Install WebWSPR on your Raspberry Pi 3B+

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March 2019

Some hints before you start

We have found that higher speed SD-cards work better. The cheapest class10 does not work well, we are doing some tests now on A1 and A2 type of cards from SanDisk. We are using heat sinks on the Raspberry Py 3B+. Introducing ram-disk for the temp files may make slower disks work ok. See the last page. To be tested.

Why use Ubuntu?

We think that using Ubuntu (or any other Debian based linux) for the main computer is very convenient as its command line has the same dialect as Raspbian. For burning the SD-cards we used a program called Etcher. It is very safe and easy to use. When starting you should make a directory for your files on the Ubuntu machine.

```
root@OH8GKP:~# cd WebWSPR\ 2.32
root@OH8GKP:~/WebWSPR 2.32# ls
2018-11-13-raspbian-stretch-lite.img  hamlib-3.3.tar.gz  WebWSPR-master.zip
2018-11-13-raspbian-stretch-lite.zip  ssh
root@OH8GKP:~/WebWSPR 2.32#
```

Start burning

Burn ”Raspbian Stretch Lite” onto your SD card. When the SD is still attached to you Ubuntu computer enable ssh by adding an empty file called ssh to the boot section. Then put the SD into the Raspberry Pi, start the Raspberry Pi, and find its IP-address on the network. Log in with ssh:
ssh pi@192.168.1.5,

- in our test case the address was 192.1.1.5 and is used as illustration here. When you have logged into the Pi, run: sudo apt-get update and sudo apt-get upgrade as usual.

Then further install: (commands for the Raspberry Pi in **green text**)
sudo apt-get install libgfortran3

Download and prepare

Download WebWSPR-master.zip and hamlib-3.3.tar.gz to your Ubuntu PC.

Copy from Ubuntu to Raspberry Pi: (Ubuntu commands in **red text**)

Command for copying WebWSPR:
scp WebWSPR-master.zip pi@192.168.1.5**:/home/pi/**

Command for copying hamlib:

scp hamlib-3.3.tar.gz pi@192.168.1.5**:/home/pi/**

During this you will have two terminal windows open, one is the ssh channel into Raspberry Pi, the other is your Ubuntu terminal window.

After the above commands are executed observe that the two files will now appear in the Raspberry Pi window using the **ls** command.

Unzip the hamlib-file:

tar -zxvf hamlib-3.3.tar.gz

Unzip the WebWSPR-master file:

unzip WebWSPR-master.zip

Rename the WebWSPR directory:

mv WebWSPR-master wspr2

cd /home/pi/wspr2

Prepare raspbian for WebWSPR:

sudo ./raspi_prepare

Compilation of code

Compiler settings:

```
export CXXFLAGS='-O2 -march=native -mtune=native'
export CFLAGS='-O2 -march=native -mtune=native'
```

Install hamlib:

```
cd /home/pi/hamlib-3.3
./configure --prefix=/usr/local --enable-static
make
sudo make install
sudo ldconfig
```

Finished hamlib!

Install WebWSPR:

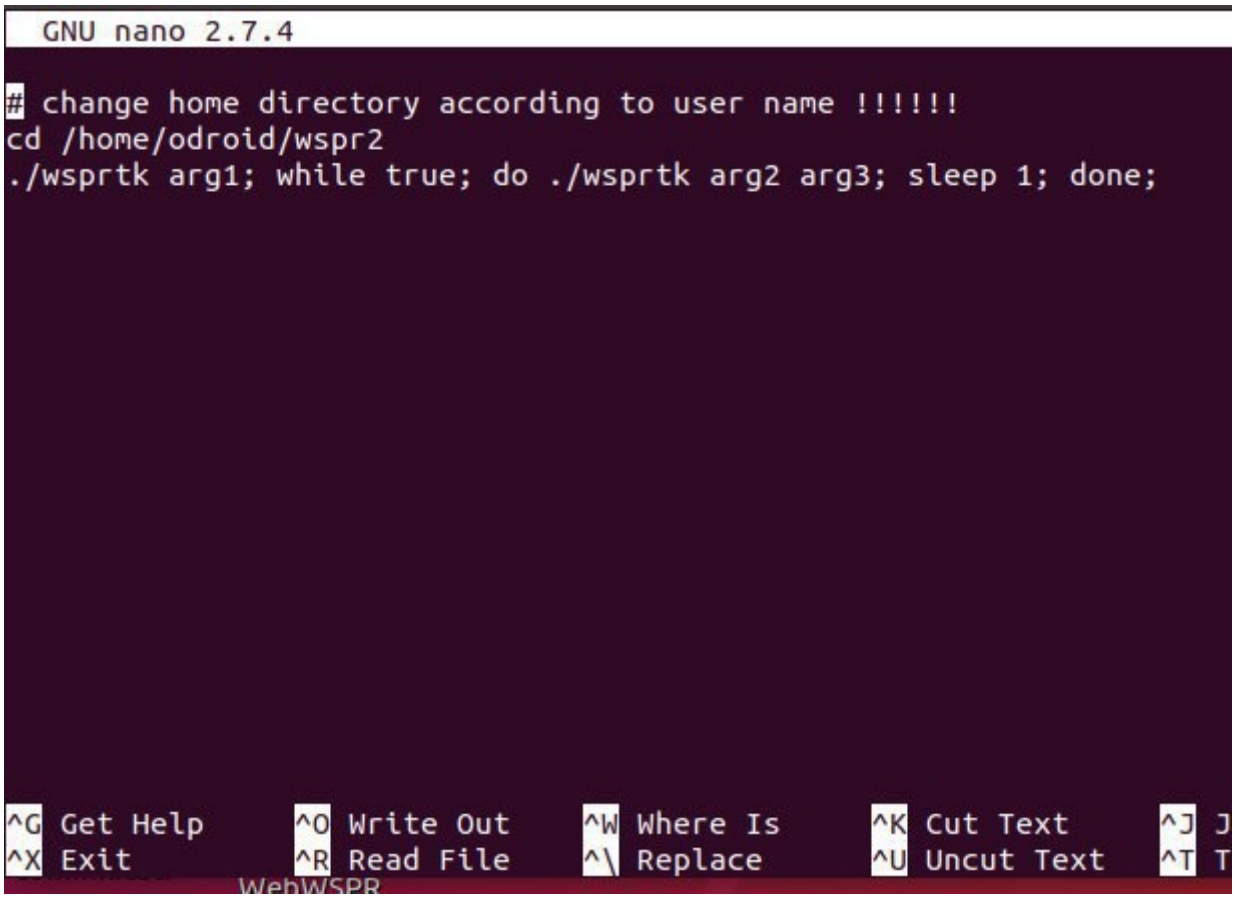
cd /home/pi/wspr2

make

Before you try to start it with:

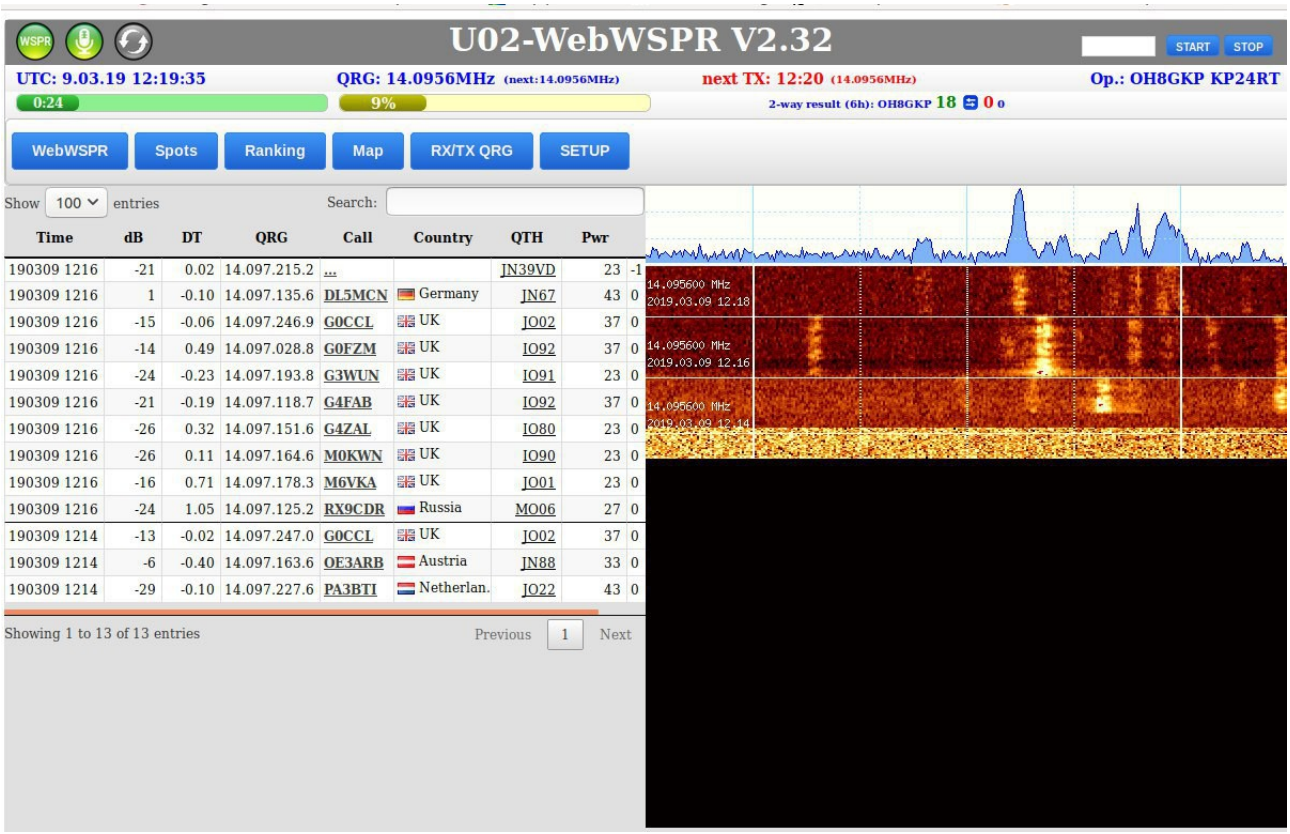
sudo ./startwspr

please remember to change from odroid to pi in the directory reference inside that file.



nano startwspr

Also use the alsamixer to select sound card and adjust volume level. This will help the WebWSPR to attach to the right channel.



Use ram-disk

To make SD live longer and probably happier!

sudo nano /etc/fstab

tmpfs /tmp tmpfs nodev,nosuid,size=25M,mode=1777 0 0

sudo mount -a

df (just to have a look on the disks)

sudo reboot

Ref. 1 http://www.kk5jy.net/fldigi-build/