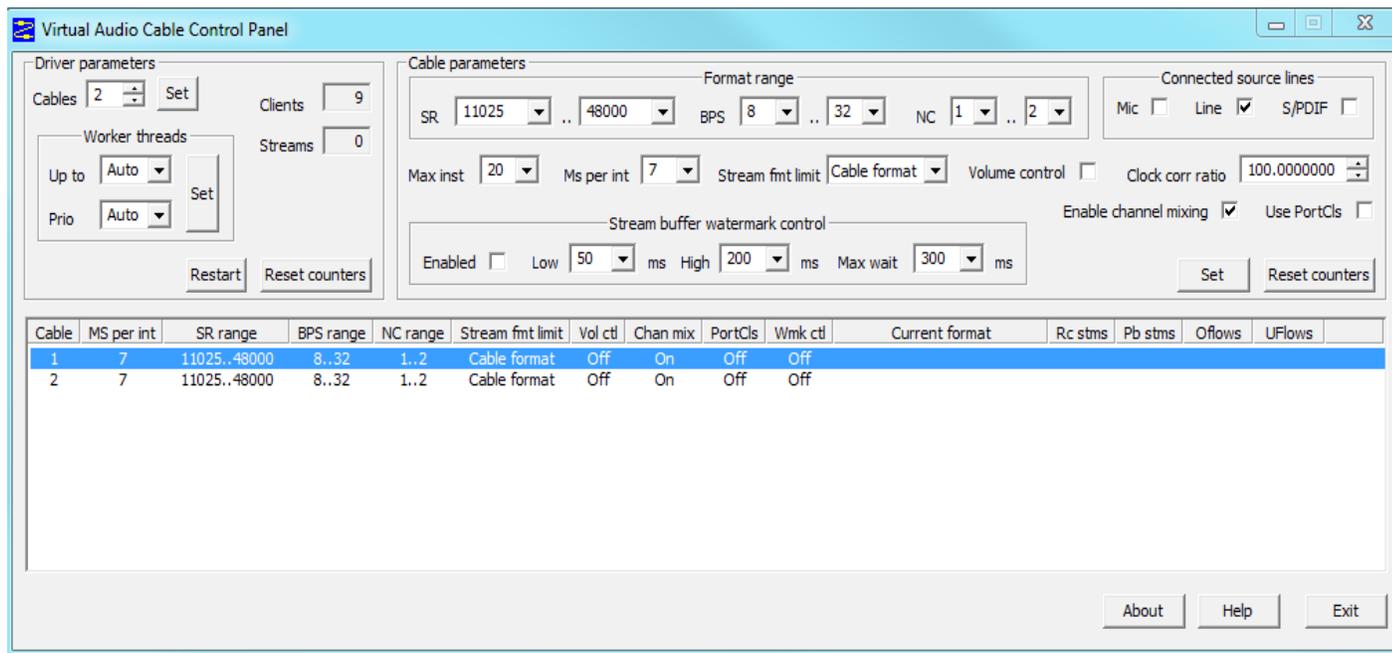


This paper provides a step by step guide to virtually connecting the Windows program PowerSDR(w5wc version) to the decoder/encoder program FLDIGI. The programs PowerSDR and FLDIGI were connected to a TAPR Hermes/ANAN-10 SDR when this guide was written. The idea is to set up a virtual COM style serial cable and two virtual audio cables which connect the input to output of PowerSDR to FLDIGI and vice versa.

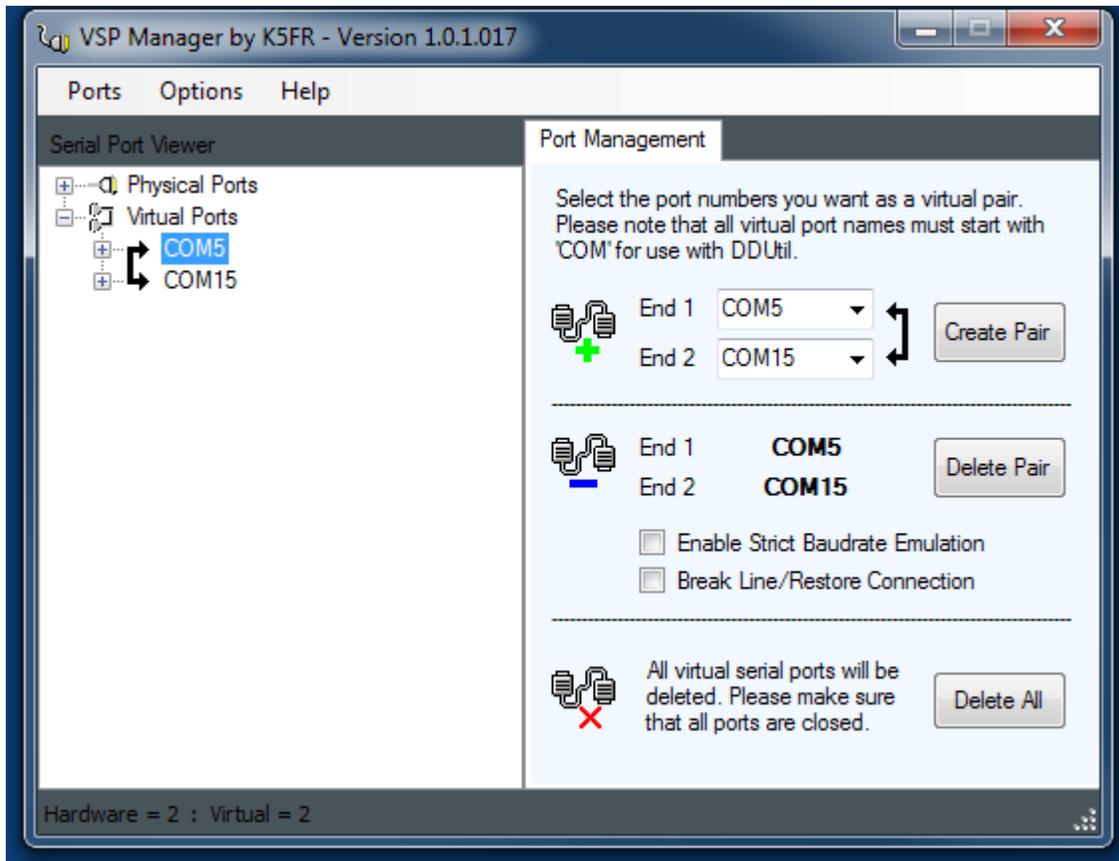
1. If not installed on your windows based PC, install the latest version of PowerSDR (w5wc) which you can obtain here: (Note: PowerSDR_v2.2.3.19_(W5WC)_Setup.msi was current when this document was written.)
<http://openhpsdr.org/download.php>
2. Similarly, obtain and install the Windows Setup version of Fldigi from here:
<http://www.w1hkj.com/download.html> (Version 2.21.62 was current when document was created. On the same page, in the RigCat XMLS section, grab a copy of PowerSDR.xml from here:
<http://www.w1hkj.com/xmls/sdr/PowerSDR.xml>
3. You need two auxiliary programs to connect PowerSDR and Fldigi. The first is obtained as vac412.zip from here: <http://software.muzychenko.net/eng/vac.htm#download>
 Note you will need the full version which costs about \$25 US. The version used in this guide is Version 4.12. Unzip the download and run the enclosed setup.exe.

In your Windows main menu, find Virtual Audio Cable Control Panel. Select “Control Panel” and then Run as Administrator. Change your VAC control panel to match that shown in below. This will create two virtual audio cables. One to connect the PowerSDR program output to the FLDIGI input. The other will be used to connect the output of the FLDIGI program to PowerSDR.



4. The second helper program is VSP Manager (Virtual Serial Port) Obtain and install a copy from here: http://k5fr.com/ddutilwiki/index.php?title=VSP_Manager You will need to supply the author your amateur radio call sign. After running the VSP Mgr installation “setup.exe” program, you should find a vspMgr icon on your desktop.

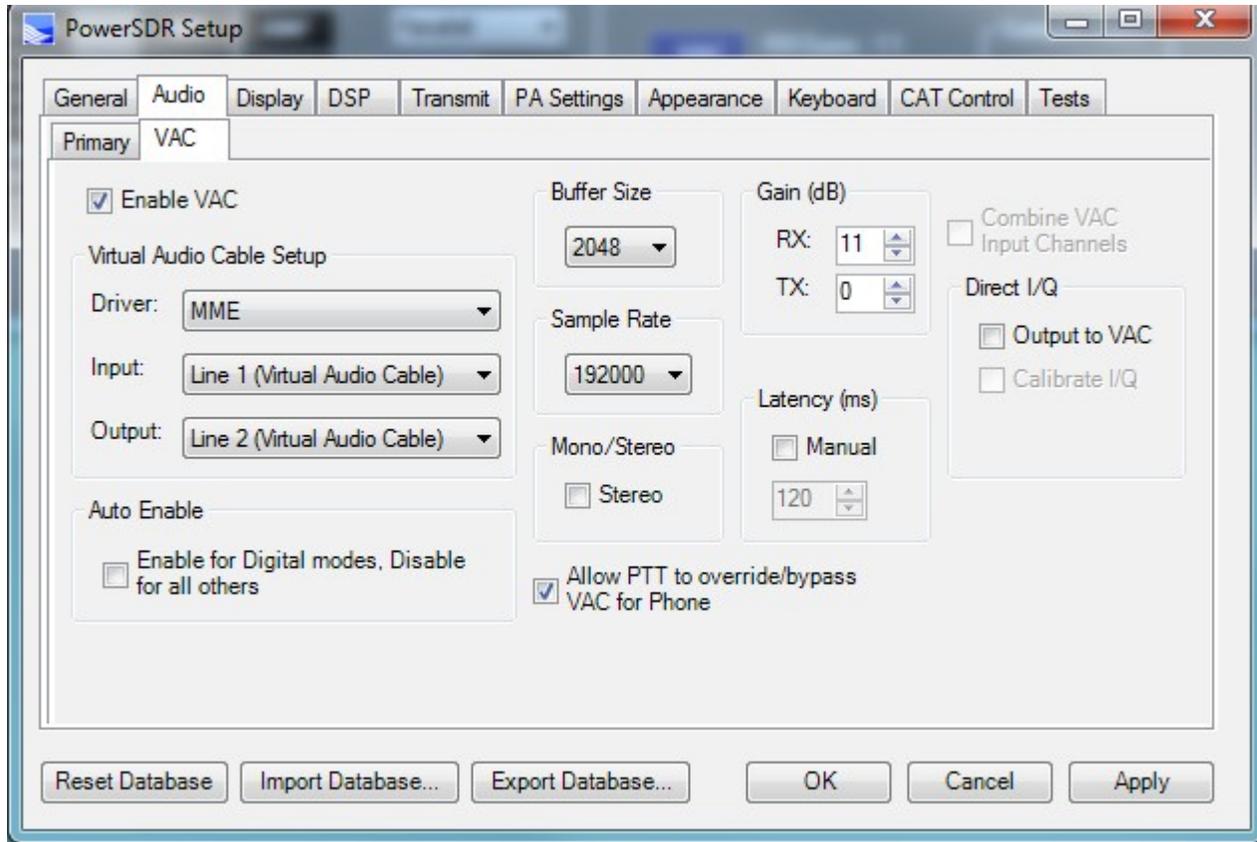
You must run the VSPManager program as Administrator. So right click on the vspMgr icon and choose “Run as Administrator”. Using the VSP Manager program, create two pairs of COM ports labeled as shown below:



4. VSP Manager by K5FR

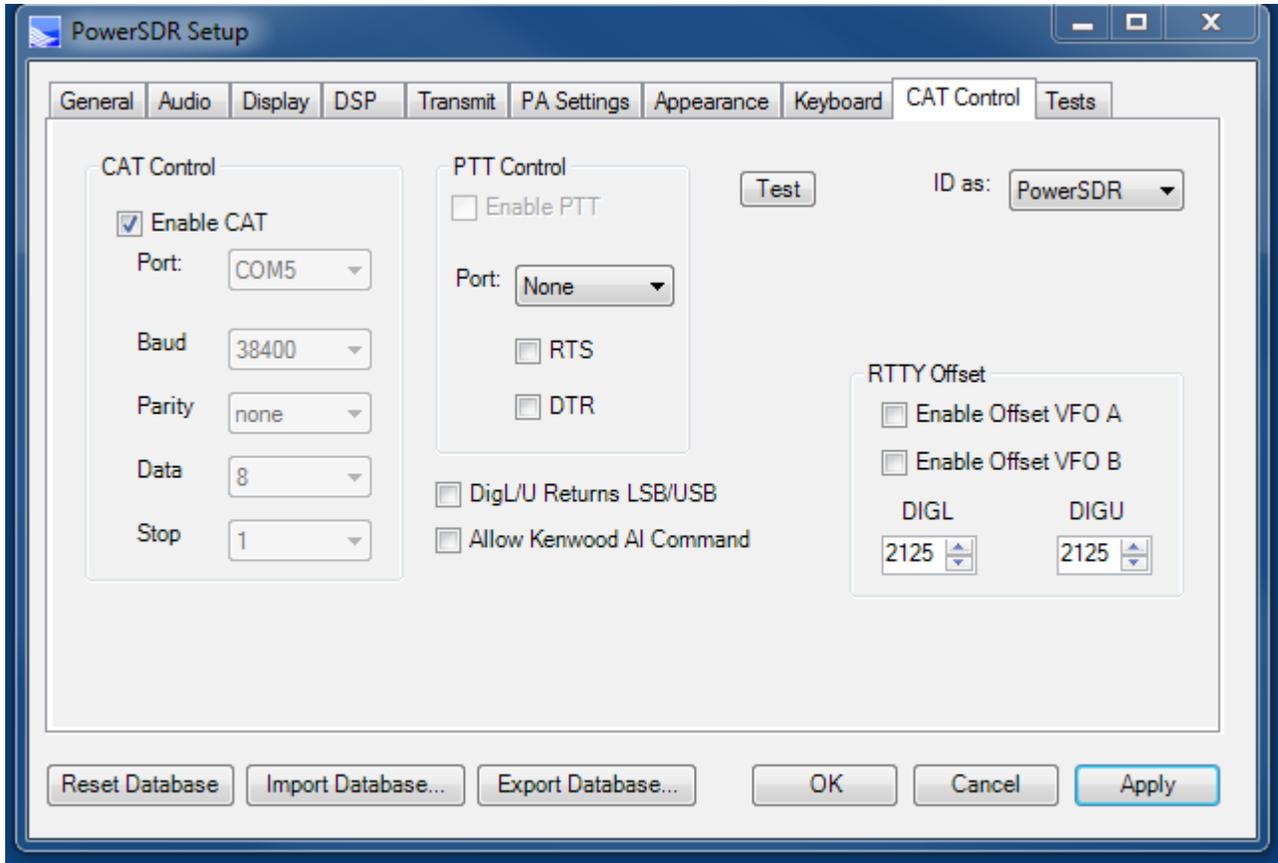
To label the Com ports as shown, simply click Create Pair and select the label from the drop down list. You want to create the pair COM5 and COM15 . The drop down appears when you click the tiny arrow just left of the double arrows. When done, close the VSP Mgr.

5. Start up the program PowerSDR which you installed previously. In Setup → Audio ->VAC , make your panel match the screen shot below:



5. PowerSDR Setup → Audio ->VAC

6. In PowerSDR Setup-> CAT Control, make your panel match that below:

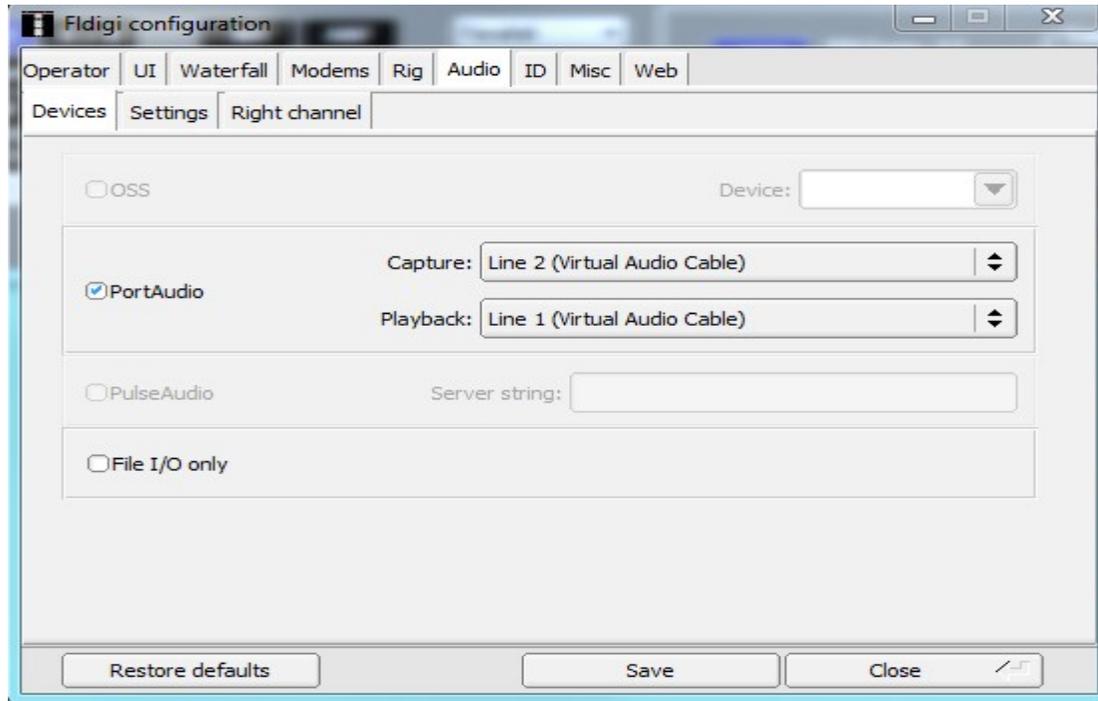


6. PowerSDR Setup-> CAT Control

Note that to change an item under CAT Control, you must first un- check Enable.

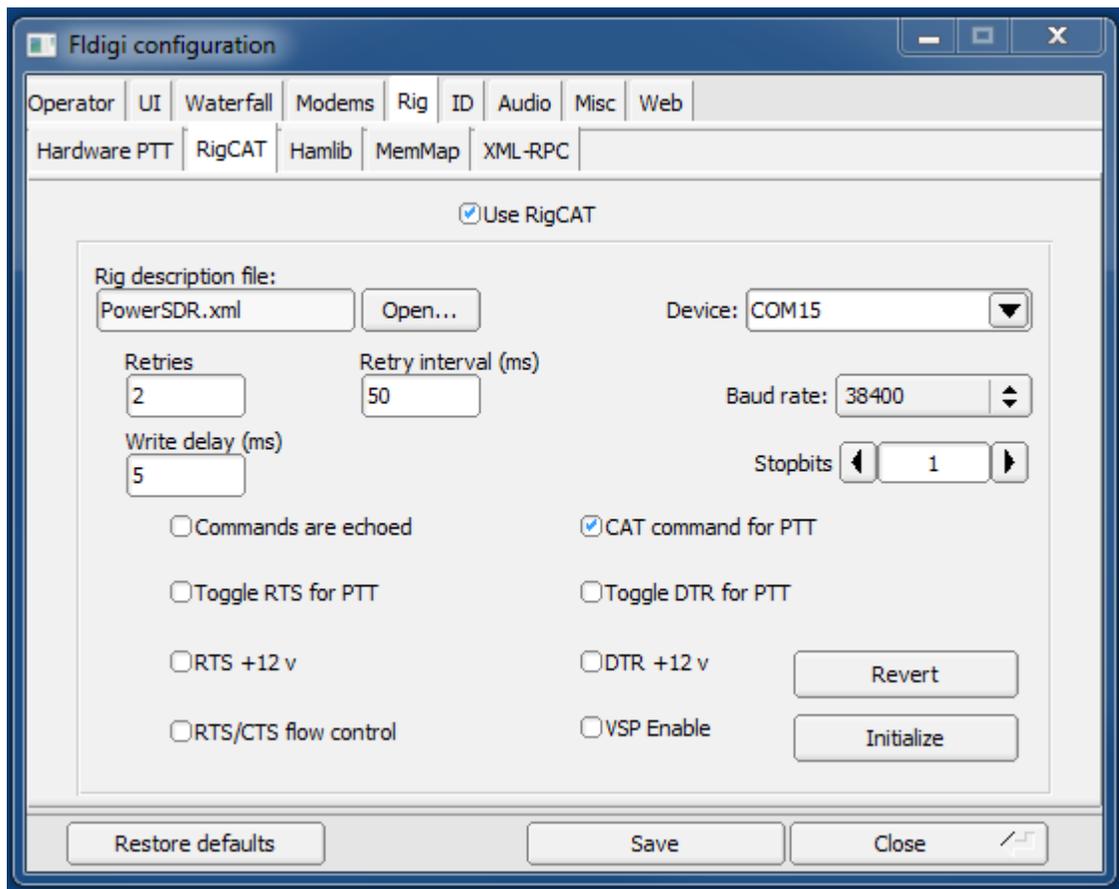
When done, click **Apply**.

7. Next start Fldigi. Click Configure → Sound Card → Devices. Duplicate the settings shown below in your Fldigi configuration panel:



7. *Fldigi_Configure* → *Sound Card* → *Devices*

9. Continuing in Fldigi Configure → RigCAT, duplicate the settings as shown below.

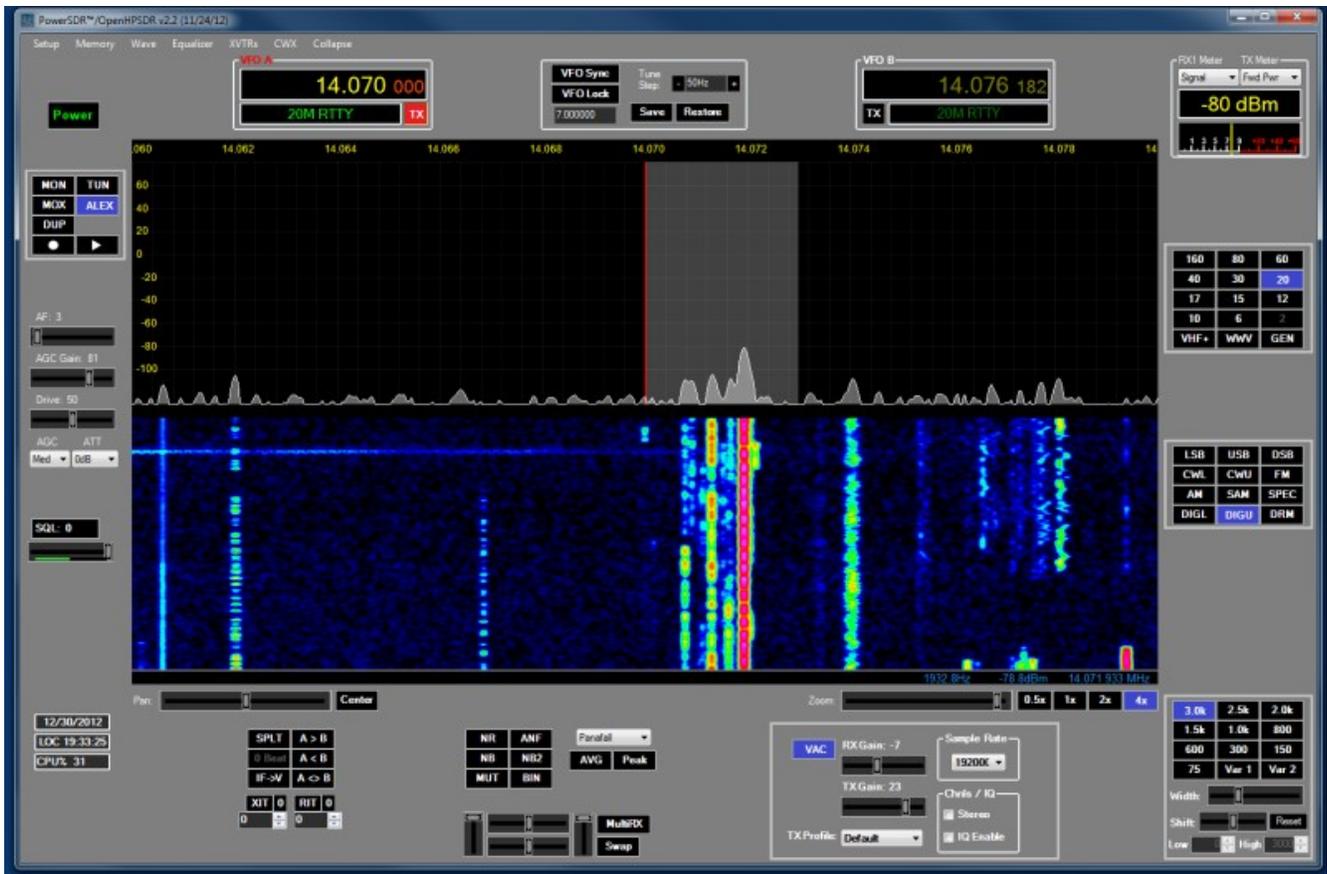


9. Fldigi Configure → RigCAT

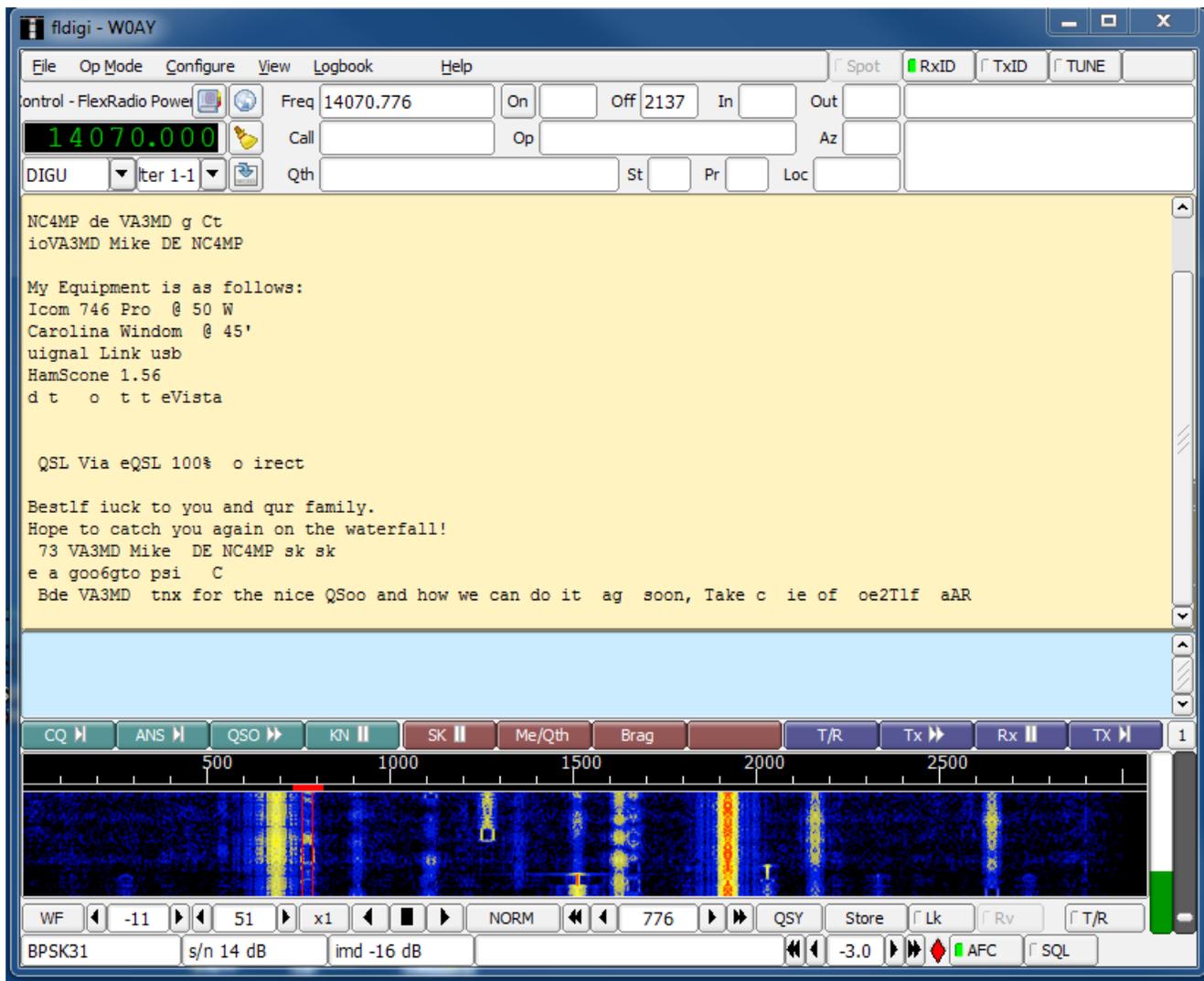
Make certain “CAT command for PTT” is checked.

Click **Initialize** then click Save and then Close:

- Finally click **Power** on the PowerSDR main virtual receiver form. Hopefully, you will see signals and noise in your spectrum display and find that Fldigi shows the same freq as in the VFO A window in PowerSDR.

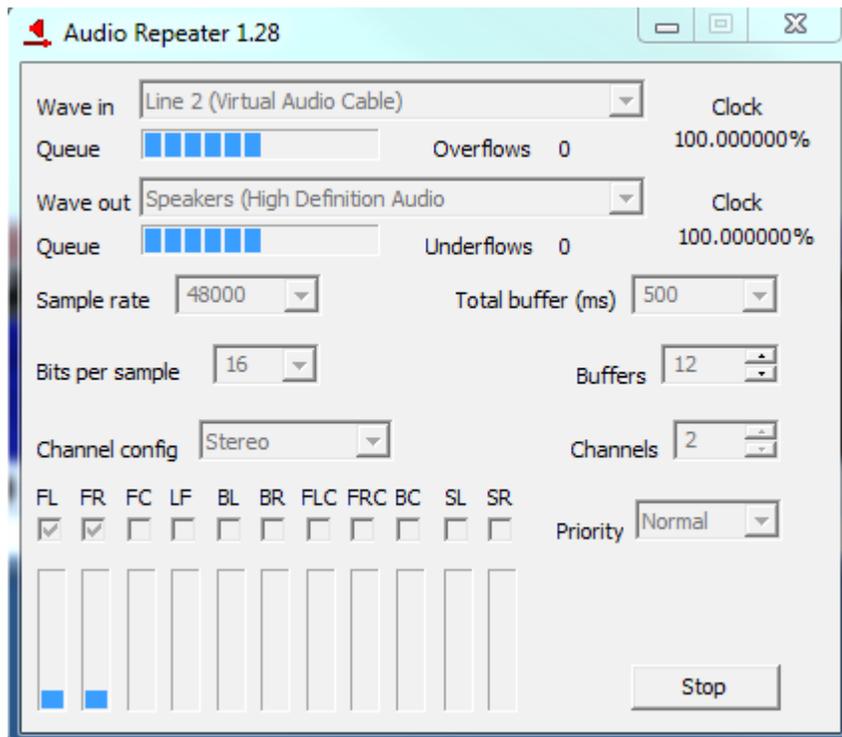


In the PowerSDR main panel marked VAC, (the White Square group of controls with highlighted word “VAC” shown above), you may have to adjust RX Gain until you obtain the familiar Fldigi screen as shown in the example screen shot below:



11. Finally, you will note there is no local audio from your PC. You could simply plug in a PC amplified speaker into the ANAN-10 Headphone Jack. Alternatively, to hear the virtual receiver audio on the PC which is running PowerSDR and Fldigi, configure the Audio Repeater facility which is part of the VAC package.

In the Start Menu, find Virtual Audio Cable → Audio Repeater (MME). Duplicate the settings as shown below:



Thanks for Jason Barker , KE7LGT, for his invaluable assistance in initial configuration. And also to Bill KC9XG for additional info and feedback.

Feedback and errata to Larry W0AY at larry@foxgulch.com