

MicroPython for ODROID-GO - Speaker

- Make sure that you've followed these guides:
 - [MicroPython setup](#)
 - [MicroPython for ODROID-GO - Hello World](#)

- Refer to the [MicroPython for ESP8266 official documents](#).
 - <http://docs.micropython.org/en/latest/esp8266/>

We will learn how to test the speaker with the buttons on the board.

Test the speaker with the buttons

The `odroid_go.py` module and its `GO` instance has a `speaker` instance for using the speaker easily. So, you can play a tone sound with `GO.speaker`.

Some of the `GO.speaker` functions are:

- `set_volume()`: to set volume level. The given parameter can be 0 to 10.
- `set_volume()`: to set a frequency and a duration in second unit for a sound from `beep()` function.
- `beep()`: to play a simple beep sound.
- `tone()`: to play a simple beep sound with two parameters of a frequency and a duration in second. You can omit the duration argument.

We're going to write code that plays a sound when a button is pressed.

We will use the **A**, **B** buttons and make these buttons play a sound that differs from each other. To learn about how the buttons are used, please refer to the [Buttons](#) example.

We're also going to show which button is pressed on the LCD.

To learn about how the LCD is used, please refer to the [Hello World](#) example.

We can write source code as below:

Put the code that playing a sound when a button pushed within `while` loop.

`GO.update()` is for notifying a button pushed.

```
from odroid_go import GO

GO.lcd.set_font(GO.lcd.fonts.TT24)
GO.lcd.print("ODROID-GO speaker test:")

GO.speaker.set_volume(3)
```

```
while True:
    GO.update()

    if GO.btn_a.was_pressed():
        GO.lcd.print("was_pressed: A")
        GO.speaker.beep()

    if GO.btn_b.was_pressed():
        GO.lcd.print("was_pressed: B")
        GO.speaker.tone(3000, 2)
```

Save and overwrite this code as **boot.py** in the **ODROID-GO module installation directory**.

Try it on your ODROID-GO

- To execute this module properly, make sure you've uploaded ODROID-GO module. And you have to upload the written file called **boot.py** using **rshell** or **ampy**.
 - If you uploaded properly, **MicroPython** will execute **boot.py** when the device boots automatically.
 - Please refer to setup guide to further information: [Install the ODROID-GO MicroPython module](#).
 - Or you also can do them in **REPL**. Write the codes line by line in order.

Upload the **boot.py** file using **rshell** or **ampy**, enter to **REPL** prompt, and **restart** ODROID-GO.

Then, press **A** or **B** button to hear the sound.

A completed example

The complete example is available in following path:

- `odroid_go/examples/button/speaker.py`

Copy and paste to try the example.

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