Firmware-Update-Instructions

The Windsensor boards delivered so far are operating at this firmware version:

NMEA_Windsensor_11_final_MyBoat.bin

This firmware version is limited to WiFi communication at fixed network settings. There is a built in webinterface for updating the firmware, however due to bugs it can only be accessed under specific conditions. This document describes the steps required to update your windsensor's firmware. After updating the same network parameters will apply as with the previous firmware.

Required Tools:

- Raspberry Pi or wireless router
- Any personal computer, laptop or mobile phone linked to the internet and running a HTML-browser

1. Setup a wireless network on either your Raspberry Pi or wireless router (e.g. FritzBox) with following parameters:

SSID: MyBoat
Password: S6587rr94P

2. Attach Windsensor to an appropriate source of power (use DC/DC-Wandler!)

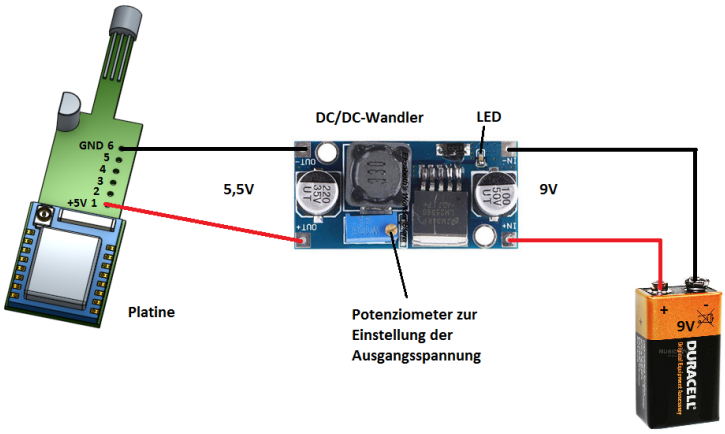


Abb.: Powering the Windsensor

The blue LED lights up on the sensor's board. After a few seconds and successful login to the network the blue LED extinguishes. It is important that the sensor logs into the network, however without being asked to transmit data at port 6666. In such case (blue LED blinking) you need to disable any client program connection as e.g. OpenPlotter. This is the only functional constellation to access the update interface.

3. Download the firmware using your pc, laptop or mobile phone from

https://gitlab.com/norbertwalter67/Windsensor_WiFi_1000/blob/master/Arduino-Code/firmware_V1.01.wsb

4. Use your pc/mobile to login to the wireless network provided by the windsensor:

SSID: NoWa
Password: 12345678

5. Point your browser to this address:

http://192.168.4.1/update

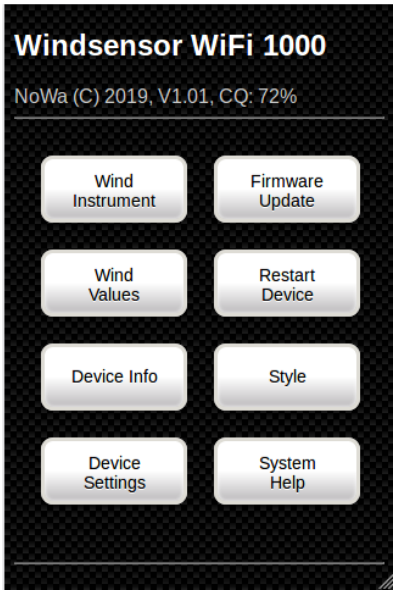
You will be presented a display to choose the new firmware. Select **Firmware_V1.01.wsb** as previously downloaded (see step 3) and press the update button. After successful data transmission a new, almost blank screen will display **OK**. If an error message is shown, you either chose a wrong file or the transmission failed for other reasons – retry the update if required.

6. Turn off the windsensor's power, wait a few seconds and power it up again**.**
This will start the windsensor running on the new firmware.

7. To validate the update and to modify the network parameters, point your browser to this address:

http://192.168.4.1

The new firmware will display following screen – make sure it shows V1.0.1



Menu item **Device Info** permits to view all current network parameters, whereas **Device Settings** allows to modify them at your will. After modification press **Save** to store any new values. The new settings will persist after restart as they are stored in the sensor's permanent memory (EEPROM).

9. To activate the new network settings the Windsensor must be restarted by interrupting power for a few seconds.

You may change all network parameters freely. Please note that SSID and password must not exceed 20 characters in length. Just alphabetic upper- and lowercase letters as well as numbers are allowed. Don't use special characters. Minimum length is 8 characters for passwords and 1 character for SSID. A built-in validity check will output corresponding error messages.

External network parameters must be entered in any case, even if you prefer not to connect anywhere. Choose random values instead.

Make sure to write down your network settings and enter them correctly. Forgotten or mistyped parameters cannot be retrieved easily and the firmware will require manual flashing via serial interface.

Future updates may be performed online in the **Update Firmware** screen.