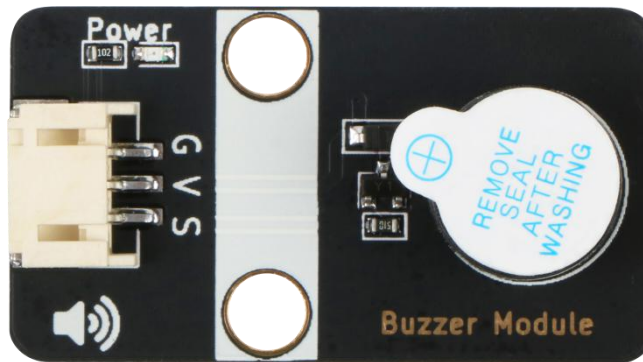


Experiment of Active Buzzer Module

Module Introduction

Some electrical appliances often make a buzz when they are in an electrical state. This is actually from a buzzer. The annoying school bell is just a bigger buzzer. There are two kinds of buzzers. One is active buzzer, while the other is passive buzzer. “Active” and “passive” do not refer to the need for power supply, but to buzzers with or without an internal oscillator. As long as you power it up, the active buzzer will buzz, but the frequency is fixed. A passive buzzer is without an internal oscillator. When it is powered on, the internal oscillator will not buzz. It needs 2 ~ 5 kHz square wave drive, and then different frequency waveform will produce corresponding sound. The buzzer module has three pins, among which the pin marked with ‘-’ is grounded (GND), the pin in the middle is connected with 5V, and the pin (the left side of the figure) is connected with signal (digital I/O).



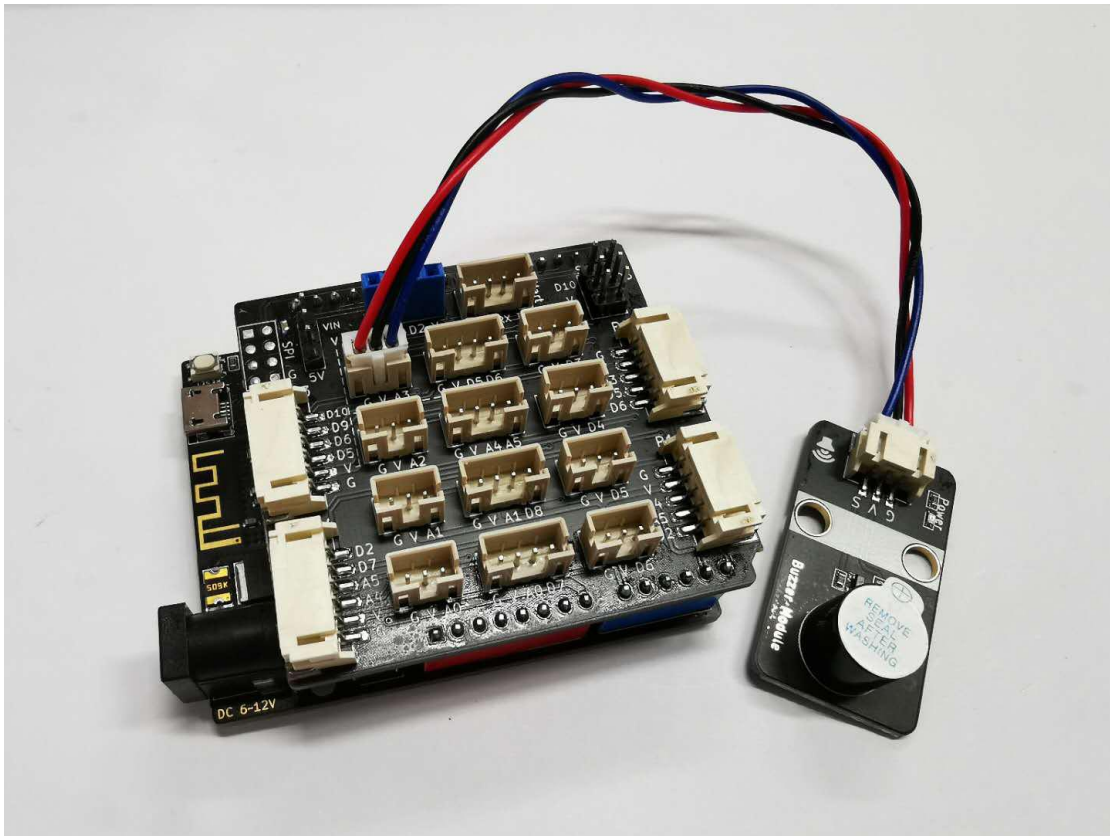
Purpose of the Experiment

Learn how to use the output signal of Arduino development board to control buzzer to make sound.

Device List

- BLE-UNO Main Board: 1
- Expansion Board: 1
- USB Data Wire: 1
- Active Buzzer Module: 1
- 3PIN Wire Jumper: 1

Physical Wiring Diagram



Program Code

```
#define buzzer_pin A3 //set buzzer pin
void setup()
{
    pinMode(buzzer_pin, OUTPUT); //set output
}

void loop()
{
    digitalWrite(buzzer_pin,HIGH); //set HIGH
    delay(1); //delay 1ms
    digitalWrite(buzzer_pin,LOW);
    delay(1);
}
```

MagicBlock Program



Mixly Program



Experimental Conclusion

After the device is connected with wires, the above program is burned to the arduino UNO board, then the UNO board is powered on, and the active buzzer will make sound.