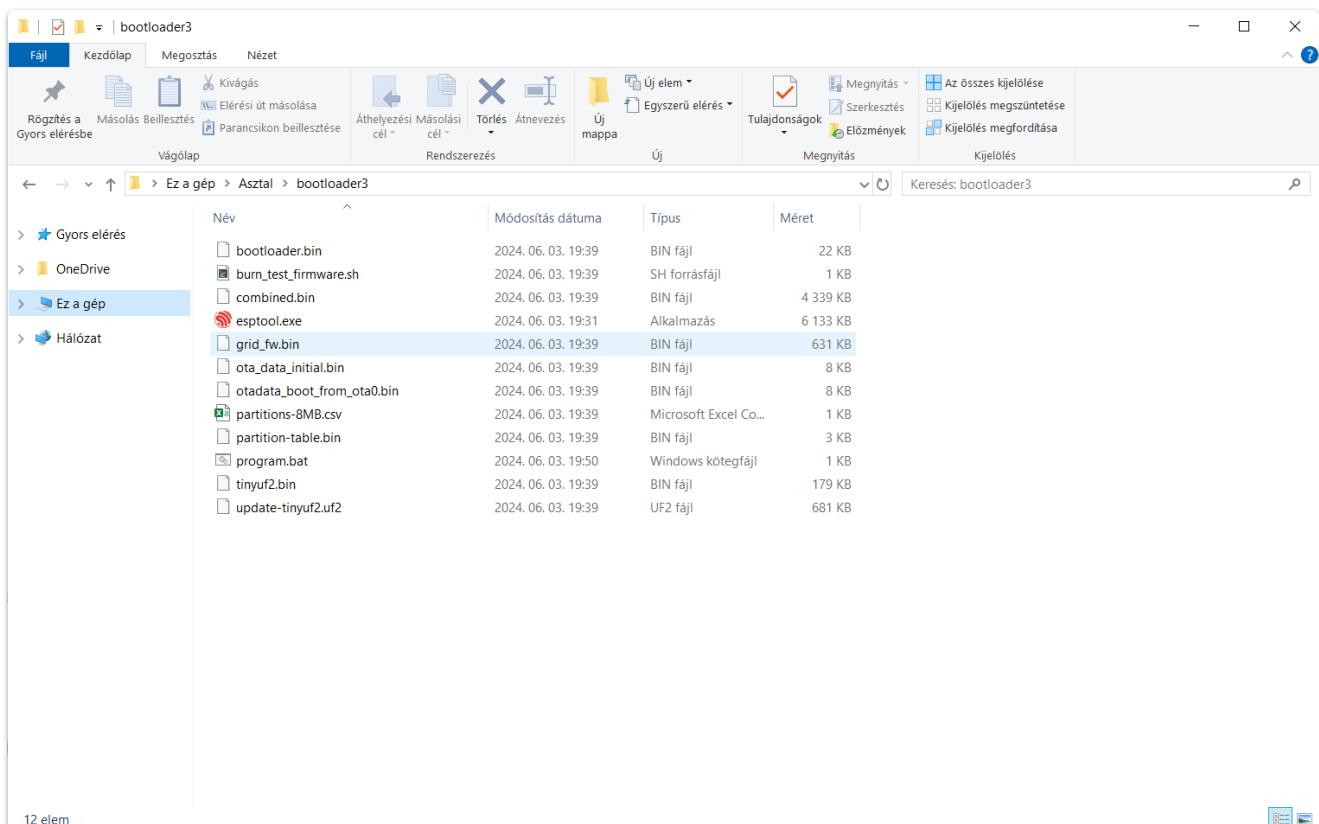


# Guide for production testing on Windows with program.bat

## Unzip archive

1. Unzip `bootloader3.zip` to the computer desktop.
2. Open the bootloader3 folder and you should find similar files inside.



## Run program.bat to flash the bootloader and firmware

1. Connect the PCB part with a USB C-A cable to the computer
2. Install the bootloader and firmware files with by running `program.bat`

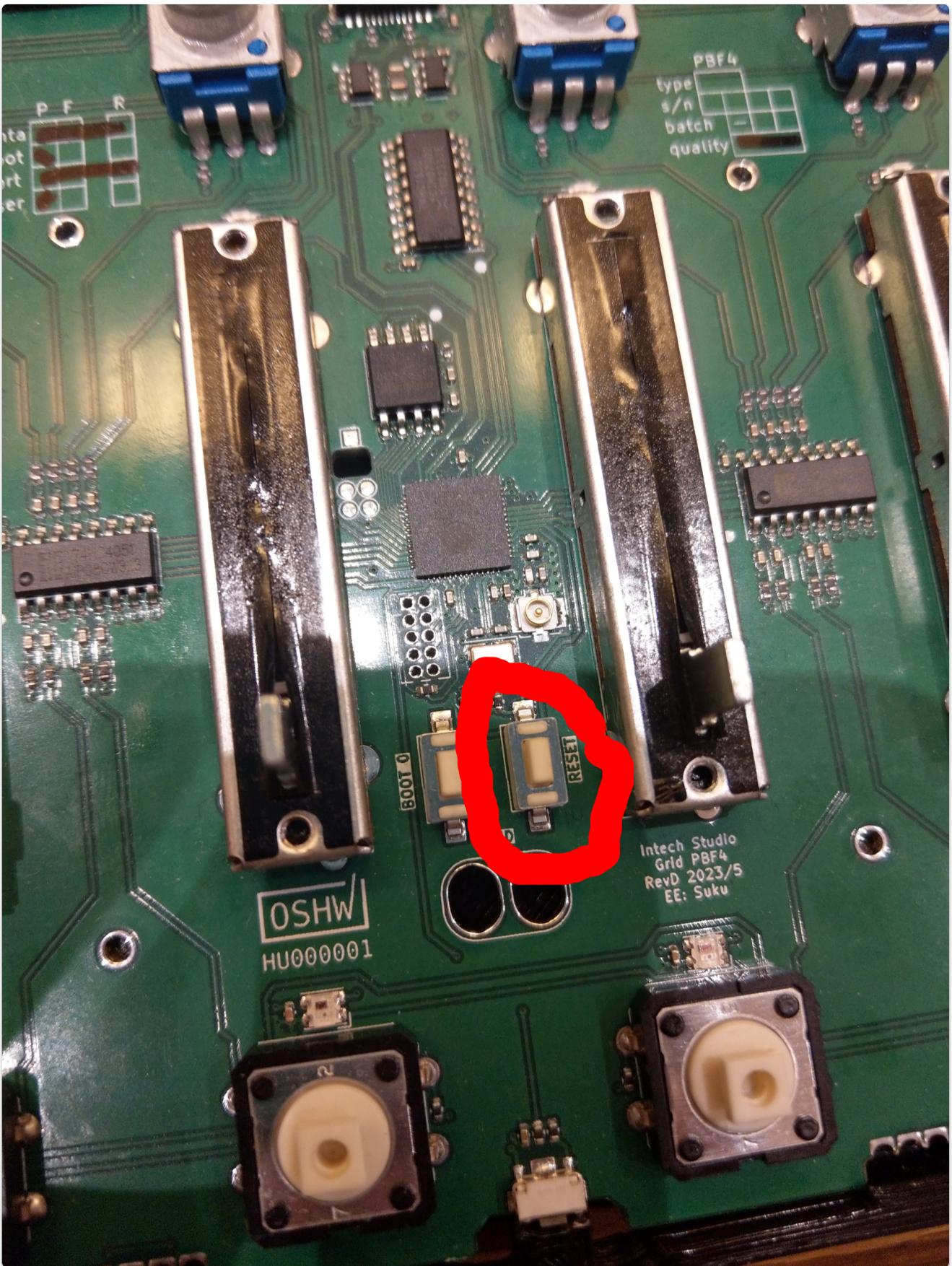
This what you should be seeing in terminal when the script ran successfully.

C:\Windows\system32\cmd.exe

```
esptool.py v4.7.0
Found 1 serial ports
Serial port COM21
Connecting...
Chip is ESP32-S3 (QFN56) (revision v0.2)
Features: WiFi, BLE
Crystal is 40MHz
MAC: 30:30:f9:2d:56:68
Uploading stub...
Running stub...
Stub running...
Configuring flash size...
Auto-detected Flash size: 8MB
Flash will be erased from 0x00000000 to 0x00005fff...
Flash will be erased from 0x00008000 to 0x00008fff...
Flash will be erased from 0x0000e000 to 0x0000ffff...
Flash will be erased from 0x00010000 to 0x000adfff...
Flash will be erased from 0x00410000 to 0x0043cff...
Compressed 22368 bytes to 14357...
Wrote 22368 bytes (14357 compressed) at 0x00000000 in 0.5 seconds (effective 376.2 kbit/s)...
Hash of data verified.
Compressed 3072 bytes to 136...
Wrote 3072 bytes (136 compressed) at 0x00008000 in 0.1 seconds (effective 344.2 kbit/s)...
Hash of data verified.
Compressed 8192 bytes to 43...
Wrote 8192 bytes (43 compressed) at 0x0000e000 in 0.1 seconds (effective 441.0 kbit/s)...
Hash of data verified.
Compressed 645872 bytes to 371706...
Wrote 645872 bytes (371706 compressed) at 0x00010000 in 5.4 seconds (effective 949.5 kbit/s)...
Hash of data verified.
Compressed 182864 bytes to 115364...
Wrote 182864 bytes (115364 compressed) at 0x00410000 in 2.0 seconds (effective 727.6 kbit/s)...
Hash of data verified.

Leaving...
Staying in bootloader.
Press any key to continue . . .
```

3. After successfull upload press the reset button manually to reboot the microcontroller



## Test procedure for the user interface

- All LED on the board should briefly flash green and then turn blue after successful booting of the device
- Interacting with the control elements on the board should change the intensity on the corresponding LED.

- Rotating to the left increases intensity, rotating to the right decrees the intensity.
- Pressing the rotary encoder produces full brightness on the corresponting LED.
- Pressing the side-mounted button cycles throught the 4 configuration banks of the device.
- Configuration banks are color coded: Blue (default), Orange, Green and Purple

## Test procedure for the USB connection and the bootloader

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- Unplug power from the device
- Press and hold the side-mounted button and then plugh in usb cable for the device
- All LED on the board should briefly turn red and then turn green after successful enumeration of the USB driver
- On the host computer the device shows up as a removable mass storage device with the drive label of GRID-S3
- Check and verify that three files are available on the device called CURRENT.UF2, INDEX.HTM and INFO\_UF2.TXT
- Repeat the test procedure with reversed orientation on the USB-C connector to verify the soldering of the USB connector