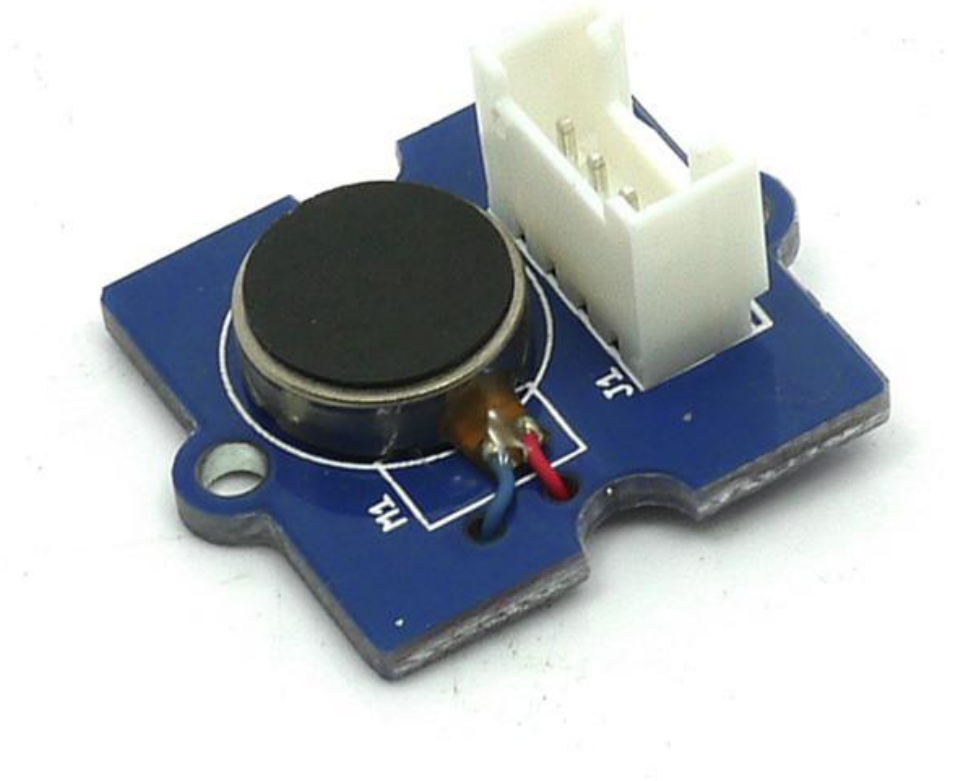
Grove - Vibration Motor



This is a mini vibration motor suitable as a non-audible indicator. When the input is HIGH, the motor will vibrate just like your cell phone on silent mode.

Get One Now

[https://www.seeedstudio.com/Grove-Vibration-Motor-p-839.html]

Version Tracker

Revision	Description	Release
v0.9b	Initial public release	May 10, 2011
v1.0	Directly uses an I/O port to drive Vibration Motor	Nov 5, 2011
v1.2	Transistor added, uses bigger current to drive Vibration Motor	July 11, 2013

Features

- Grove compatible
- Non-audible
- Low power consumption
- High reliability

Tip
More details about Grove modules please refer to Grove System [https://wiki.seeedstudio.com/Grove_System/]

Specifications

Item	Min	Typ	Max
Operating Voltage	3.0V	5.0V	5.5V
Control Mode	Logic Level (When Logic HIGH, the motor is ON. When LOW, the motor is OFF.)		
Rated speed	9000 rpm		

Platforms Supported

Arduino	Raspberry Pi		

Caution
The platforms mentioned above as supported is/are an indication of the module's software or theoritical compatibility. We only provide software library or code examples for Arduino platform in most cases. It is not possible to provide software library / demo code for all possible MCU platforms. Hence, users have to write their own software library.

Getting Started

Note
If this is the first time you work with Arduino, we firmly recommend you to see Getting Started with Arduino [https://wiki.seeedstudio.com/Getting_Started_with_Arduino/] before the start.

Play With Arduino

To make it vibrate is just as easy as to turn on an LED. Here is an example showing how to turn on the vibration motor.

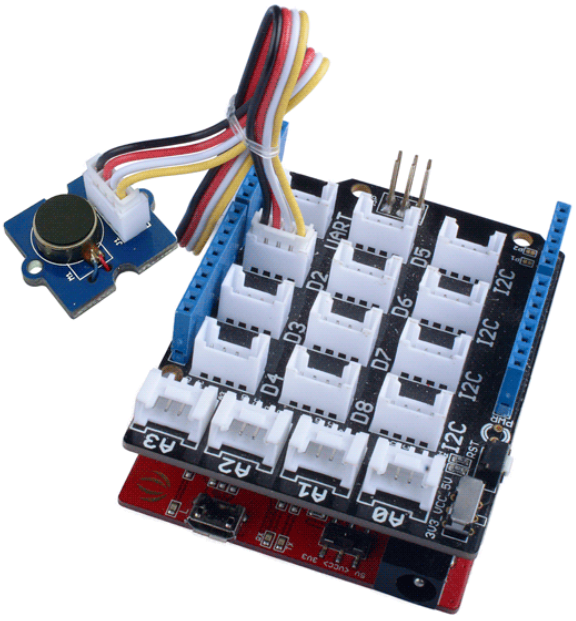
Hardware

- **Step 1.** Prepare the below stuffs:

Seeeduino V4.2	Base Shield
	
Get One Now [https://www.seeedstudio.com/Seeeduino-V4.2-p-2517.html]	Get One Now [https://www.seeedstudio.com/Base Shield-V2-p-1378.html]

- **Step 2.** Grove - Vibration Motor to D2 of Grove-Base Shield.
- **Step 3.** Plug Grove - Base Shield into Seeeduino.

- **Step 4.** Connect Seeeduino to PC via a USB cable.



Note
If we don't have Grove Base Shield, We also can directly connect Grove - Vibration Motor to Seeeduino as below.

Seeeduino	Grove - Vibration Motor
5V	Red
GND	Black
Not Conencted	White
D2	Yellow

Software

- **Step 1.** Copy the code into Arduino IDE and upload. If you do not know how to upload the code, please check how to upload code [https://wiki.seeedstudio.com/Upload_Code/].

```
int MoPin = 2;    // vibrator Grove connected to digital

void setup()  {
    pinMode( MoPin, OUTPUT );
}

void loop()  {

    digitalWrite(MoPin, HIGH);
    delay(1000);

    digitalWrite(MoPin, LOW);
    delay(1000);
}
```

- **Step 2.** Now, feel the vibration of your motor!

Play with Codecraft

Hardware

Step 1. Connect Grove - Vibration Motor to port D2 of a Base Shield.

Step 2. Plug the Base Shield to your Seeeduino/Arduino.

Step 3. Link Seeeduino/Arduino to your PC via an USB cable.

Software

Step 1. Open Codecraft [https://ide.chmakered.com/], add Arduino support, and drag a main procedure to working area.

Note
If this is your first time using Codecraft, see also Guide for Codecraft using Arduino [https://wiki.seeedstudio.com/Guide_for_Codecraft_using_Arduino/].

Step 2. Drag blocks as picture below or open the cdc file which can be downloaded at the end of this page.

Upload the program to your Arduino/Seeeduino.

Success
When the code finishes uploaded, you will feel the vibration motor vibration.

Play With Raspberry Pi

Hardware

- **Step 1.** Prepare the below stuffs:

Raspberry pi	GrovePi_Plus
	
Get One Now [https://www.seeedstudio.com/Seeeduino-V4.2-p-2517.html]	Get One Now [https://www.seeedstudio.com/Base Shield-V2-p-1378.html]

- **Step 2.** Plug the GrovePi_Plus into Raspberry.
- **Step 3.** Connect Grove - Vibration Motor ranger to **D8** port of GrovePi_Plus.
- **Step 4.** Connect the Raspberry to PC through USB cable.

Software

- **Step 1.** Navigate to the demos' directory:

```
cd yourpath/GrovePi/Software/Python/
```

- **Step 2.** To see the code

```
nano grove_vibration_motor.py   # "Ctrl+x" to exit #
```

```
import time
import grovepi

# Connect the Grove Vibration Motor to digital port D8
# SIG,NC,VCC,GND
vibration_motor = 8

grovepi.pinMode(vibration_motor,"OUTPUT")

while True:
    try:
        # Start vibrating for 1 second
        grovepi.digitalWrite(vibration_motor,1)
        print 'start'
        time.sleep(1)

        # Stop vibrating for 1 second, then repeat
        grovepi.digitalWrite(vibration_motor,0)
        print 'stop'
        time.sleep(1)

    except KeyboardInterrupt:
        grovepi.digitalWrite(vibration_motor,0)
        break
    except IOError:
        print "Error"
```

- **Step 3.** Run the demo.

```
sudo python grove_vibration_motor.py
```

Schematic Online Viewer

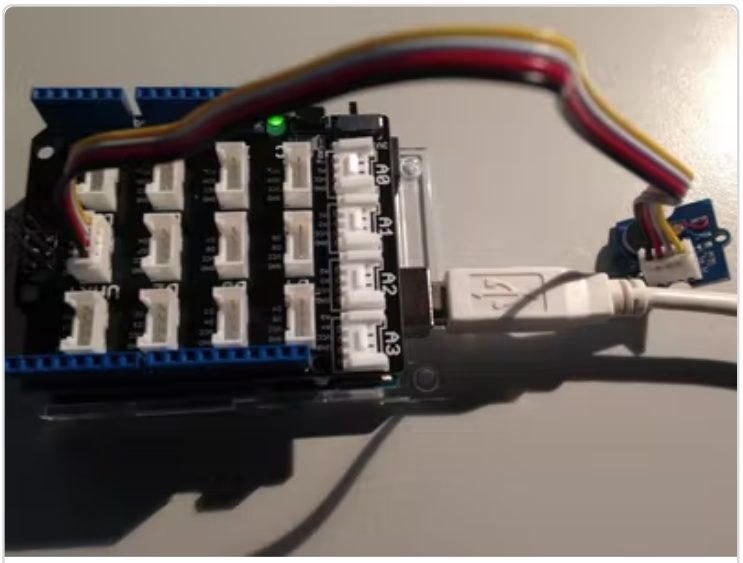
Resources

- **[Eagle]** Grove - Vibration Motor Schematic [https://files.seeedstudio.com/wiki/Grove-Vibration_Motor/res/Grove-Vibration_Motor_Eagle_Files.zip]
- **[Datasheet]** S9013 Datasheet [https://files.seeedstudio.com/wiki/Grove-Vibration_Motor/res/S9013.pdf]

- **[Datasheet]** ANDA-B1020 Datasheet [https://files.seeedstudio.com/wiki/Grove-Vibration_Motor/res/ANDA-B1020_datasheet.pdf]
- **[Codecraft]** CDC File [https://files.seeedstudio.com/wiki/Grove_Vibration_Motor/resource/Grove_Vibration_Motor_CDC_File.zip]

Project

Grove - Introduction in a Vibration Motor - only for adults: Beginner-Example



(https://www.hackster.io/ingo-lohs/grove-introduction-in-a-vibration-motor-only-for-adults-2acfc2)

Inspired by OVERWATCH, we have made a very cool Wooden Laser Gun toy for fun these day!

The Wooden Laser Gun and the Gun Target are all based on an Arduino board called Seeeduino Lotus. The laser emitter on the

Laser Gun is controlled to fire laser pulse to "activate" the Gun Target. And there are 3 light sensors on the Gun Target to detect the laser pulse. It seems very simple right? If you are interested in our project, please make one for yourself or your child! It's worth to spend one day DIY it as a Xmas present.

[https://www.instructables.com/id/DIY-a-Wooden-Laser-Gun-As-a-Xmas-Present-for-Your-/]

Tech Support

Please submit any technical issue into our forum [https://forum.seeedstudio.com/].

[https://www.seeedstudio.com/act-4.html?utm_source=wiki&utm_medium=wikibanner&utm_campaign=newproducts]