# The Radio Hotel — Easy(and Free) HF Waterfall Display
By Rick Hiller – W5RH

One of the coolest things that has happened this century to Ham-type radios is the major move to Software Defined Radio (SDR), as a means to receive and demodulate our radio hobby spectrum. With software based demodulation, signal processing is more flexible and full of capability that most times is non-existent in the hardware or firmware based radio world that we all grew up in.   My favorite receive capability of these new SDR based radios is the visual display of signal activity up and down the whole ham band.

A majority of the current stable of available new radios have a nice, high resolution color screen that is able to display the band signals in a waterfall or signal amplitude function. Touch screens allow you to choose a particular signal. Examples are the Icom7300, Kenwood 890S or the Yaesu FT-991A. If, however, your radio ownership goes back a few years, your rig might have a wide band IF output. By utilizing an RTL-SDR with HDSDR (or many other compatible programs) you can display the IF's band spread on your computer screen. Now, go back in time even further, where the radios do not have an IF output, as mine doesn't, there is a way to get a reasonable representation of the band signals at your home QTH. It is called -- Web SDR.   Blame Rick, WD5L, for showing me the capabilities of these wonderful web site receivers. HI HI   Rick, by phone, checks into the Wednesday night 3910 Rag Chew Net, as he is listening on the Waller (Texas) WebSDR.

What is WebSDR?

WebSDR is a group of receive stations, each at different global locations, that are Internet attached and user accessible and controllable. They use a standardized interface to a user adjusted receiver. Find the main group page at www.websdr.org. Below is a screen shot of the Waller SDR on 40 meters.
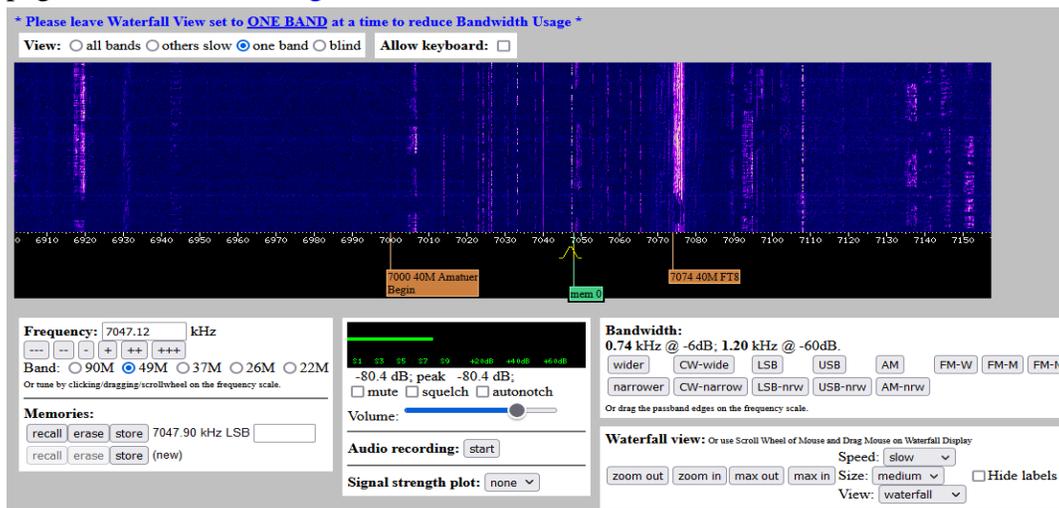
Using the various worldwide locations of the Web SDR stations you can: 1) diversity receive -- listen for stations that you cannot hear due to noise etc.; 2) do antenna pattern and propagation studies – tune one in and transmit a test signal from your station…can you hear it in W3 land or W7 land? ; and 3) have dual band or dual frequency receive capability – simultaneously listen to a second DX station or HF net while working the first from your home station.   There are a multitude of uses for the WebSDR "free" receivers.

A few caveats exist like, FireFox /Mozilla is the recommended browser or that not all WebSDR stations have the same frequency range coverage and, obviously, no transmitting. You'll find that most of the WebSDR locations use only dipoles. But on receive that is typically all you need. Hey, if one WebSDR location doesn't get it for you, choose another. It's all free!

Another group of web based SDR receivers is Kiwi SDR. Very similar in structure and locations but covering the Pacific located countries too. Slightly different interface, but also intuitive. Find it at **kiwisdr.com**.

Use these web based SDR receivers to listen to local HF activity at a plethora of national and international locations. All free and for your enjoyment of Ham Radio.   *Enjoy your hobby….73…Rick W5RH*