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## **SDR-4 Receiver**

### **Quick Start Guide**

version 1.3

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**Company no 7431559 registered in England and Wales**



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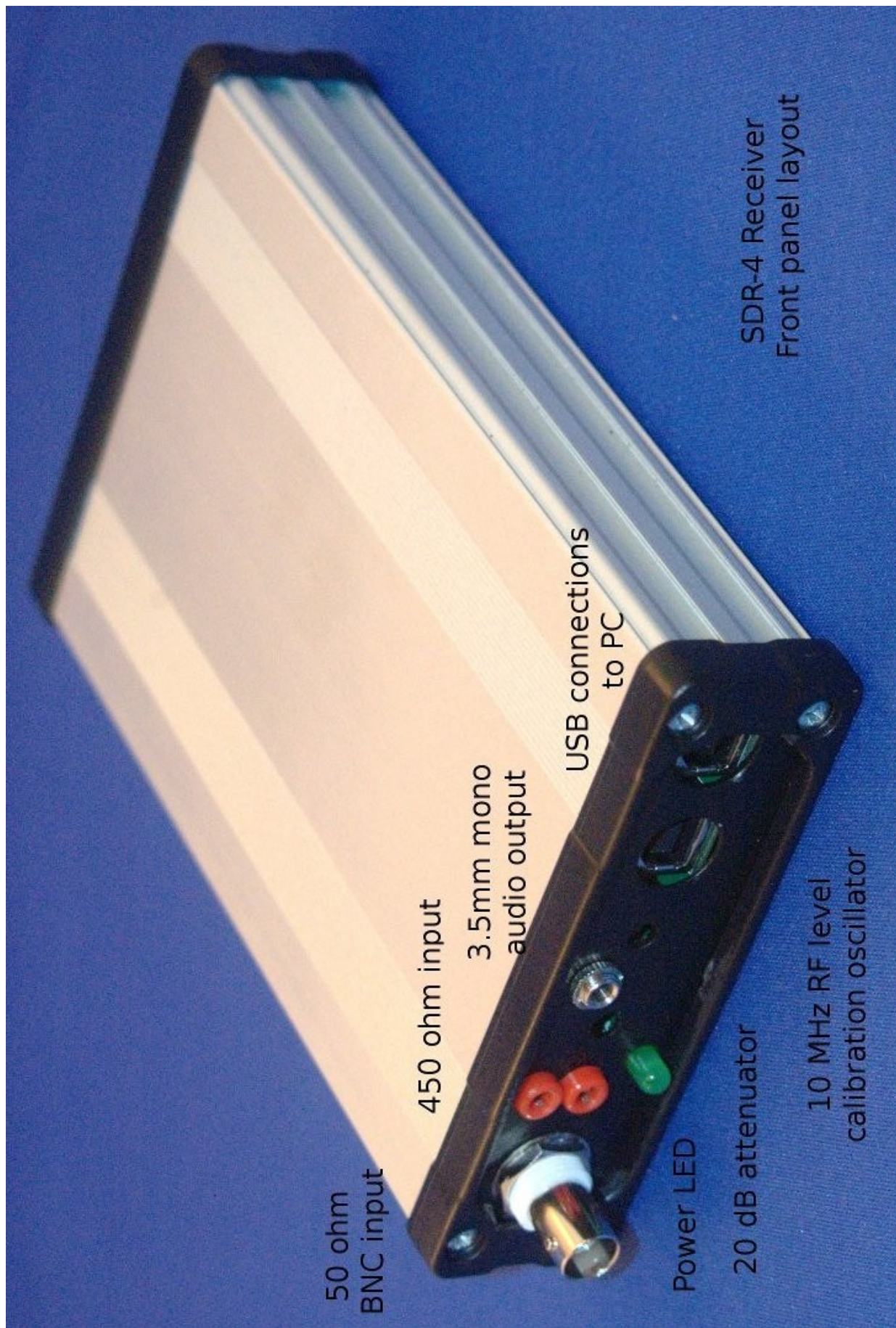
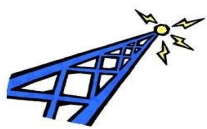
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## 1 Safety feature

**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.

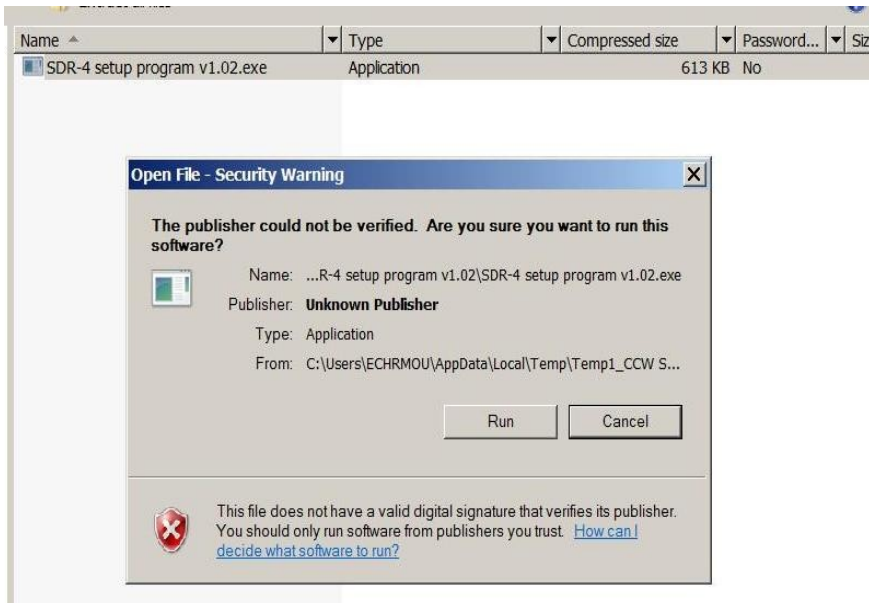
**No warranty claims will be accepted if the receiver case has been opened.**

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 antenna connection.

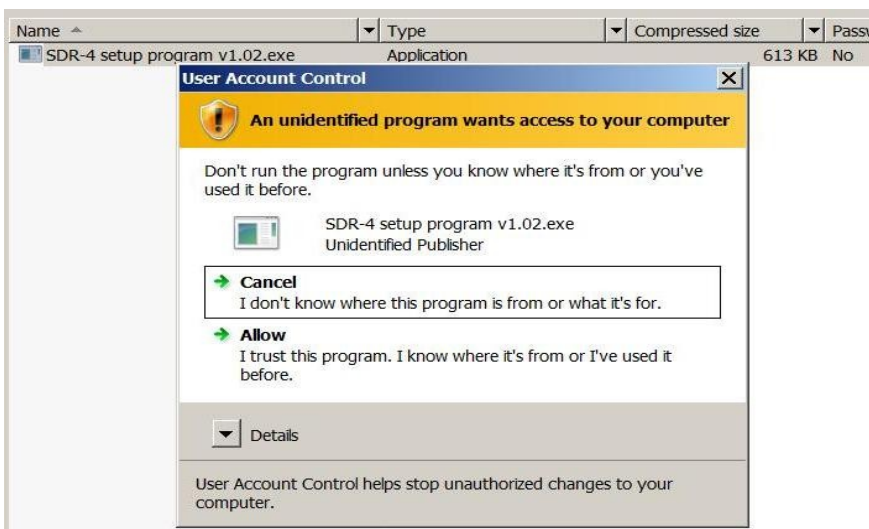


## 4 Driver installation



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.

Open the file.

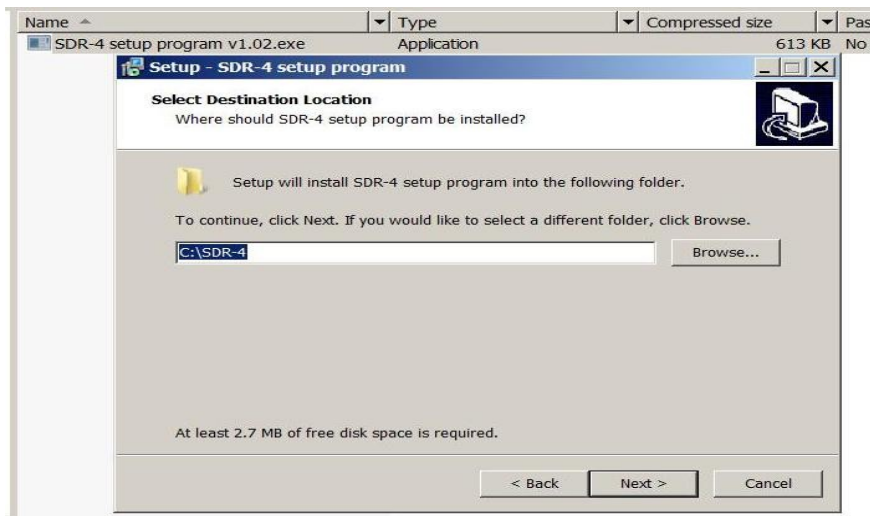


Allow the program to install.

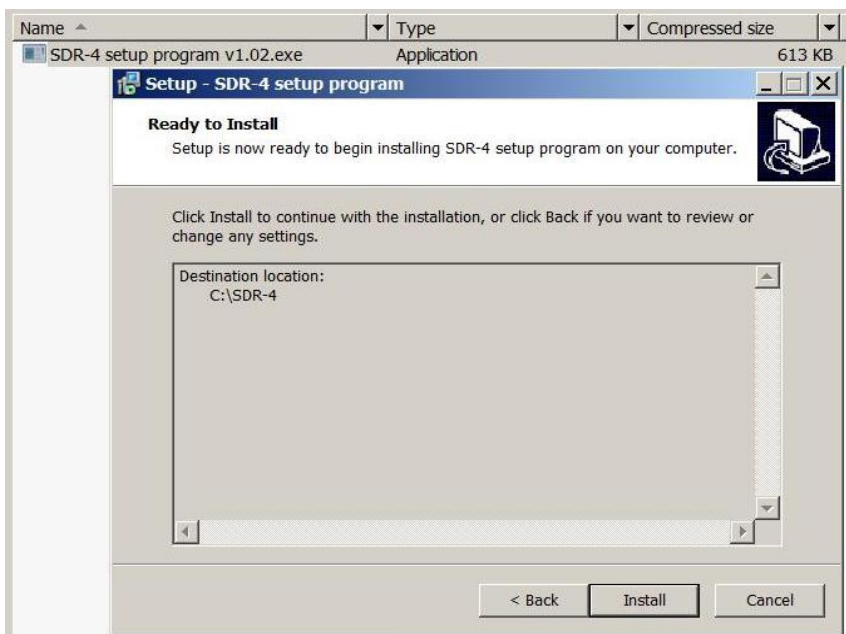


Click next to start installing the program. This program installs the driver files in a folder (usually [C:\SDR-4](#)) and inserts a ExtIO synthesiser control file in the HDSDR and Winrad program files.

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



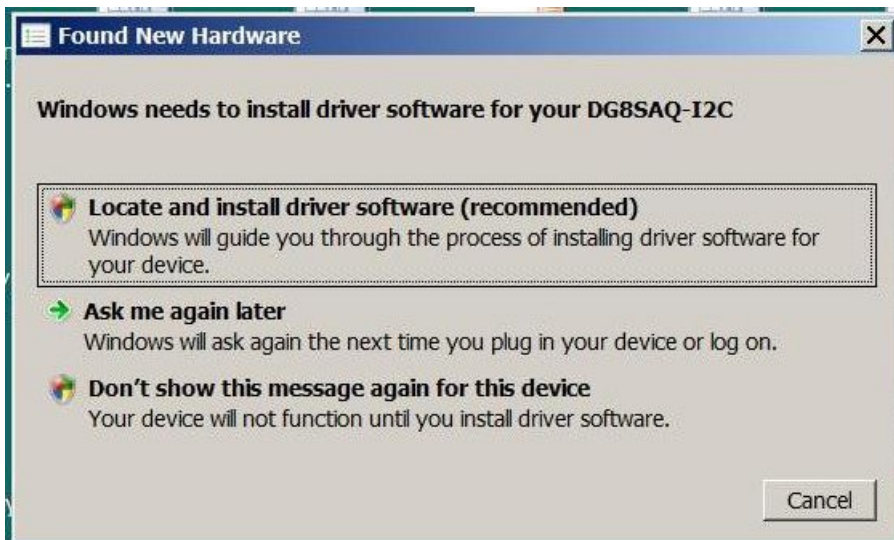
Click Next or change the location of the program if required.



Install the program.



Click Finish to complete the driver program installation.



Connect both USB cables from the computer to the SDR-4 receiver.

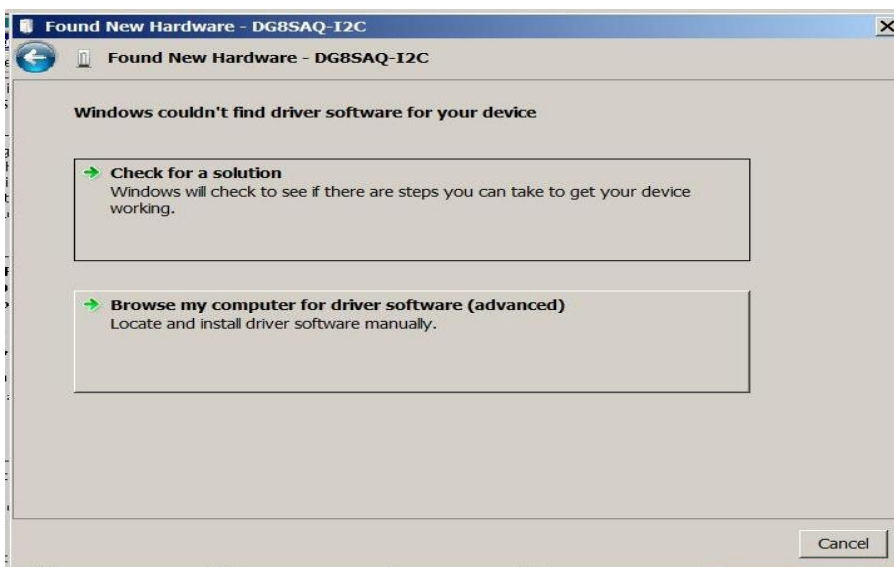
The SDR-4 internal soundcard will automatically install using Windows native drivers.

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

Select Locate and install driver software.

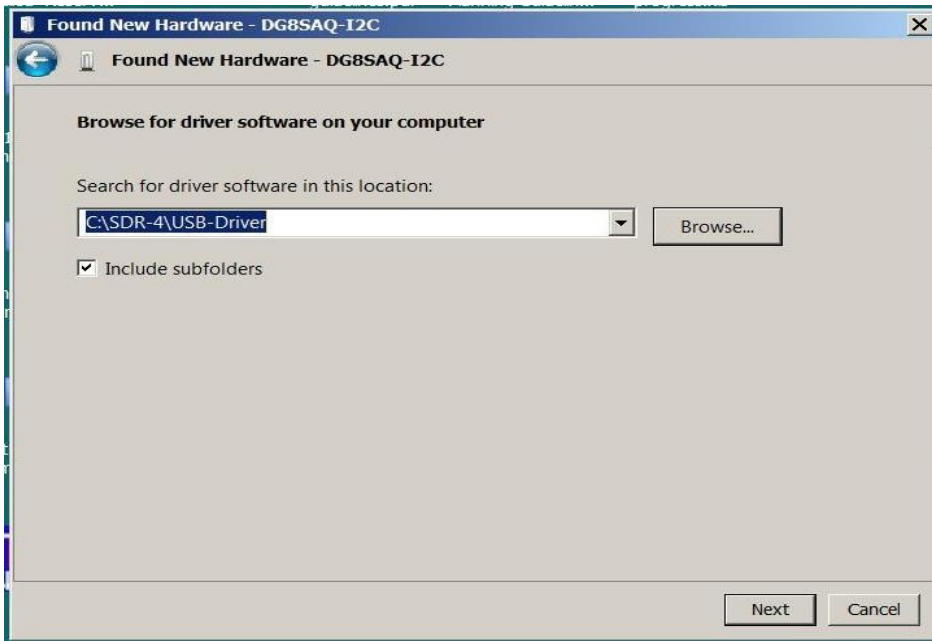


Windows will ask permission for the driver installation to continue.



Select Browse my computer for driver software



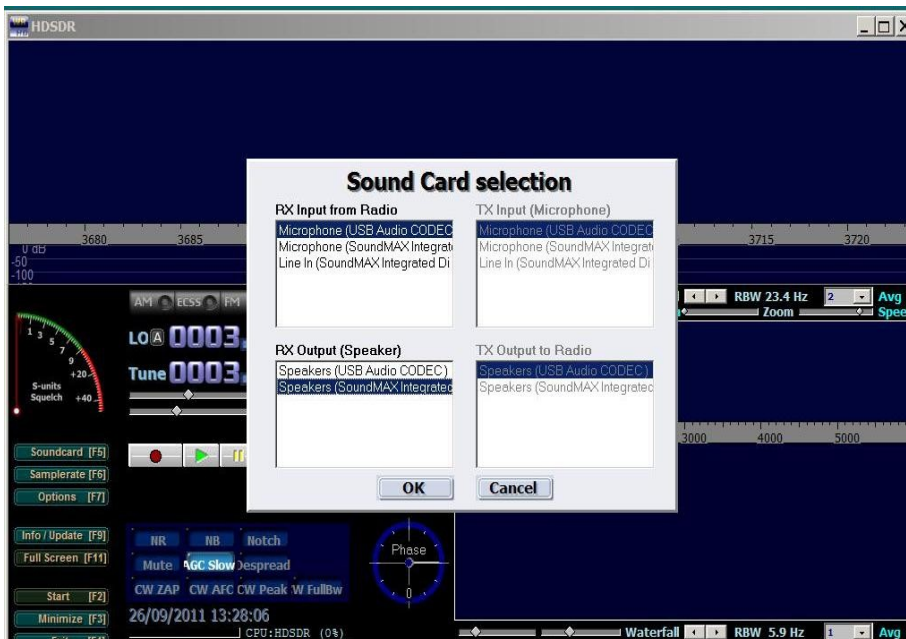


Browse to C:\SDR-4\USB-Driver and select Next.

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 or Next on any further selections until the drivers are loaded successfully.

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

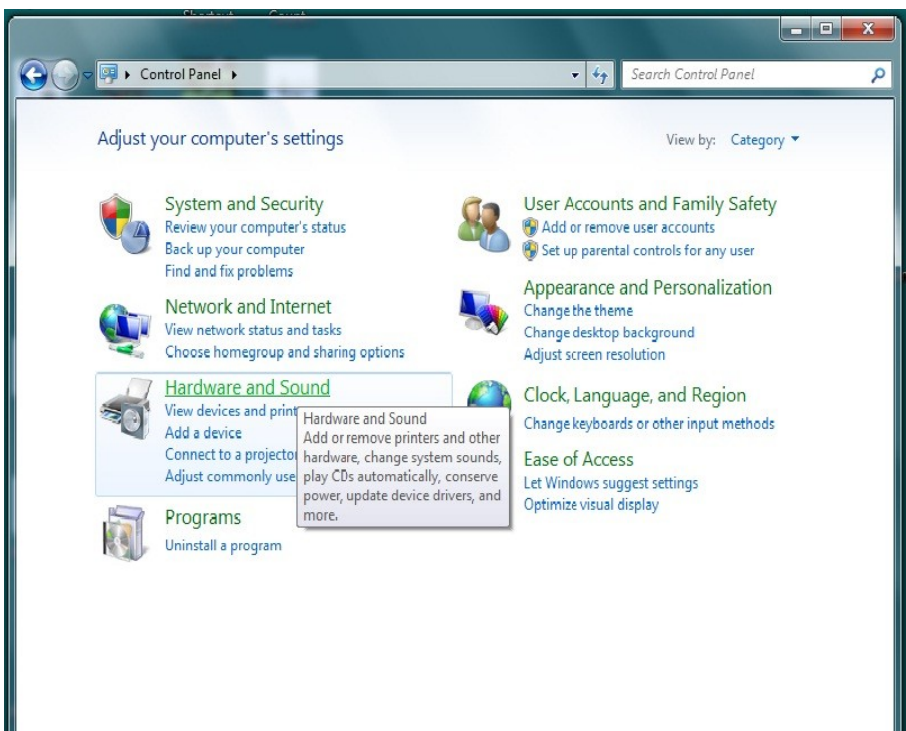


Load HDSDR from the CD disk included with the receiver or download the latest version from the HDSDR website: <http://hdsdr.de/>

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.

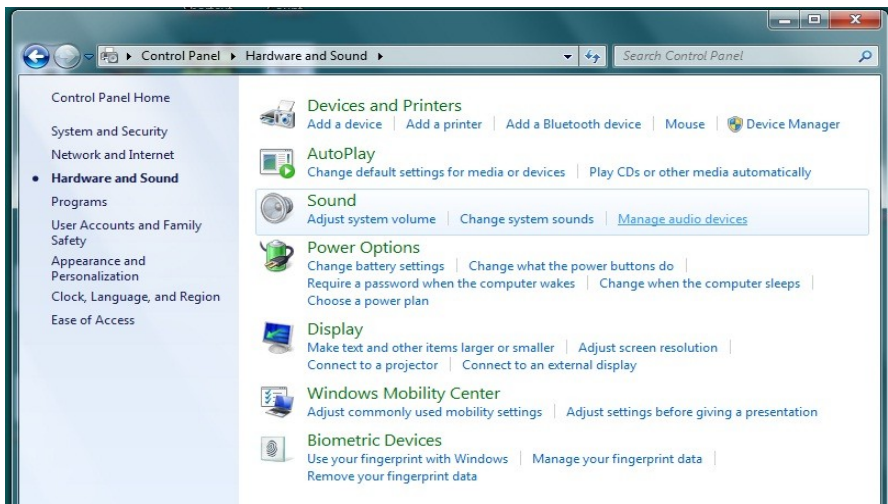
RX input from Radio should be set to USB Audio Codec or Microphone (USB Audio Codec). Set RX output(speaker) to the PC soundcard.



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

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

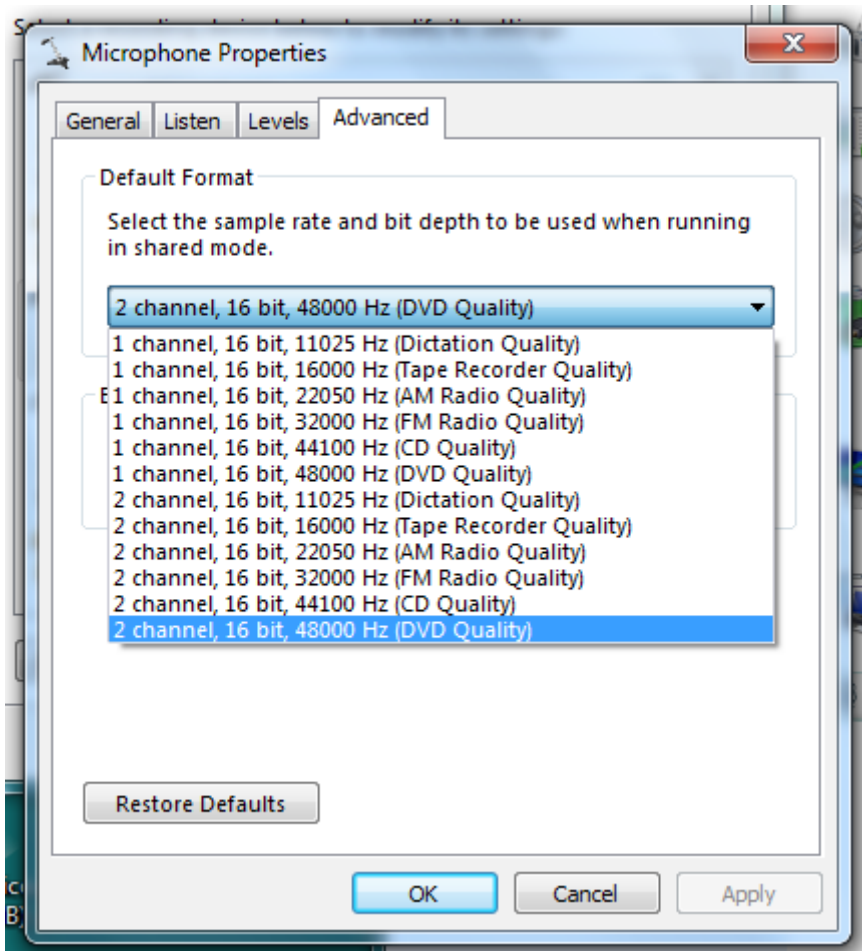
Open the Windows Control Panel and select Hardware and Sound.



In Sound select Manage Audio Devices



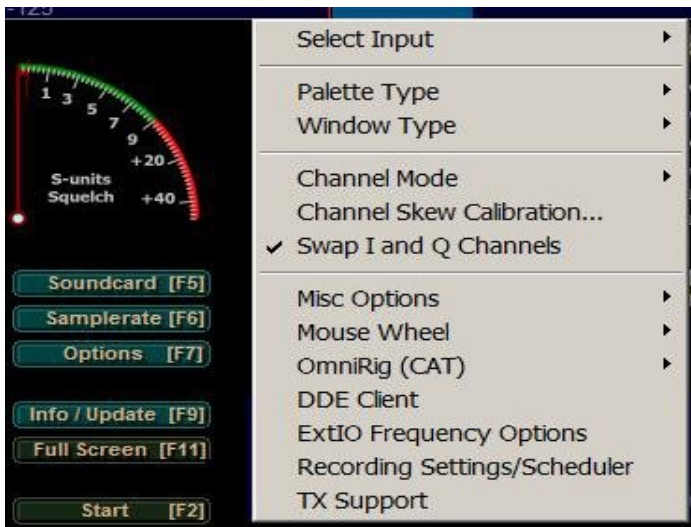
In Sound select the Recording tab then select the USB Audio Codec.



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

Select OK to confirm any changes.

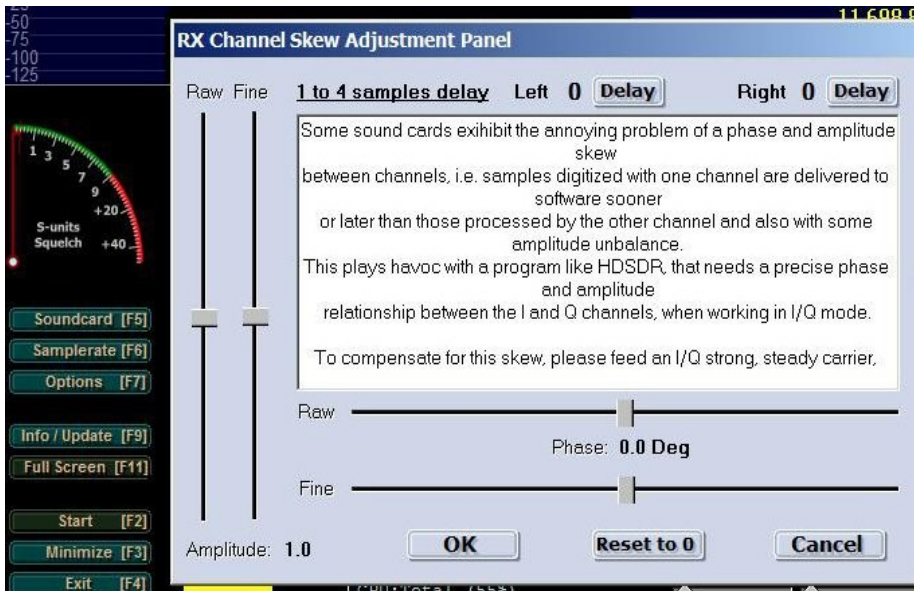




In Options select Swap I and Q channels.

This will make the frequency display 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.

**Important! One safety design feature of the SDR-4 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.. 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, step the frequency up or down by 10 MHz and the filters will switch in. You can then select the required frequency of operation.**