## Circuits and Connections for the Five-String Laser Harp

Diagrams created by Scott Feister on March 7, 2018 for the middle school Laser Harp project.

### Laser Fast-Check Circuit

This circuit is for testing that your lasers work properly, before building the Laser Control Circuit.

5x Laser Dot Diode Heads
Internally current-regulated
5V nominal voltage
Class 3R safety (<5mW)

RaspPi

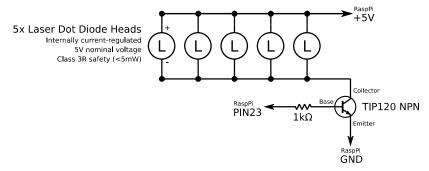
RASPPi

GND



## Laser Control Circuit

This circuit lets the Pi control whether the lasers are on or off.



### Power Button Circuit

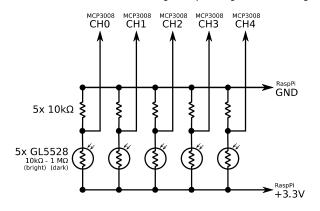
This circuit connects the power pushbutton to the Pi.

#### Calibration Button Circuit

This circuit connects the calibration pushbutton to the Pi.

### **Photoresistor Circuit**

This circuit converts photoresistor resistance into measurable voltage. Photoresistor resistance changes depending on incident light.



# MCP3008 Connections Diagram

Enables Pi to take voltage measurements. MCP3008 is an analog-to-digital converter (ADC).

