

Using WSJT-X with SDRUNO and RSP1A

I was interested in using my RSP1A SDR receiver with the WSJT-X software. There is a YouTube video that is good and provides an introduction but more details would have been helpful. I am going to present some additional information here that may help in getting it going quicker and also some of the quirks that I have found. I am using a Windows 10 computer and V1.4 of SDRUNO. Additional software required is a Virtual Serial Port Emulator and a Virtual Audio cable.

Here is a link to the YouTube video. You will need to have an understanding of the SDRUNO and WSJT-X operation.

www.youtube.com/watch?v=3f81HWLPq7Mit

You might want to watch it before continuing.

Here are the links to the additional software I am using.

<http://www.eterlogic.com/Downloads.html> Virtual Serial Port Emulator (VSPE).

<https://www.vb-audio.com/Cable/index.htm> VB Cable.

VSPE needs to be run every time WSJT-X and SDRUNO are run.

Install the Virtual Audio Cable. I haven't included any additional information for this.

When VB Cable is installed on your computer no other intervention is required but note that the volume control on the SDRUno rx control module will control the audio level into the WSJT-X software. The following should be done in order otherwise there is a good chance WSJT-X won't run.

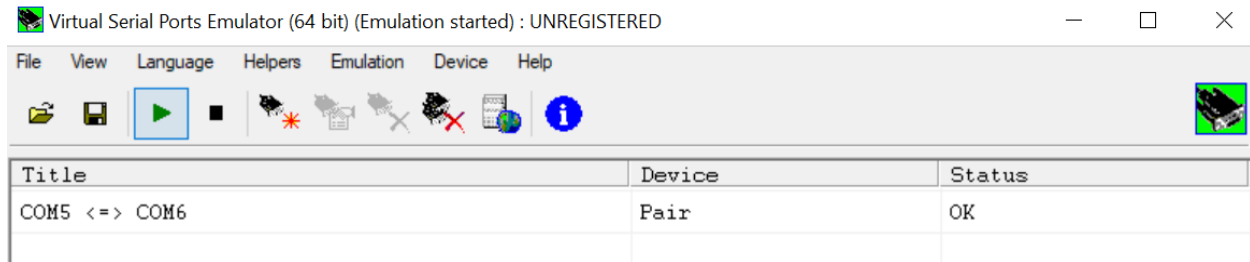
See screen shots below for support of the following steps.

You will need to run the Virtual Serial Port Emulator (VSPE) first.

Next install SDRUNO. Verify that the RX setting, OUT Tab, on the RX Control is set to Virtual Cable. In my case it's VB-Audio. On the CAT Tab, I use com5 and a BAUD RATE of 57600. Click on PLAY on MAIN and then click on Clear on the key pad. If you don't click on clear you may find that it won't change bands when using WSJT for receiver control but can change frequencies within the band. Controlling SDRUNO with WSJT will only change the frequency. It does not control other settings, for example, USB. You will need to do this manually along with bandwidth etc.

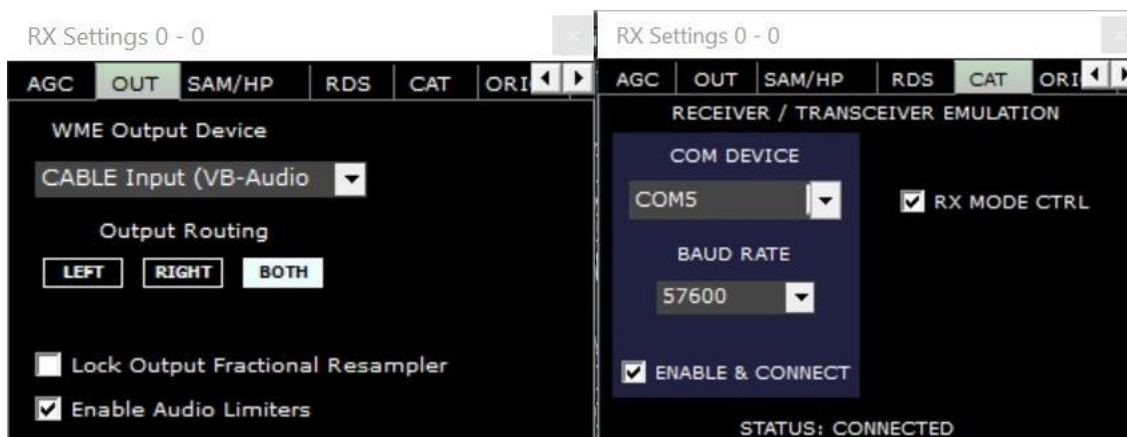
Virtual Serial Port Emulator configuration

For the Virtual Serial Port Emulator (VSPE) CAT interface I use com5 and com6 (for no good reason, just picked them).

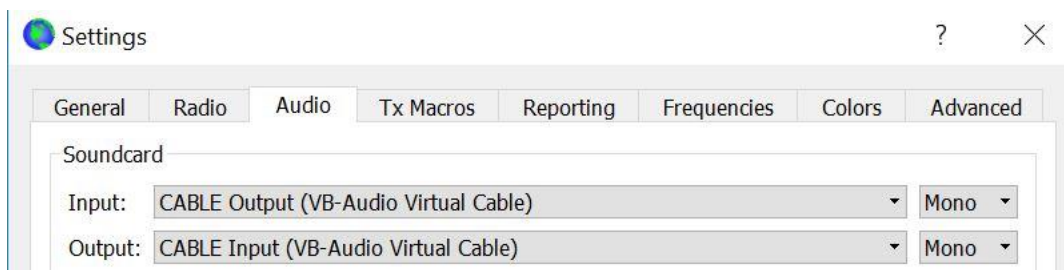


To configure, click on Device, Create, then Device type Pair, click next and select your com ports. You can save the configuration so you don't have to re-configure each time. Saving it to the Desktop may be convenient. Don't forget, run this first.

SDRUNO Settings



WSJT-X Settings



WSJT-X Settings Continued

The screenshot shows the 'Settings' window for WSJT-X, specifically the 'Radio' tab. The window has a title bar with a question mark and a close button. Below the title bar is a tabbed interface with tabs for 'General', 'Radio', 'Audio', 'Tx Macros', 'Reporting', 'Frequencies', 'Colors', and 'Advanced'. The 'Radio' tab is selected. The 'Rig' dropdown is set to 'Kenwood TS-480' and the 'Poll Interval' is set to '1 s'. The 'CAT Control' section includes a 'Serial Port' dropdown set to 'COM6' and a 'Serial Port Parameters' section with a 'Baud Rate' dropdown set to '57600'. Below this are three sections: 'Data Bits' with radio buttons for 'Default' (selected), 'Seven', and 'Eight'; 'Stop Bits' with radio buttons for 'Default' (selected), 'One', and 'Two'; and 'Handshake' with radio buttons for 'Default' (selected), 'None', 'XON/XOFF', and 'Hardware'. The 'Force Control Lines' section has dropdowns for 'DTR' and 'RTS'. The 'PTT Method' section has radio buttons for 'VOX', 'CAT' (selected), 'DTR', and 'RTS', and a 'Port' dropdown set to 'COM3'. The 'Transmit Audio Source' section has radio buttons for 'Rear/Data' and 'Front/Mic' (selected). The 'Mode' section has radio buttons for 'None' (selected), 'USB', and 'Data/Pkt'. The 'Split Operation' section has radio buttons for 'None' (selected), 'Rig', and 'Fake It'. At the bottom right are two buttons: 'Test CAT' and 'Test PTT'.

More Information

There is latency in the SDR. In my case when my computer clock is set correctly and decoding FT-8 the received station's DT shows about .5/.6 seconds assuming their clock is set correctly. Generally this doesn't seem to have much of an effect on the operation but if their time is significantly off in the right direction it would. Your DT time shown may be different than mine. There is an app, maybe several, which you can use to correct this. It's called Time Fudge. The problem is that if you use another app like Dimension 4 to initially set the computer time, every time Dimension 4 updates you need to run Time Fudge again. You can configure Dimension 4 to set the Time on start-up and not do it again until you reboot the computer. If you do this you then can use Time Fudge to compensate. It should be good for the day.

If you want to listen or not listen to the RSP audio, in Windows go to the Control Panel. Click on Sound then click on the Recording Tab. Double click on Cable Output. Click on the Listen Tab. Click on the box Listen to this device and then click OK.

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Continued...

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I recently set up SDRUNO to run with MMSSTV. It wasn't difficult. All you need is VB Cable installed. I did not use VSPE. In the set-up for MMSSTV you will need to configure the sound card in and out (Misc tab) for USB Audio CODEC and do the level. You will need to adjust the receive frequency manually on SDRUNO.

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