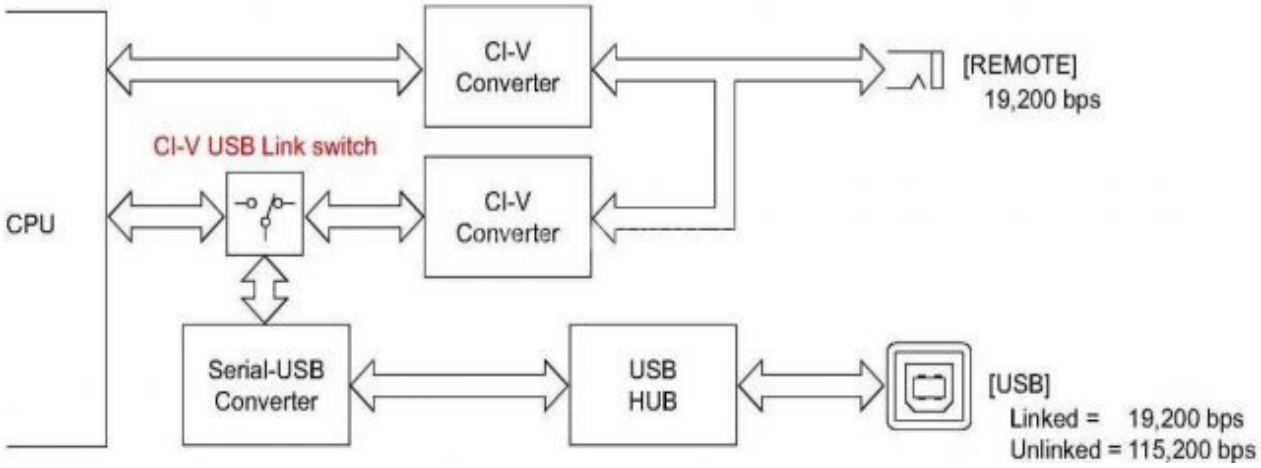
INTERFACING THE ICOM IC-7300 TO N1MM LOGGER

by Terry (G4CHD)

USB COMPUTER TO IC-7300 CONNECTION

Interconnecting a computer and the IC-7300 is via either the USB or CI-V jack plug (called REMOTE by Icom). By default, these are connected internally - see this image below:-



To display the Spectrum/Waterfall, the data rate between the IC-7300 and computer must be sufficiently high to carry the vast amount of data involved. A baud rate of 115,200 bps must therefore be adopted which necessitates using the USB socket as indicated in the above diagram.

However, as shown in the above diagram, the **CI-V USB Link Switch** by default is linked to Remote.

It is therefore necessary to change two settings within the IC-7300 Menu system via Menu/Set/Connectors/CI-V.

Scroll down to **CI-V USB Port** and select **Unlink from Remote** and then change the baud rate to 115200 under **CI-V USB Baud Rate.**

The USB rear connector on the IC-7300 is now ready for use.

Fortunately the Icom IC-7300 has the SiLabs CP210x USB to UART (Serial Port) bridge chip built into its design. However, the IC-7300 still needs a driver which apparently is automatically installed when using either the Win8.1 or Win10 Operating Systems ie no need to install the Icom supplied driver. Equally, the audio CODEC inside the IC-7300 does not requires a separate driver install. It is so-called class-compliant.

It would therefore be prudent to first check this by interconnecting the IC-7300 to your computer using a type A to B USB screened cable (ideally fitted with ferrite filters) eg :-

https://www.amazon.co.uk/Tripp-Lite-U023-006-Ferrite-Chokes-Black/dp/B003MQ29B2/ref=sr_1_3?keywords=usb+a+b+ferrite&qid=1563552016&s=computers&sr=1-3

and then switch on the Icom IC-7300. Using Win 10, go to Device Manager (right click on the bottom left Start Windows icon and select Device Manager from the drop down list). Double click on Ports (COM and LPT) and check that a SiLabs driver is listed and note the **COM port number**.

If it is not listed then with the **IC-7300 disconnected**, a driver can be downloaded from the Icom website at :-

https://www.icom.co.jp/world/support/download/firm/IC-7600/usb1_20/

Click to save the zip file and then unzip and run it. Finally, reconnect the IC-7300, switch it on and recheck in Device Manager and note the **COM Port number**.

INSTALLING N1MM LOGGER SOFTWARE

Go to https://n1mmwp.hamdocs.com/ and under the Downloads tab, select Program Files/Full Install Info/Full Install File and in the new window double left click on **N1MM Logger+ FullInstaller 1.0.7711.exe** to download.

This installer file can now be run to install N1MM which will finally require a computer Restart.

This will result in two new icons appearing (presumably on your Desktop) ie N1MM Logger+ and N1MM Rotor.

INITIAL SETUP OF N1MM

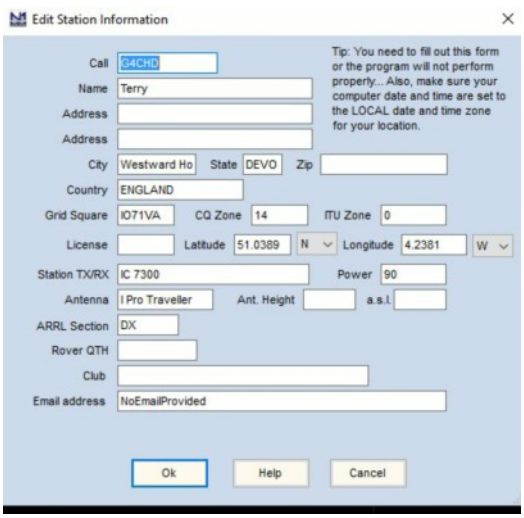
Double left click on the N1MM Logger+ icon to start the program which will produce a Database Creation window. My suggestion would be to select the **Create New Logger+ Database** option and click OK.

You will now be reminded to **Set Up Your Station Info**

Click OK and the **Create New Database** window opens allowing you to edit/enter the name your new database (which by default will be saved to your Documents/N1MM Logger+/Databases folder) and click Save.

You will be again reminded to **Set Up Your Station Info** so click OK and the **Edit Station Information** window will appear.

Complete this as fully as you want - suggest minimum requirement is your callsign, name, City, Country, (perhaps Grid Locator) and finally under ARRL enter **DX** and finally click on Save. The Log entry and Logbook windows will now appear.



ENTRY OF CAT INFORMATION TO CONNECT TO THE IC-7300

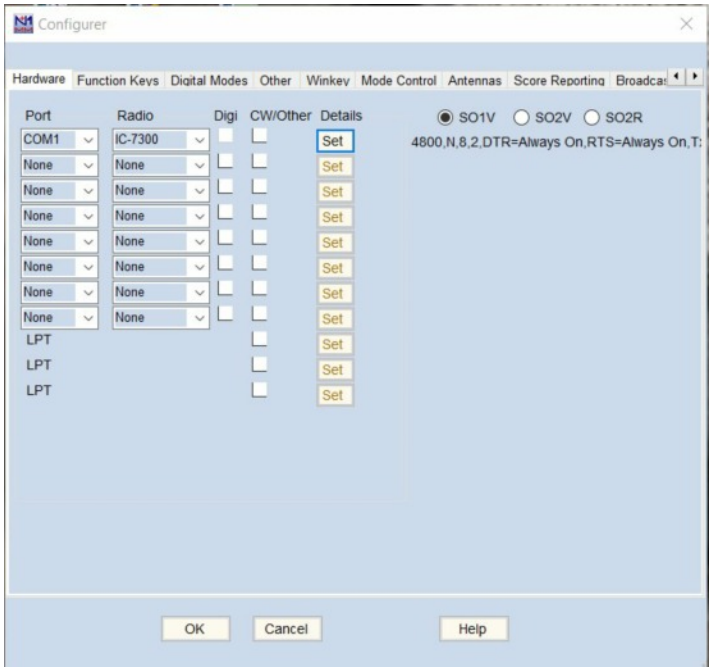
Under the **Config** tab, select the top option - **Configure Ports, Mode Control, Audio, Other ..**

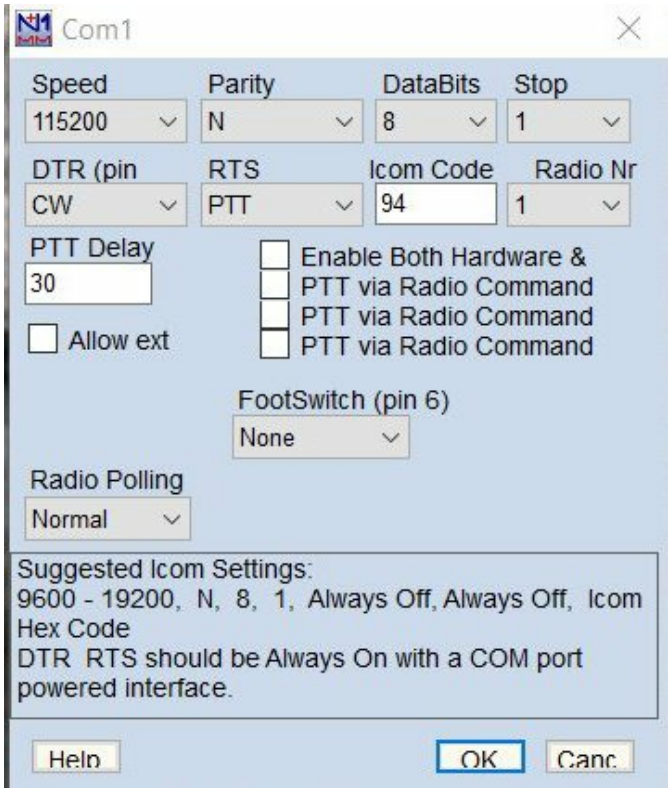
A **Configurer** window opens as shown opposite :-

Enter the **COM port number** recorded earlier from the drop down list, and choose the **IC-7300** from the drop down Radio list.

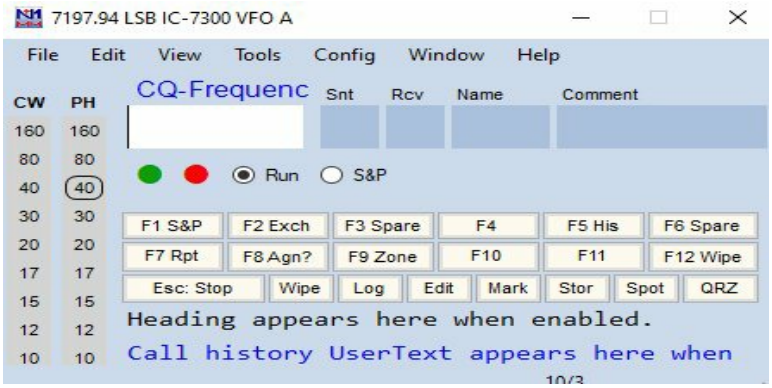
Now click on **Set** box to open the Port Details window as shown on the next page (details shown are what I have used - seems to work but the DTR and RTS settings may not be perfect.

NB; the Baud Rate of 115,200 is necessary to provide sufficient data to display the Spectrum/Waterfall as explained earlier.





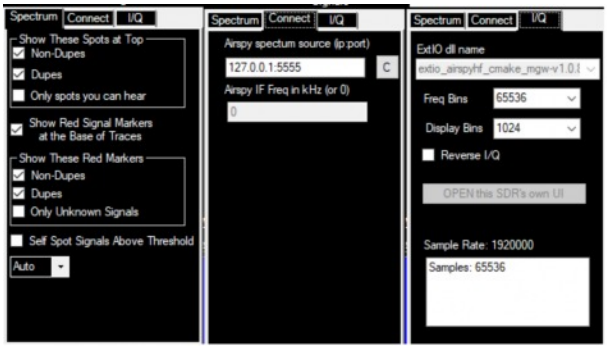
Finally click OK and if all is well, the radio will connect to N1MM as can be confirmed by the radio operating frequency appearing at the top of the Log Entry window :-



DISPLAYING THE SPECTRUM/WATERFALL

In order to display the spectrum/waterfall within N1MM it is essential that it is being displayed on the IC-7300.

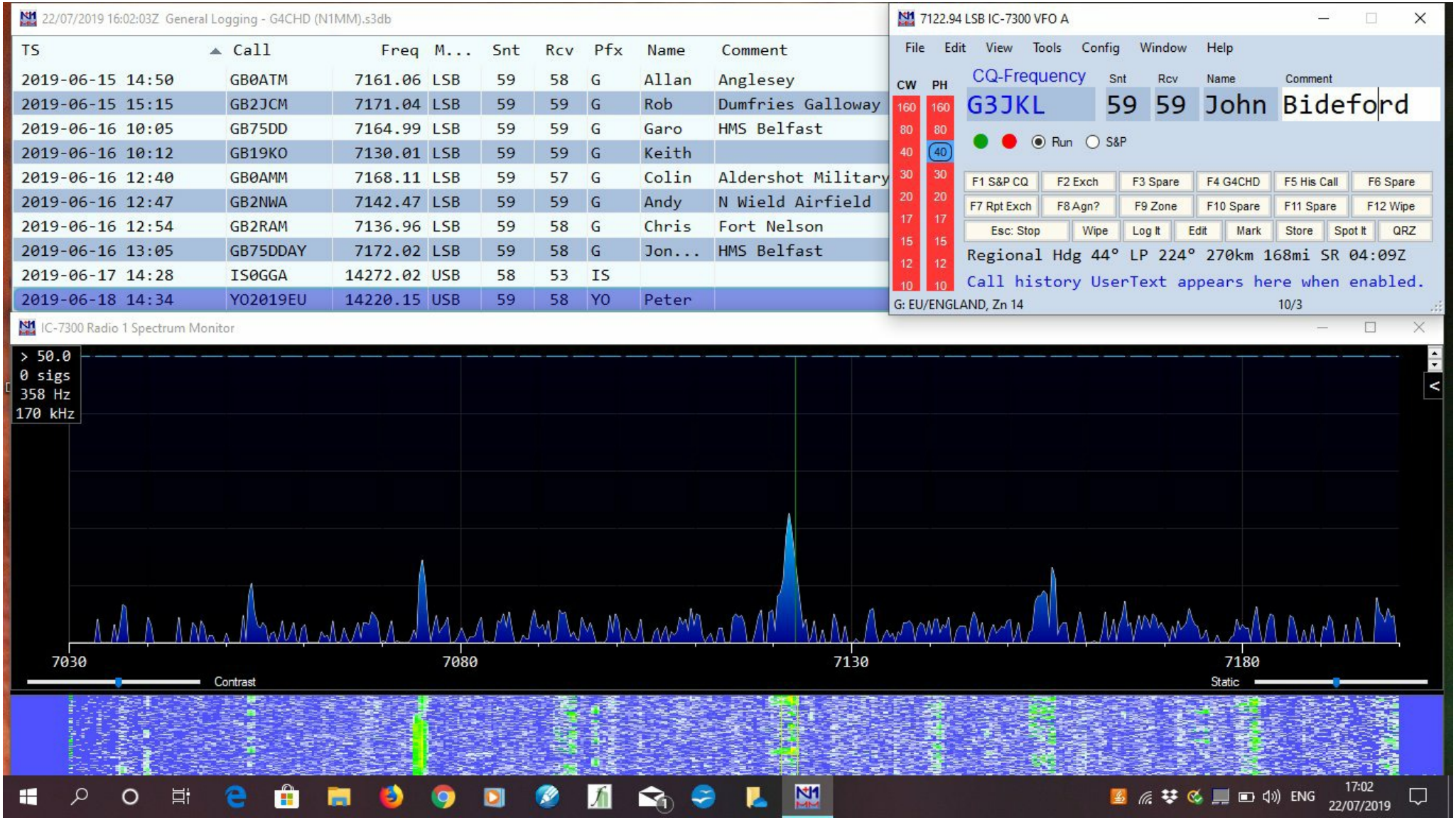
To open the spectrum/waterfall window, click on the Window tab at the top of the Log Entry window and select **Spectrum Display**. In the Spectrum Display window, right click in the upper display area and from the menu select Spectrum Source and select as appropriate - normally **Radio 1**.



The Spectrum Display may include re dots where it is believed there is a QSO. These can be removed by clicking the **<** symbol on the right hand side of the Spectrum display and in the new window that opens, select the Spectrum tab and untick **Show Red Signal Markers at the Base of Traces**

You should now have the Log Book, QSO Entry and Spectrum Display windows open as shown on the next page.

The N1MM Logger offers many other facilities which are well described in numerous web articles.



Screen grab showing Log BooL QSO Entry and Spectrum Display windows