Panadapter for FT1000mp with a PMSDR and Hamradio deluxe Cat/ logging application

Hardware and Software

- PMSDR (you don't need the switchboard plug- in!)
- FT1000mp
- Soundcard for the PMSDR (I use the EMU 0202 USB)
- WinradHD (now called HDSDR)
- Omnirig Cat software (A COM component for transceiver/receiver CAT control)
- VSPE (virtual serial ports emulator)
- Hamradio deluxe (version 5.0 build 2837 (always use the last one))
- Tweak UI (This PowerToy gives you access to system settings that are not exposed in the Windows XP default user interface, including mouse settings, Explorer settings, taskbar settings, and more.
- UHF Female (SO-239) Tee Coaxial Adapter Connector

- Two phone jacks male

- One BNC plug male

- 3x UHF male (pl-259)

- RG-8 coax

To Prepare the Hardware

The first two RG-8 Coax cables can be short (1 foot/30cm). Make two equal ones of them with on one end the Male Phone jack and on the other end the PL 259 connector.

The length of the third cable depends of the distance between the back of your FT1000mp and the PMSDR. On one end of that last RG-8 coax cable you have to connect the BNC and on the other end the PL-259.

To download the software

It depends on your settings on what place the downloads will be set. All my downloads will be placed on my desktop, but most computers will place them in the map called Downloads.

Download WinradHD (now called HDSDR) form this site:

http://www.hdsdr.de/

Download also the latest DLL-file for Winrad from the site:

http://www.iw3aut.altervista.org/

(At this time the latest one are DLL's v3.3 rev2)

Download Omnirig Cat from this site:

http://www.dxatlas.com/OmniRig/

Download VSPE form this site:

http://www.eterlogic.com/Downloads.html

(Choose virtual serial ports emulator. It's for free)

Download Tweak UI from this site:

 http://www.microsoft.com/windowsxp/downloads/powertoys/xppowertoys.mspx

(Scroll down with your mouse and you will find the application half way with on the right site the download button)

Download HamRadio Deluxe , if you haven't run this application yet:

http://www.ham-radio-deluxe.com/HRDv5.aspx

(Always use the latest version, which now is v5.0 build 2837)

Install the Software

My suggestion is always make a backup of your recent PC settings. That means, backup your C-drive on an external HD or other partition, or at least make a system reinstall point.

By the way it always a good habit to make a backup every time you are doing trails or install new software. It takes some time and discipline, but when things go wrong you will be back in a flash.

HDSDR

Install HDSDR. Unzip the DLL's v3.3 rev 2 files and copy and paste them into the HDSDR map on your computer. Mostly you will find HDSDR after installing on: **C: program files/HDSDR/**

Make a shortcut of HDSDR.exe and put it on your desktop, or add HDSDR at your start button.

OMNI-rig Cat

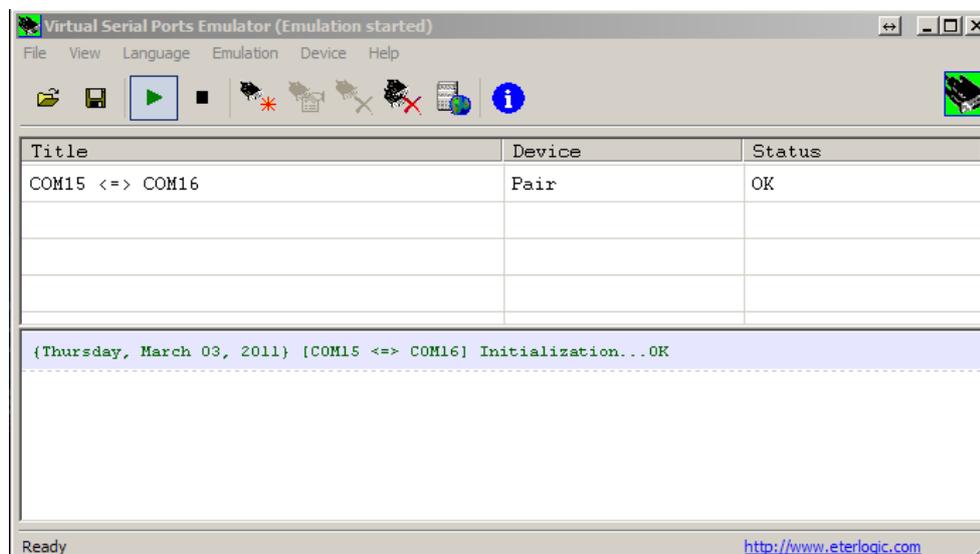Install Omnirig Cat on your PC.

VSPE

Install VSPE and make a map at C: program files/VSPE

The application will be found on your desktop but is not proper configured yet.

Open vspe from your desktop, Click on the button with the connector/star and choose option "pair" and make a two virtual comports (in my example I choose com 15 and com 16)
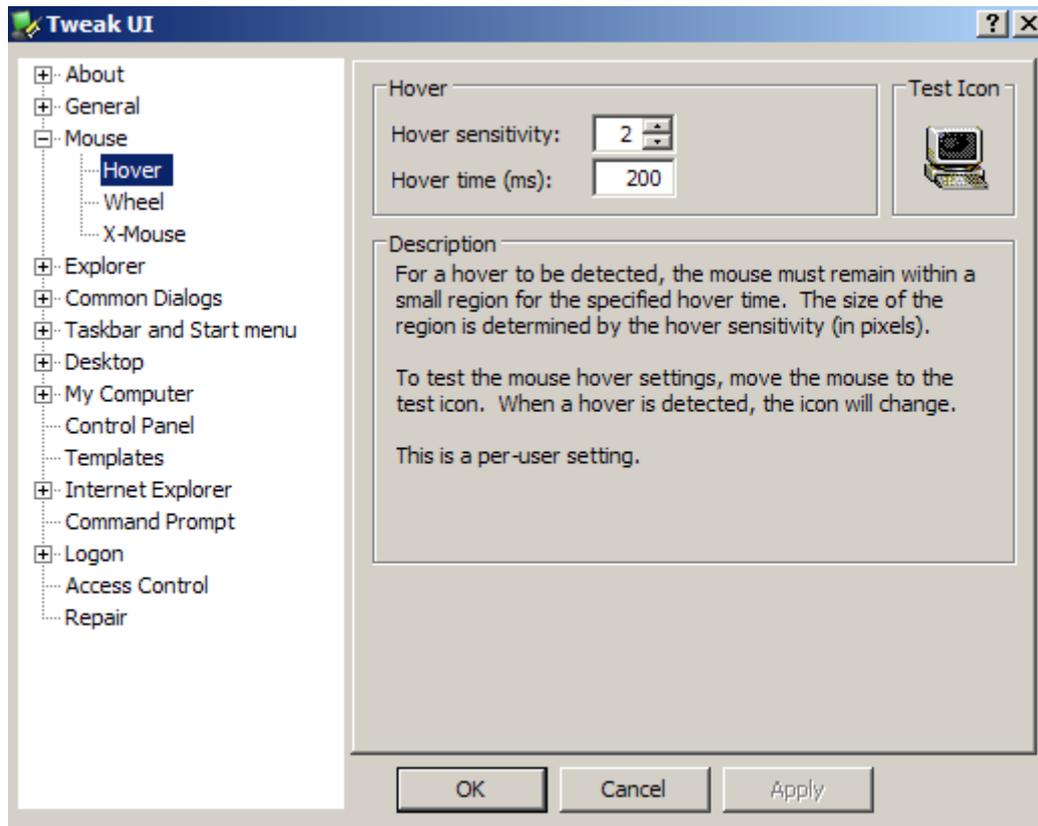
It looks like this below

Save these settings as PMSDR and save it in c:program files/VSPE/PMSDR

Tweak UI

Install this application. And make the following settings

Connect the hardware

I will use the FT1000mp manual to explain the way to configure the right settings. That makes it easy to show what to do.

On page 19 of the manual (rear panel controls & connectors) you will see number 18. (RX ant.).

Take the first made 30 cm coax cable and connect the Jack into the RX out and the PL 259 into the UHF Female (SO-239) Tee Coaxial Adapter Connector.

Take the second made c30 cm coax cable and connect the jack into the RX in and the PL 259 into the UHF female (SO-239) T coaxial Adapter Connector in the opposite part, so rx in and rx out are straight in one line.

Connect the third coax cable on the T-split from the T Coaxial Adapter connector and the BNC to the BNC connector on the rear of your PMSDR.

Now we have three receivers. The VFO A, The VFO B and thePMSDR.

To let all work properly, you have to turn your ant in front of your ft1000mp on RX. See page 9 in you manual under number 18. Usually you will choose ant A/B, but now you choose Ant RX.

If you have done the right thing, the LED A or B will not show up on you front screen (see page 16 in the manual under number 20.

Be sure if you want to use the PMSDR as panadaper, you have to set RX on all bands. If you don't want to use the panadapter, you can switch back to Ant A or B.

When you are listening, the signal from the Antenna goes through RX out, back to RX in, but also to the PMSDR. When transmitting, the internal switch in the FT1000mp cuts of the RX antenna and the signal goes straight through the antenna. You can see this on your screen, because pushing the PTT the "A "after ANT appears on the screen. When release the PTT it goes back to the RX antenna and the A disappears. That's why we don't need the switching unit in the PMSDR. The FT1000mp has this already inside and it works great.

I always listen via my headphone with my monitor on to hear my voice while transmitting. You also can listen via de PMSDR (with the filtering), but at that time there will always be a delay due to the software. And I can tell you, it is hard to speak and hear yourselves with a delay. So that's why I also use the RX in and I can listen via my FT1000MP without any delay.

Let's see if it works

Start up your soundcard, Start VSPE (from c: program files/HDSDR/pmsdr), Turn on your FT1000mp, Start HRSDR, but don't start this application yet, because we do have to make some settings first. (You have to do these only ones)
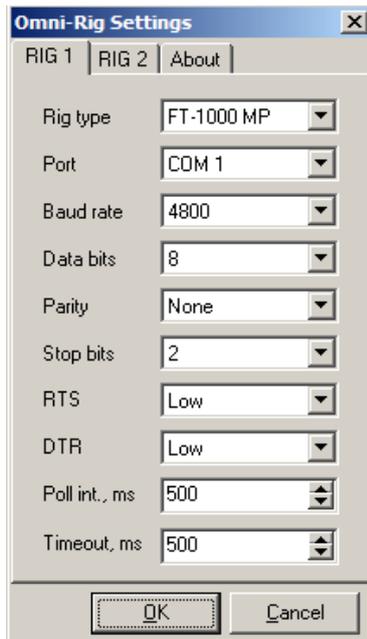
On the left bottom there are some menu buttons in HDSDR

Soundcard: choose your soundcard

Sample rate: choose the maximum sample rate you card can handle. Mine EMU 202 handles 192 kHz, Output on 12000
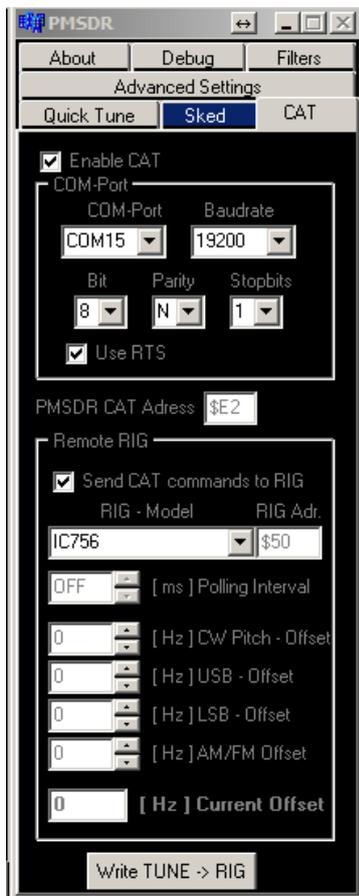
Options:
- Select input and select the PMSDR,
- Select normal process priority and in my case 24 bits ASIO drivers. Chose 16 bits **MME if your card doesn't support ASIO drivers**
- Omnirig Cat, choose settings and select as rig 1 the FT1000mp on that comport your ft1000mp is connected to your computer. In My case this is com1.
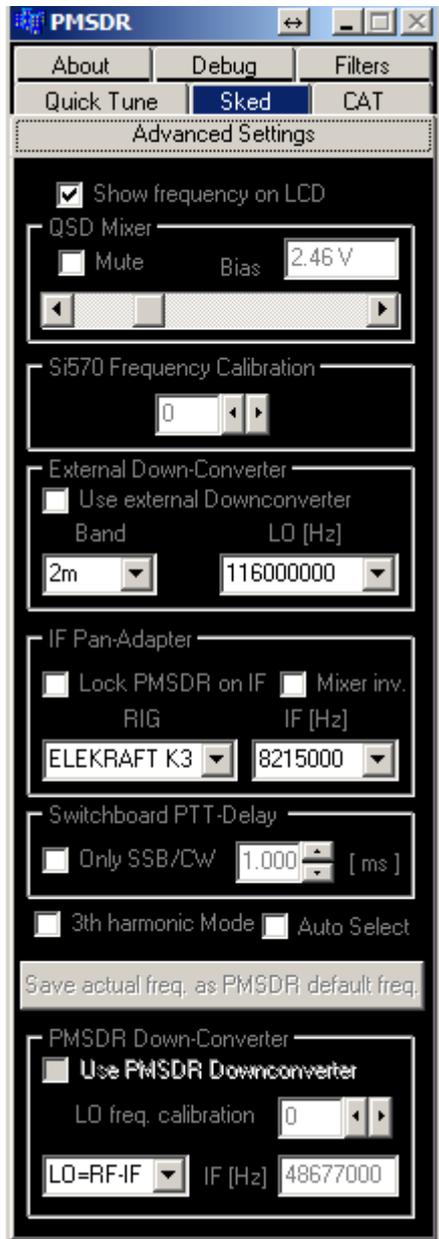- Omnirig Cat, check "sync Rig 1" and check "Sync tune frequency "

Now we go to the PMSDR.dll window to make the proper settings in HDSDR

Click on the tab Cat and make the next settings just the same as I did.

As you can see above, For Remote Rig I have chosen the IC 756 instead of the FT1000mp. You have to do this, because send Cat commands to Rig FT1000mp will conflict.

Now check tab advanced settings and make the same settings as I did.

Our first test.

Click on the start button on HDSDR. I everything runs properly, your ft1000mp will go to the same QRG as HDSDR. Behind the LO Frequency there is a button called "band". If you click on that one a window appears with band switching options. You can drag it to any place on the screen. Click and see if the FT 1000mp will follow the bands and also click on the panadapter (strong signal) and hear

the station you can see on HDSDR while the FT1000mp switched to that station. Watch out the mode is checked correctly, because you have to do this manual.

If this works, then we will go further on with Hamradio deluxe.
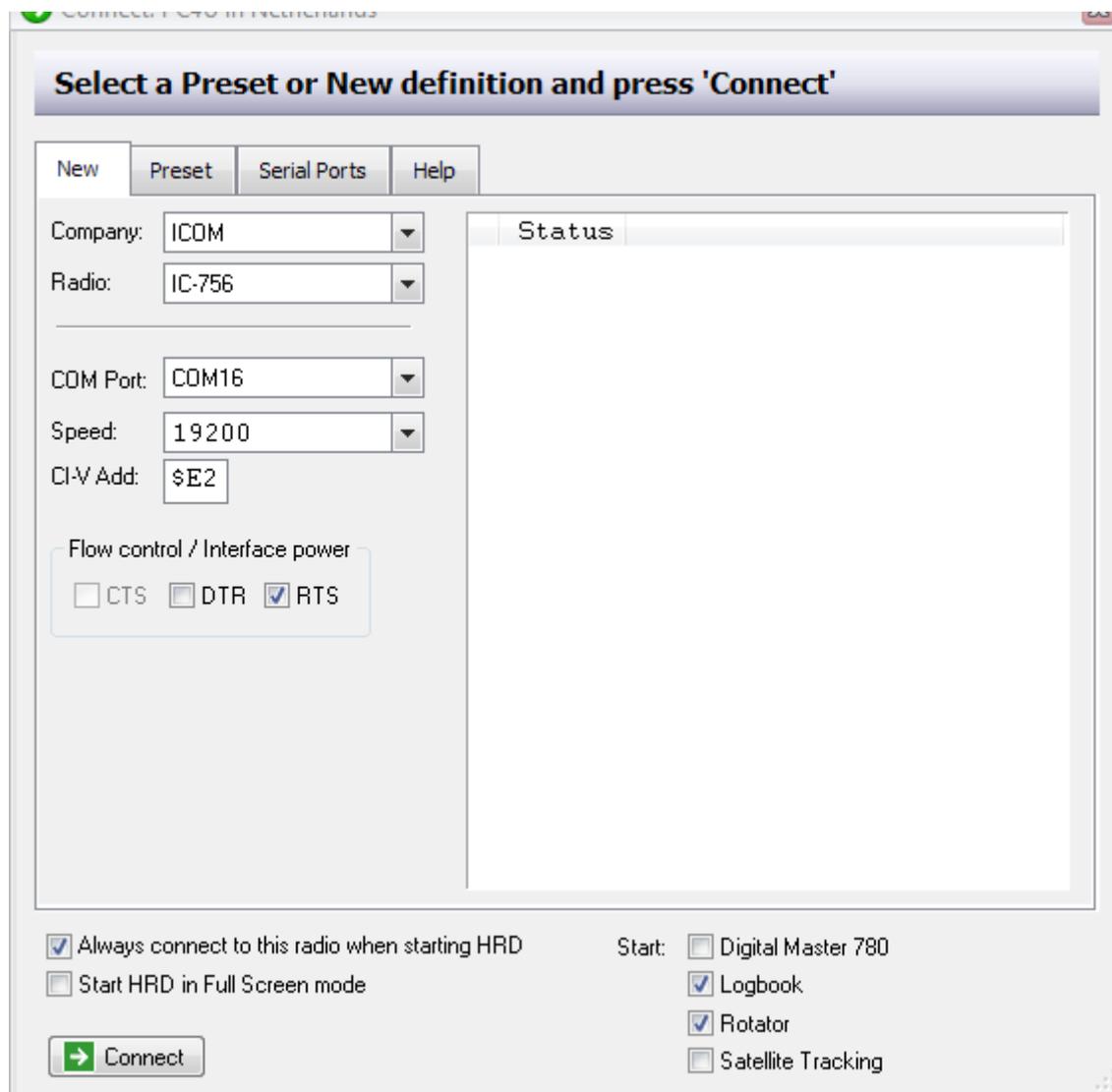
Making the settings in HRD

Leave all the appellations running and start HRD. If you have used HRD previous, you have to change the old settings, because the FT1000mp is no more the rig to Cat-control.

After starting HRD, it will give probably a fault, because the normal cat comport is already in use by HDSDR and not available anymore for HRD.

So we go to the tab "preset" and will delete all the settings.

Then go back to the tab "new" and make the setting just the way I did (see below)

Although you are using the FT10000mp, you have to select the Icom 756. When you choose the Icom IC 756, the CI-V Add will be automatically set to 50. You have to change this into $E2.

That's the PMSDR recognition.

As you see, I also use the logging part and the rotator application of HRD. So all those three applications are activated and will start immediately.

The CAT QRG window is made very small, because I do now controll my FT1000mp via the panadapter or via de DX cluster.

I have made a bat-file so with one simple button in my start screen, all the needed applications will start in the proper order.

If you want to have a copy of this bat-file, just let me know and send me an e-mail to pc4u@amsat.org. I will get in contact with you to make it also proper work for you.

The result.

The panadapter Follows the FT1000mp and vice versa. HRD will not switch the QRG with the FT1000mp, so if you will log a station, just hoover the mouse over the QRG in HRD and the QRG will be correct and the same as in HDSDR. This all has to do with what screen is active. Windows just allows only one screen to be active. But this little tweak UI program, you did install, makes it easy. Just put the cursor of you mouse on the QRG window of HRD and leave it that way. Now turn you FT1000mp knob and all three work together.

If you see a station on the dx cluster in HRD and click on it, all three will go to that station.

Last thing. There is only one QRG in HRD on the screen. So only VFO A will be shown. This because the PMSDR just reads only one frequency and has no double VFO. And because HRD doesn't read the mode anymore, I chanced the mode in the Add field to SSB. I'm only a Phone man, but otherwise you have to change this manually

Hope many of you will enjoy this setup, which give the FT1000MP with the PMSDR a wonderful panadapter without having an if-out our switch unit in the PMSDR in combination with the wonderful program of Ham Radio Deluxe.
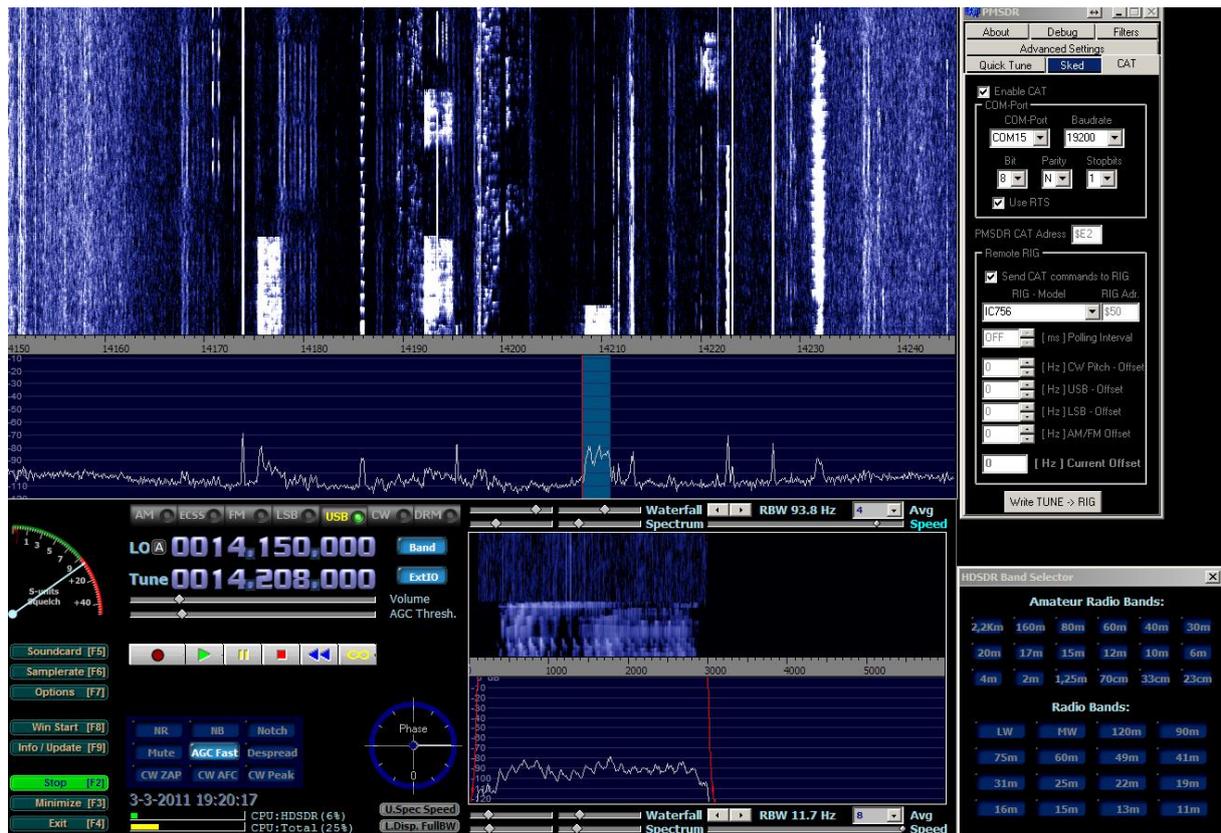
73

Marc, the PC4U

http://members.home.nl/pc4u/ and all my info is also of course on QRZ.com
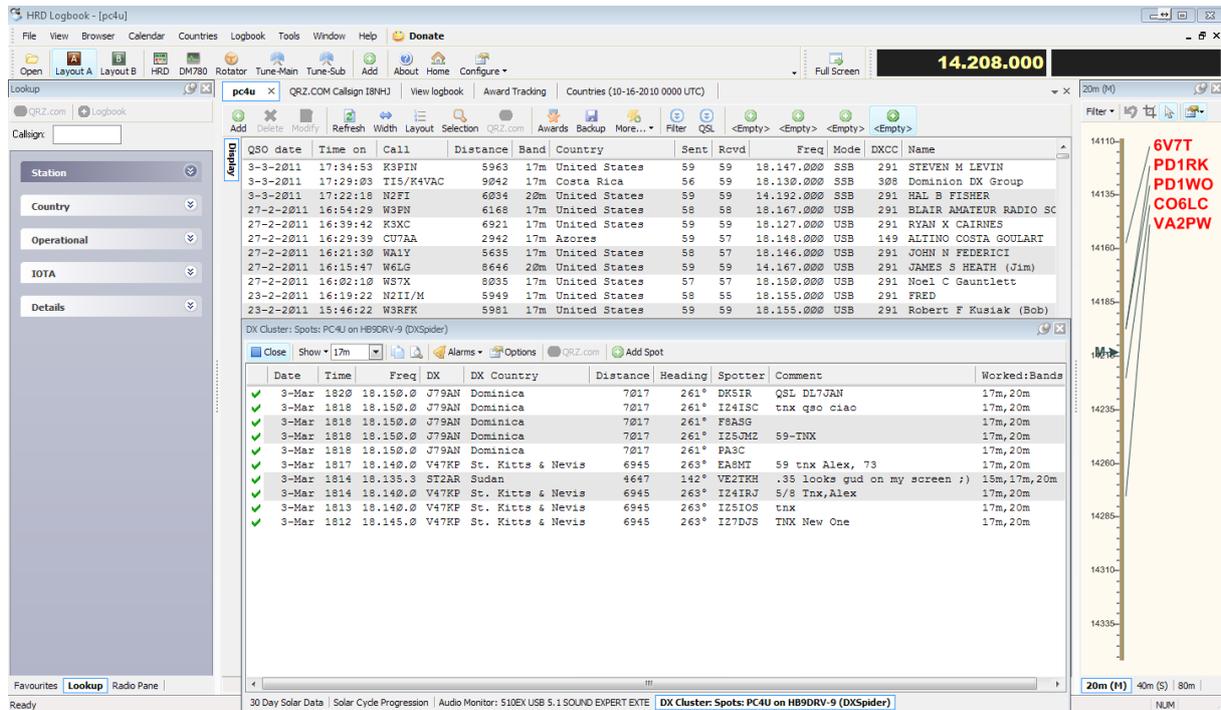
pc4u@amsat.org

On the next few pages you will see my screens

HDSDR

Logging part of HRD

Small CAT screen of HRD with the QRG, right is the Add field and below the Rotator application of HRD