

## 7.3 PS2 Handle control

**Note: The handle is not included in the kit, you need to purchase additional.**

### 1. Learning goal:

In this course, we will learn how to control Omniduino robot car by PS2 handle .

### 2. Download code

2.1 Open the **PS2\_control.ino** we provided, and upload it into Omniduino Car.

About how to download code, please refer to **【3.Development Environment Construction】** .

**!Note: You must carefully read all the courses in [3.Development Environment Construction] before you can successfully compile and upload the program.**

2.2 After the upload is completed, close power switch.

2.3 Insert the PS2 handle receiver, open the power switch of car, we can see red indicator of receiver is keep on, and green indicator of receiver is flashing.

2.4 Open the PS2 handle power, we can see green light of PS2 Handle is keep on. Then, the PS2 handle will be automatically connect to receiver. After the connection is completed, the red indicator of PS2 handle and green indicator of receiver are keep on.

As shown below:



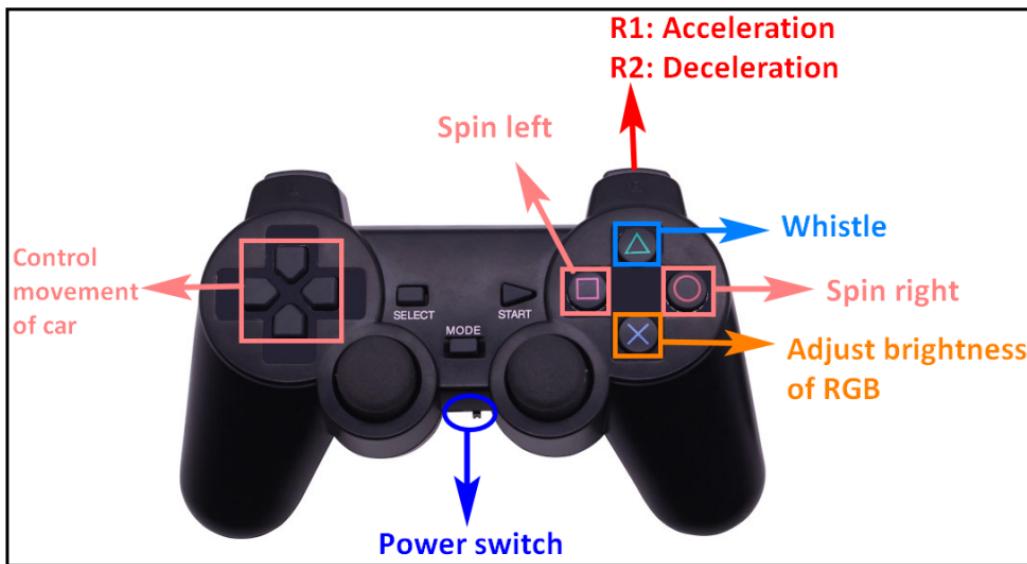
2.5 LED D9 indicates the status of MPU6050. Initialize MPU6050 after booting, D9 lights up after initialization. And there will be boot animation, RGB green light gradually bright from dark.

### 3.PS2 Handle control

Mode 1:

3.1 After the PS2 handle and receiver are successfully paired, we can see that the RGB light on the bottom of the car is **green**.(default)

The function corresponding to the handle at this time is as follows:

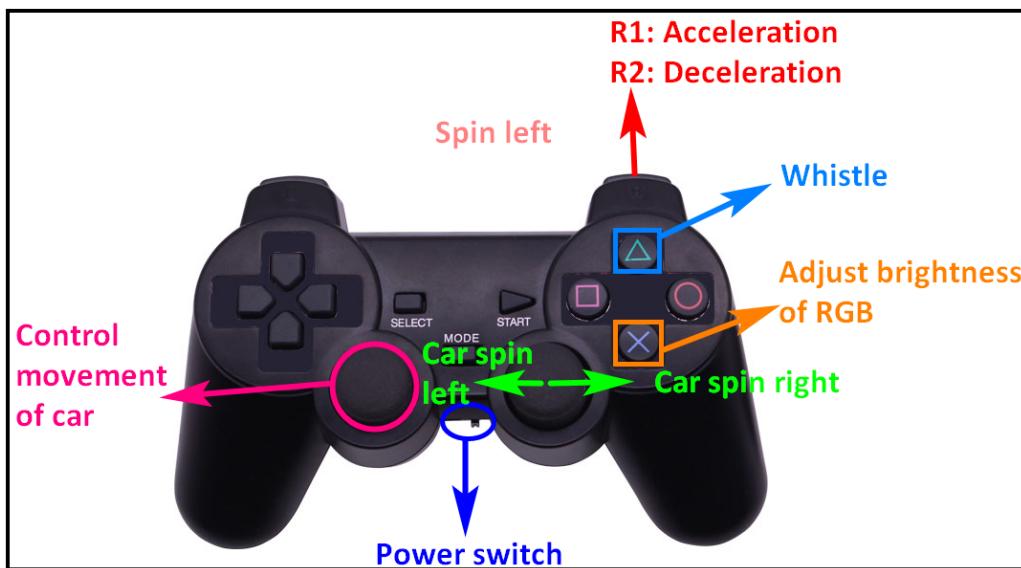


Other button unavailable.

### Mode 2:

3.2 After we press “SELECT” button of Handle, we can see that the RGB light on the bottom of the car is blue.

The function corresponding to the handle at this time is as follows:



Other button unavailable.

### Tip:

V1.1 version of the program adds the auto-stabilization function of the car.

After each remote control of the car, the car will record the current gyroscope angle once stopped. If there is an external force to change the direction of the car (non-APP remote control), the car will automatically rotate back.

The position after turning may not be exactly the same as the original, but the direction of the car's head will be about the same as the original. Because the data provided by the sensor has a certain error value, ±3 degree error is allowed in the program, otherwise the motor of the car will keep ringing.