

radio-tracking.eu

Basic Setup

Please be aware that all the following steps are provided without any warranty!

1. Download the latest image

please visit the following website:

<https://radio-tracking.eu/impressum/download>

and download the latest File. This file already includes the operating system and all the programs needed to run the system. Please be aware that everything is still in the early stages of development.

2. Unzip the image and install it on a MicroSD-Card

For Windows users:

1) please download the following software to decompress the file:

<https://www.7-zip.org/>

and install it. After installation decompress the image by right-clicking on the downloaded file -> 7z -> decompress here

2) Install the image on SD-Card using win32DiskImager.

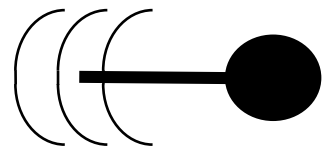
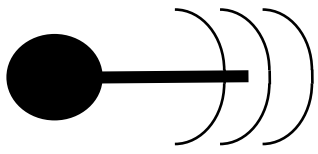
<https://sourceforge.net/projects/win32diskimager/>

Download the software from the link above and install it. Start the win32diskimager.exe and grant it administrator rights (it should be automatically asking for it). Then:

- a) Insert your microSD Card (capacity minimum of 32GB) into your SD-Card slot (using an adaptor) or use an USB to microSD Card adaptor to connect it to the PC
- b) Choose the decompressed image file by clicking on the little folder
- c) Select your device (be careful to choose the right one – all data on that device will be deleted)
- d) Press the „write“ - button and confirm that all data will be deleted
- e) This may take a while

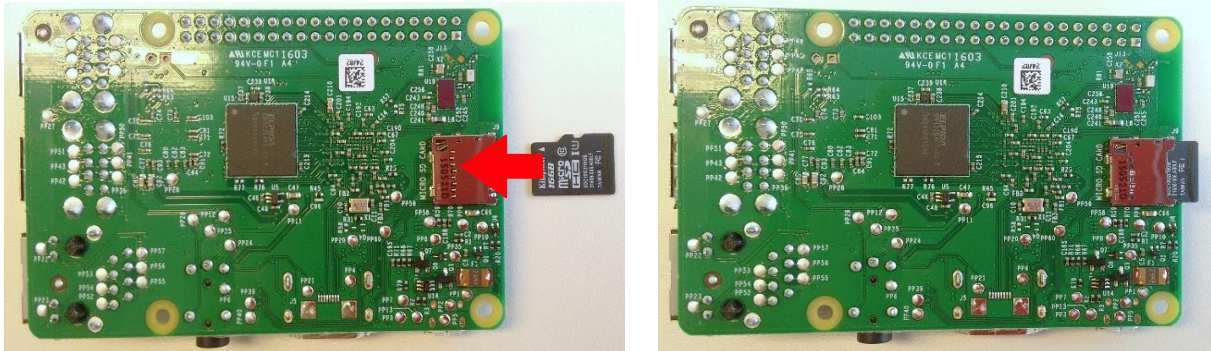
For Linux users:

- 1) Extract the image using the archive manager that should be part of your system installation. If your archive manager asks for permission to install the file type support for .7z files allow it.
- 2) Install the image on SD Card using „disks“, which is pre-installed on Ubuntu 16.04 and newer. If your system doesn't have „disks“ installed, you can get it by typing `sudo apt-get install gnome-disk-utility` to the console.

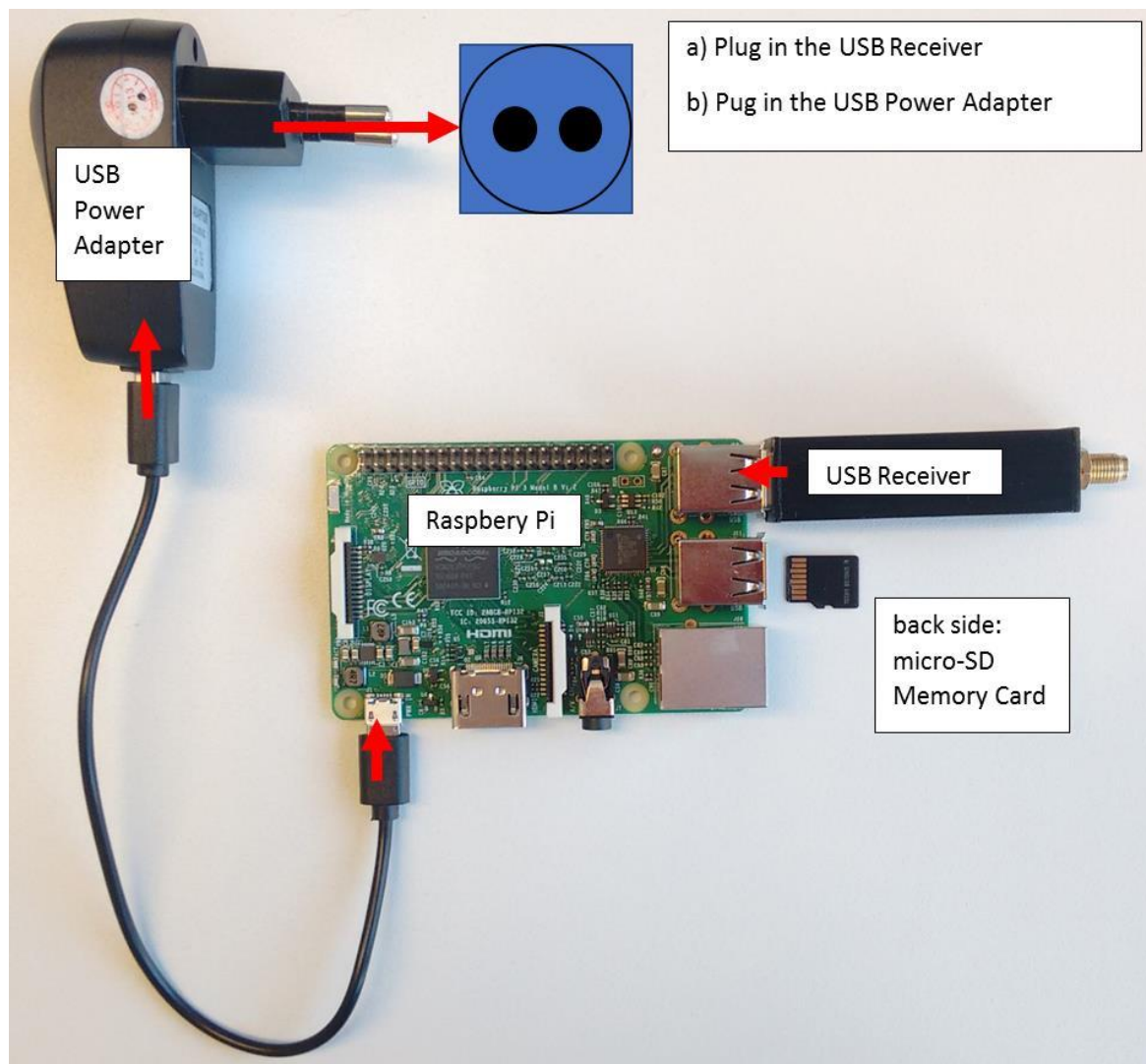


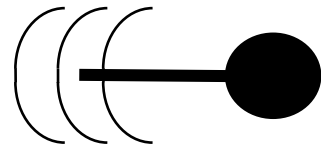
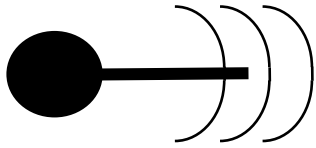
3) Open the application, choose your SD-Card and install the image using the „restore disk image“ - option. This may take a while.

3. Insert the memory card into the Raspberry Pi 3



4. Connect the hardware





The USB-Receiver needs to be connected to an antenna of your desire – you might need an adapter to do so (the USB-Receiver got a female SMA input – not reversed)

5. Power up the Raspberry Pi 3

as soon as it is connected to a power source it automatically boots.

6. Connect to the Raspberry Pi 3

The Raspberry Pi automatically opens a WiFi-Network on startup. Use your smartphone or your laptop to connect to the Raspberry Pi's WiFi

- Network name: rteuv2
- Password: sdrtracking

7. Enter the IP-Address 192.168.1.1 in your internet browser and you will be asked to enter a username and password. Enter the following:

- Username: pi
- Password: rteuv2!

8. Connect the Raspberry Pi to your WiFi with internet connection (of your office / mobile hotspot / smartphone...)

- Menu -> WiFi -> WiFi Connection
- as WiFi-Name set the name of your desired network
- as Password enter the network's password
- [!] Be very careful entering WiFi-name and Password. If entered wrong, the Raspberry Pi won't be able to connect to the network and you can't access it via WiFi. If that happens to you, you can still access your Raspberry Pi via LAN (cable) and change the network settings (*). [!]
- confirm with „change“
- click on „reboot“ to apply the changes

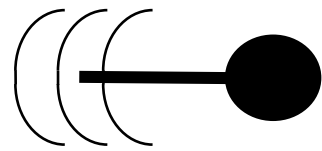
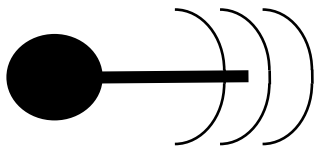
9. Connect to the Raspberry Pi via the given network

To do so, you first need the IP-Address given to the Raspberry Pi by the network's router/hotspot. In case you use a fritz box (which is a very common WiFi-router), type <http://fritz.box/> to your browser. Enter the router's password to access the WiFi-settings. In the list of connected devices, you should find one device named "nyctalus" – that's what you're looking for. Get the nyctalus' IP-Address, copy it to the address bar of your browser, hit enter and continue by entering the username and password for the Pi (see point 7.)

10. Update to the latest version

- Menu -> System -> Software -> System Update

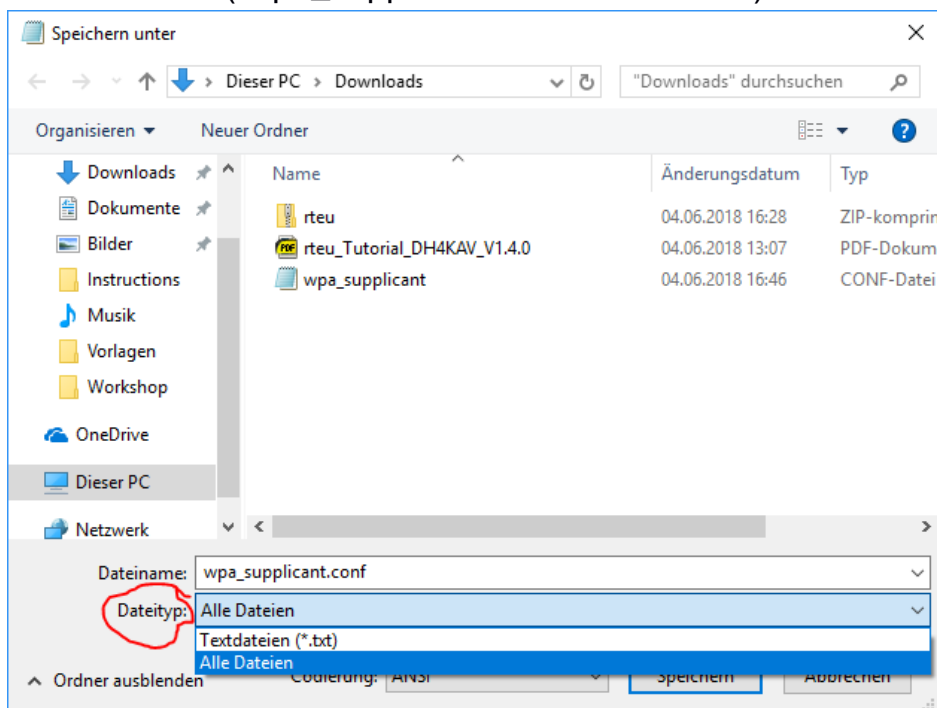
11. Use the desired features as described in your browser (Introduction)



(*) to repair messed-up WiFi settings, access your router with the wire-connected Raspberry Pi by following the steps described in **9**). Instead of the WiFi-section, inspect the LAN-section now to get the Raspberry Pi's IP-address. Then login (**7**) and again perform the steps described in **8**) to change the Pi's WiFi-settings.

Another way to change messed up WiFi – settings is to copy a prepared [wpa_supplicant.conf – file \(click to download\)](#) to your Raspberry Pi. First, you have to prepare the file with the (correct) SSID and password for the network we want the Pi to connect to. Open the wpa_supplicant.conf with a text editor of your choice. For ssid="" enter your WiFi-name between the quotation marks, for psk="" enter the WiFi-password. Then save the file without changing its name.

ATTENTION: Notepad by default saves files as *.txt that can't be used by the linux system running on the Pi. Therefore, when saving the changed file, you must change "data type" from "*.txt" to "all" and enter the complete desired name ("wpa_supplicant.conf" in our case) before hitting "save".



Retrieve the SD-card from your Raspberry Pi and connect it to your computer (e.g. using an usb-adaptor or a SD-slot). If you use a Windows-PC, the folder that automatically opens (boot) is the right one. On a Linux System, you might have to choose the boot-partition manually. Copy the just prepared wpa_supplicant.conf to this folder/partition (without using subfolders). Put the SD-card back to your Raspberry Pi, boot it and watch it connect to the desired WiFi.

Happy Tracking!