

How to use the Python demo program

(The >> line shows the commands to execute).

Step 1

Make sure you have the latest version of the operating system.

```
>> sudo apt-get update
>> sudo apt-get dist-upgrade (say Yes to installing updates/upgrades)
>> sudo apt-get upgrade
>> sudo apt-get autoclean
```

If the dist-upgrade went through with updates, you should consider rebooting the Pi to ensure you have the latest OS and updates.

Step 2

In your home directory (or some other location), you may want to create a separate folder.

```
>> mkdir some-folder-name
>> cd some-folder-name
```

Use wget and download the python script from the alchemypower web site.

```
>> wget http://alchemy-power.com/wp-content/uploads/2017/08/Pi-16ADC.zip
```

This creates a file Pi-16ADC.zip file.

Step 3

Unzip the Pi-16ADC.zip file using the unzip command

```
>> unzip Pi-16ADC.zip
```

This creates a Pi-16ADC folder.

Step 4

Change to Pi-16ADC directory (folder). Edit the file Pi-16ADC.py and make sure:

- 1) The i2c address is ok. Default is 0x76.
- 2) The sample routine reads channel 0 and 1 – if that is sufficient, you can run that routine as is. This will at least let you check if you are able to read channels 0 and 1. If you want to add more channels, copy the code from (start of) `## Channel 1 block##` to `##End of channel 1 block##`. You should be able to identify those in main routine. Replace the variables ending in “1” with a “2” (for use with Channel 2) e.g. Ch1Value becomes Ch2Value, channel1 with channel2.
- 3) Currently both channel 1 multiplier and channel 0 multiplier is set as 1 – so continue to use ch1_mult for channel 2 as well or define a new variable for each channel you want to use e.g.

ch2_mult etc. and make sure you use that variable with each channel. Repeat for other channels you want to read.

```
>> cd Pi-16ADC
>> cp Pi-16ADC.py Pi-16ADC-download.py (Make a backup copy of the file just in case...)
>> vi Pi-16ADC.py (or use your favorite editor. Make changes as suggested above, save file, exit editor)
>> python Pi-16ADC.py
```

You should now see some results. Note if the input Voltage is more than 2.5V or open (i.e. not grounded) you should see an error indicating that.

If you have questions, please send email to support@alchemypower.com – enjoy!