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# **AdafruitMAX9744 Library Documentation**

***Release 1.0***

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CircuitPython module for the MAX9744 20W class D amplifier.



# CHAPTER 1

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## Dependencies

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This driver depends on:

- [Adafruit CircuitPython](#)

Please ensure all dependencies are available on the CircuitPython filesystem. This is easily achieved by downloading the [Adafruit library and driver bundle](#).





## CHAPTER 2

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### Installing from PyPI

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On supported GNU/Linux systems like the Raspberry Pi, you can install the driver locally [from PyPI](#). To install for current user:

```
pip3 install adafruit-circuitpython-max9744
```

To install system-wide (this may be required in some cases):

```
sudo pip3 install adafruit-circuitpython-max9744
```

To install in a virtual environment in your current project:

```
mkdir project-name && cd project-name
python3 -m venv .env
source .env/bin/activate
pip3 install adafruit-circuitpython-max9744
```



## CHAPTER 3

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### Usage Example

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See `examples/max9744_simpletest.py` for a demo of the usage.



## CHAPTER 4

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### Contributing

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Contributions are welcome! Please read our [Code of Conduct](#) before contributing to help this project stay welcoming.



## CHAPTER 5

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### Documentation

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For information on building library documentation, please check out [this guide](#).





## 6.1 Simple test

Ensure your device works with this simple test.

Listing 1: examples/mas9744\_simpletest.py

```
1  # Simple demo of the MAX9744 20W class D amplifier I2C control.
2  # This show how to set the volume of the amplifier.
3  # Author: Tony DiCola
4  import board
5  import busio
6
7  import adafruit_max9744
8
9
10 # Initialize I2C bus.
11 i2c = busio.I2C(board.SCL, board.SDA)
12
13 # Initialize amplifier.
14 amp = adafruit_max9744.MAX9744(i2c)
15 # Optionally you can specify a different addres if you override the AD1, AD2
16 # pins to change the address.
17 # amp = adafruit_max9744.MAX9744(i2c, address=0x49)
18
19 # Setting the volume is as easy as writing to the volume property (note
20 # you cannot read the property so keep track of volume in your own code if
21 # you need it).
22 amp.volume = 31 # Volume is a value from 0 to 63 where 0 is muted/off and
23 # 63 is maximum volume.
24
25 # In addition you can call a function to instruct the amp to move up or down
26 # a single volume level. This is handy if you just have up/down buttons in
27 # your project for volume:
```

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```
28 amp.volume_up() # Increase volume by one level.  
29  
30 amp.volume_down() # Decrease volume by one level.
```

## 6.2 adafruit\_max9744

CircuitPython module for the MAX9744 20W class D amplifier. See examples/simpletest.py for a demo of the usage.

- Author(s): Tony DiCola

### 6.2.1 Implementation Notes

#### Hardware:

- Adafruit [MAX9744 Stereo 20W Class D Audio Amplifier](#) (Product ID: 1752)

#### Software and Dependencies:

- Adafruit CircuitPython firmware for the ESP8622 and M0-based boards: <https://github.com/adafruit/circuitpython/releases>

**class** adafruit\_max9744.**MAX9744** (*i2c*, \*, *address*=75)  
MAX9744 20 watt class D amplifier.

#### Parameters

- **i2c** – The I2C bus for the device.
- **address** – (Optional) The address of the device if it has been overridden from the default with the AD1, AD2 pins.

**volume\_down** ()  
Decrease the volume by one level.

**volume\_up** ()  
Increase the volume by one level.

## CHAPTER 7

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### Indices and tables

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