

ColibriDDC ExtIO.dll



Using ColibriDDC receiver
with the third party software

Introduction

ColibriDDC receiver has a large number of opportunities, which can be fully unleashed by ExpertSDR2 software, but for variety of reasons it is sometimes necessary to use the receiver with the third party software. Some standard for controlling the devices (ExtIO.dll library) has appeared lately. With the help of it the manufacturers of the SDR receivers can connect their devices to the free software. A special version of ExtIO library was specially developed for the Users of ColibriDDC receiver to be able to use the third party software to operate their receiver. ExtIO library interface description can be found at the web-site www.hdsdr.de.

Such programs as WinRad, HDSDR, SDR#, Studio1, etc. can be used with a help of this library.

Getting started with HSDR software

1. Download the archive with ExtIO_ColibriDDC.zip library from the manufacturers web-site.
2. Unzip the archive's contents to the folder with the installed HSDR software (figure 1)

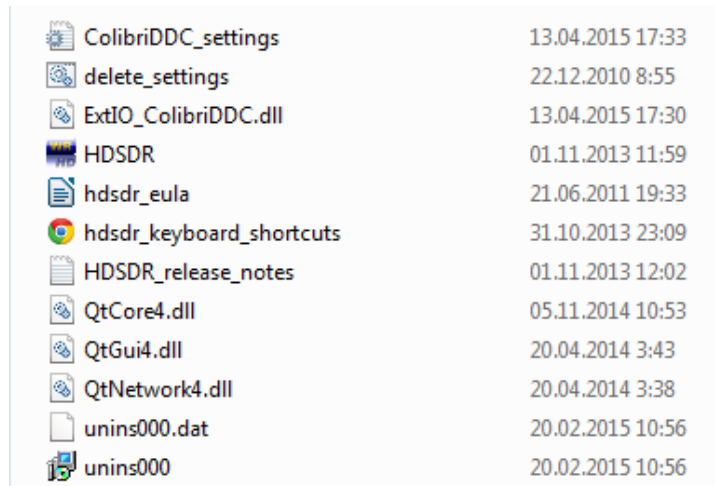


Figure 1 — The contents of the archive was added to the folder with HSDR software

3. Launch the HSDR software by the double mouse click on HSDR.exe
4. After the program has started choose the ColibriDDC receiver as the used device (figure 2). For that in the low left corner of the window press Options (1) ->Select Input (2)->Receiver ColibriDDC (3).

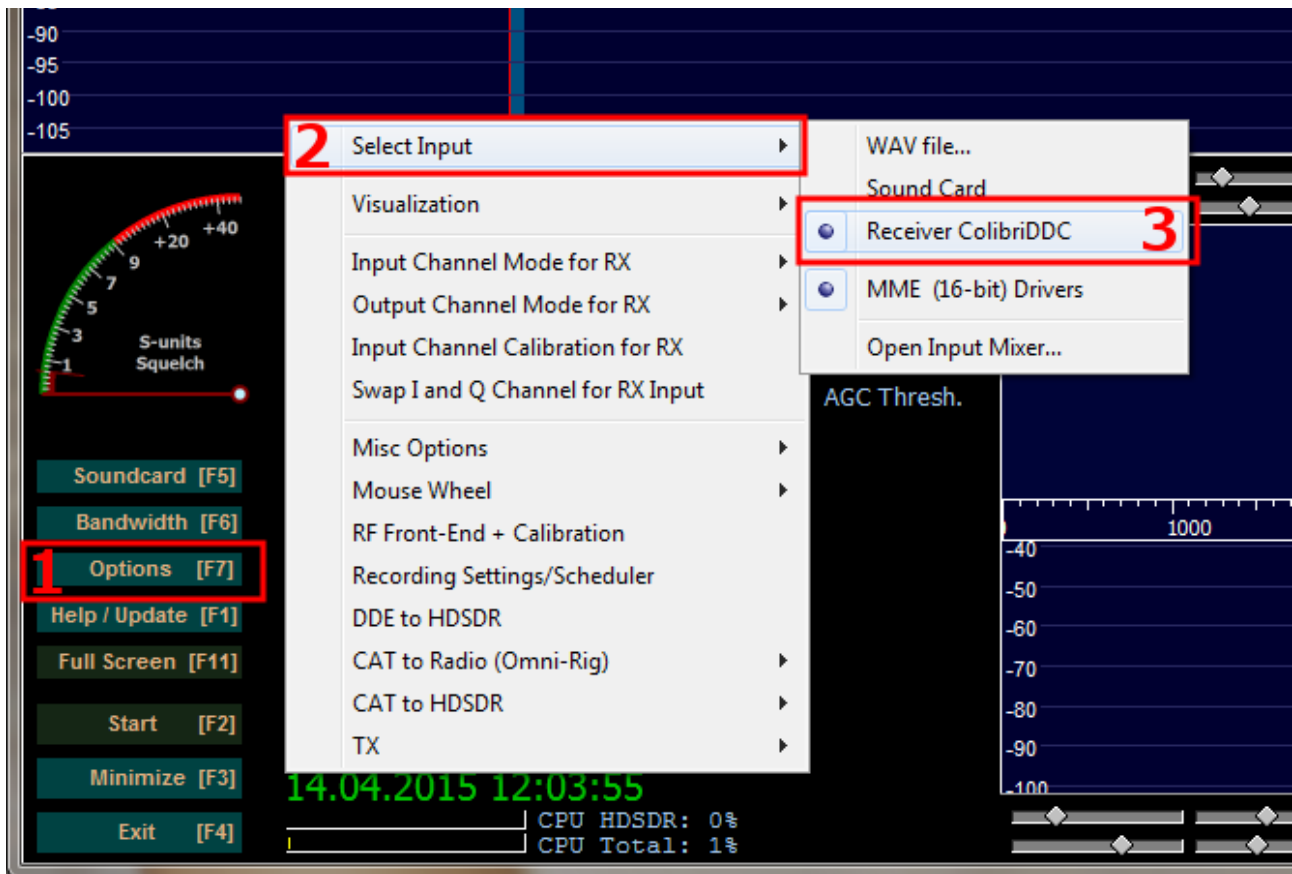


Figure 2 — Selection the ColibriDDC receiver for work with HSDR software.

5. Connect the ColibriDDC receiver to PC and turn on the power.
6. Check that HSDR has found the ColibriDDC receiver. For that open the Settings window by pressing the button **ExtIO** in HSDR software (figure 3).

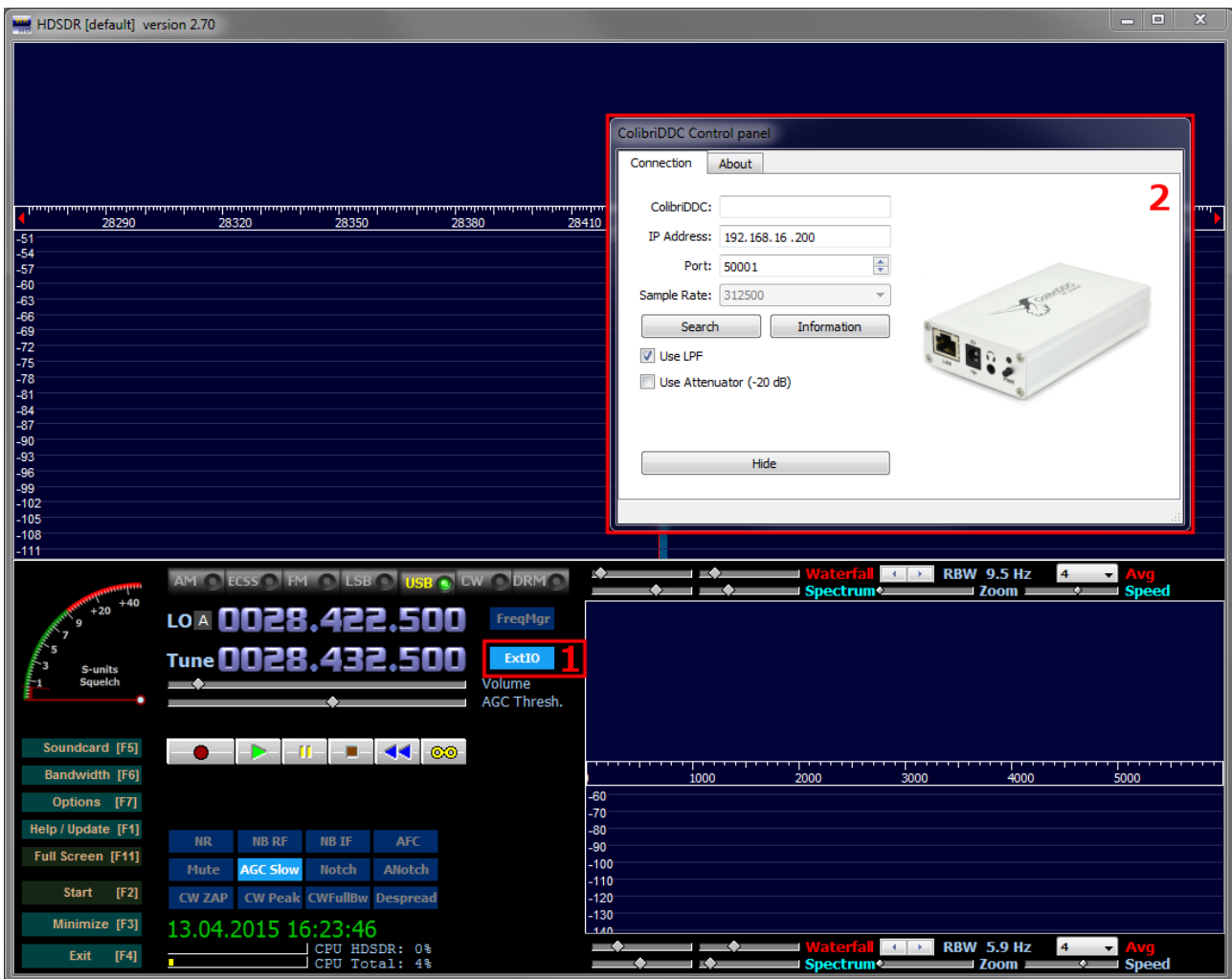


Figure 3 — ColibriDDC receiver's settings window in HSDR software.

7. In the appeared window press the button **Search** (1), as shown at the figure 4. The program will search all the accessible receivers in the network, after that the window (2) appears. From the given list choose the necessary ColibriDDC receiver and press the button **Use** (3). After that in the ColibriDDC receiver's Settings window appear the serial number, IP address and UDP port. When the settings are made the window can be closed by the double click on the button **ExtIO** in HSDR software (figure 3) or press the button **Hide** in the ColibriDDC receiver's Settings window.

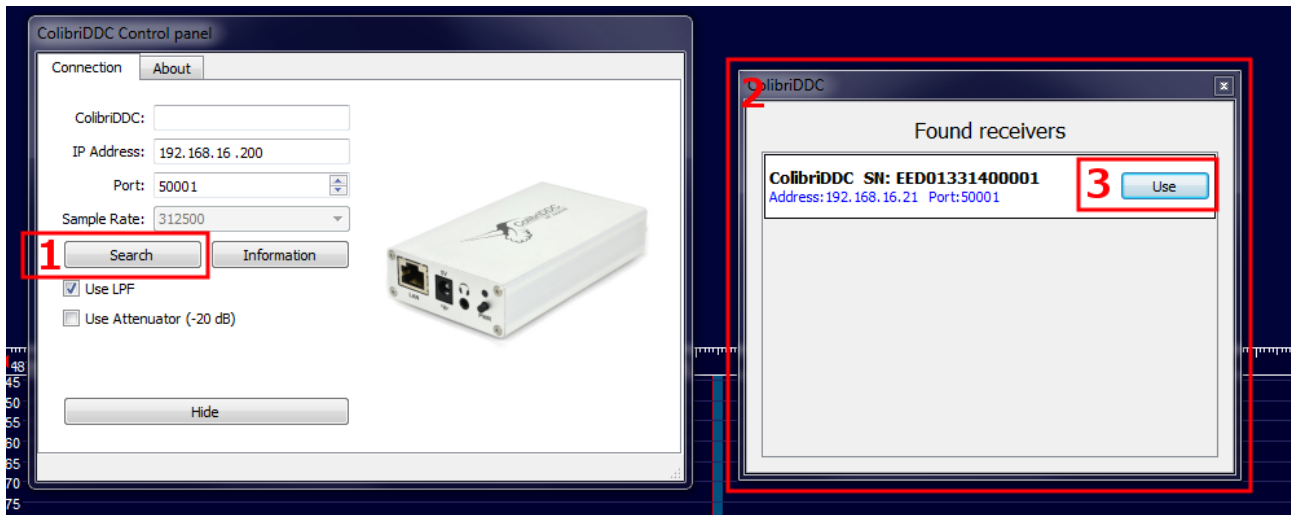


Figure 4 — Selection of the necessary ColibriDDC receiver from the list of accessible.

8. In the low left corner of HSDR software press the button **Start**.

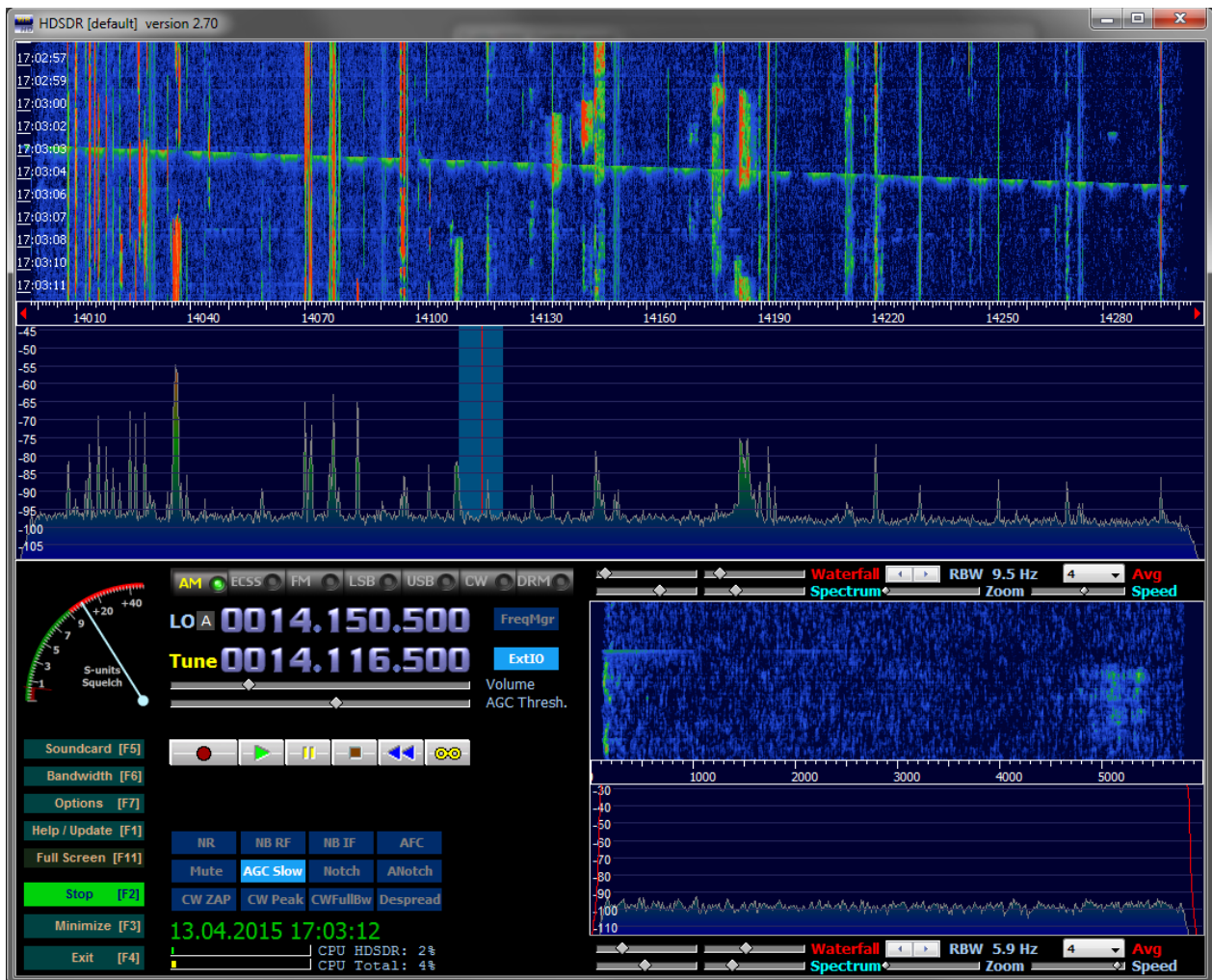


Figure 5 — HSDR software using ColibriDDC receiver.

If everything was done correctly in the appeared program window would appear the spectrum and at the PC's sound card appear the sound of the receiving station (figure 5).

***Note!** ExtIO library doesn't allow to use embedded audio DAC of the ColibriDDC receiver to output the sound. The sound can be output by the software only to the PC's sound card.*

While using ExtIO.dll ColibriDDC receiver supports only 3 sampling frequencies: 78 kHz, 156 kHz, 312 kHz.

By default the maximum sampling frequency is set. To change this parameter it is necessary to close the HDSDR software and open the initialization file ColibriDDC_settings.ini (file is placed at the folder with the installed program HDSDR) in the text editor and change the corresponding value in the field **SampleRateID** (figure 6):

- 0 — 78 kHz;
- 1 — 156 kHz;
- 2 — 312 kHz.

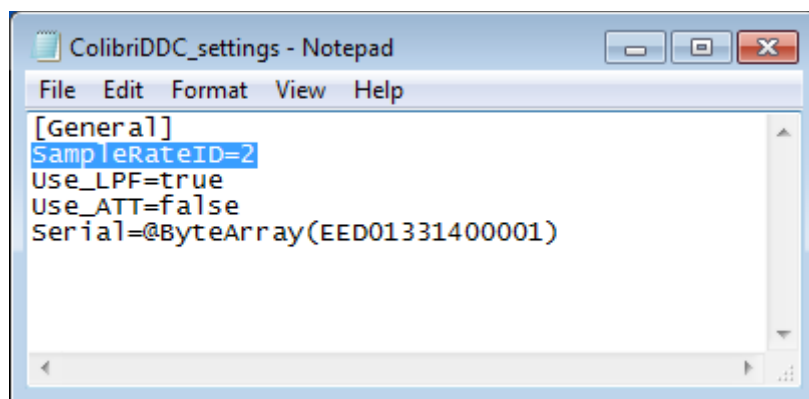


Figure 6 — Changing the sampling frequency in file ColibriDDC_settings.ini.

Now the HDSDR software can be started and work with the intended sampling

frequency.

It should be also mentioned that ExtIO.dll allows to control the embedded -20dB attenuator (2) and switch on/off the LPF for HF band with the cut-off frequency 55 MHz in the settings window (figure 7).

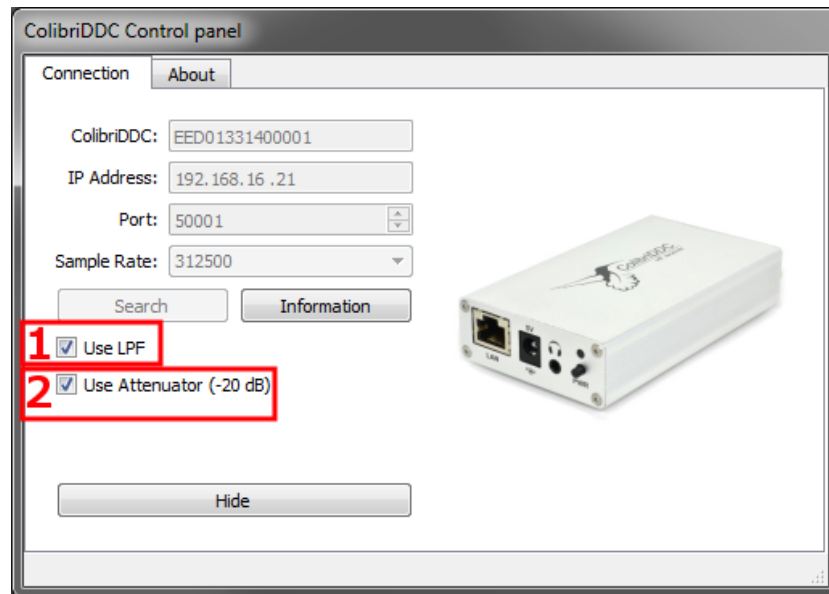


Figure 7 — ExtIO main settings window of ColibriDDC receiver.

Getting started with SDR# software

The principle of launching the SDR# software with the ColibriDDC receiver is similar to the previous clause. Copy the contents of the archive to the folder with the installed SDR# software.

After starting the program (figure 8) at the list of the devices (1) choose necessary ColibriDDC receiver. Further open the ColibriDDC receiver's settings window (2) and make the search of the devices, as it was written in the previous clause (see figure 4).

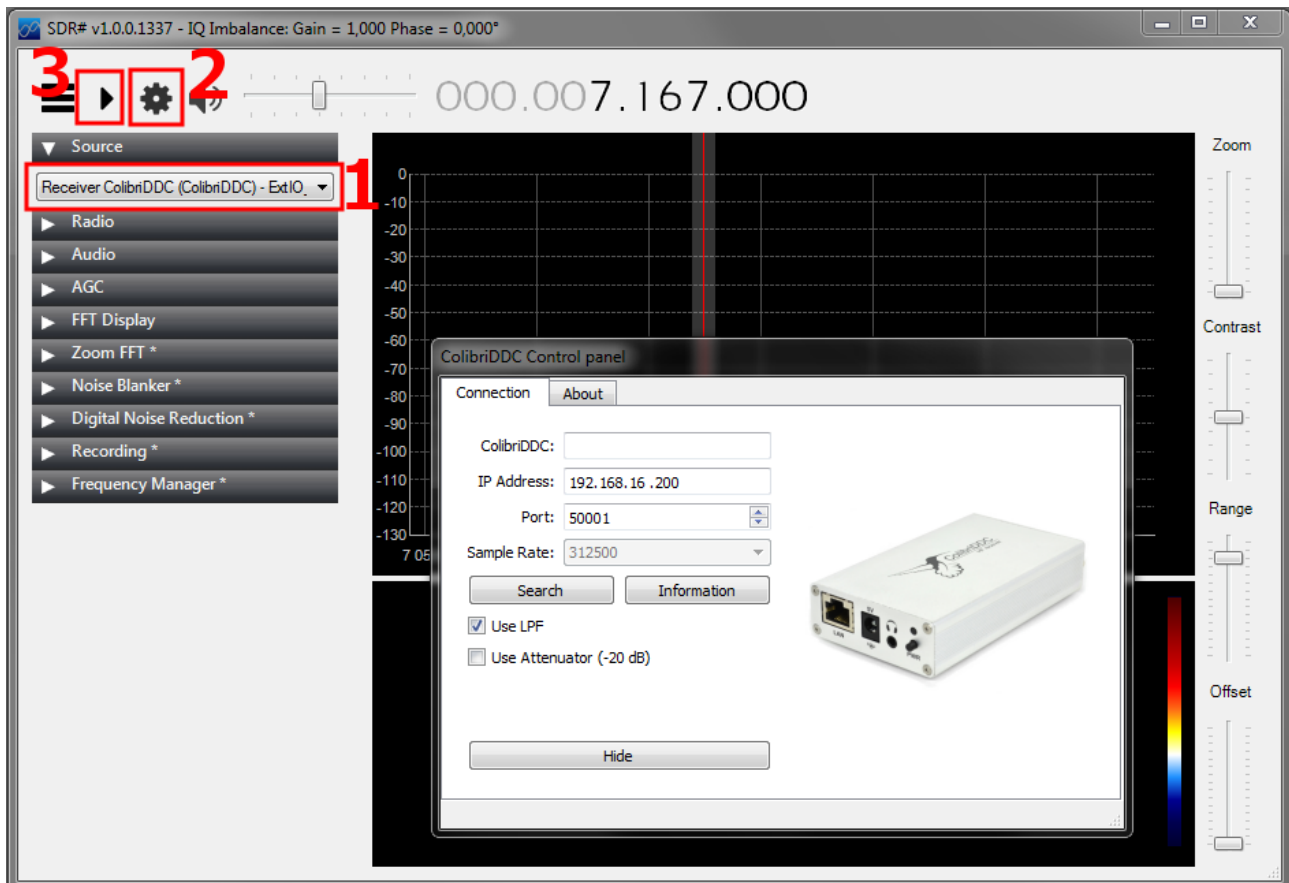


Figure 8 — Selection of the ColibriDDC receiver for work with HSDR software.

When all the settings are made press the button **Start** (3). After that the spectrum of the radio air will appear and the receiving station will be heard in the PC's sound card.

Conclusion

This document describes the opportunity to use the ColibriDDC receiver with the third party software with a help of ExtIO library. Now all Users of ColibriDDC receiver have an opportunity to use it with the third party software.

Links:

- Expert Electronics web site www.eesdr.com
- HDSDR software web site www.hdsdr.de
- SDR# software web site <http://sdrsharp.com/>