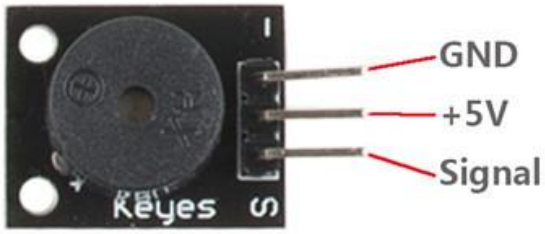
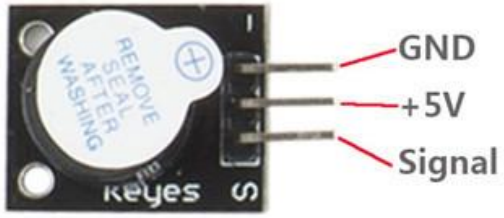
Lesson 12 Buzzer

Introduction

Buzzers can be categorized as active and passive buzzers (See the following picture).



Passive



Active

Components

- 1*SUNFOUNDER UNO board (or SUNFOUNDER MEGA2560 board)
- 1*USB data cable
- 1*Buzzer module
- Several jumper wires

Experimental Principle

When we place the pins of two buzzers upwards, we can see the one with green circuit board is a passive buzzer, while the one without circuit board instead of enclosing with black tape is an active buzzer.

The difference between an active buzzer and a passive buzzer is:

The active buzzer has built-in oscillating source, so it will make sounds as long as it is wired up. While the passive buzzer does not have oscillating source, so it will not tweet if you use DC signals, instead you must use square waves whose frequencies are between 2K and 5K to drive it. The active buzzer is often more expensive than the passive because multiple built-in oscillating circuits exist.

Experimental Procedures

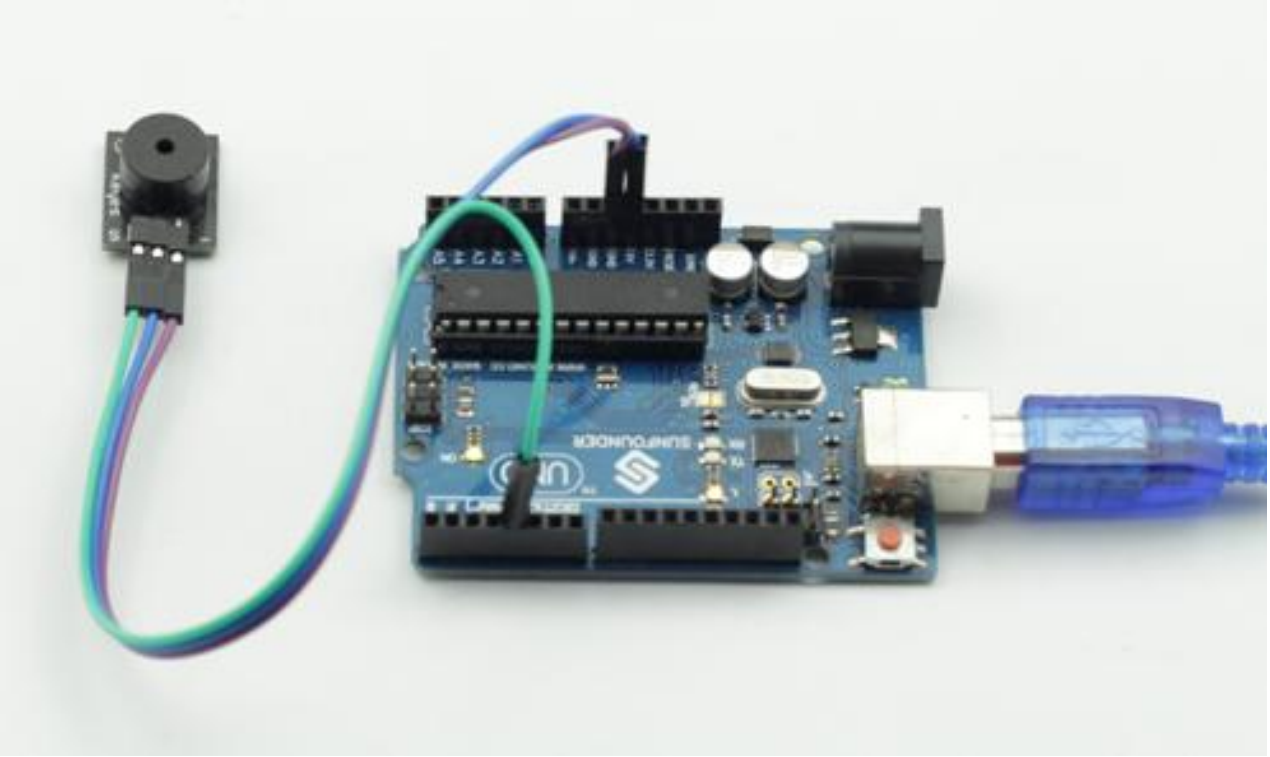
Passive Buzzer

Step 1: Connect the circuit according to the following method

Passive Buzzer module	**SUNFOUNDER UNO**
S	Digital 4
"-"	GND
+	5V

Step 2: Program (Please refer to example code in CD provided by us)
Step 3: Compile the program
Step 4: Burn the program into SUNFOUNDER UNO board

Now, you can hear the passive buzzer make air defense warning sounds.



Active Buzzer

Note: The active buzzer has built-in oscillating source, so it will make sounds as long as it is wired up. But it can only make sounds with fixed frequency.

Step 1: Connect the circuit according to the following method

Active Buzzer module	**SUNFOUNDER UNO**
S	Digital 11
"-"	GND
+	5V

Step 2: Program (Please refer to example code in CD provided by us)
Step 3: Compile the program
Step 4: Burn the program into SUNFOUNDER UNO board

Now, you can hear the active buzzer make ticking sounds.