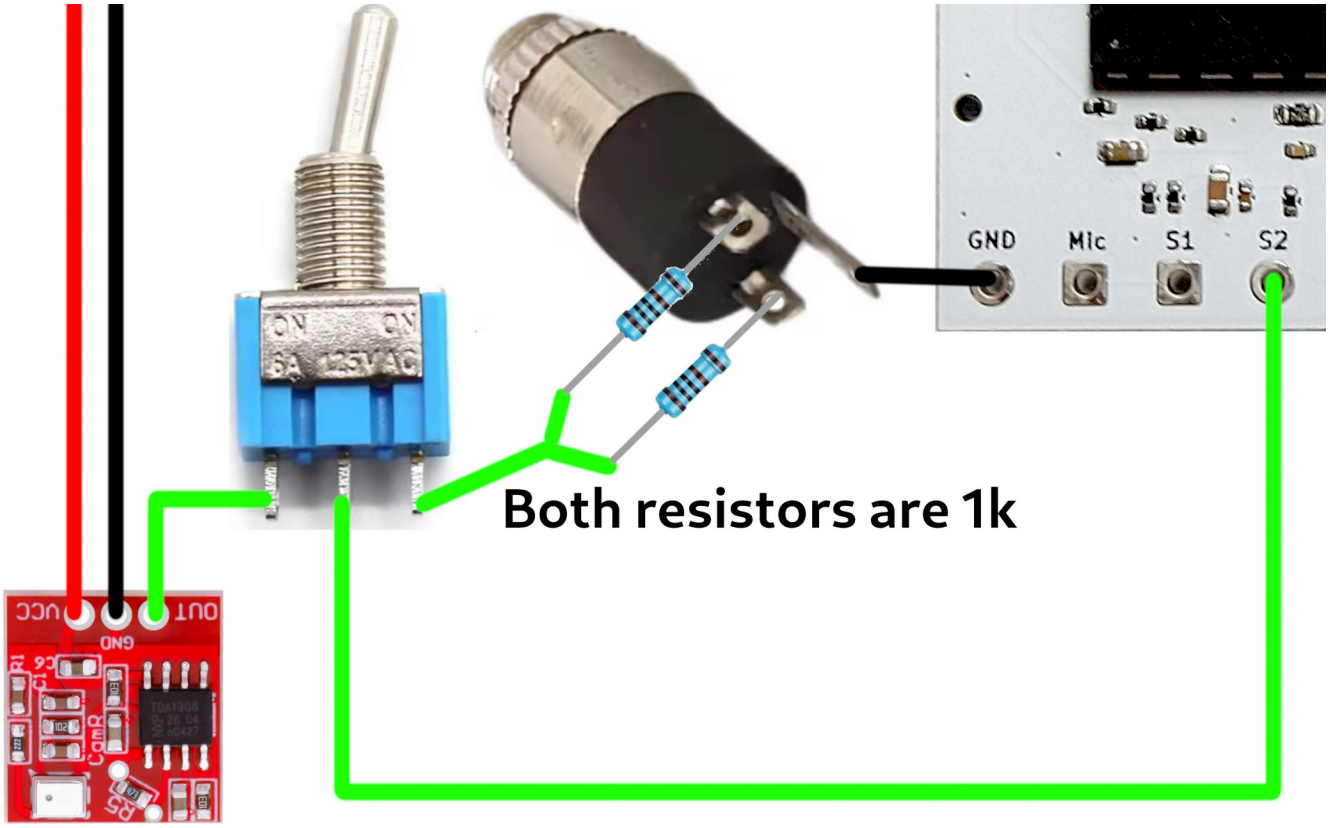
Input voltage: 5V – 12V

Maximum current for included On-Off switch is 6A. This means each strip connector can handle up to around 3A each. Use large gauge wire for the power jack and on-off switch. For long strips you might need an additional power supply on the other end of the strip, so be sure to do the calculations when using long strips. More info on LED power consumption:

https://us.govee.com/blogs/led-strip-lights/led-strip-power-requirements

https://www.wired4signsusa.com/blogs/led-projects-blog/how-much-electricity-do-led-strip-lights-use

Adding a Line Input

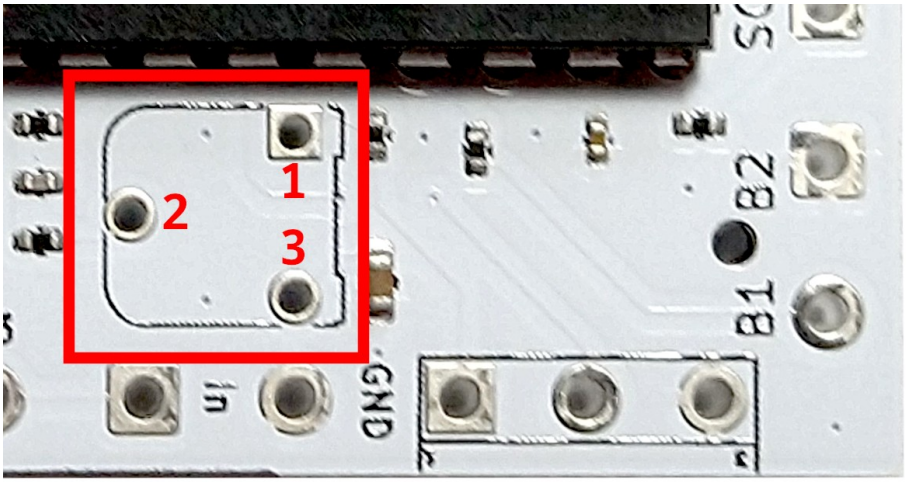


Required parts
SPDT switch: https://amzn.to/4bMjQdO
3.5mm female stereo jack: https://amzn.to/3Zssk2b
Two 1k resistors

If you want to connect a guitar I suggest using a mono ¼” jack instead of a 3.5mm jack.

Adding a Gain Potentiometer

Included with the kit is a small trimpot which should be soldered where the red outline is. This controls the gain of the input. When using just a microphone you can “set it and forget it”. But when using a line input, the volume coming from the line can vary, so being able to control the gain is useful in certain scenarios. If you’re planning to add a line input then I suggest soldering a regular B500k potentiometer instead of the trimpot. This gives you a gain knob. Adding a gain knob also has a second benefit. If you crank up the gain all the way then this forces the device to produce effects even if it doesn’t hear any sounds.



Trimpot

B500k potentiometers: https://amzn.to/4tsGWfA