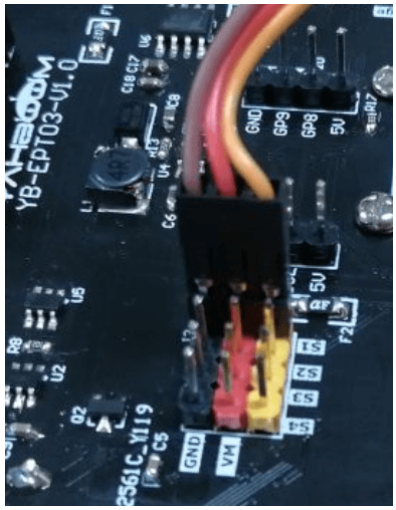
3.8 Servo control

1. Learning Objectives

In this course, we will learn how to drive PWM servo.

2. About Hardware

We need use servo interface and PWM servo on Pico robot.



The basic control principle of PWM steering gear is to use PWM signal to generate a signal with a period of 20ms and a duty cycle of 0.5~2.5ms to control the angle of the servo.

3. About Code

Code path: Code -> 1.Basic course -> 8.Servo control.py

```
from pico_car import pico_car
Servo = pico_car()

#180 servo S1 angle 0
#the parameters are (steering gear number, steering gear angle)
Servo.servo180 (1.0)
#270 servo
Servo.servo270(2,90)
#360 servo
Servo.servo360 (3,360)
```

from pico_car import pico_car

Use pico_car of pico_car, which encapsulates the servo driver library.

Servo = pico_car()

Initialize the servo.

Servo.servo180 (1.0)

Set the 180-degree PWM servo S1 angle to 0 degrees.

Servo.servo270(2,90)

Set the angle of the 270-degree PWM servo S2 to 90 degrees.

Servo.servo360 (3,360)

Set the angle of the 360-degree PWM servo S3 to 360 degrees.

4. Experimental Phenomenon

After the code is downloaded, we can see that the 180° servo, 270° servo, and 360° servo plugged into S1-S3 are at 0°, 90°, and 360° respectively.