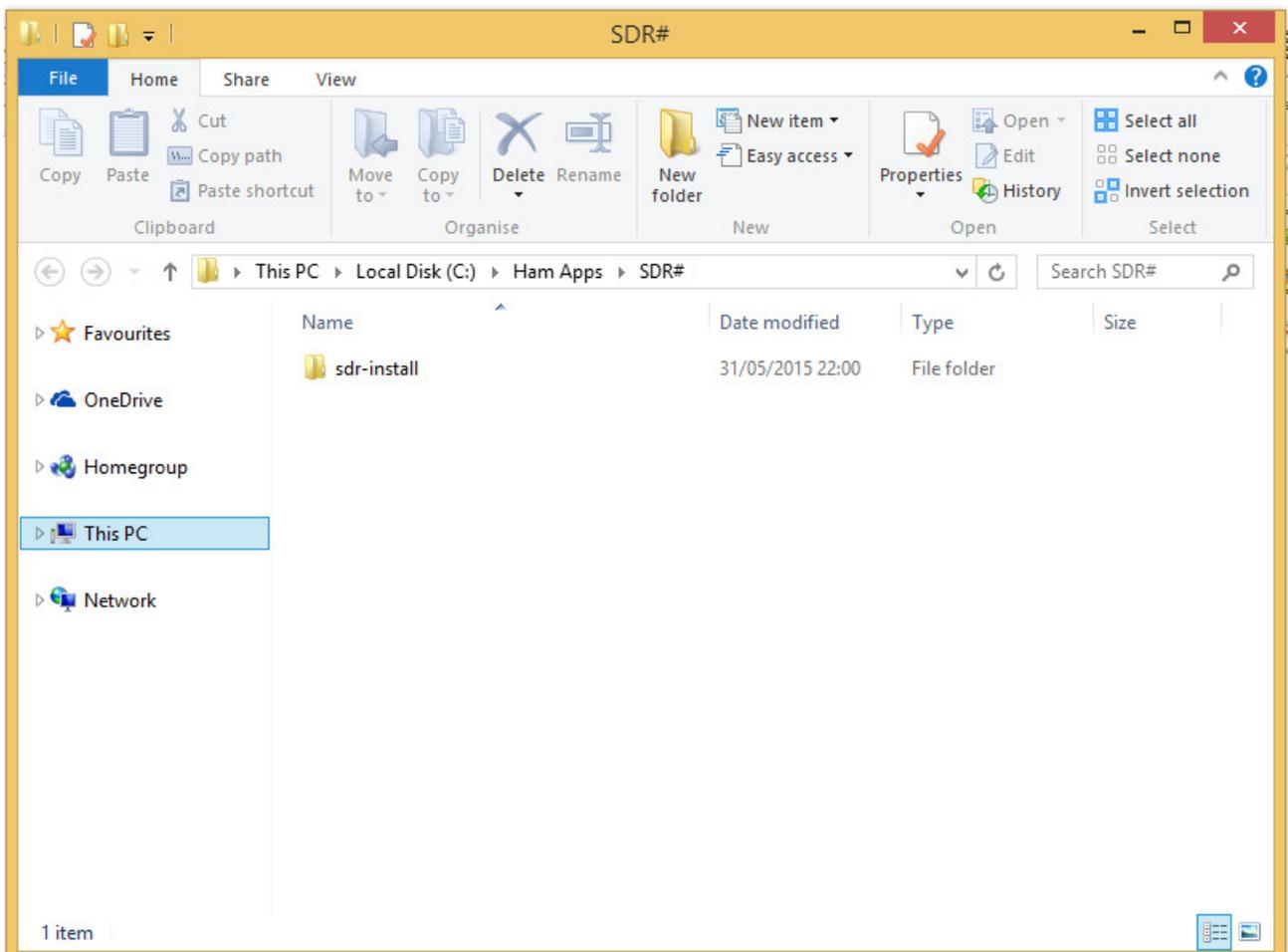


How Set up a Simple SDR – Software Defined Radio using a DVB-T Dongle.

Please note that you don't need an Amateur Radio Licence to try this project, however you should check you local laws as they may prohibit listening to certain bands

1. Purchase an RTL-SDR dongle. The cheapest and best for most applications is the R820T dongle. For this Demo I am using a Terratec Dongle purchased from Ebay. However I find the best ones to be the Noolec <http://www.nooelec.com/store/sdr/nesdr-mini-rtl2832-r820t.html>

2 Go to the SDR Sharp web site and down load SDR# Software <http://www.sdrsharp.com/#sdrsharp> and extract the software to a folder of your choice.

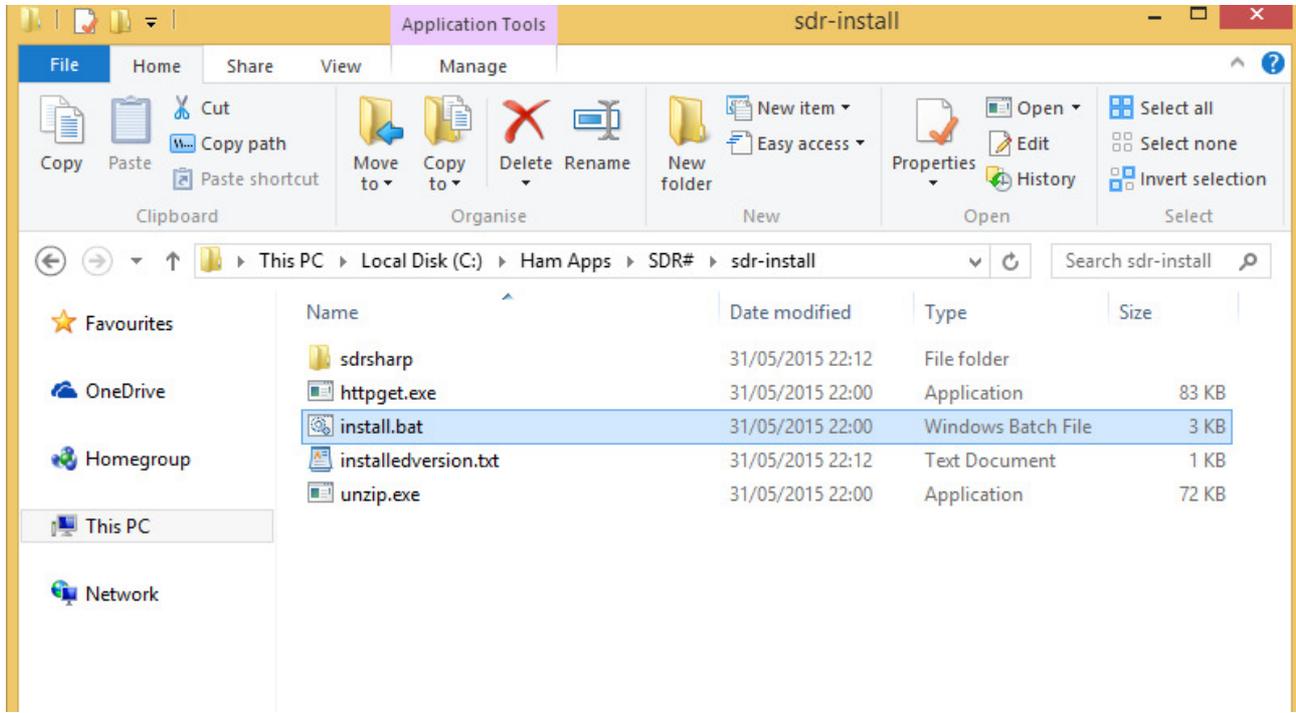


Here I have downloaded it to [C:\Ham Apps\ SDR#](C:\Ham Apps\SDR#)

3 Go to the folder where you installed SDRSharp and double click on install.bat . This will start a cmd prompt that will download SDRSharp (check to see it works) and all the files required to

make SDRSharp work with RTL-SDR. Everything will be placed into a new folder(that you created above) within the sdr-install folder called “sdrsharp”. The command prompt will ask you to Press any key to continue and then automatically close once you have done this.

My Directory now looks like this.



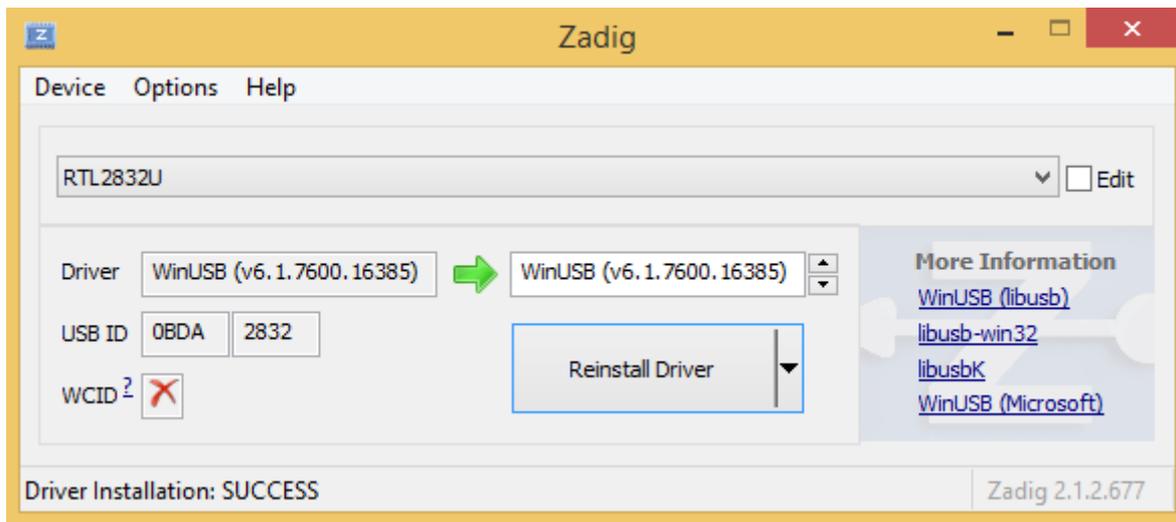
4 Insert your dongle and **do not** install any of the software that it came with (if any), but ensure you let plug and play finish attempting to install it. If you’ve already installed the software drivers that came on the CD bundled with some dongles, you must uninstall them first.

5. Change Directory into the newly created sdrsharp folder. Find the file zadig.exe. Right click this file and select “Run as administrator” if using Windows Vista/7/8.

6 Once In Zadig, go to “Options->List All Devices” and make sure this option is checked.

7. In the drop down list select “**Bulk-In, Interface (Interface 0)**” . Ensure that WinUSB is selected in the box next to where it says Driver. (Note on some PCs / Laptops you may see something like RTL2832UHIDIR or RTL2832U instead of the bulk in interface. This is also a valid/good selection). (Please do not select “USB Receiver (Interface 0)” this is important).

Once Installed it should look something like this.

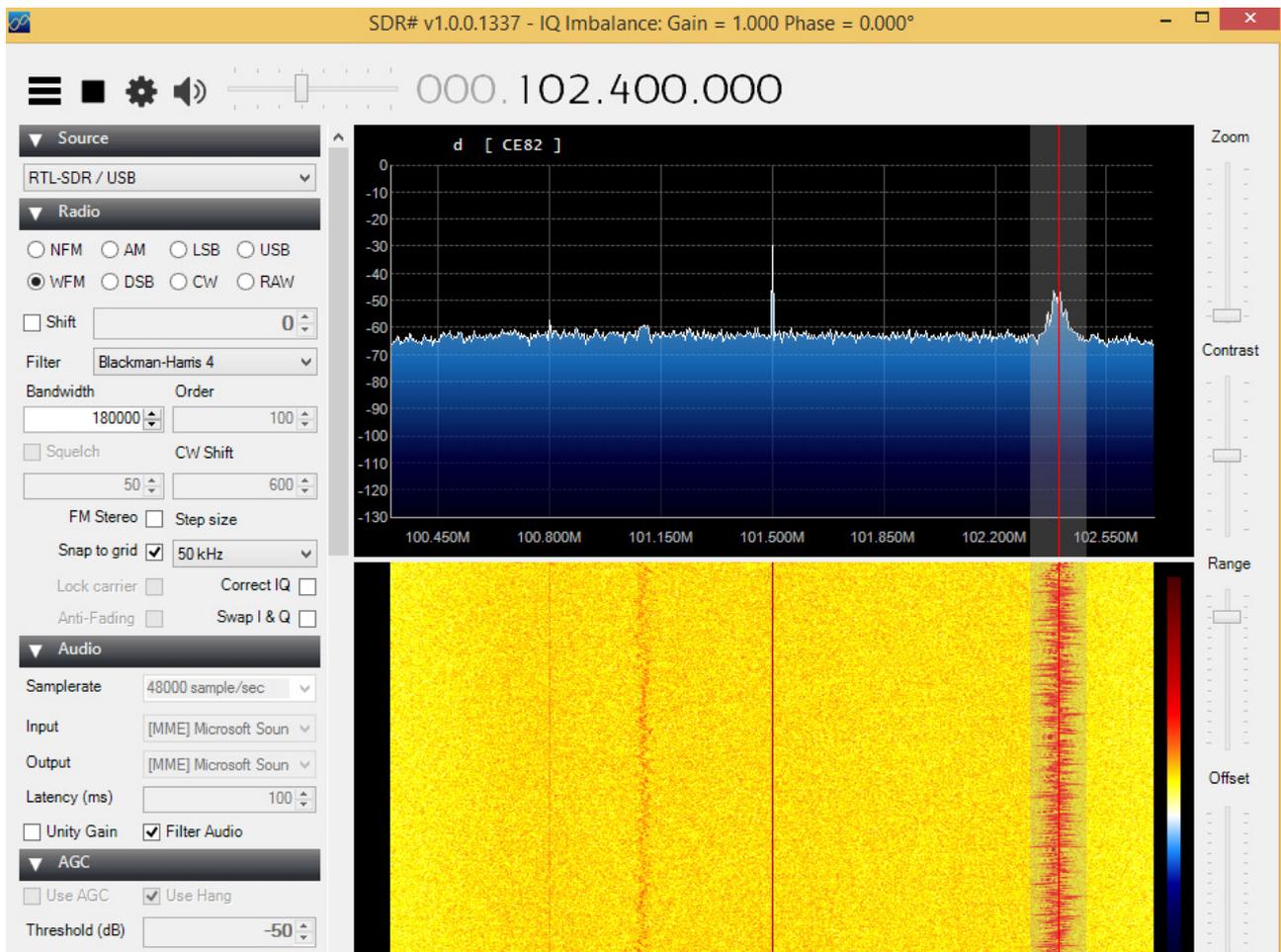


Note if you had not already done so *Click Install Driver*. You may get a warning that the publisher cannot be verified, but please just accept it by clicking on Install this driver software anyway. This will install the drivers necessary to run the dongle as a software defined radio.

8. Now **adjust the RF gain settings** by pressing the Configure button (looks like a cog) up the top near the Play button. By default the RF gain is set at zero (for some reason). A gain of zero will probably receive nothing but very strong broadcast FM – increase the gain until you start seeing other signals.

Open SDRSharp.exe. Set the drop down box at the top next to the Play button to RTLSDR / USB'. Press Play. Your rtl-sdr software radio should now be set up and ready to use! If everything has worked you should be able to start tuning to frequencies.

If all went well you should get something like this ;



Note

The Small antenna it came with is okay however you will want to upgrade to a better antenna, I can recommend a discone antenna

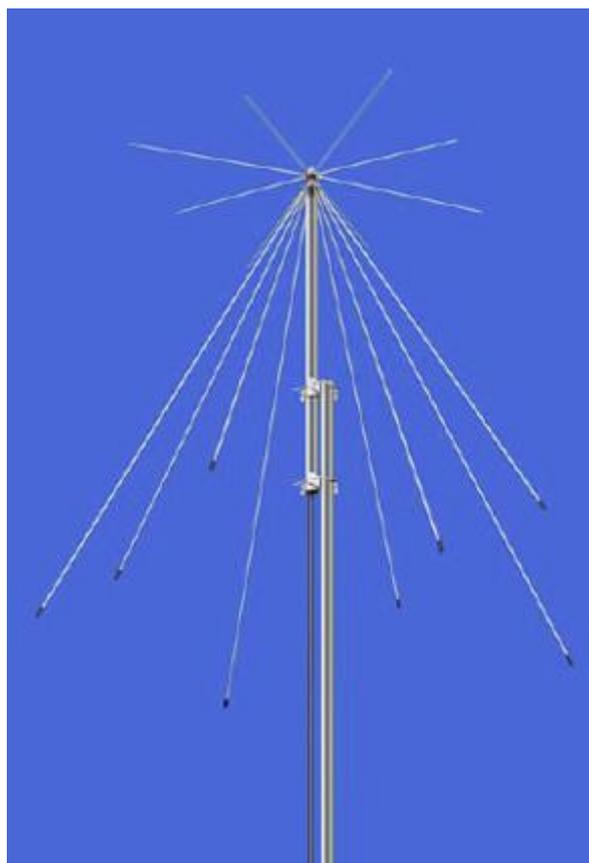


Illustration 1: Discone Antenna

This information for this project came from a number of sources – but I first came across the idea on Tim G4VXE web site, which you might like to visit.

Paul Archer M0PJA 2015-May-25