

Display Shield RasPiBox Zero Lite

construction and programming manual

Rev.	Date	Description
A	2017-06-05	First release

1.) *Electrical connection*

Pin	Cable color	Pi Zero	Description
1	black	N.C.	Optional Interrupt line – not used ¹
2	brown	GPIO3	SCL – I2C clock
3	red	GPIO2	SDA – I2C data
4	orange	3,3V	3,3V power supply
5	yellow	GND	Ground connection

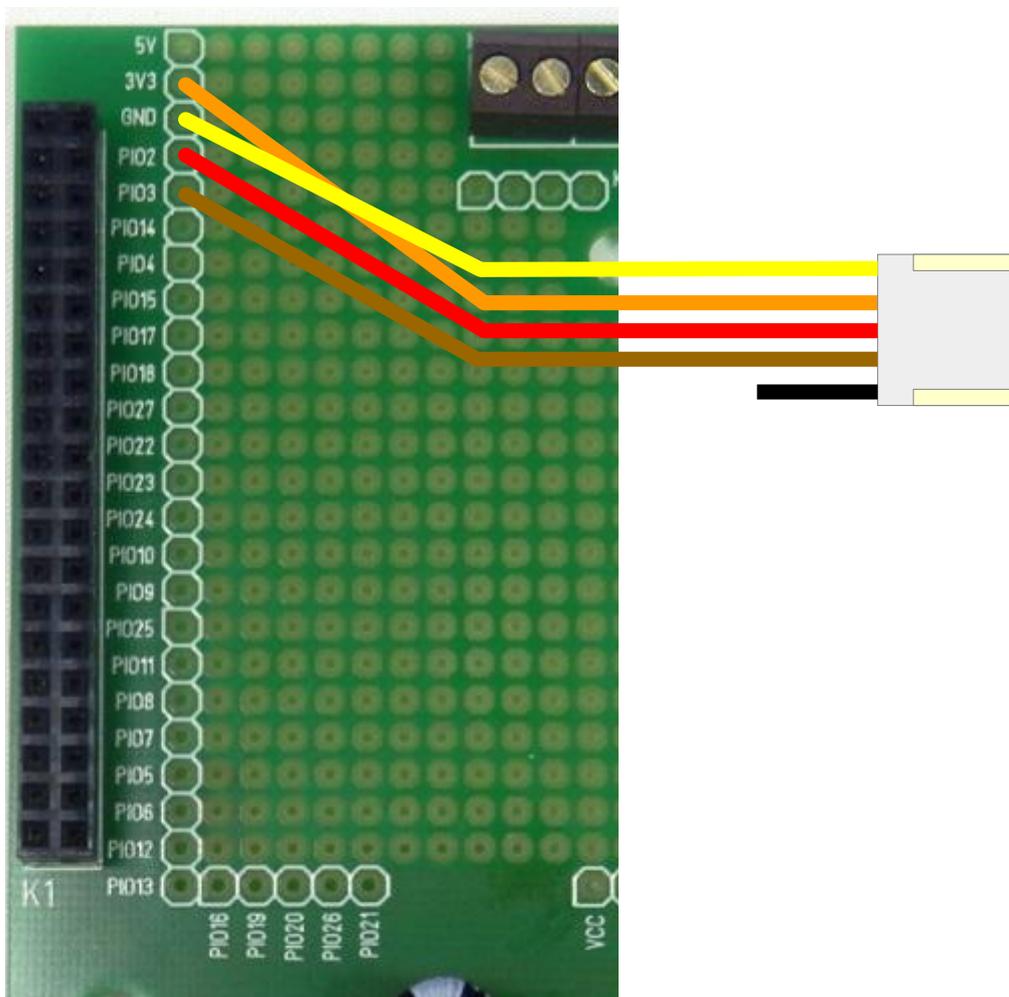
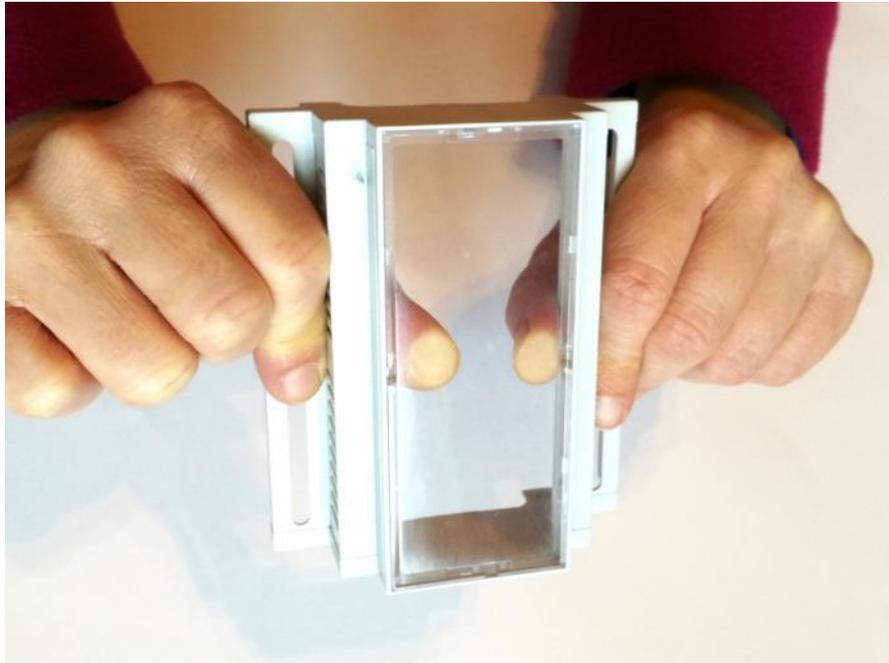


Fig 1: Wiring example for RasPiBox Zero Lite

¹ If you want, you can connect this wire with a GPIO of your choice. In our programming example we don't use this line!

2.) *Mechanical assembly in RasPiBox enclosure*

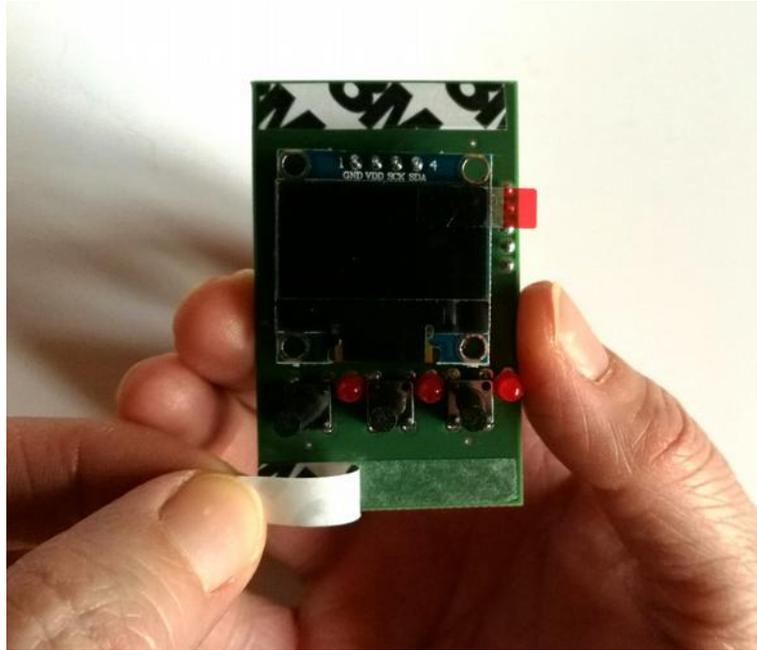
2.1) *Remove the old front glass from top shell*



Press the glass careful with your thumbs out of the top shell.

2.2) Assemble the Display Shield

Remove the protection foil from the double adhesive tape first:



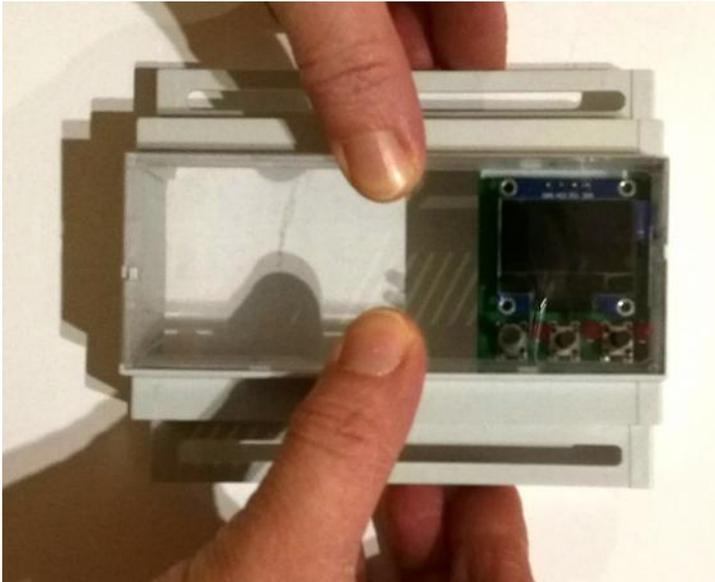
Glue the shield into the top shell:



Place it exactly as in the picture above and close as possible to the left wall!

Please note: The OLED Shield have to be placed exactly on the expected position.

2.3) *Assemble the new front plate*



Press the glass careful with your fingers from the top into the top shell.

3.) *Programming in Python*

Before using the library you will need to make sure you have a few dependencies installed. Connect to your device using SSH and follow the steps below.

Install the RPi.GPIO library by executing:

```
sudo apt-get update  
sudo apt-get install build-essential python-dev python-pip  
sudo pip install RPi.GPIO
```

Install the Python Imaging Library and smbus library by executing:

```
sudo apt-get install python-imaging python-smbus
```

Now to download and install the SSD1306 python library code, execute the following commands:

```
sudo apt-get install git  
git clone https://github.com/adafruit/Adafruit\_Python\_SSD1306.git  
cd Adafruit_Python_SSD1306  
sudo python setup.py install
```

Now to download and install the MCP23008 python library code, execute the following commands (not required for basic version):

```
cd ..  
git clone https://github.com/adafruit/Adafruit\_Python\_GPIO.git  
cd Adafruit_Python_GPIO  
sudo python setup.py install
```

Now to download and install the sample code for the display shield, execute the following commands:

```
cd ..  
git clone https://github.com/hwhardsoft/Display\_Shield\_RPI.git  
cd Display_Shield_RPI
```

to run the demo enter for the basic version:

```
sudo python basic_test.py
```

to run the demo enter for the standard version:

```
sudo python standard_test.py
```

Press the 3 buttons to view different screens!