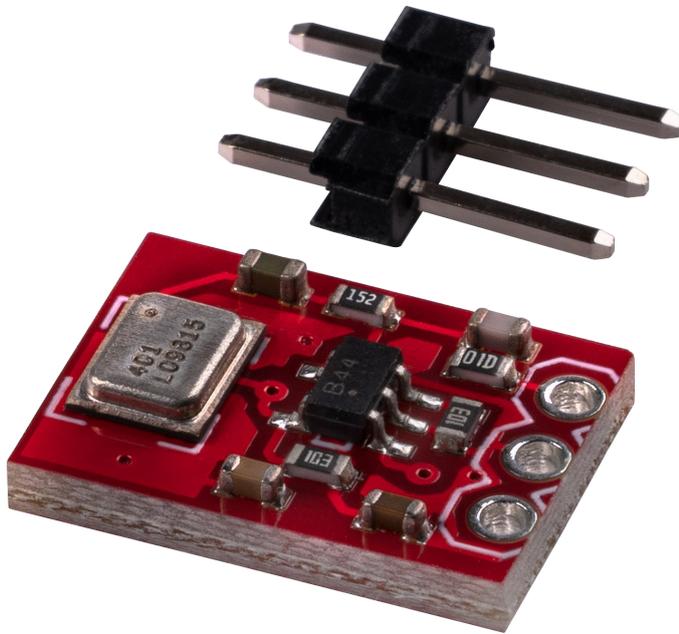


MEMS MICROPHONE ON BREAKOUTBOARD

COM-MIC-ADMP401



1. GENERAL INFORMATION

Dear customer,

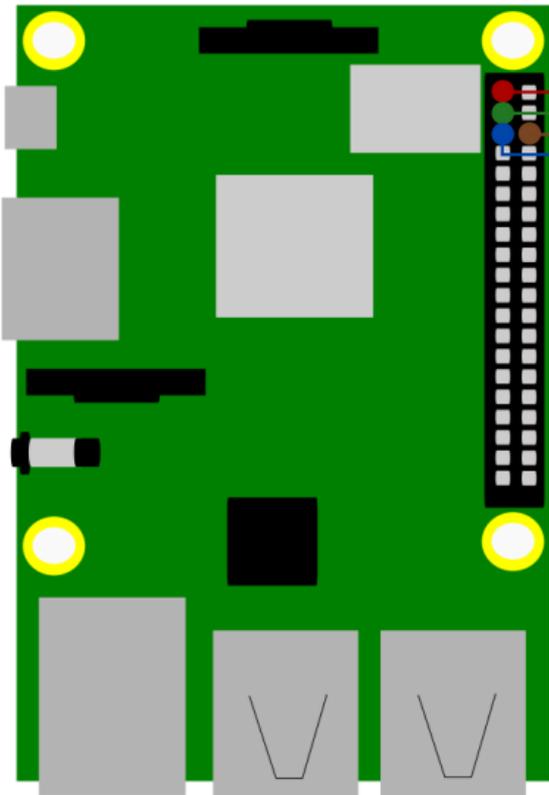
thank you very much for choosing our product.
In the following, we will introduce you to what to observe while starting up and using this product.

Should you encounter any unexpected problems during use, please do not hesitate to contact us.

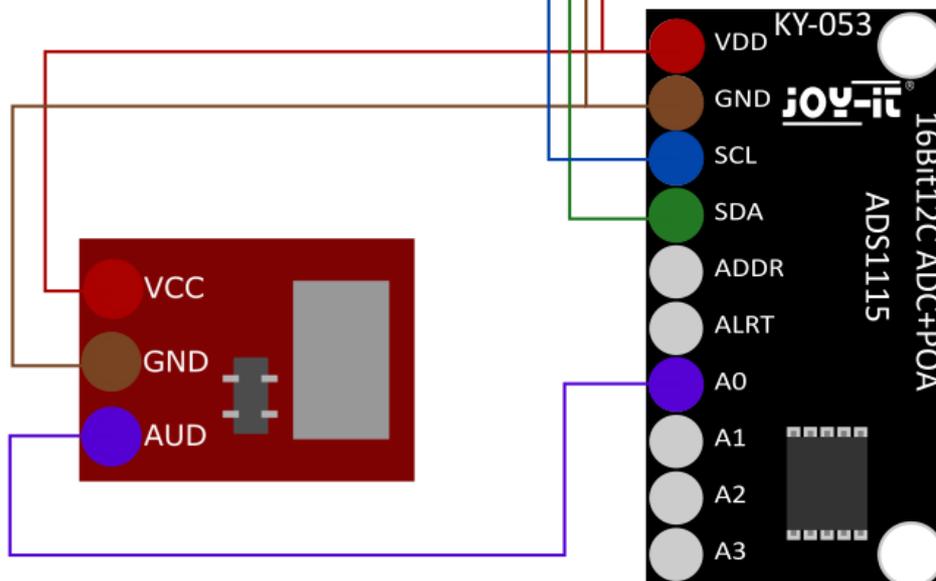
2. USAGE WITH THE RASPBERRY PI

For use with the Raspberry Pi, you need an analog-digital converter. For this purpose, you can use our product COM-KY053ADC. You can find more information about this product [here](#).

2.1 Connection



Raspberry Pi	KY-053	ADMP401
Pin 1	VDD	VCC
Pin 6	GND	GND
Pin 2 GPIO 2 (SDA)	SDA	-
Pin 5 GPIO 3 (SCL)	SCL	-
-	A0	AUD



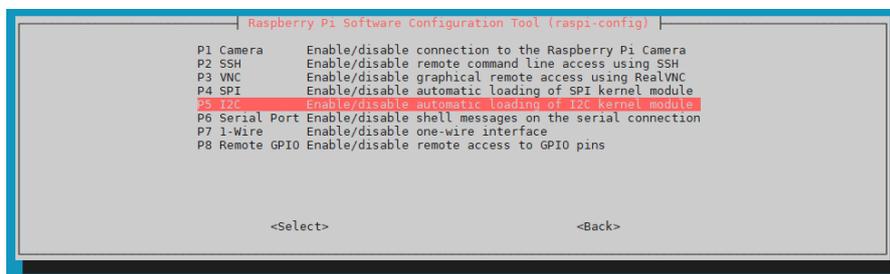
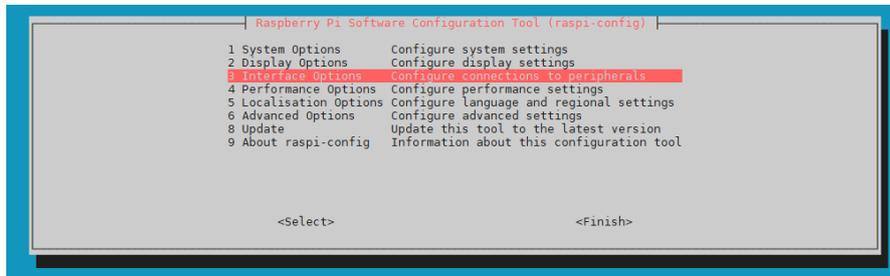
2.2 Installation

For the following code example, you need a operating system with graphical user interface. We recommend [Raspberry Pi OS with desktop and recommended software](#).

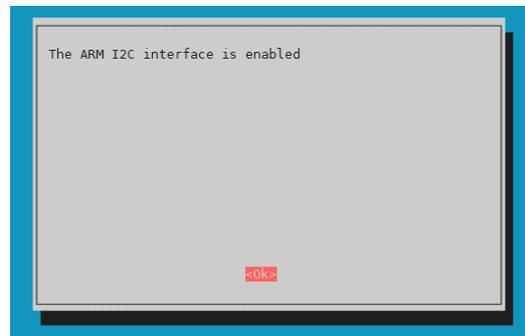
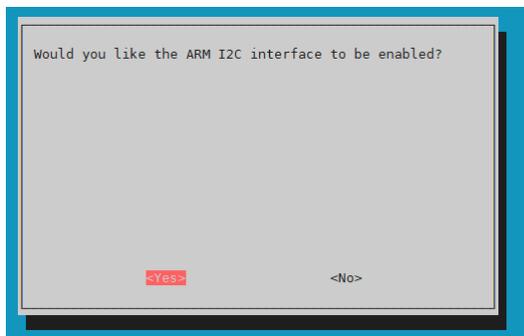
First, enable I2C on your Raspberry Pi. To open the configuration, enter

```
sudo raspi-config
```

There, select **3 Interface Options** → **P5 I2C**.



There, you get the question **Would you like the ARM I2C Interface to be enabled?** Confirm this with **Yes**.



You have now successfully activated I2C. The analog-digital converter is now accessible under the I2C address **0x48**.

We use the [Adafruit Python ADS1x15](#) library for our code example, which is released under the [MIT-Lizenz](#). Use the following commands to download and install this library.

```
git clone https://github.com/adafruit/Adafruit_Python_ADS1x15.git
```

```
cd Adafruit_Python_ADS1x15/
```

```
sudo python3 setup.py install
```

```
cd ..
```

Now install the required software with the following commands.

```
sudo pip3 install -U matplotlib
```

```
sudo pip3 install -U numpy
```

```
sudo apt-get install libatlas-base-dev
```

2.3 Code example

Now download and unzip the code sample.

```
wget https://joy-it.net/files/files/Produkte/COM-MIC-ADMP401/  
COM-MIC-ADMP401_RaspberryPiCode.zip
```

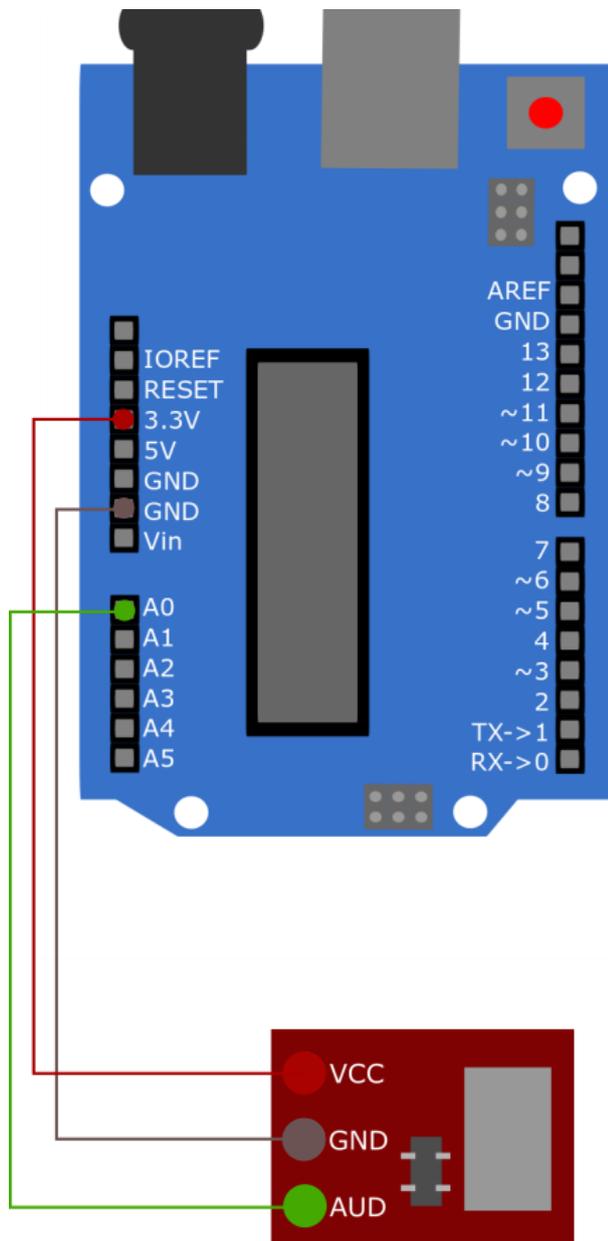
```
unzip COM-MIC-ADMP401_RaspberryPiCode.zip
```

You can now run the code example with the following command. You will see a graph that records the volume fluctuations.

```
python3 COM-MIC-ADMP401.py
```

3. USAGE WITH THE ARDUINO

3.1 Connection



Arduino	ADMP401
3.3V	VCC
GND	GND
A0	AUD

3.2 Code example

Now, copy the following code into your Arduino IDE.

```
int pin = A0;
int value;

void setup() {
    // put your setup code here, to run once:
    Serial.begin(9600);
}

void loop() {
    // put your main code here, to run repeatedly:
    value = analogRead(pin);
    Serial.println(value);
}
```

Click on **Upload** to run the program. However, make sure that **Board** and **Port** are selected correctly under **Tools**. Under **Tools**, click on **Serial Plotter** to display the read-out values of the microphone graphically.

4. OTHER INFORMATION

Our Information and Take-back Obligations according to the Electrical and Electronic Equipment Act (ElektroG)



Symbol on Electrical and Electronic Products:

This crossed-out bin means that electrical and electronic products do not belong into the household waste. You must hand over your old appliance to a registration place. Before you can hand over the old appliance, you must remove used batteries and replacement batteries which are not enclosed by the device.

Return Options:

As the end user, you can hand over your old appliance (which has essentially the same functions as the new one bought with us) free of charge for disposal with the purchase of a new device. Small devices, which do not have outer dimensions bigger than 25 cm can be handed in for disposal independently of the purchase of a new product in normal household quantities.

1. Possibility of return at our company location during our opening hours

Simac Electronics GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn

2. Possibility of return nearby

We will send you a parcel stamp with which you can send us your old appliance free of charge. For this possibility, please contact us via e-mail at service@joy-it.net or via telephone.

Information about Package:

Please package your old appliance safe for transport. Should you not have suitable packaging material or you do not want to use your own material, you can contact us and we will send you an appropriate package.

5. SUPPORT

If any questions remained open or problems may arise after your purchase, we are available by e-mail, telephone and ticket support system to answer these.

E-Mail: service@joy-it.net

Ticket-system: <http://support.joy-it.net>

Telephone: +49 (0)2845 98469 – 66 (10 - 17 o'clock)

For further information visit our website:

www.joy-it.net