

# WSJT-X Operation by W2HUV

You will need to install virtual audio cables on your PC in order to operate in the FT8 and FT4 modes unless you have an Elecraft K3 Remote or an ORB Control Device. The VB CABLE Virtual Audio Device is recommended.

## Installation of VB CABLE Virtual Audio Device:

Use the following link to download the VB CABLE Virtual Audio Device  
[http://download.vb-audio.com/Download\\_CABLE/VBCABLE\\_Driver\\_Pack43.zip](http://download.vb-audio.com/Download_CABLE/VBCABLE_Driver_Pack43.zip)

Extract all files and Run Setup Program in administrator mode. Reboot after installation.

## Remaining Settings:

- 1) Open RCForb client.
- 2) Select the "Virtual Devices" tab and look at the "Virtual K3" option. If the option is greyed out, it will be necessary to reinstall the client, this time, checking the "Virtual Serial Port Support" option.
- 3) Turn on the "Virtual K3" option and select a COM port. COM20 is suggested because it is easy to remember and out of the way.
- 4) Select the "Audio" tab. Set SPKR to "CABLE Input (VB-Audio Virtual Cable)" and MIC to "CABLE Output (VB-Audio Virtual)". **Set both VOL and MIC audio levels at minimum** and close the client.

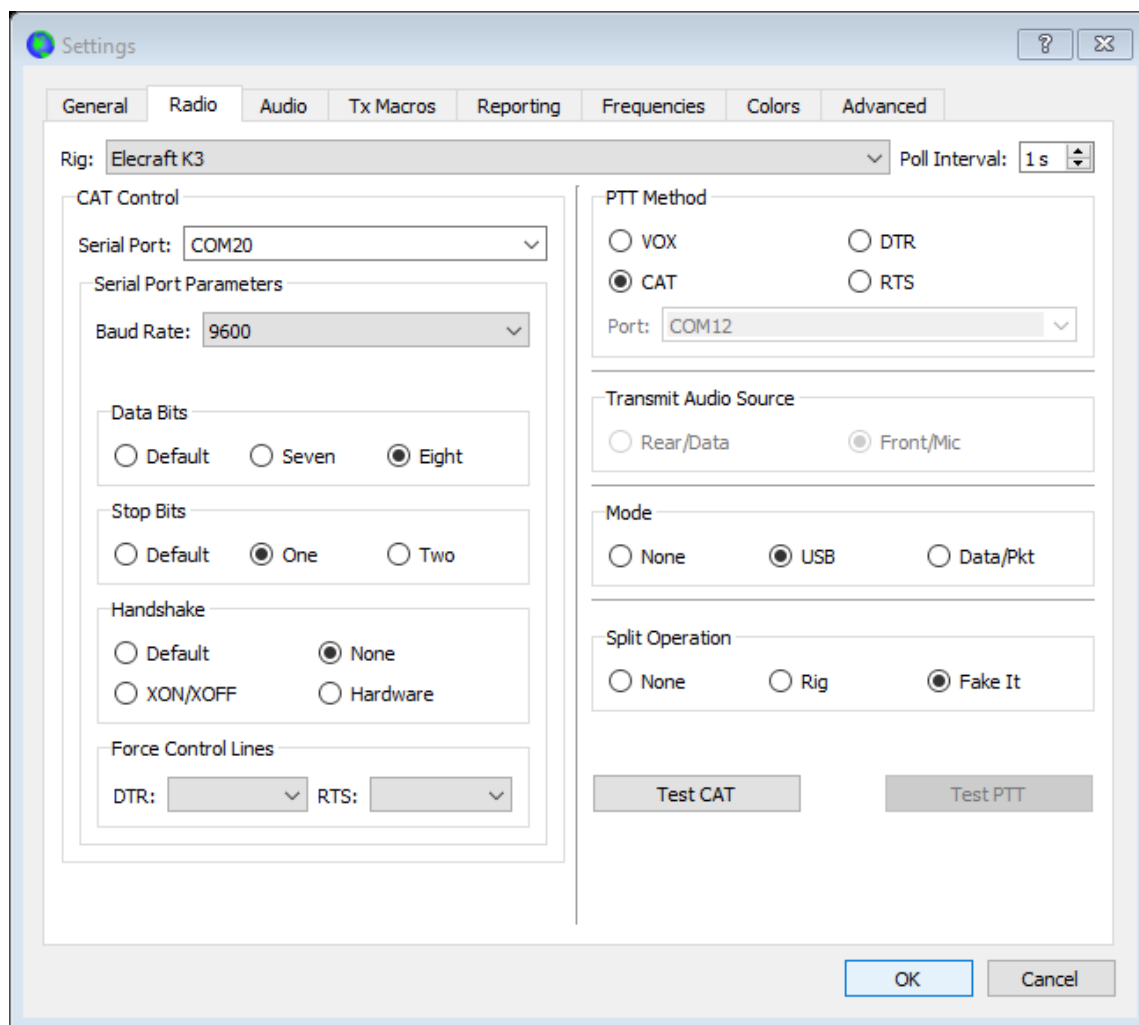
## Remote WSJT-X Operation:

- 1) A patch is required for WSJT-X Split Operation to work properly. If you have not already done so, download the zip file at the link below. Unzip the file and place the dll in the folder where RcForb V9 Client was installed to.

**Note: This fix is only for V9 of the Client**

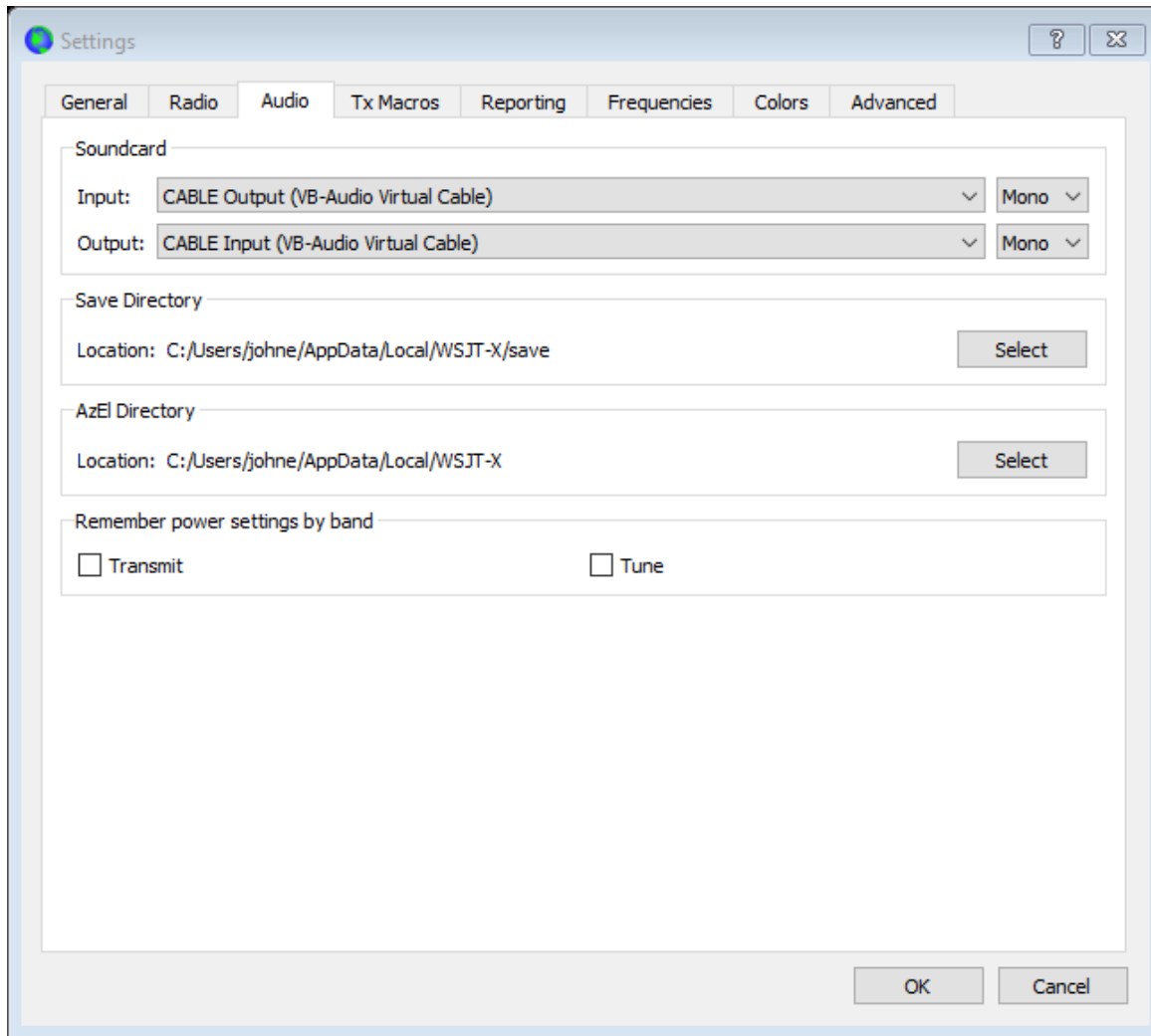
<http://www.romacsoftware.com/beta/RemoteHams.VSP.zip>

2) Open WSJT-X and configure the “Radio” tab settings as shown below.



Note that the rig is an Elecraft K3. This is because the Cat Control Serial Port indicated is for the “Virtual K3” turned on in Step 3) in the previous section. Split Operation may be set to “Rig” or “Fake It” to allow WSJT-X to change the transmit frequency as needed to keep the tones well within the 2.7 KHz transmit bandwidth of a typical transmitter. “Fake It” is preferred because less handshaking is required, making it more reliable. The difference is that it changes the VFO A frequency between RX and TX instead of switching between VFO A and VFO B

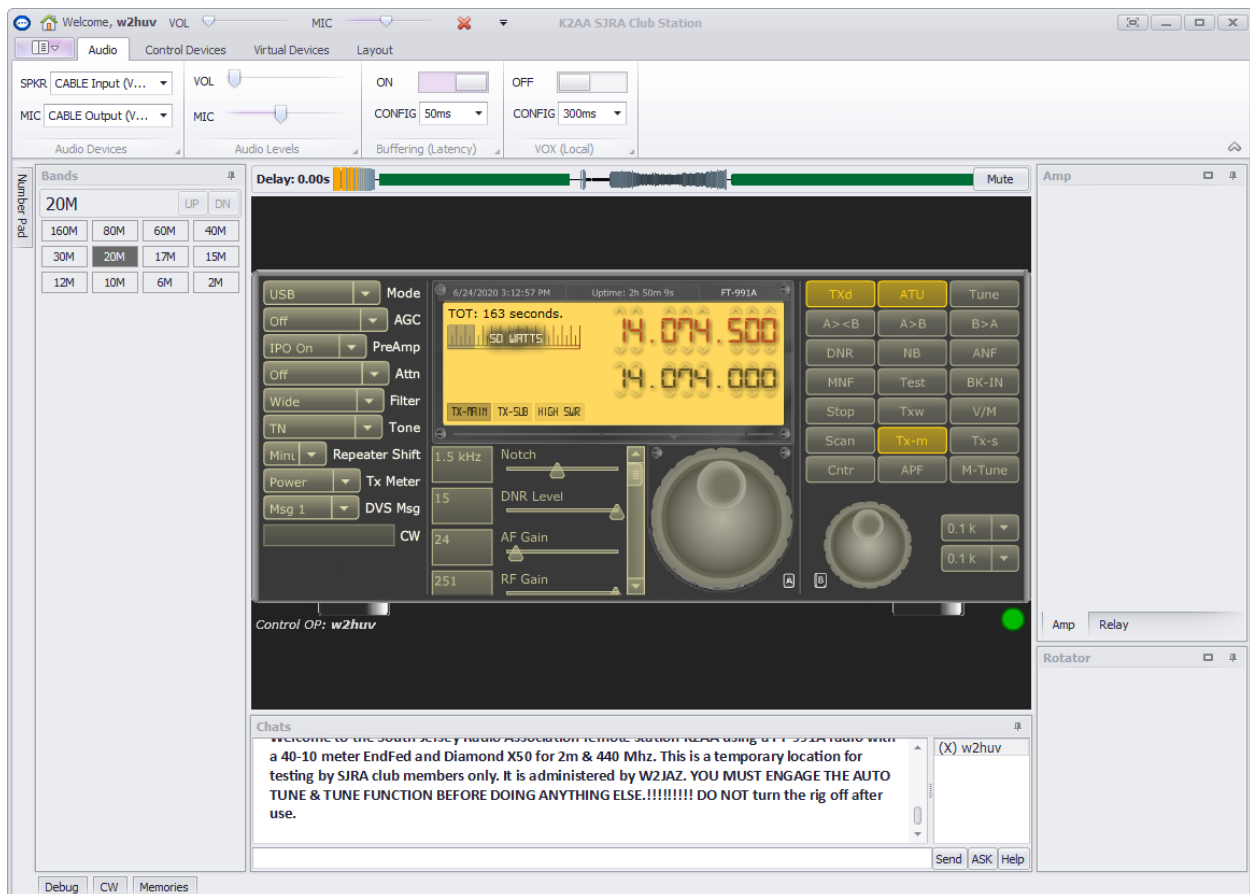
3) Configure the “Audio” tab settings as shown below.



4) Open the RCForb client, connect to the remote, and refer to the screen shot on the next page.

5) The following radio settings are suggested for WSJT-X operation: Mode, USB; AGC, Off; PreAmp, IPO On; Attn, Off; Filter, Wide; RF Gain, 100%; Comp Level, NB Level, and NR level, minimum.

6) The screen shot was taken during TX. Note that VFO A increased 500 Hz during TX. That is because the TX audio frequency was set at 2000 Hz in this example.



- 7) Open WSJT-X and refer to the screen shot on the next page.
- 8) Set the mode to FT8 and set the “Pwr” slider to the right at **100%**.
- 9) Click the down arrow in the band selector to the left of the frequency display on the WSJT-X screen and select 20m. The displayed WSJT-X frequency and radio VFO A frequency should be 14.074.
- 10) The green vertical bar to the left in the WSJT-X screen shot should not appear initially. Increase “VOL” slightly on the RCForb client until the top of the green vertical bar is at about 40.
- 11) Toggle "Tune" on, increase “MIC” level on the RCForb client until signal is red and back off until signal just returns to green. See below. Toggle "Tune" off.



- 12) Select “ALC” on the rig Tx Mtr.
- 13) Toggle "Tune" on, observe “ALC” level and toggle "Tune" off. Decrease the “Pwr” setting slightly and repeat until “ALC” level is as close to zero as possible.
- 14) Select “Power” on the rig Tx Mtr.

15) Toggle "Tune" on, observe "Power" level on rig and toggle "Tune" off. Increase or decrease "Pwr" setting as desired.

**Note:** Don't be alarmed if you receive a FA.ULT message during FT8 operation. The FA.ULT message is generated by the RCForb server when TX exceeds 10 seconds if the power is too high. It is assumed that the rig is being operated at 100% duty cycle, which is not the case. The message will clear before the next FT8 TX. The rig is unaffected.

Congratulations! You are ready to operate in the FT8 and FT4 modes.

The normal startup sequence before you start operating WSJT-X is as follows: Open RCForb client, connect to remote radio and open WSJT-X. It will not hurt to leave WSJT-X running when you switch to another mode.

Please address all questions, comments, and issues to [w2huv@arri.net](mailto:w2huv@arri.net).