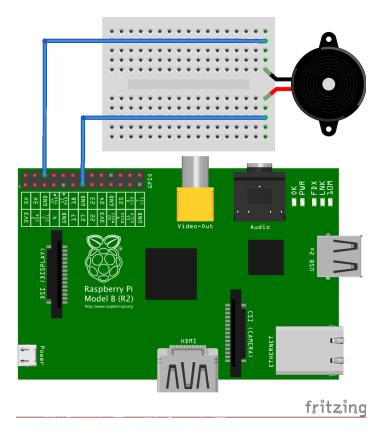
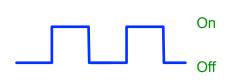


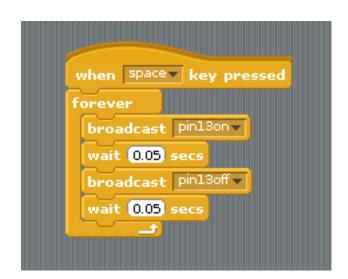
BUZZ BUZZER WITH SCRATCH



Simply turning on the buzzer like we did with the led will not work. This is a passive piezo buzzer so we need to feed it a square waveform. In other words, turn it on and off quickly.













BUZZ BUZZER WITH Python



Scratch is limited in how fast it can switch things. Python can do much better!

```
# first import some helpful libraries
# This one lets us use buzzer with the GPIO pins
from gpiozero import Buzzer
# This one has useful time functions
from time import sleep
mybuzz = Buzzer(27) # The buzzer is on GPIO27 (pin13)
on time = 0.001
off time = 0.001
# \overline{\text{Turn}} the buzzer on and off 100 times
mybuzz.beep(on time,off time,100,False)
```

Try adjusting the values of off_time and on time that you use to see how it affects the sound.

> Can you modify the code so that it plays a series of notes of increasing frequency?

What happens if you change False to True?

Can you modify the 'Reaction Time' code to include a buzzer that sounds when a player presses their button? Make it play a different note for each player



