



hwhardsoft PP2040 Display Shield Instruction Manual

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Rev.	Date	Description
A	2021-11-03	First release

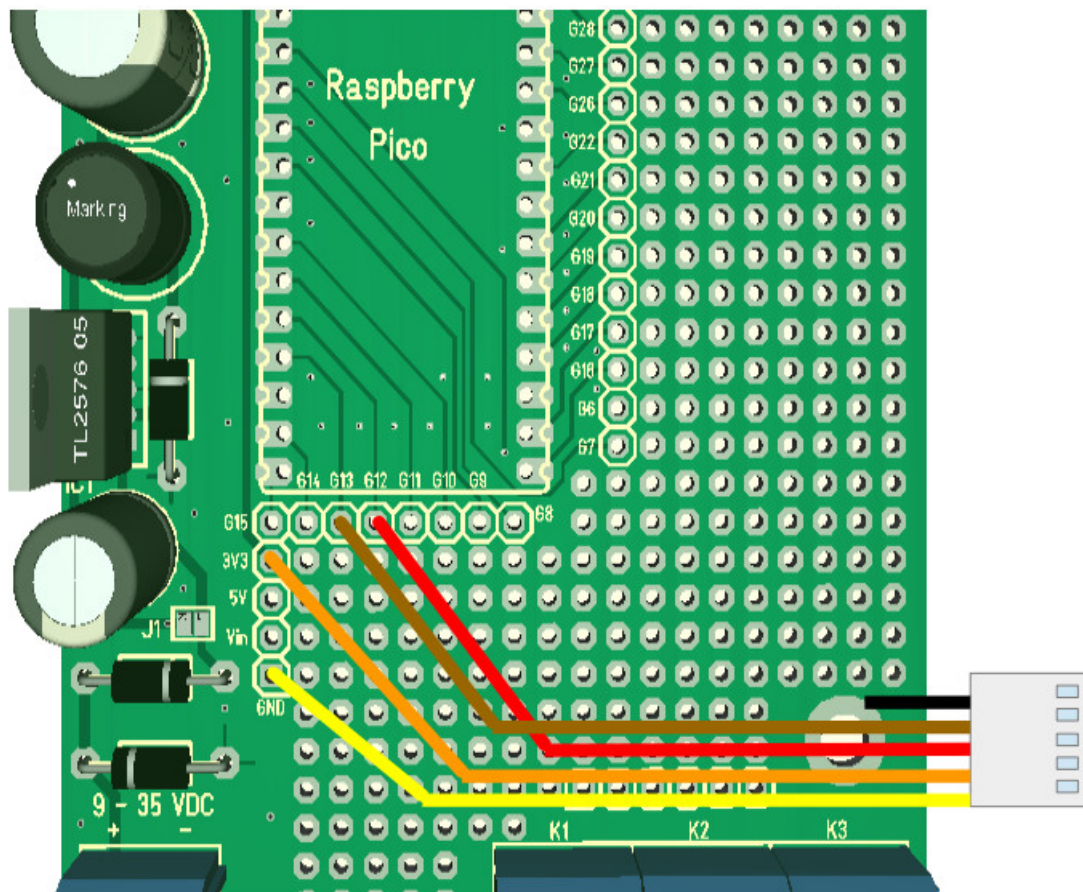
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Electrical connection

Pin	Cable color	Arduino	Description
1	black	N.C.	Optional Interrupt line — not used'
2	brown	GP13	SCL — I2C clock
3	red	GP12	SDA— I2C data
4	orange	3,3V	3,3V power supply
5	yellow	GND	Ground connection

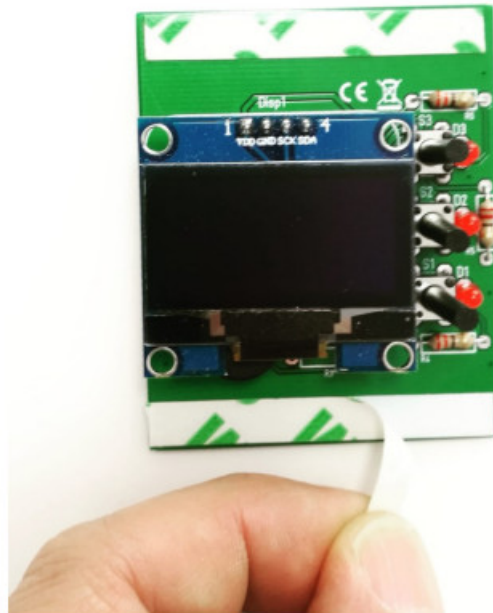
Connections in RasPiBox Pico:



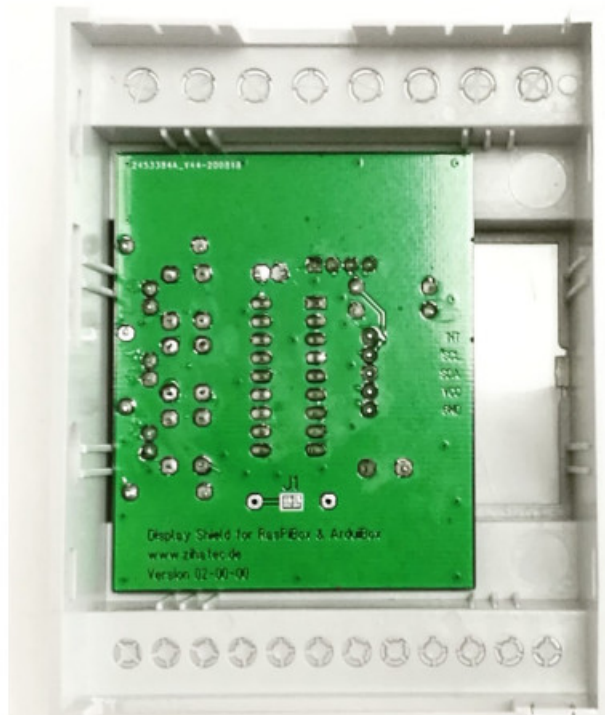
This line will generate an interrupt whenever a button is pressed. If you want, you can connect this wire with a digital input of your choice. In our programming example, we don't use this line!

Mechanical assembly in Arduibox enclosure

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!

Programming

3.1 Install CircuitPython

Download the CircuitPython version for the Raspberry Pi Pico:

https://circuitpython.org/board/raspberry_pi_pico/

Copy the downloaded file to the root directory of your Pi Pico.

For more information, please visit this link: <https://learn.adafruit.com/getting-started-with-raspberry-pi-pico-circuitpython>

3.2 Install additional libraries

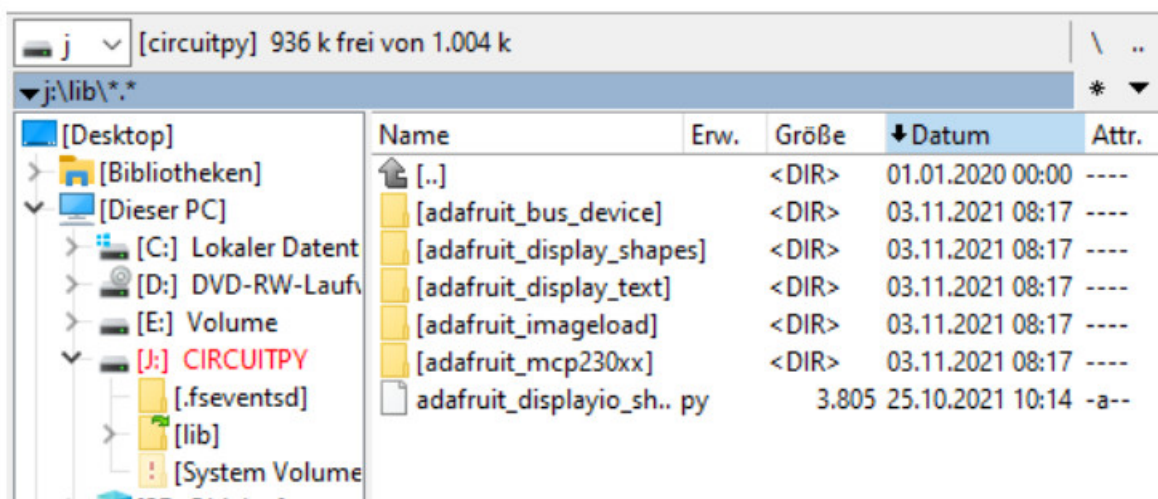
Create a subfolder „lib“ in the root directory of the „CIRCUITPY“ drive. Copy now the following libraries in this subfolder.

- adafruit_bus_device
- adafruit_display_shapes
- adafruit_display_text
- adafruit_imageload
- adafruit_mcp230xx
- adafruit_displayio_sh1106.mpy

You will find all the needed libraries here

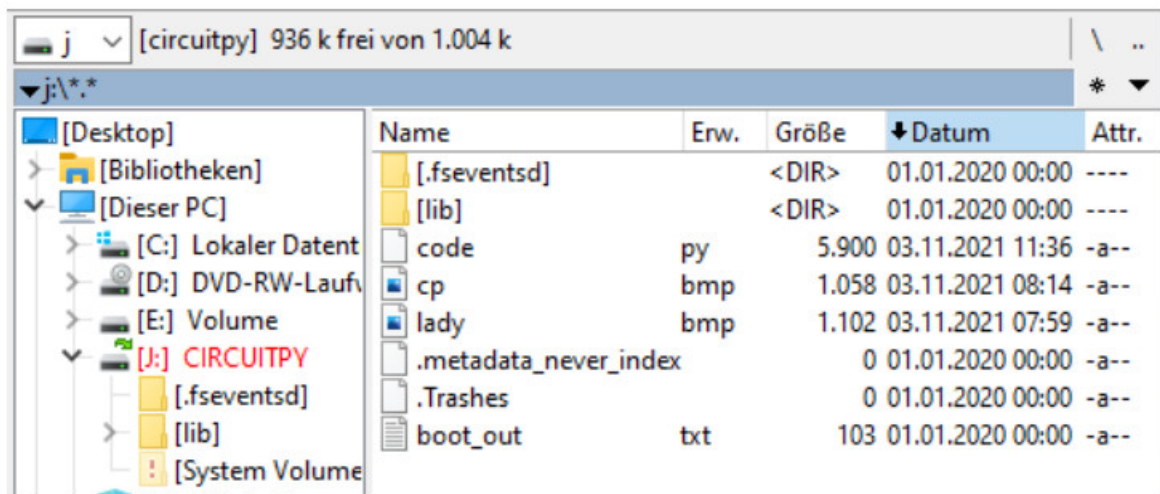
https://github.com/adafruit/Adafruit_CircuitPython_Bundle/releases

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3.3 Install the demo program

Copy now the files of the demo program in the root directory of the CIRCUIPTY drive.



3.4 Run the demo

The demo will start automatically after overwriting the existing code.py with our file.
Press the buttons beside the display to show different screens and to switch the leds on.

Documents / Resources

	hwhardsoft PP2040 Display Shield [pdf] Instruction Manual PP2040 Display Shield, PP2040, Display Shield, Shield
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References

- [Pico Download](#)
- [Releases · adafruit/Adafruit_CircuitPython_Bundle · GitHub](#)
- [GitHub - HWHardsoft/Display-Shield-Pico: python source code for SH1106 OLED based display](#)

shield and Raspberry Pi Pico

-  [Overview | Getting Started with Raspberry Pi Pico and CircuitPython | Adafruit Learning System](#)

Manuals+.