Buzzer

1. Learning purpose

1.1 Learn how to use buzzer and Raspberry Pi Pico board.

1.2 Learn how to use active buzzer.

2. Hardware construction

List:

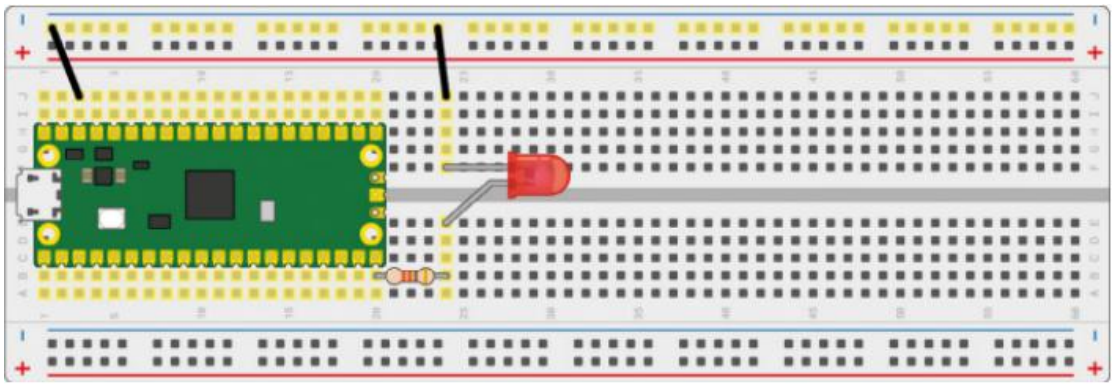
LED light*1

Button*1

220Ωresistor *1

The circuit wiring diagram is as shown below.

(Replace the LED light with a buzzer, and connect the buzzer with “+” to the resistor)



3. About code

Thonny programming

```
import machine
import utime
buzzer = machine.Pin(15, machine.Pin.OUT)
while True:
    for i in range(80):
        buzzer.value(1)
        utime.sleep(0.001)
        buzzer.value(0)
        utime.sleep(0.001)

    for i in range(100):
        buzzer.value(1)
        utime.sleep(0.002)
        buzzer.value(0)
        utime.sleep(0.002)
```

Program explanation:

import machine

This machine library contains the instructions needed by MicroPython to communicate with Pico and other devices.

import utime

This library handles all things related to time.

buzzer = machine.Pin(15, machine.Pin.OUT)

Set IO15 as an output pin.

Two different for loops make the buzzer sound at different frequencies.

4. Experimental phenomenon

After the program is downloaded, we can heard buzzer play sounds of different frequencies.