QO-100 Web SDR for Linux

Installation

DOWNLOAD

You start any Linux computer (tested are Raspberry-PI, Odroid, Orange-PI as well as desktop computers with Debian compatible OS like: Ubuntu, Mint...). The WebSDR should run on almost all Debian compatible OSs. On non-Debian OSs (Opensuse, Fedora...) it usually runs as well, but the install scripts may have to be adapted, because libraries may have different names.

Then open a terminal and enter the following commands:

```
git clone https://github.com/dj0abr/Q0-100_SSB-WebSDR_DATV-WebSpectrum
cd Q0-100_SSB-WebSDR_DATV-WebSpectrum
```

the complete WebSDR is now on the hard disk which can be displayed with this command:

ls

On the monitor it now looks something like this:

kurt@server:~/tes	t/QO-100_SSB-WebSD	R_DATV-WebSpectrum\$ ls		
antialiasing.c	color.h	Makefile_extudp	qo100websdr_SDRplay_pc64	setup.h
antialiasing.h	downmixer.c	Makefile_playsdr	README.md	ssbdemod.c
audio bandpass.c	downmixer.h	Makefile playsdr WB	rtlsdr.c	ssbdemod.h
audio bandpass.h	es	Makefile playsdr WB ams	rtlsdr.h	ssbfft.c
audio.c	es arm32	Makefile pluto	sdrplay api callback.h	ssbfft.h
audio.h	extApp.c	Makefile pluto ams	sdrplay_api_control.h	test.sdrig
beaconlock.c	fifo.c	Makefile pluto WB	sdrplay_api_dev.h	timing.c
beaconlock.h	fifo.h	Makefile pluto WB ams	sdrplay_api.h	timing.h
build_EXTUDP	fir_table_calc.c	Makefile_rtlsdr	sdrplay_api_rspla.h	udp
build_PLUT0	fir_table_calc.h	minitiouner.c	sdrplay_api_rsp2.h	uhr_mini_24h.png
build_PLUTO_WB	fssb_wisom	minitiouner.h	sdrplay_api_rspDuo.h	wb
build_RTLSDR	hilbert90.c	plutodrv.c	sdrplay_api_rspDx.h	wb_fft.c
build_SDRplay	hilbert90.h	plutodrv.h	sdrplay_api_rx_channel.h	wb_fft.c_orig
<pre>build_SDRplay_WB</pre>	html	prepare_ubuntu	sdrplay_api_tuner.h	wb_fft.h
cat.c	identifySerUSB.c	prepare_ubuntu_pluto	sdrplay.c	wb_wisom
cat.h	identifySerUSB.h	qo100websdr.c	sdrplay.h	websocket
civ.c	libiio	qo100websdr.h	setqrg.c	wf_univ.c
civ.h	LICENSE	qo100websdr_RTLSDR_arm32	setqrg.h	wf_univ.h
color.c	Makefile	qo100websdr_SDRplay_arm32	setup.c	
kurt@server:~/test/QO-100_SSB-WebSDR_DATV-WebSpectrum\$				

Preparingthecomputer

First, various libraries need to be installed. There are two utilities that do this work:

- prepare_ubuntu (if you work with the RTL-SDR stick or the SDRplay).
- prepare_ubuntu_pluto (if you work with the Adalm Pluto)

so you start one of these two programs:

```
./prepare_ubuntu
or
```

./prepare_ubuntu_pluto

additional software is now installed, which is done quickly.

SDRplay

For the SDRplay you have to install the driver from the SDRplay website. The driver can be found here https://www.sdrplay.com/downloads/

Choose the right driver for your hardware, download it (API) and install it. Then proceed as described here.

Creating the WebSDRs

ready-made programs are also available for this purpose, which create a WebSDR that fits the SDR receiver used. Available are:

RTL-SDR Stick (and compatible) ... for receiving the narrow band SSB transponder

Pluto or SDRplay ... for receiving the Narrow-Band SSB transponder as well as for the Wide-Band DATV transponder

due to the limited bandwidth the RTL stick is not suitable for the DATV transponder. However, it works very well for SSB.

according to the used SDR receiver one enters the following commands:

to create the WebSDR for the SSB transponder.

./build_RTLSDR
or
./build_PLUT0
or
./build_SDRplay

to build the WebSDR for the DATV transponder.

./build_PLUT0_WB
or
./build_SDRplay_WB

after a few seconds the WebSDR is ready, the finished program has the name "qo100websdr".

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