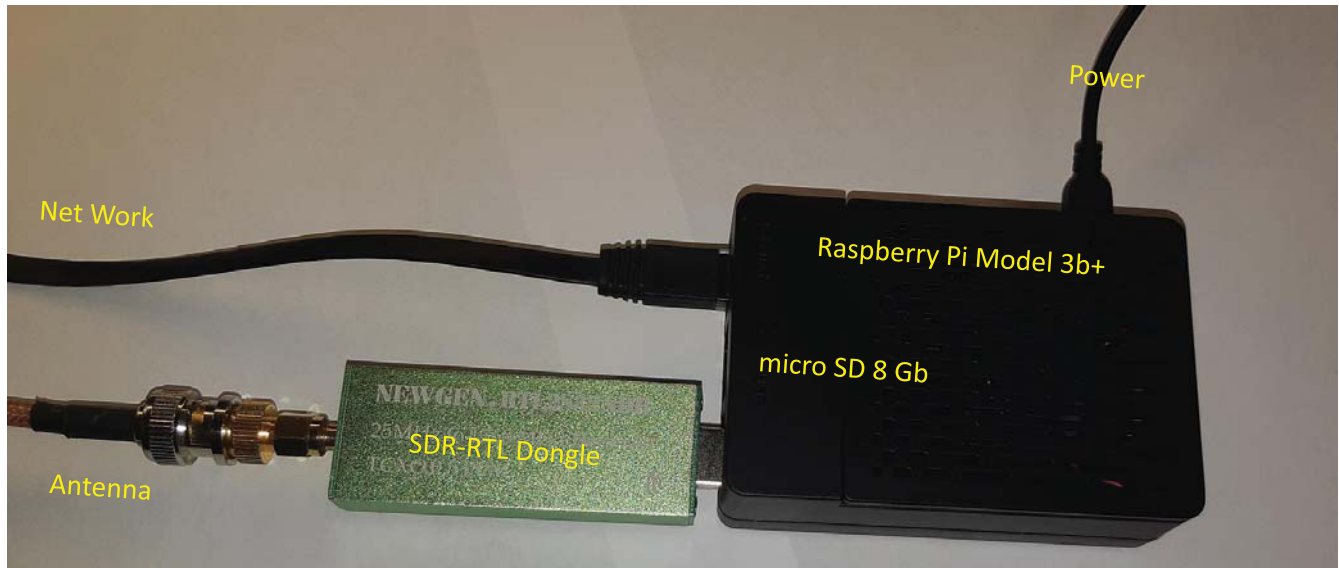


Raspberry pi Remote Receiver

Met SDR-RTL USB Ontvanger

Ontvangst Station



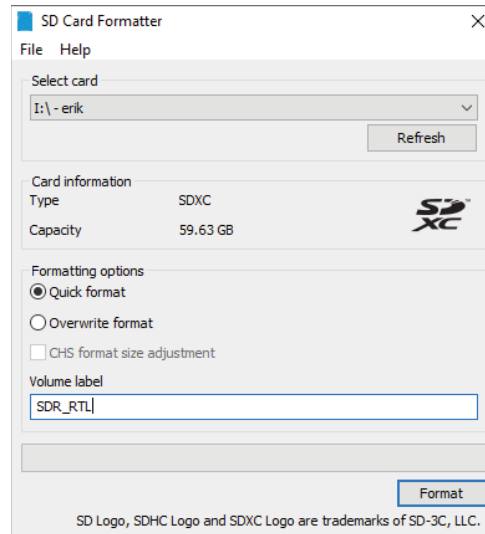
Installatie Raspberry Pi

- [Download](#) de meest recente Raspbian versie.
- [Download](#) SD Memory Card Formatter.
- [Download](#) de meest recente versie van Etcher.



Installatie Raspberry Pi

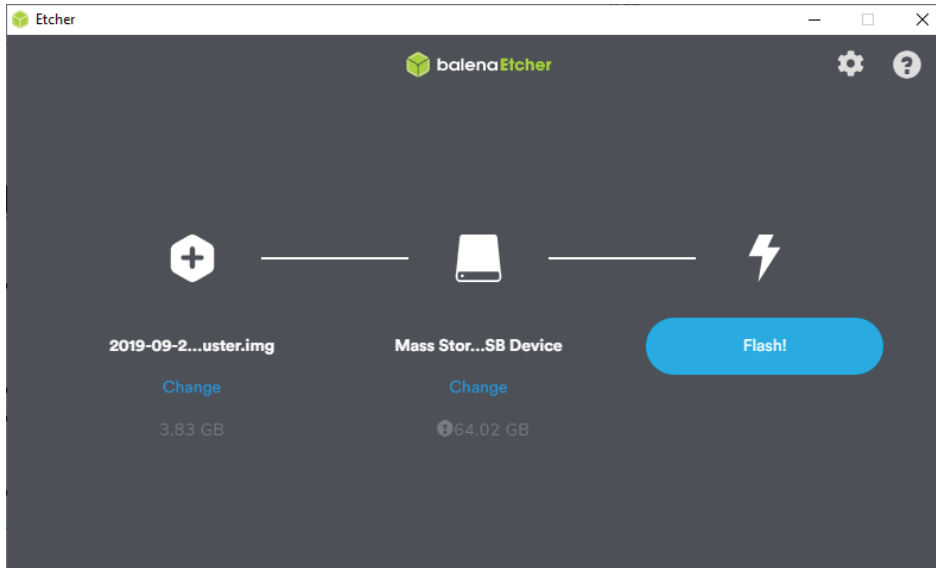
- Format memory card met SD Memory Card Formatter.



Installatie Raspberry Pi

- Format memory card met SD Memory Card Formatter.
- Start de Etcher tool.
- 1. Selecteer het .IMG bestand of het gecomprimeerde ZIP bestand.
- 2. Selecteer de drive (micro SD kaart).
- 3. Klik op burn.
- 4. Wanneer het process voltooid is, wordt de SD kaart automatisch unmount.

Installatie Raspberry Pi

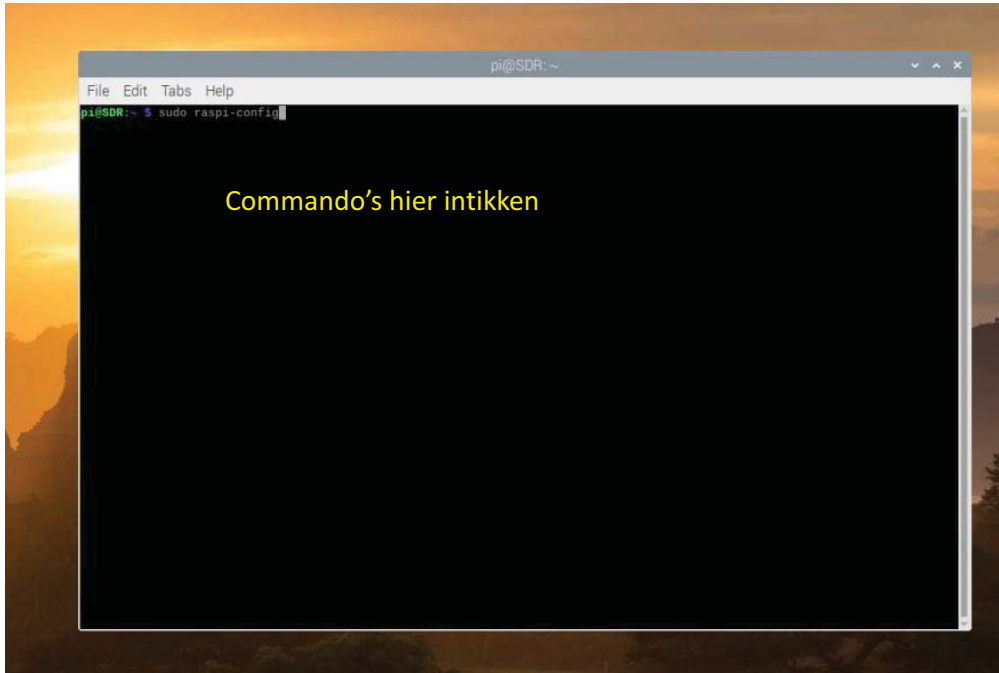


Kaart in Raspberry Pi steken maar nog geen USB RTL stick aansluiten

Installatie Raspberry Pi



Installatie Raspberry Pi



Installatie Raspberry Pi

```
sudo raspi-config
```

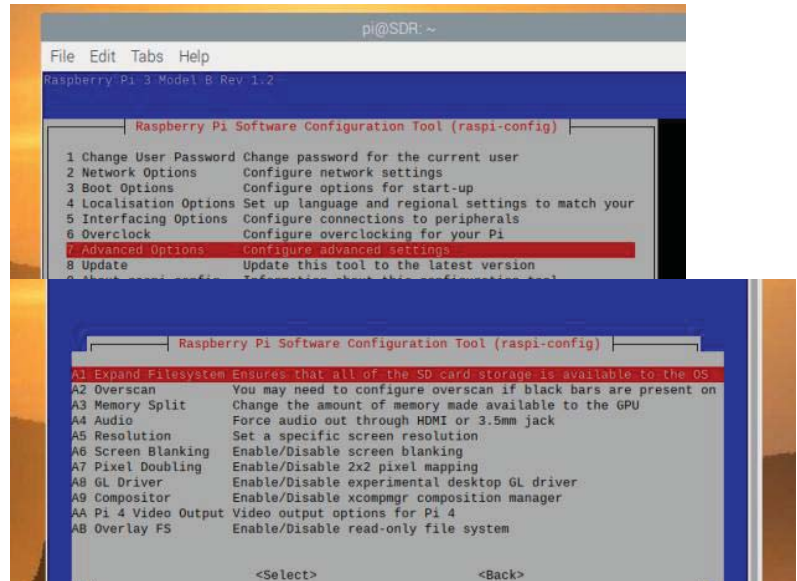
Choose option 1 to "Expand Filesystem" - Ensures that all of the SD card storage is available to the OS

Choose Finish & reboot

- `sudo apt-get update`
- `sudo apt-get upgrade`

Blacklist aanmaken:

- `cat <<EOF >no-rtl.conf`
- `blacklist dvb_usb_rtl28xxu`
- `blacklist rtl2832`
- `blacklist rtl2830`
- `EOF`
- `sudo mv no-rtl.conf /etc/modprobe.d/`



Installatie Raspberry Pi

Raspberry voorbereiden voor installatie

- `sudo apt-get install git-core`
- `sudo apt-get install git`
- `sudo apt-get install cmake`
- `sudo apt-get install libusb-1.0-0-dev`
- `sudo apt-get install build-essential`

Installatie Raspberry Pi

SDR software installeren:

```
git clone git://git.osmocom.org/rtl-sdr.git
```

```
cd rtl-sdr/
```

```
mkdir build
```

```
cd build
```

```
cmake ../ -DINSTALL_UDEV_RULES=ON
```

```
make
```

```
sudo make install
```

```
sudo ldconfig
```

```
cd ~
```

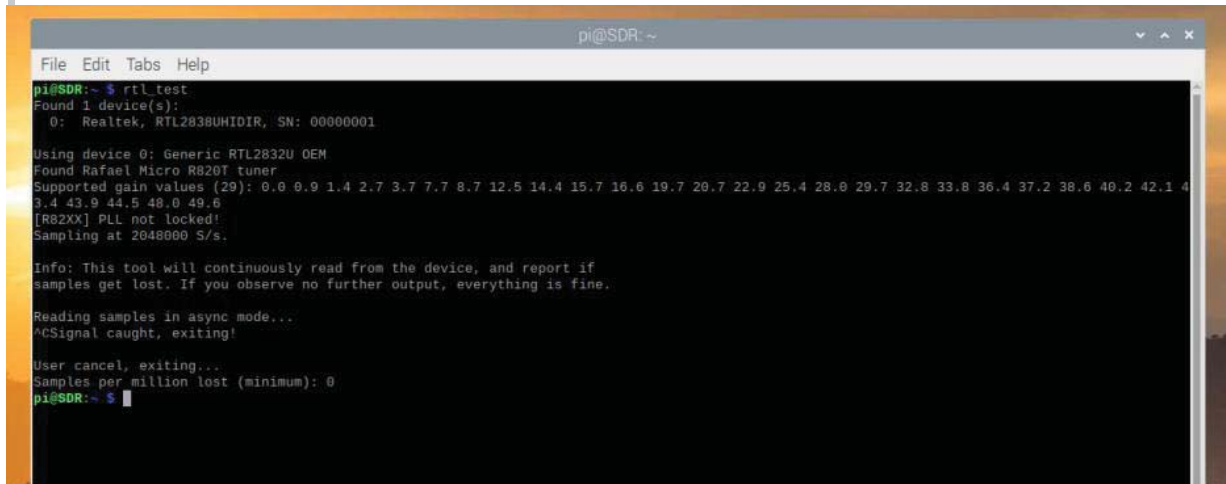
```
sudo cp ./rtl-sdr/rtl-sdr.rules /etc/udev/rules.d/
```

```
sudo reboot
```

Installatie Raspberry Pi

Afluiten, SDR aansluiten en opnieuw booten.

SDR software Testen:

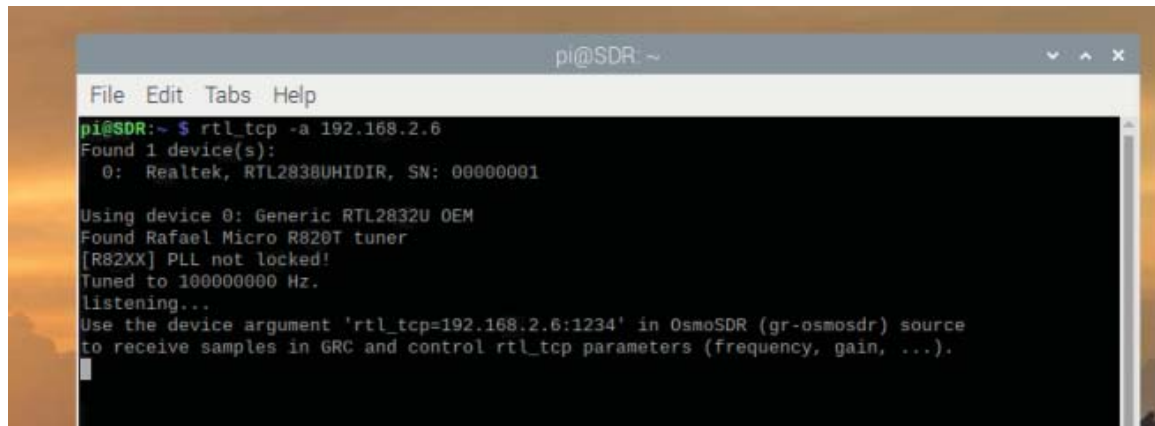


```
pi@SDR: ~  
File Edit Tabs Help  
pi@SDR:~$ rtl_test  
Found 1 device(s):  
 0: Realtek, RTL2838UHF/RTL2832U, SN: 00000001  
  
Using device 0: Generic RTL2832U OEM  
Found Rafael Micro R820T tuner  
Supported gain values (29): 0.0 0.9 1.4 2.7 3.7 7.7 8.7 12.5 14.4 15.7 16.6 19.7 20.7 22.9 25.4 28.0 29.7 32.8 33.8 36.4 37.2 38.6 40.2 42.1 4  
3.4 43.9 44.5 48.0 49.6  
[R82XX] PLL not locked!  
Sampling at 2048000 S/s.  
  
Info: This tool will continuously read from the device, and report if  
samples get lost. If you observe no further output, everything is fine.  
  
Reading samples in async mode...  
^CSignal caught, exiting!  
  
User cancel, exiting...  
Samples per million lost (minimum): 0  
pi@SDR:~$
```

Met Ctrl C onderbreken.

Installatie Raspberry Pi

Server opstarten met:
`rtl_tcp -a 192.168.2.6`
Eigen ip adres gebruiken



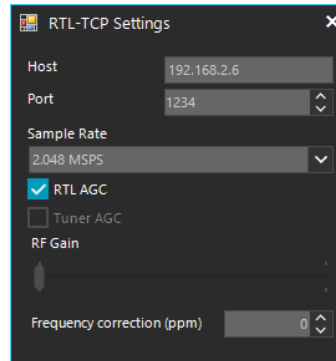
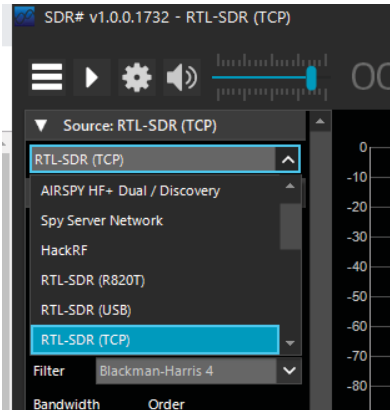
```
pi@SDR: ~  
File Edit Tabs Help  
pi@SDR:~$ rtl_tcp -a 192.168.2.6  
Found 1 device(s):  
  0: Realtek, RTL2838UHIDIR, SN: 00000001  
  
Using device 0: Generic RTL2832U OEM  
Found Rafael Micro R820T tuner  
[R82XX] PLL not locked!  
Tuned to 1000000000 Hz.  
listening...  
Use the device argument 'rtl_tcp=192.168.2.6:1234' in OsmoSDR (gr-osmosdr) source  
to receive samples in GRC and control rtl_tcp parameters (frequency, gain, ...).
```

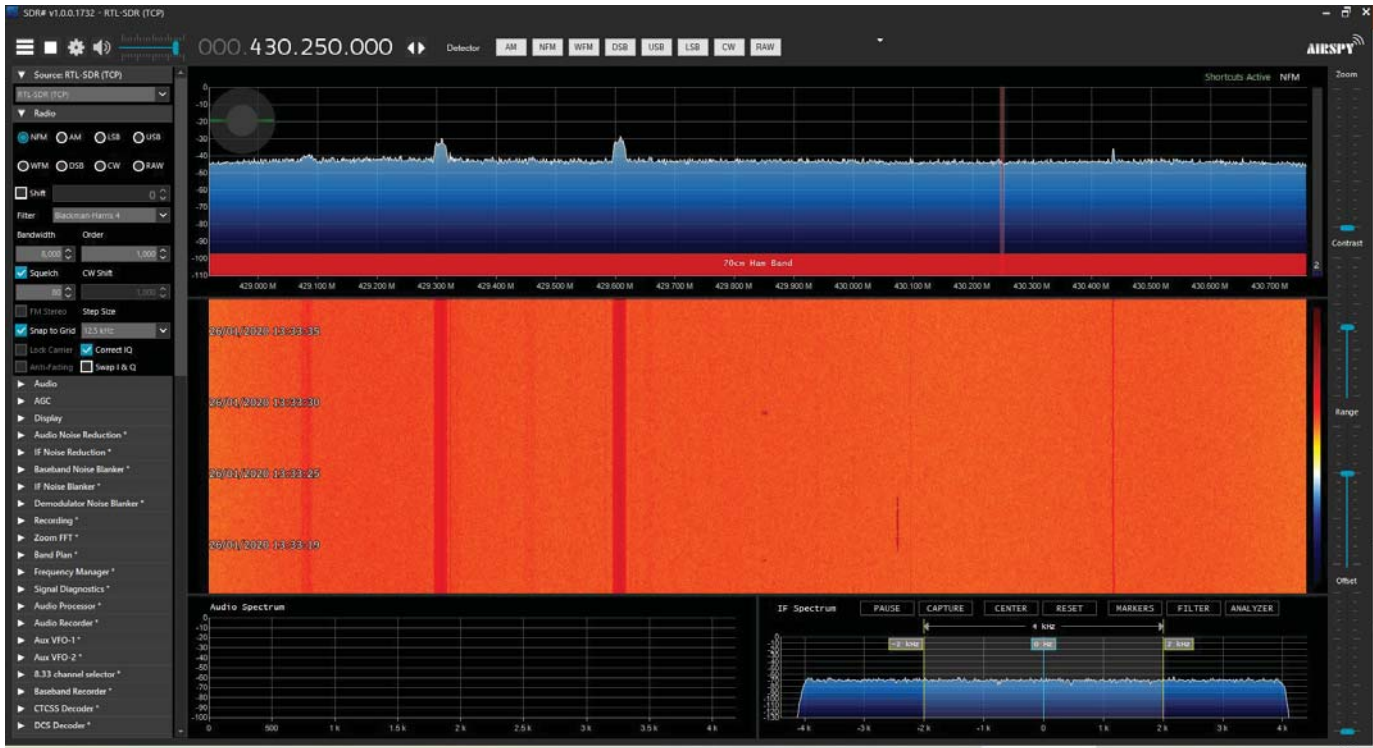
Installatie Raspberry Pi

Download op PC: SDR# van Airspy
<https://airspy.com/download/>
Community Package with Plugins




Instellen als:
RTL-SDR(TCP)





Installatie Raspberry Pi

Voor internet port forwarding gebruiken via je router.

▼ TCP And UDP: 60007~60007 

Protocol	TCP And UDP ▼
Start Port	60007
End Port	60007
Start Mapping Port	1234
End Mapping Port	1234

▼ SDR Server

Mode	IP Address ▼
LAN Host	192 . 168 . 2 . 6
App Group	<input type="radio"/> Games <input type="radio"/> Audio/Video <input type="radio"/> VPN <input type="radio"/> Apps <input checked="" type="radio"/> Servers
App Name	SDR Server ▼

Installatie Raspberry Pi

Vragen?

