Scanning with SDR#

1. Follow the instructions in the Set-Up document to install SDR#.

2. Plug in the dongle.

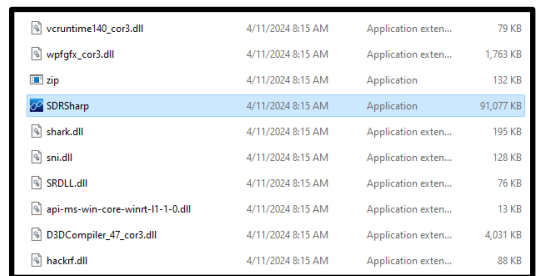3. To start SDR# simply locate the SDRSharp.exe file (Figure 1) and double-click on it.

vcruntime140_cor3.dll	4/11/2024 8:15 AM	Application exten...	79 KB
wpfgfx_cor3.dll	4/11/2024 8:15 AM	Application exten...	1,763 KB
zip	4/11/2024 8:15 AM	Application	132 KB
SDRSharp	4/11/2024 8:15 AM	Application	91,077 KB
shark.dll	4/11/2024 8:15 AM	Application exten...	195 KB
sni.dll	4/11/2024 8:15 AM	Application exten...	128 KB
SRDLL.dll	4/11/2024 8:15 AM	Application exten...	76 KB
api-ms-win-core-winrt-l1-1-0.dll	4/11/2024 8:15 AM	Application exten...	13 KB
D3DCompiler_47_cor3.dll	4/11/2024 8:15 AM	Application exten...	4,031 KB
hackrf.dll	4/11/2024 8:15 AM	Application exten...	88 KB

Figure 1: The SDR# application is highlighted.

4. You should be able to press the play button and start decoding radio frequencies immediately.

5. However, you may get the error "No device detected". Assuming that your dongle is in the correct USB drive you need to reset the program.

   a. In the menu at the top click on the three horizontal lines to open the menu.
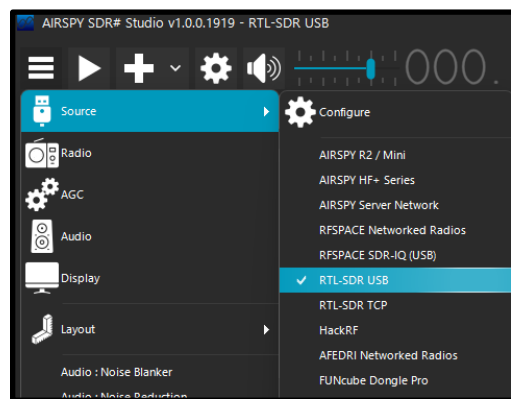
   b. Hover over Source and select RTL-SDR USB (Figure 2).

Figure 2: The Source and RTL-SDR USB are highlighted.

   c. Click on the gear.
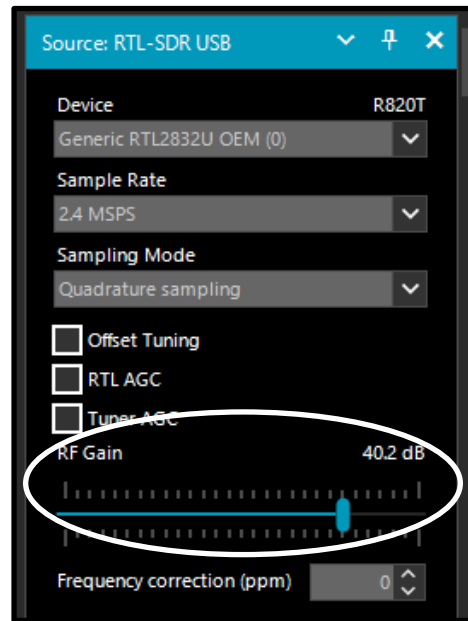
d. Set the gain to approximately 40 dB (Figure 3).

Figure 3: The RF gain slider is circled in white.

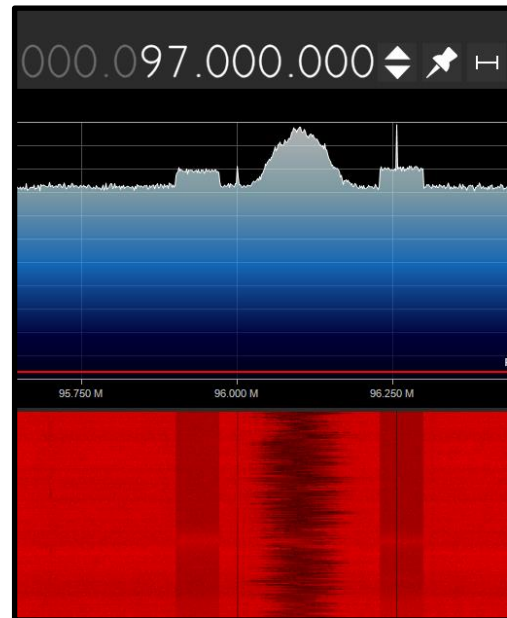6. Now you should be able to click on play and see a waterfall (Figure 4).

Figure 4: The waterfall for a signal at 97 MHz.

7. It is suggested that you use this guide to familiarize yourself with the user interface.

Reception with SDR#

If you received one of the Nooelec dongles from SpectrumX the range is 100 kHz to 1.75 GHz. If you bought your own dongle check the manufacturer's specifications for the frequency range. You should be able to receive signals within this range depending on several conditions:

1. Your location. Are you indoors or outside? You will typically get stronger signals if you are outside. However, it is possible to get a good signal inside if you are by a window.

2. How high up your antenna is in the room. The closer toward the ceiling your antenna is the better the signal.

3. The topography of your area. If you are in a heavily wooded area or in an area with uneven terrain then it may be difficult to get a signal.

4. Your antenna. Different signals need different-sized antennas. If you aren't picking up a certain signal with your existing antenna build a new one. Just use any internet search engine to search for the signal you want and the type of antenna needed.

What can you scan with SDR#

There are several different signals you can pick up with your RTL-SDR if you have the SDR# settings correct and the right antenna. Please see use [this user guide](#) to familiarize yourself with the controls on SDR#.

1. Two-way radio communications and weather radio announcements. Make sure SDR# is set to the NFM mode.

2. FM radio stations. Be sure SDR# is set to the WFM mode.

3. AM radio stations and air traffic control. Be sure SDR# is set to the AM mode. Please be aware this will require you to construct a long wire antenna and may require the purchase of a converter box.