

Active buzzer

Overview



This is an active buzzer experiment.
In this experiment, we will learn how to use buzzer module.
Active means that the direct power supply can make a sound.

Specification

Voltage: DC 5V

Min Sound Output at 10cm: 85dB;

Total Size (Pin Not Included): 12 x 9mm/0.47" x 0.35"(D*H)

Pin definition

Active Buzzer

Long pin






Short pin

Arduino

-> D5

-> GND

Hardware required

Material diagram	Material name	Number
	Active buzzer	1
	USB Cable	1
	UNO R3	1
	Breadboard	1
	Jumper wires	Several

Component Introduction

Active Buzzer:

As a type of electronic buzzer with integrated structure, buzzers, which are supplied by DC power, are widely used in computers, printers, photocopiers, alarms, electronic toys, automotive electronic devices, telephones, timers and other electronic products for voice devices. Buzzers can be categorized as active and passive ones (see the following picture). Turn the pins of two buzzers face up, and the one with a green circuit board is a passive buzzer, while the other enclosed with a black tape is an active one.

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

An active buzzer has a built-in oscillating source, so it will make sounds when electrified. But a passive buzzer does not have such source, so it will not tweet if DC signals are used; instead, you need to use square waves whose frequency is between 2K and 5K to drive it. The active buzzer is often more expensive than the passive one because of multiple built-in oscillating circuits.

Distinguish between Active and Passive Buzzer

Teach you to distinguish between active and passive buzzer

Now a small buzzer on the market because of its small size (diameter of only 11 mm), light weight, low price, solid structure, and is widely used in a variety of needs audible electrical equipment, electronic production and microcontroller circuits, etc.

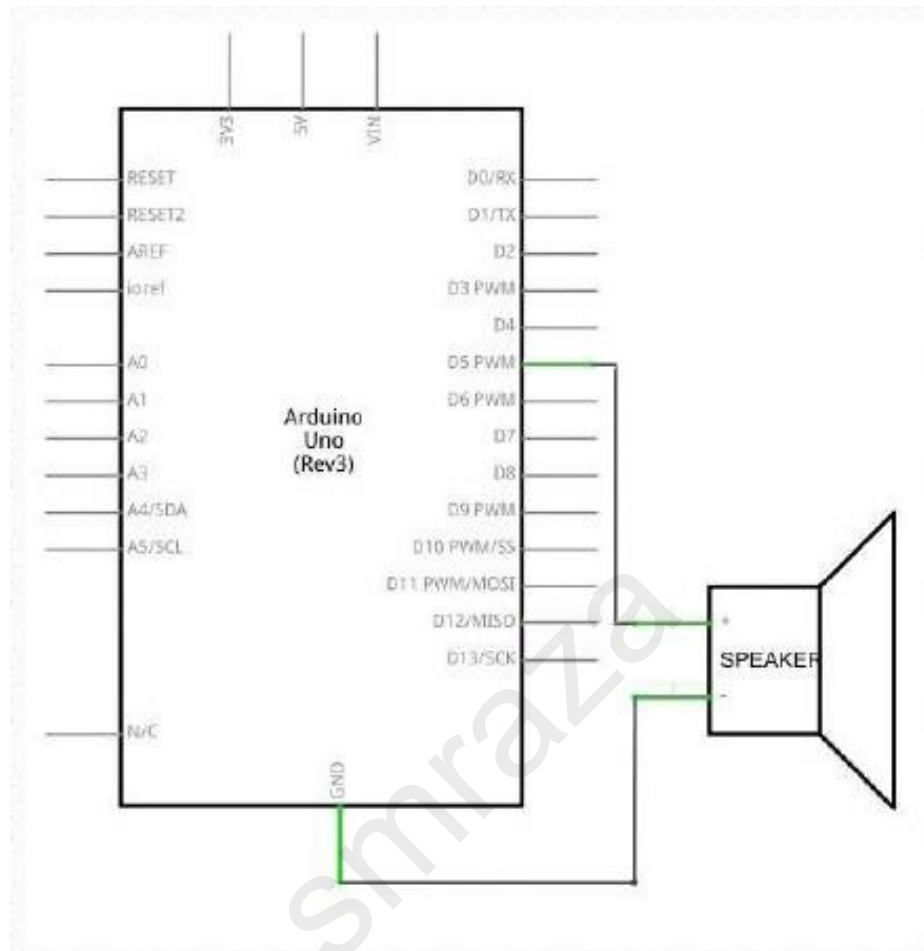
From the exterior, two kinds of buzzer seems the same, but a closer look, a slight difference between the height of the active buzzer a, height of 9mm, and passive buzzer b height of 8mm. When the buzzer as the two pins are facing up, you can see there is a green circuit board is passive buzzer, no closed circuit boards with a vinyl is active buzzer .

Further determine the active and passive buzzer, you can also use a multimeter to test the resistance profile Rxl file: buzzer with black pen then "+" pin, the red pen to touch on another pin back and forth, if trigger a cracking, cracking sound and the resistance only 8Ω (or 16Ω) is passive buzzer; If you can emit continuous sound, and the resistance in Europe and more than a few hundred, and is an active buzzer.

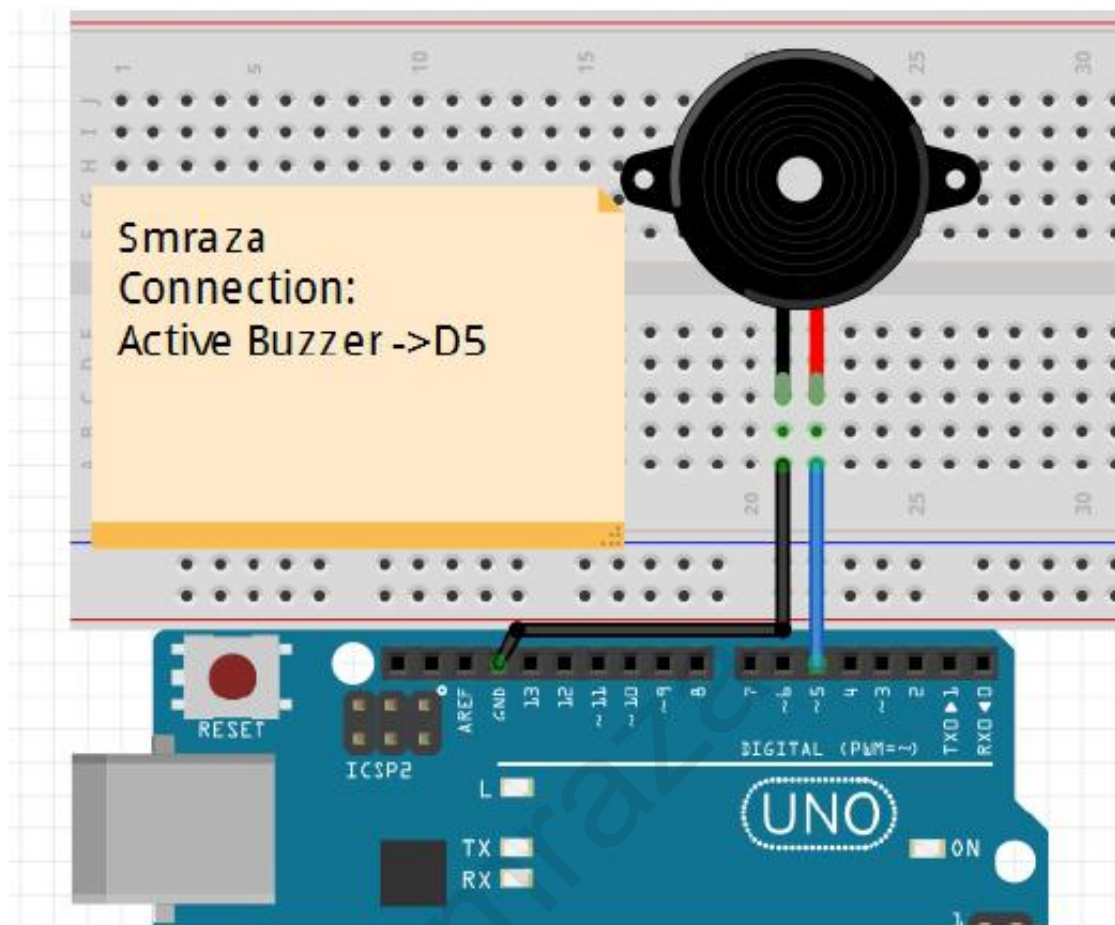
Active buzzer directly connected to the rated power (new buzzer has stated on the label) can be a continuous sound; rather passive electromagnetic buzzer and speaker are the same, you need to take in order to sound the audio output circuit .

Connection

Schematic



Connection diagram



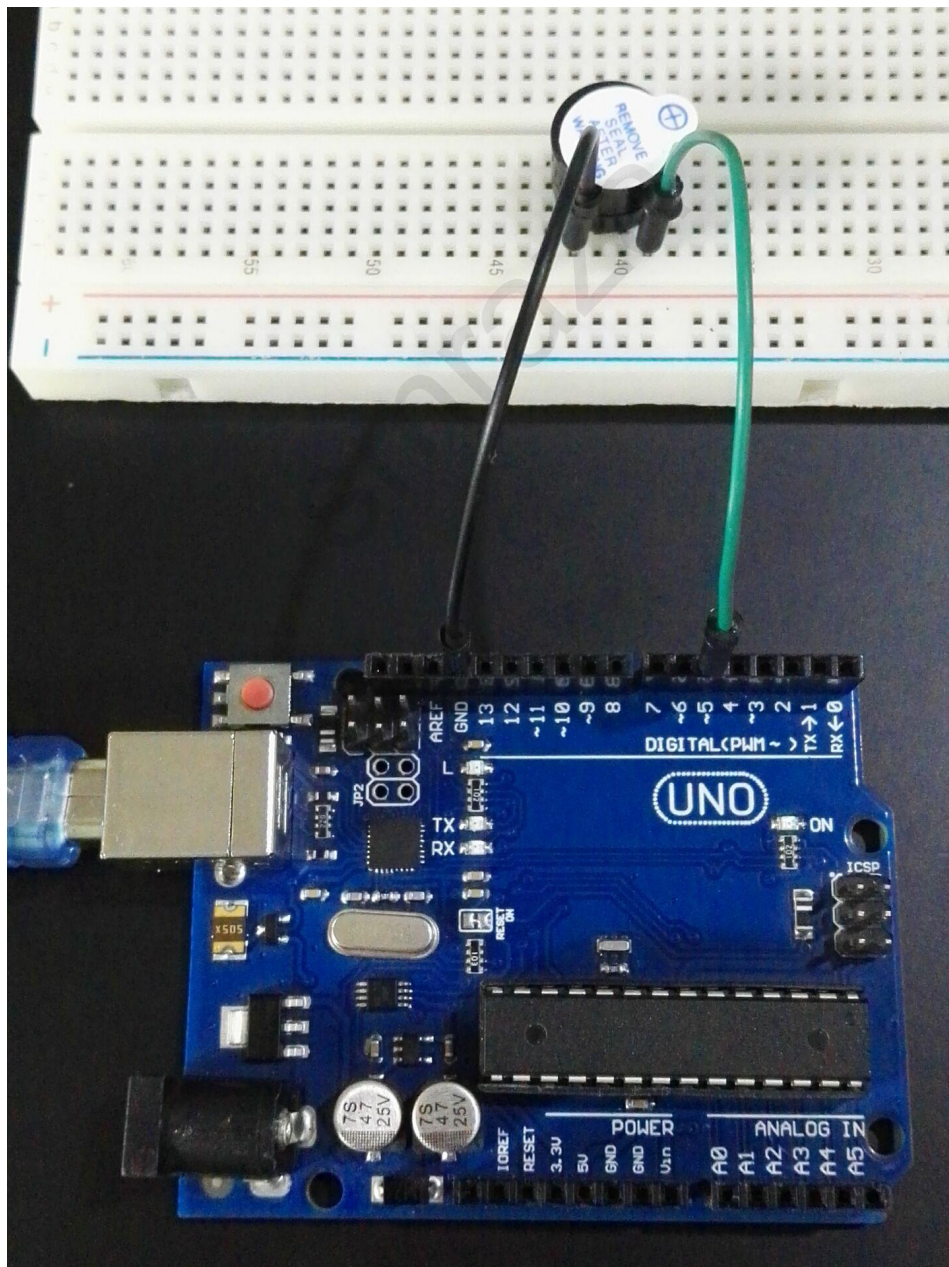
Note : The longest active buzzer of the pin is connected to the digital signal port 5 (D5).

Sample code

Note: sample code under the **Sample code** folder.

```
int buzzer=5;  
void setup()  
{  
    pinMode(buzzer,OUTPUT);  
}  
void loop()  
{  
    digitalWrite(buzzer, HIGH); // produce sound  
}
```

Example picture



Language reference

Tips : click on the following name to jump to the web page.

If you fail to open, use the Adobe reader to open this document.

[digitalWrite\(\)](#)

[pinMode\(\)](#)

Application effect

When the upload process is complete, the buzzer rings.

* About Smraza:

* We are a leading manufacturer of electronic components for Arduino and Raspberry Pi.

* Official website: <http://www.smraza.com/>

* We have a professional engineering team dedicated to providing tutorials and support to help you get started.

* If you have any technical questions, please feel free to contact our support staff via email at support@smraza.com

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