



rtlsdr.org wiki

softwarelinux

Linux Software

Options for free software in Linux are:

- **GNURadio** [<http://gnuradio.org/redmine/projects/gnuradio/wiki>] is an excellent but unwieldy piece of software for use with RTLSDR. It's the only software for now that will receive analogue (FM, AM, sideband) and digital modes such as AP25, FSK and ADS-B. Be warned it's not very easy to drive but if you are canny you can use it to build your own software defined radio. Follow the build guide for your Linux system as the latest code is always the best to use.
- **GQRX** [<http://www.oz9aec.net/index.php/gnu-radio/gqr-x-sdr>] apparently does too.
- As **SDR#** [<http://www.sdrsharp.com>] is written in C# it works with Mono in Linux!

Have a look [here](http://sdr.osmocom.org/trac/wiki/rtl-sdr#KnownApps) [<http://sdr.osmocom.org/trac/wiki/rtl-sdr#KnownApps>] for a good summary of Linux utilities.

Getting SDR# Running in Linux

This has only been tested on a x64 Debian system using the combined current stable/testing repositories but the process should be similar in Ubuntu and Fedora/Centos.

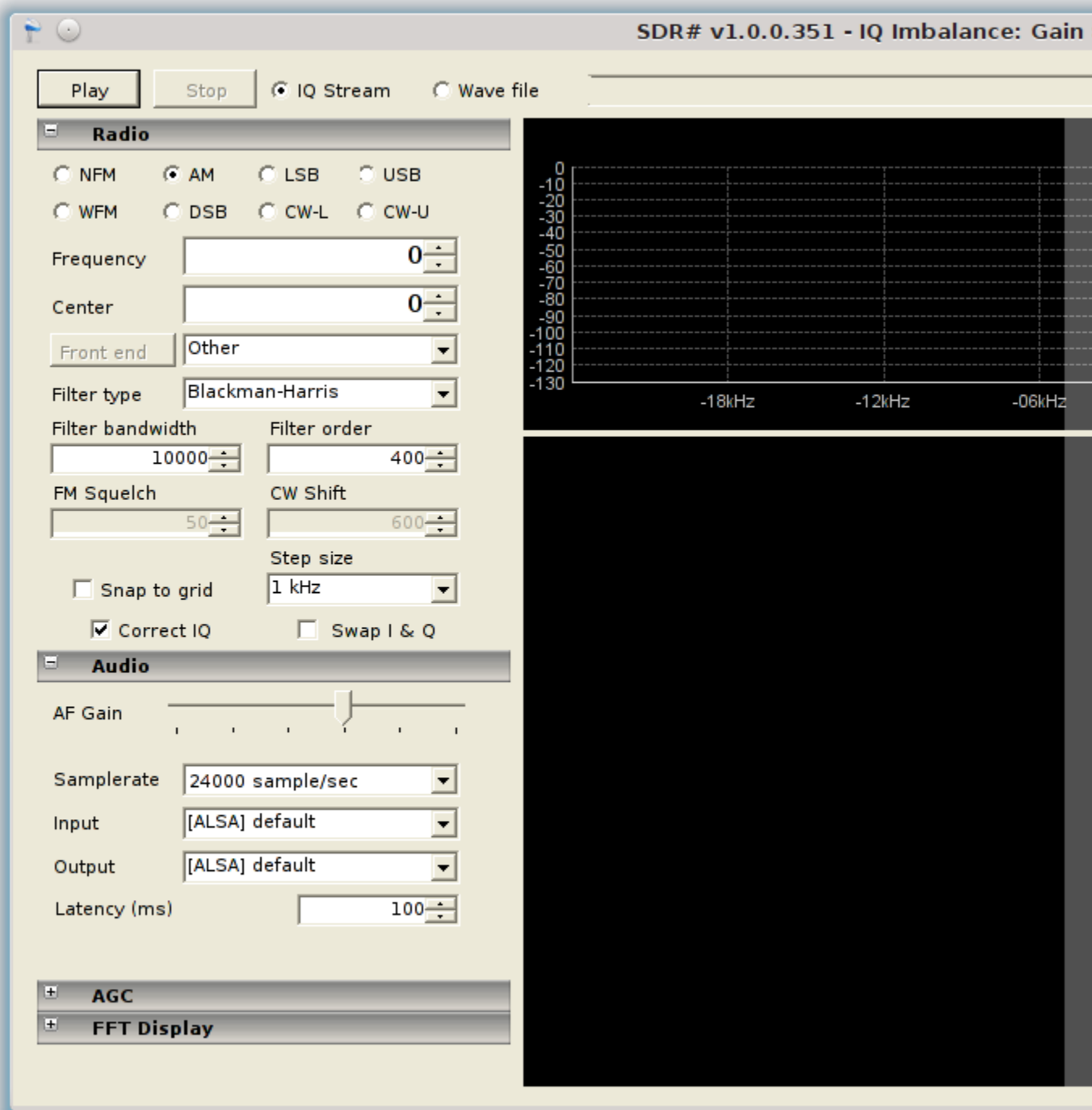
- Install `mono`. This is the Linux version of Microsoft's .NET.
`sudo apt-get install mono-complete`
- Install `libportaudio2` to make sure sound works.
`sudo apt-get install libportaudio2`
- Compile and install the latest RTLSDR. I used the cmake version as detailed [here](http://sdr.osmocom.org/trac/wiki/rtl-sdr#Buildingthesoftware) [<http://sdr.osmocom.org/trac/wiki/rtl-sdr#Buildingthesoftware>]. Don't forget to run `ldconfig` as root at the end to sort the newly installed libraries out.
- Download the latest development version of **SDR#** [<http://sdrsharp.com/index.php/downloads>] - it's a zip file.
- Make a new `SDRSharp` directory and unzip the contents of the zip file into this directory.
- `cd` into the new `SDRSharp` directory and type the following:

```
ln -s /usr/local/lib/librtlsdr.so librtlsdr.dll
ln -s /usr/lib/x86_64-linux-gnu/libportaudio.so.2 libportaudio.so
```

- If the last command doesn't work type `locate libportaudio.so.2` and try again with the new path. On 32 bit systems it will be in a different directory to what's shown here.
- Type `mono SDRSharp.exe` and you should see the following!
- If you get audio stutter (I do on my i7 CPU!) change the audio latency from 100ms to

200ms or more. It seems Mono doesn't run SDR# anywhere as efficiently as the native Windows CLR. I have tried `-optimize=all` and also the `-llvm` options and it doesn't seem to help. Any advice appreciated!

- Be sure to select **[ALSA] sysdefault** as audio output, otherwise you may experience audio stutter.



- If you download source code from the the [SVN \[https://www.assembla.com/code/sdrsharp/subversion/nodes\]](https://www.assembla.com/code/sdrsharp/subversion/nodes) tree the project/solution opens and builds just fine in Linux with MonoDevelop. Just make sure the above soft links exist in the Debug directory.

- Alternatively, you can build it directly from commandline with

```
xbuild /t:Rebuild /p:Configuration=Release SDRSharp.sln
```

RTLTCP

Have a look here [http://www.rtlsdr.org/softwarewindows#rtlsdr_tcp_and_sdr] for some words on using `rtl_tcp` and SDR#.

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