Display Shield Arduino

construction and programming manual

Rev.	Date	Description
A	2017-01-18	First release
B	2017-01-23	Bug fix fig. 1

1.)   Electrical connection

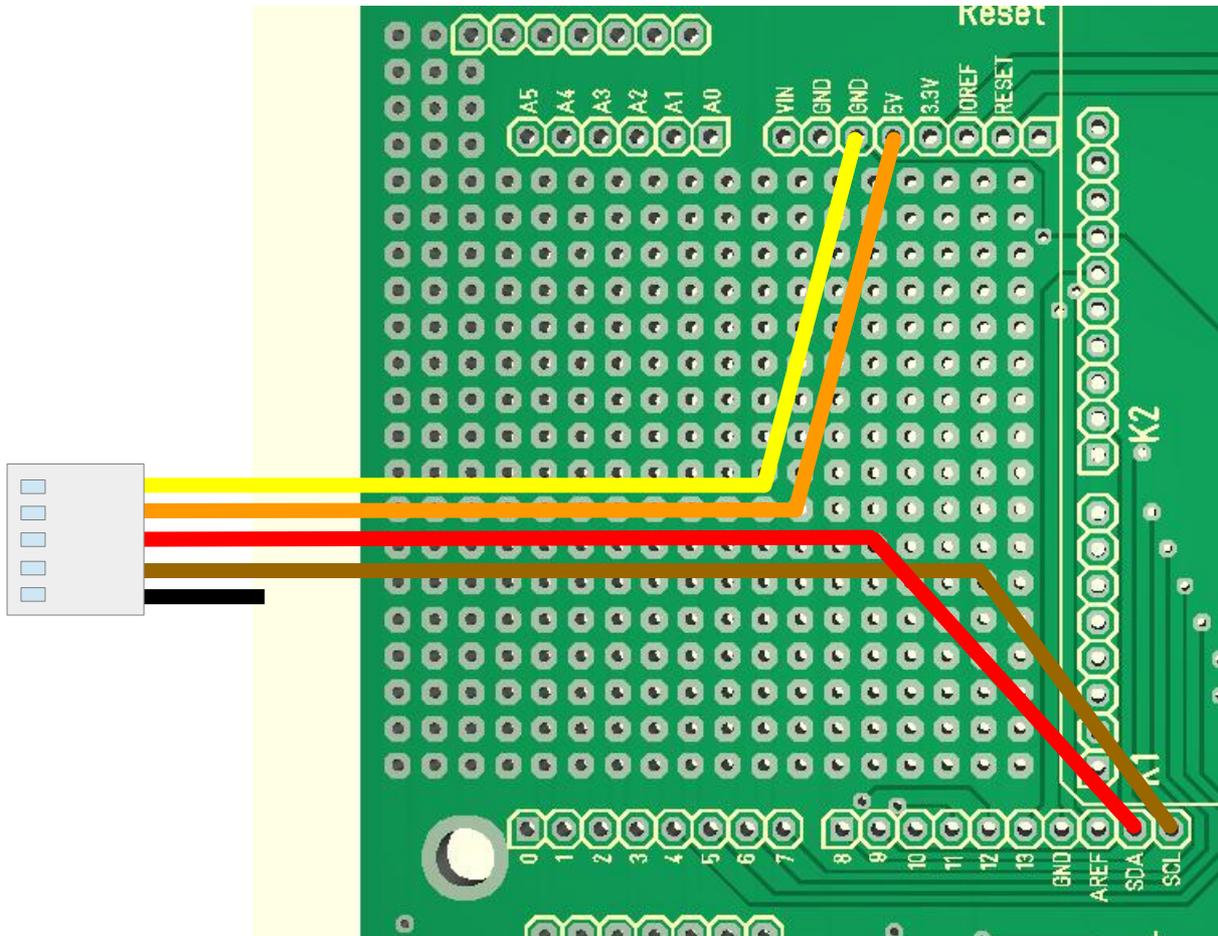| Pin	Cable color	Arduino	Description
1	black	N.C.	Optional Interrupt line – not used[1]
2	brown	SCL	SCL – I2C clock
3	red	SDA	SDA – I2C data
4	orange	5V	5V power supply
5	yellow	GND	Ground connection

Fig 1: Wiring example for Arduibox Open V01-01

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1 This line will generate an interrupt whenever a button is pressed. If you want, you can connect this wire with a digital input of your choice. In our programming example we don't use this line!

2.)   Mechanical assembly in Arduibox enclosure

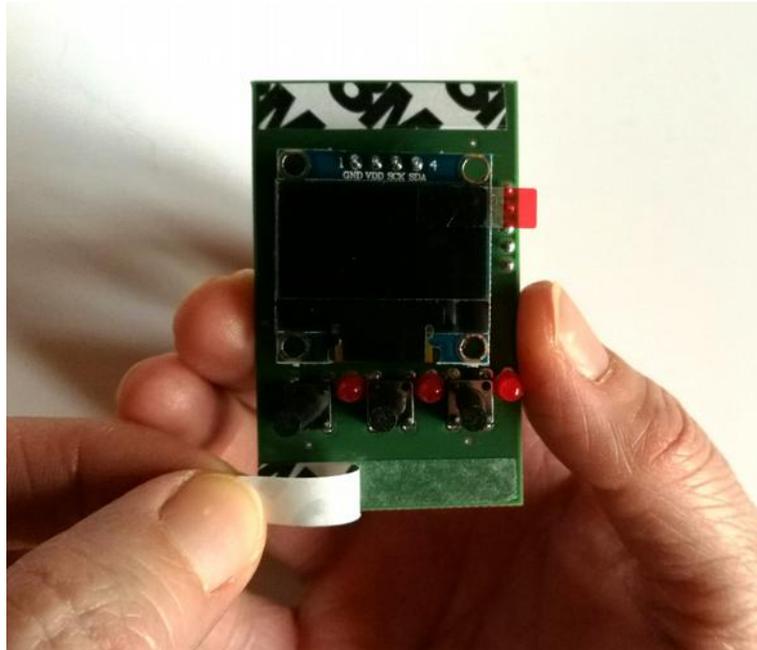**Please note: The steps 2.1 and 2.3 are required for the standard version of the Display Shield only.**

2.1)   Remove the old front glass from top shell
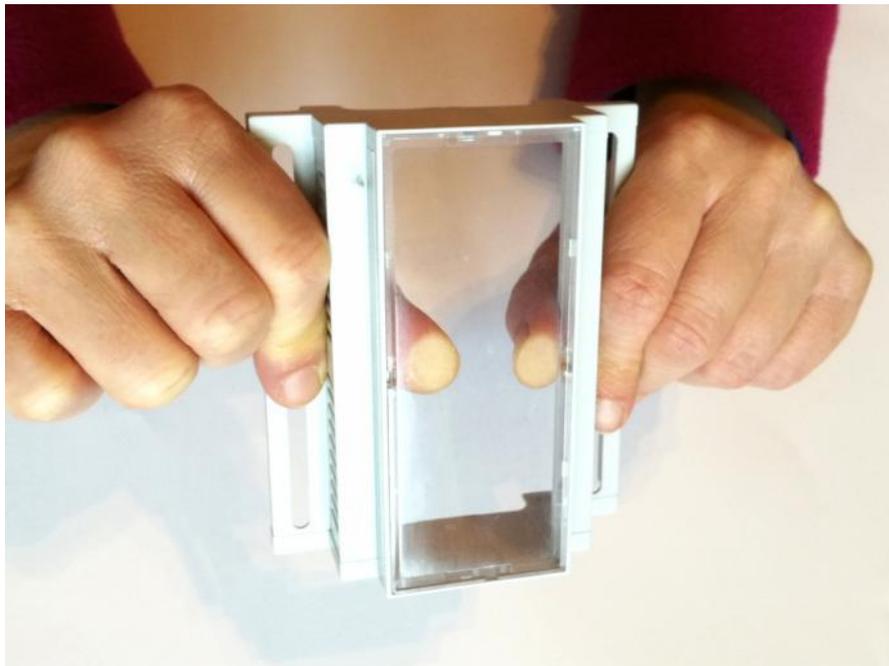
Press the glass careful with your thumbs out of the top shell.

2.2) Assemble the Display Shield

Remove the protection foil from the double adhesive tape first:
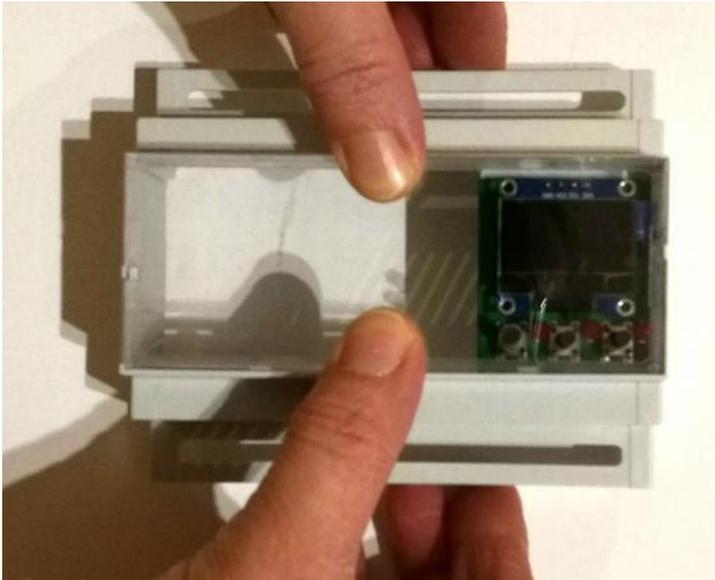

Glue the shield into the top shell:

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

Please note: The basic version of the Display Shield can be placed on any position in the top shell. The standard version 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

3.1) Install Adafruit SSD1306 Library

Start by installing the support library for the OLED display, you'll need it to talk to the OLED controller chip. We are using the Adafruit SSD1306 library repository on GitHub if you're interested in looking at the code. You can download the library also directly as ZIP file via this link:

https://github.com/adafruit/Adafruit_SSD1306/archive/master.zip

Rename the uncompressed folder Adafruit_SSD1306 and check that the Adafruit_SSD1306 folder contains Adafruit_SSD1306.cpp and Adafruit_SSD1306.h

Place the Adafruit_SSD1306 library folder your arduinosketchfolder/libraries/ folder.

3.2) Install Adafruit GFX Library

You will need to do the same for the Adafruit_GFX library available here:
https://github.com/adafruit/Adafruit-GFX-Library/archive/master.zip

Rename the uncompressed folder Adafruit_GFX and check that the Adafruit_GFX folder contains Adafruit_GFX.cpp and Adafruit_GFX.h

Place the Adafruit_GFX library folder your arduinosketchfolder/libraries/ folder like you did with the SSD1306 library

3.3) Install Adafruit MCP23008 Library (for standard version only)

You will need to do the same for the Adafurit_MCP23008 library available here:
https://github.com/adafruit/Adafruit-MCP23008-library/archive/master.zip

Rename the uncompressed folder Adafruit_MCP23008 and check that the Adafruit_MCP23008 folder contains Adafruit_MCP23008.cpp and Adafruit_MCP23008.h

Place the Adafruit_MCP23008 library folder your arduinosketchfolder/libraries/ folder like you did with the libraries above

3.4) Run the demo

After installing the Adafruit libraries, restart the Arduino IDE. You should now be able to access the sample code by navigating through menus in this order:
File→Sketchbook→Libraries→Adafruit_SSD1306→SSD1306...

You have to download our sample code for the OLED Shield from
https://www.hwhardsoft.de/english/projects/display-shield/

now. Please open this sample in the Arduino IDE. After compilation and upload you have to press the 3 buttons to view different screens.

Our demo contains only some samples of the possiblities of the Adafruit GFX engine. Please visit this link of additional informations about the Adafruit library:

https://learn.adafruit.com/monochrome-oled-breakouts/arduino-library-and-examples