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SDR-4+ Receiver

Quick Start Guide

version 1.6

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1 Safety feature

Important! One safety design feature of the SDR-4+ receiver is that when it or the PC is powered down all the bandpass relays are powered off shorting the bandpass filters to ground to provide extra isolation and protection to the PC. This can also happen when changing the SDR program. When first powered up the relays remain in a safe condition until the receiver is tuned past a bandpass filter change point i.e. 4, 8, or 16 MHz.

After powering up the receiver or changing the SDR program, step the frequency up or down by 10 MHz or change the operating band and the desired filter will switch in. You can then select the required frequency of operation.

3 WARNING!

The SDR-4+ receiver has been carefully designed to meet CE and FCC specifications and also provide protection to your computer from static electricity and electrical pulses. The receiver is designed to be powered only from the USB connection on the PC. If the receiver is modified by the user this voids the CE and FCC certifications and may damage the receiver or user's PC.

No warranty claims will be accepted if the receiver case has been opened.

The receiver has been designed to isolate the antenna from the computer. Connection to the antenna should be made only via the BNC connector or by the 2mm connectors. External antenna earths or grounds should only be connected to the BNC connector.

The receiver case is connected to the computer ground and should be isolated from any external antenna connection except for the following exception.

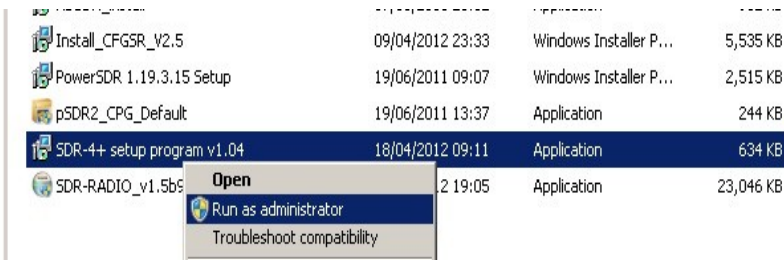
If an internal antenna is used then as the risk of lightning or static discharge is reduced it may be possible to connect the antenna and computer grounds or earths together. This may reduce the transfer of noise from the PC power supply into the receiver. If in doubt regarding the risk do not connect the grounds or earths together.



Before starting driver installation remove any external USB hubs from the computer and connect the USB cables from the SDR-4+ receiver directly to the computer USB ports when directed during driver installation. Failure to do this may result in the driver installation being rejected.

Install all SDR programs and drivers in Administrator mode. Failure to do so may result in incorrect installation of the frequency control drivers.

4 Driver installation



Before starting remove any external USB hubs from the computer and connect the USB cables from the SDR-4+ receiver directly to the computer USB ports when directed during driver installation. Failure to do this may result in the driver installation being rejected.



Install all SDR programs and drivers in Administrator mode. Failure to do so may result in incorrect installation of the frequency control drivers.

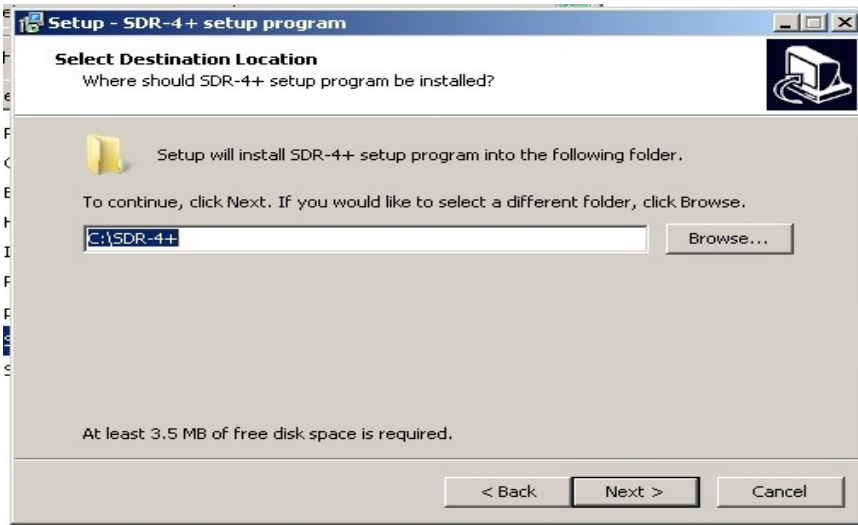
Load the SDR-4+ setup program from the CD disk included with the receiver or download the latest file from the Cross Country Wireless web page.

Right click on the program file and install as Administrator.

Allow the program to install.



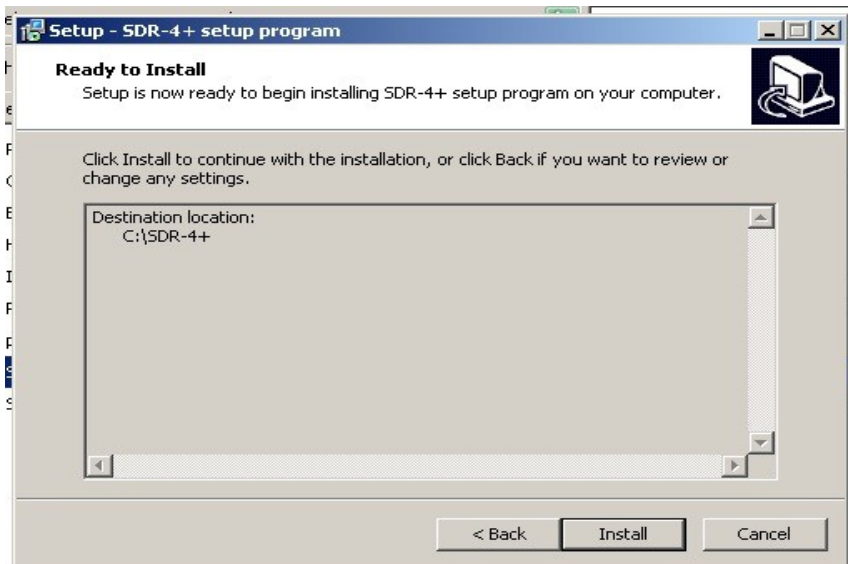
Click next to start installing the program.



This program installs the driver files in a folder (usually [C:\SDR-4](#)) and inserts a ExtIO synthesiser control file in the HSDR and Winrad program files.

If HSDR or Winrad are not installed yet the setup program opens a HSDR and Winrad folder in the Program Files folder so that it's already there when you install HSDR and Winrad in the future.

Click Next or change the location of the program if required.



Install the program.



Click Finish to complete the driver program installation.



Connect both USB cables from the SDR-4 + receiver directly to the USB ports on the computer.
If you only have one USB port on your computer just connect the frequency control USB cable (see the photo of the receiver).

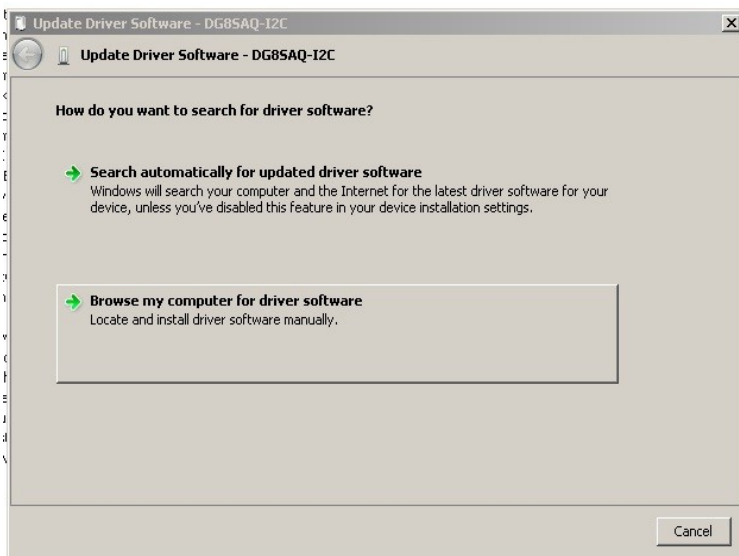
The SDR-4+ internal soundcard will automatically install using Windows native drivers.



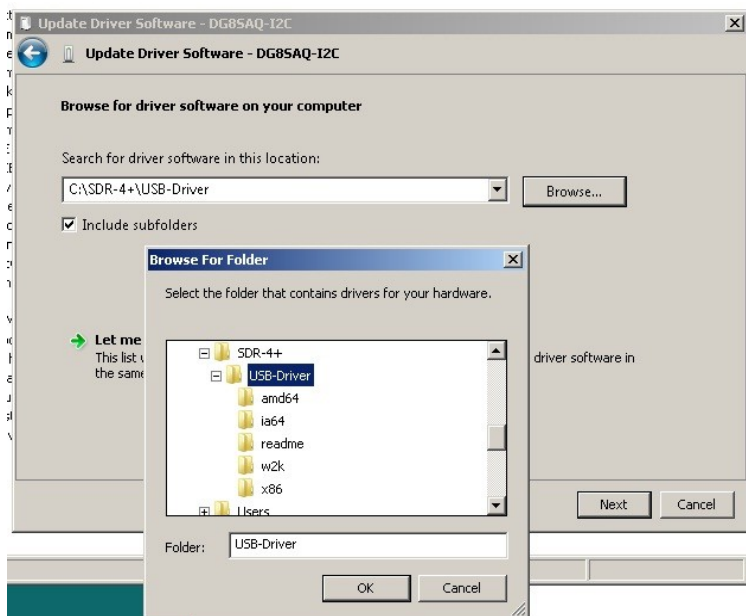
The Si570 synthesiser will require driver installation and a pop-up window may request the driver location.

Select Locate and install driver software.

If not go into Device Manager and right click on DG8SAQ-I2C in Other Devices. Select Update Driver Software...



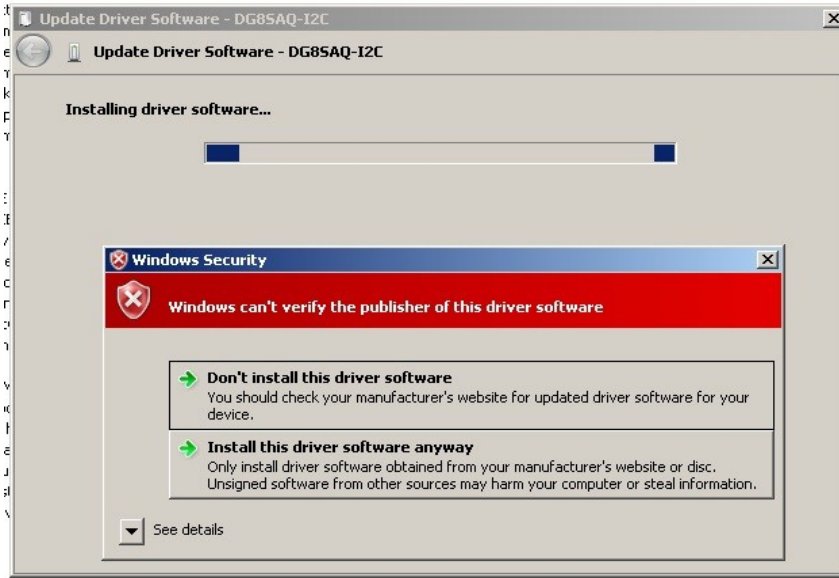
Select Browse my computer for driver software



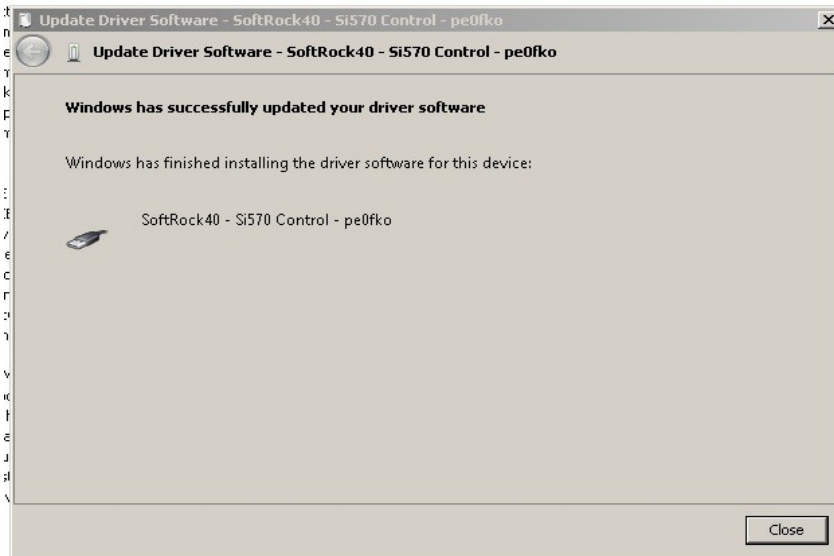
In Windows 7 browse to C:\SDR-4+\USB-Driver and select Next.

In Windows XP If the driver isn't found browse further into the USB-Driver folder as several alternative drivers are available based on the computer processor type.

Click OK then Next.



In Windows Security select Install this driver software anyway.



The driver has been installed successfully.

FYI the SDR-4+ receiver uses Si570 firmware licensed from Fred Krom, PE0FKO to ensure compatibility with most SDR software.

Very Important – Re-boot the PC at this stage before installing SDR software.

5 HSDR setup with Windows 7 and Vista sound card set-up

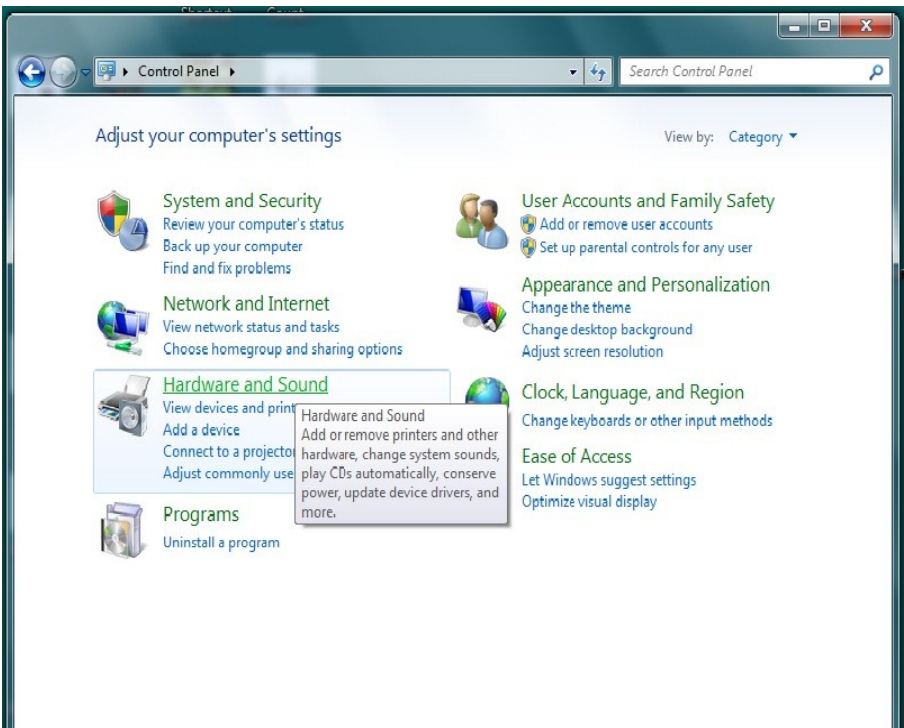


Load HSDR from the CD disk included with the receiver or download the latest version from the HSDR website: <http://hdsdr.de/>

Follow the setup instructions and allow the program to install.

When the program installs select the Soundcard (F5) button on the main screen and select the sound cards.

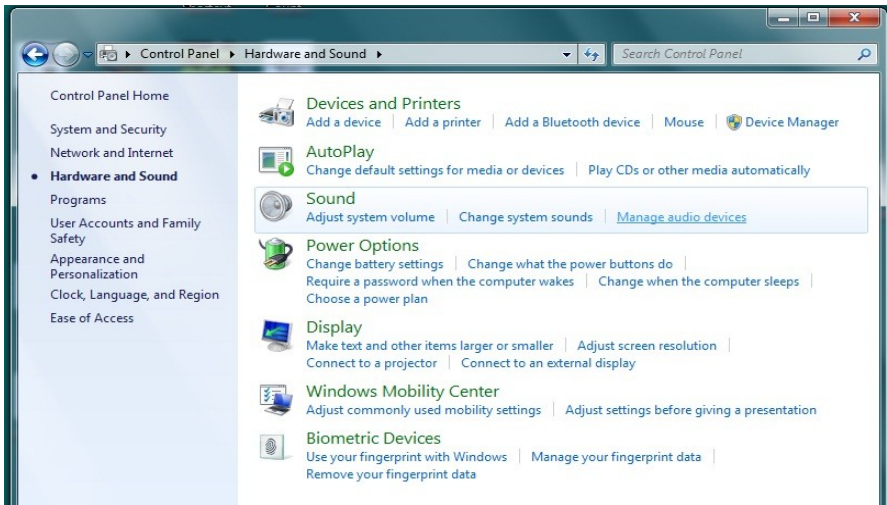
RX input from Radio should be set to USB Audio Codec or Microphone (USB Audio Codec). Set RX output(speaker) to the PC soundcard.



Windows XP will install the SDR-4+ internal soundcard correctly.

Windows Vista and Windows 7 may need the sound card settings correcting if the HSDR display looks like a mirror image about the centre.

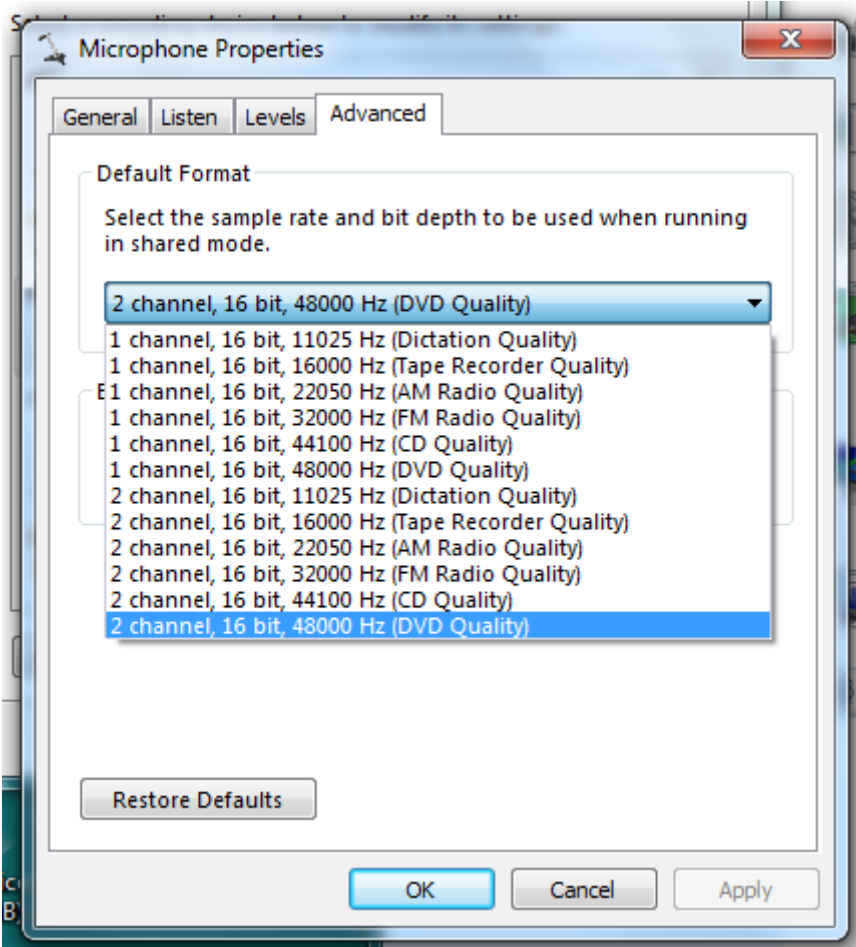
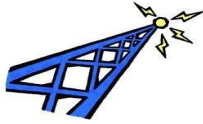
Open the Windows Control Panel and select Hardware and Sound.



In Sound select Manage Audio Devices

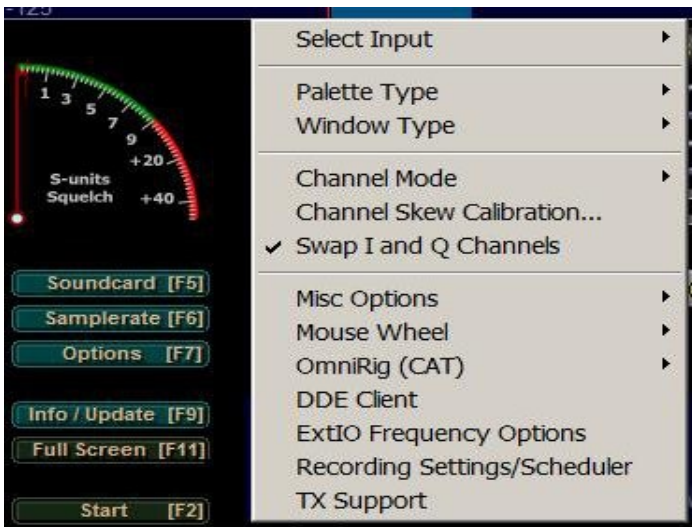
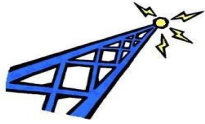


In Sound select the Recording tab then select the USB Audio Codec.



Select the Advanced tab and select
2 channel, 16 bit, 48000 Hz (DVD
Quality).

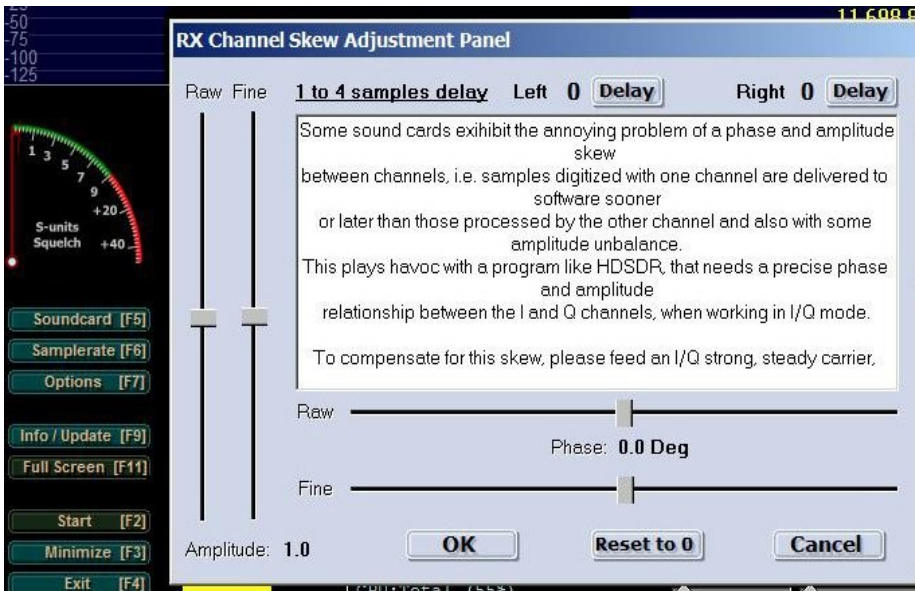
Select OK to confirm any changes.



In Options select Swap I and Q channels.

This will make the frequency and waterfall display correctly.

Select Channel Skew Calibration.



For initial settings enter the values from the SDR-4+ Receiver test sheet included with the receiver.

This will cancel out the unwanted image. The settings in the test sheet cancelled the image greater than 80 dB on final test.

On the main window press Start and the waterfall should start.

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