Sentinel HF SDR receiver set-up FAQs

Read this before starting the Sentinel receiver set-up!

Where are the set up files?

On the CD disc included with the Sentinel is a folder "CCW Sentinel SDR receiver". Inside that folder is another one "CCW Sentinel SDR program" Copy this folder to your C: drive. If you can't use the CD contact Cross Country Wireless for a link to the Dropbox folder on the internet containing these files.

Where is the Sentinel SDR program?

In the folder "CCW Sentinel SDR program" is an EXE file "Sentinel_SDR_v1.16". Make a desktop shortcut or click on this to start the program.

What operating system does it need?

The program will only run on Windows 2000 or Windows XP.

Why can't it use Windows Vista, 7 or 8?

The program uses Intel Native Signal Processing libraries. Microsoft limited their use to Windows 2000 and Windows XP as it competed directly with their own software. Using these libraries allows the program to run reliably for months on end if required.

What sound card should I use?

Select USB Audio CODEC for the Rx input sound card. Select your loudspeaker sound card for Rx output sound card. For digital modes connect the 3.5mm audio cable between the audio jack on the receiver and the Mic socket on your PC. Select USB Audio CODEC for Rx output sound card and your PC Mic sound card for Data modes input sound card.

Do I need a digital modes interface?

No. The Sentinel receiver has an isolation transformer on the receiver input that provides galvanic isolation between the PC and the antenna.

What digimode program does it use?

The MMVARI sound card engine is built-in to the Sentinel program. It's probably the best for weak signal decodes.

How do I enter the calibration figures from the test sheet supplied with the receiver?

Select the serial COM port and enter the figures in the program in the text boxes on the lower right hand side. Close the program and re-start to save the values.

Why do I need to enter the calibration figures?

Your Sentinel receiver has been workshop calibrated against test equipment with calibration traceable back to National Standards. Entering the calibration values allows your receiver to send data back to the noise measurement project that's as accurate as professional receiver systems costing up to 100 times the price of the Sentinel receiver.

Can I do my own calibration?

Yes, if you have a fully equipped test lab with off-air frequency standards and calibrated test equipment. Contact us for the calibration procedure.

What's my APRS passcode?

Contact us at passcode@crosscountrywireless.net with your callsign for a passcode.

Latitude and longitude?

Enter your latitude and longitude in degrees, minutes and decimal minutes e.g. 5332.76N and 00225.91W. It's important to get this right to send the correct APRS beacon for your location.

Where does my noise measurement information go to?

It's sent out as telemetry beacons on the APRS-IS (APRS internet system) every 10 minutes. An APRS message with more detail is also sent to Gwyn Williams, G4FKH who runs the noise measurement project. You can check your telemetry at http://aprs.fi/telemetry/a/G4HYG-5. Substitute your callsign for G4HYG-5.

What's all the data when the APRS server is connected?

The program is designed to display all APRS messages sent worldwide. This helps keep the link to the APRS server open with only a minimal data download.

Can I use a local APRS server?

Yes, enter it in the APRS server text box. We recommend using "rotate.aprs2.net" as the program will automatically try to re-connect if the link to the server is lost. Using the "rotate" server allows the APRS-IS to automatically select a server for you.

I'd like a waterfall display.

If your PC has enough processing power you can open another SDR program such as HDSDR, select USB Audio CODEC for the Rx input sound card and view the 48 kHz wide display.

My 233 MHz laptop has problems with the USB Audio CODEC.

On some older machines the maximum USB data rate is slower than the USB 1.0 spec. Try installing a USB 2.0 PCMCIA card to provide a faster USB port for old PCs.

Where can I get help or advice from other Sentinel users?

Join the Cross Country Wireless Yahoo group:
http://uk.groups.yahoo.com/group/cross_country_wireless/

Partners: Mr C.J.Moulding, Mrs S.M.Moulding