**Install rtl\_sdr (takes about 2 minutes):**

[sjrumsby@goomba](mailto:sjrumsby@goomba):~$ cd ~/Desktop/ELEC350

[sjrumsby@goomba](mailto:sjrumsby@goomba):~$ git clone git://git.osmocom.org/rtl-sdr.git

[sjrumsby@goomba](mailto:sjrumsby@goomba):~/Desktop/ELEC350rtl-sdr/$ cd rtl-sdr/

[sjrumsby@goomba](mailto:sjrumsby@goomba):~/Desktop/ELEC350rtl-sdr/$ mkdir build

[sjrumsby@goomba](mailto:sjrumsby@goomba):~/Desktop/ELEC350rtl-sdr/$ cd build

[sjrumsby@goomba](mailto:sjrumsby@goomba):~/Desktop/ELEC350rtl-sdr/build/$ cmake ../ -DINSTALL\_UDEV\_RULES=ON

[sjrumsby@goomba](mailto:sjrumsby@goomba):~/Desktop/ELEC350rtl-sdr/build/$ make

[sjrumsby@goomba](mailto:sjrumsby@goomba):~/Desktop/ELEC350rtl-sdr/build/$ sudo make install

[sjrumsby@goomba](mailto:sjrumsby@goomba):~/Desktop/ELEC350rtl-sdr/build/$ sudo ldconfig

**Install latest gnuradio (takes about 45 minutes):**

[sjrumsby@goomba](mailto:sjrumsby@goomba):~$ cd ~/Desktop/ELEC350

sjrumsby@goomba:~/Desktop/ELEC350$ git clone git://git.gnuradio.org/gnuradio

sjrumsby@goomba:~/Desktop/ELEC350$ mkdir gnuradio/build

sjrumsby@goomba:~/Desktop/ELEC350$ cd gnuradio/build

sjrumsby@goomba:~/Desktop/ELEC350/gnuradio/build$ cmake ../

sjrumsby@goomba:~/Desktop/ELEC350/gnuradio/build$ make && make test

sjrumsby@goomba:~/Desktop/ELEC350/gnuradio/build$ sudo make install

sjrumsby@goomba:~/Desktop/ELEC350/gnuradio/build$ sudo ldconfig

**Using rtl\_fm**

First install sox: sudo apt-get install sox (or run using aplay default)

Then liten to some FM signals:

sjrumsby@goomba:~$ rtl\_fm -f 100.3M -N -s 200k -o 4 -A fast -r 32k -l 0 -D| play -r 32000 -t s16 -c 1 -

A lot of those are redundant, or optimized for speed. ('-A fast', '-o 4', '-l 0 -D' specifically) . You can make it work with just:

sjrumsby@goomba:~$ rtl\_fm -f 100.3M -W | play -r 32k -t s16 -

Or using aplay:

sjrumsby@goomba:~$ rtl\_fm -f 100.3M -W | aplay -r 32k -f S16\_LE