Activity 4 – Analog v.s. Digital

We are going to control the speed of a small vibrating motor using analog values created with a potentiometer.

Digital		Analog	
A set number of values, such as ON and OFF.	ON ~ OFF	An infinite range of values	

Potentiometer

A Potentiometer (pot) is a variable resistor. Turning the knob will increase or decrease the resistance between the middle pin and one of the outside pins.

By connecting the two outside pins of a potentiometer to 5V and GND, the middle pin will give us an **analog voltage value** between 5V and GND depending on how the knob is turned.

Circuit Diagram Symbol

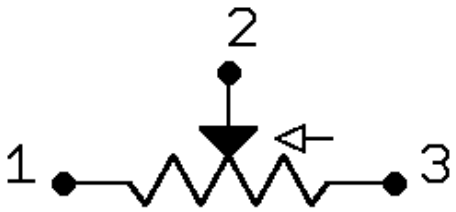
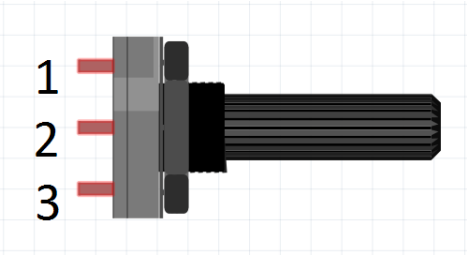
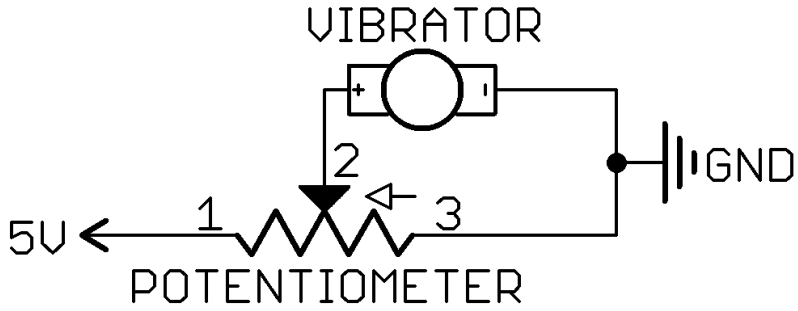


Image of Potentiometer on Breadboard[1]



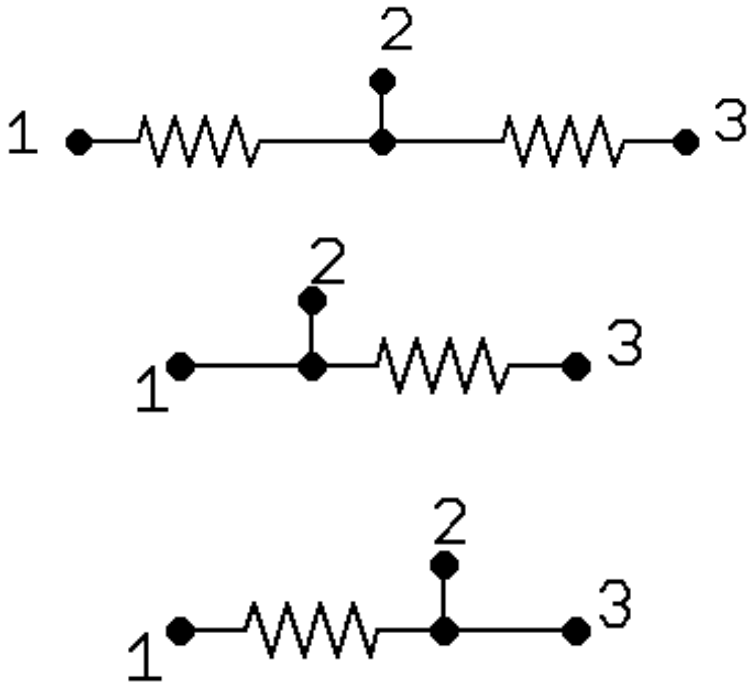
Circuit Diagram to Control a Vibrator Using a Potentiometer



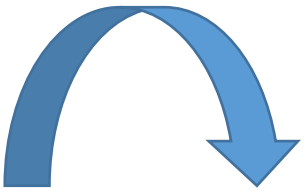
[1] *Image from Fritzing*

Author: Harry Pigot Date: 2017-09-03

Turning the Knob of the Potentiometer



Knob centered.



Knob turned clockwise

Knob turned counter-clockwise

Ideas, Observations, Questions