Buzzers

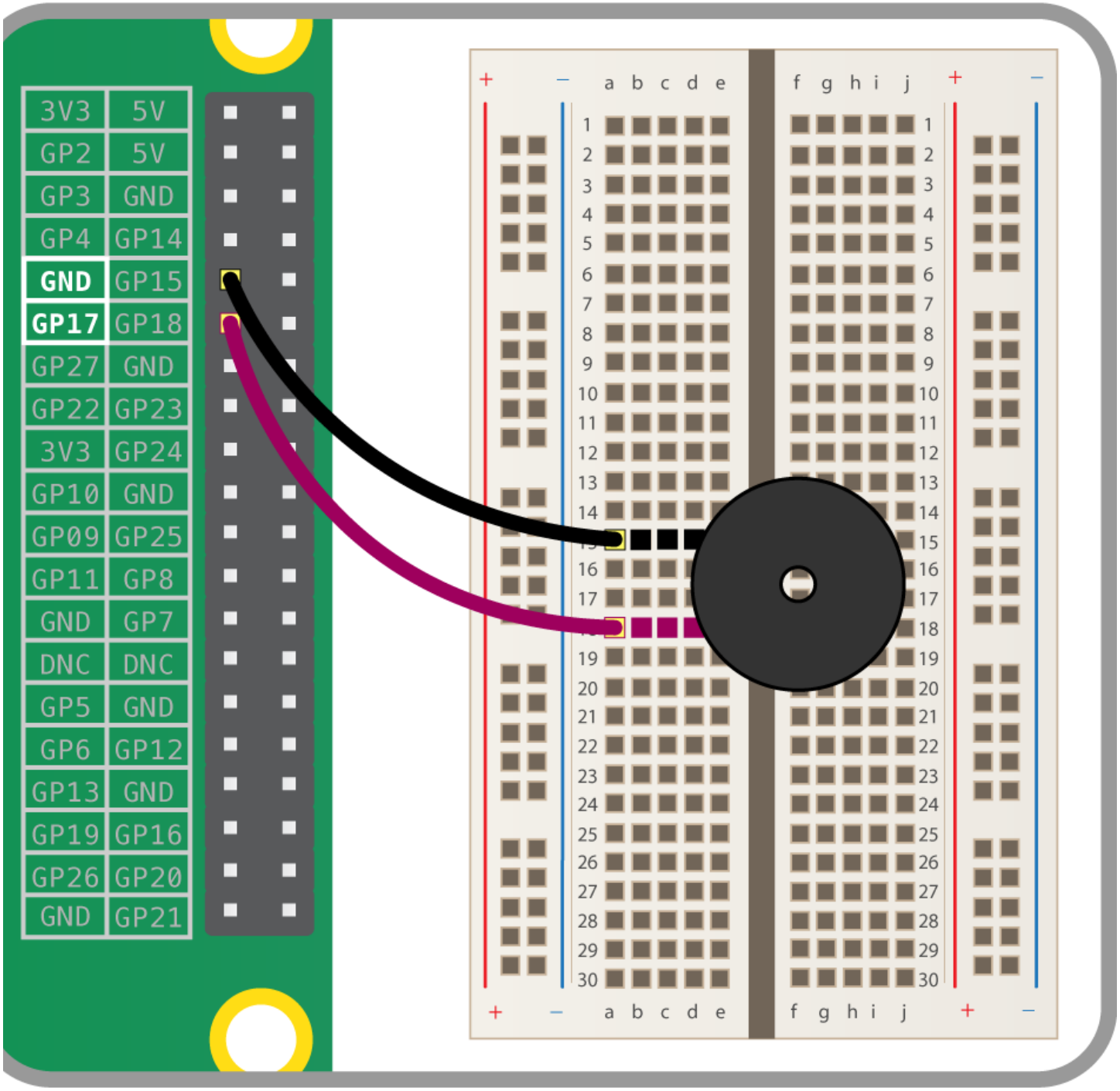
There are two main types of buzzer: *active* and *passive*.

A *passive* buzzer emits a tone when a voltage is applied across it. It also requires a specific signal to generate a variety of tones. The *active* buzzers are a lot simpler to use, so these are covered here.

Connecting a buzzer

An *active* buzzer can be connected just like an LED, but as they are a little more robust, you won't be needing a resistor to protect them.

Set up the circuit as shown below:


3V3
5V
GP2
5V
GP3
GND
GP4
GP14
GND
GP15
GP17
GP18
GP27
GND
GP22
GP23
3V3
GP24
GP10
GND
GP09
GP25
GP11
GP8
GND
GP7
DNC
DNC
GP5
GND
GP6
GP12
GP13
GND
GP19
GP16
GP26
GP20
GND
GP21
a b c d e
f g h i j

1. Add `Buzzer` to the `from gpiozero import...` line:

```
from gpiozero import Buzzer
from time import sleep
```

2. Add a line below your creation of `button` and `lights` to add a `Buzzer` object:

```
buzzer = Buzzer(17)
```

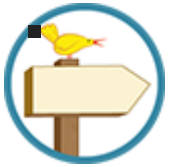
3. In GPIO Zero, a `Buzzer` works exactly like an `LED`, so try adding a `buzzer.on()` and `buzzer.off()` into your loop:

```
while True:
    buzzer.on()
    sleep(1)
    buzzer.off()
    sleep(1)
```

4. A `Buzzer` has a `beep()` method which works like an `LED`'s `blink`. Try it out:

```
while True:
    buzzer.beep()
```

What Next?



Continue to the next worksheet on building a traffic lights system using GPIO Zero.