

## **Section 1: Install and Run Win-Test**

You can download a full-featured trial copy from

[http://www.win-test.com/rubrique.php?id\\_rubrique=1780](http://www.win-test.com/rubrique.php?id_rubrique=1780)

This version has all the features, but randomly quits after 30 minutes to 2 hours (after which you can immediately restart and continue)

## **Start and set up Win-Test**

### **Basic settings**

*File / New*

Select contest (here CQWW DX), fill out info

Contest configuration

Station

Callsign: K0DQ Grid Square: FN19BB Exchange (zone, ...): 5 ?

DXCC Prefix: W WAZ zone: 5 ITU zone: 8 State/Province/Other: VA

Name: Scott Redd

Address: PO Box 372

Address: McLean

Address: VA, 22101

Club: PVRC - Potomac Valley Radio Cub

Load

K0DQ P49Y Station 3 Station 4 Station 5

Save as

K0DQ P49Y Station 3 Station 4 Station 5

Contest

Contest: CQWW DX Days...  This month only

Category: Single operator Mode: CW

Overlay: Fixed station Band plan: Default Setup...

Class: High power Power:

Operators: K0DQ

Network

Station: STN1  Enable time distribution across the network

OK Cancel

Note:

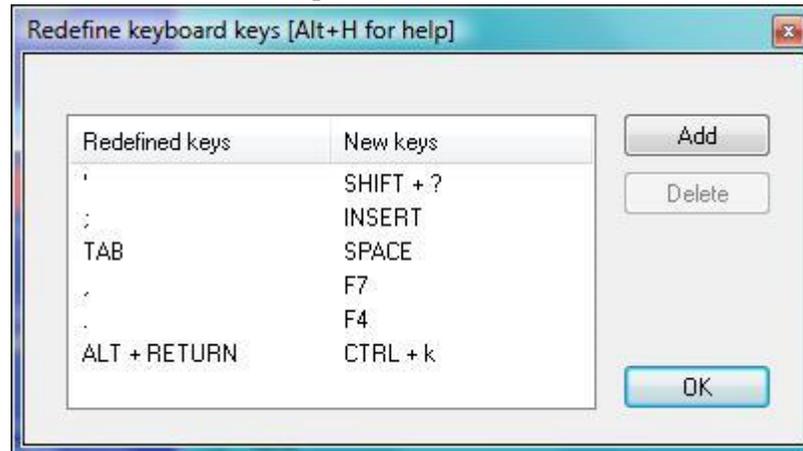
1. Exchange window should be set for transmitted exchange (follows RST). E.g. CQ Zone for CQ WW Contest, IARU Zone for IARU, State for ARRL DX, etc.

Click on OK and Win-Test will open.



- **Tools / Data entry / Redefine keyboard keys (optional, but smart)**
  - o Click “Add” and follow instructions

K0DQ preferred redefinitions:



Notes: Goal is to keep hands on keyboard with as little movement as possible.

1. ‘ (apostrophe) puts “?” in call when typing in callsign window (e.g. G3?N). Note it does not SEND an ? by itself (see comma below)
2. ; (semicolon) sends call and report (INSERT)
3. TAB moves between callsign and zone/exchange field, skipping the RST field which is virtually never touched.
4. , (comma) SENDS whatever partial call is in the run callsign window and SENDS a “?” (F7). If there’s nothing in the callsign window, it simply sends a “?” Useful for narrowing pileup and for maintaining rhythm.
5. . (period) sends your callsign (useful for repeat calls in Alt-D second radio scenario) (F4)
6. Redefine ALT-ENTER as CTRL-+ (Control-Plus) (note: looks like CTRL+k in screen shot but it’s CTRL-+). This allows silent logging of QSO (i.e. log without sending CW). NOTE: This is NOT the same as TRLog which uses CTRL-ENTER for silent logging. In Win-Test, CTRL-ENTER is used to enter a call in the band map, which is sometimes useful when you want to come back to a pile up on the second radio. If you’re not interested in that, redefine CTRL-ENTER as CTRL-Plus.

## SET CW Messages (mandatory)

- *Options / CW / Modify standard messages*

K0DQ preferred settings:

	Run Messages	Search & Pounce Messages
F1	\$RSTEXCHGESENT TEST \$MYCALL	TEST \$MYCALL
F2	\$SETEXCHSENT \$RST \$ZONE	\$SETEXCHSENT \$RST \$ZONE
F3	\$ZONE	\$ZONE
F4	\$MYCALL	\$MYCALL
F5	\$LOGGEDCALL	\$LOGGEDCALL
F6	TEST \$MYCALL \$MYCALL TEST	NR?
F7	\$NEXT ?	\$NEXT ?
INSERT	\$LOGGEDCALL \$GUESSEXCH \$F2	\$F2
PLUS	\$CORRECT ++TU-- \$CR \$MYCALL	\$CR

### NOTES:

1. Use \$SERIAL instead of \$ZONE or whatever is appropriate for your particular contest.
2. NOTE: For contests such as ARRL DX or WPX where the exchange is NOT fairly automatic: (1) add \$TAB after \$ZONE (or \$STATE, \$SERIAL) in Run Messages F2 to automatically advance cursor to exchange field, and (2) remove "\$GUESSEXCH" from Run Messages INSERT line.
3. Run Message F6 is long CQ
4. F7 used in running pile up. If partial call in callsign window, sends that and "?" (e.g. G3 ?) If no call in window, simply sends "?"

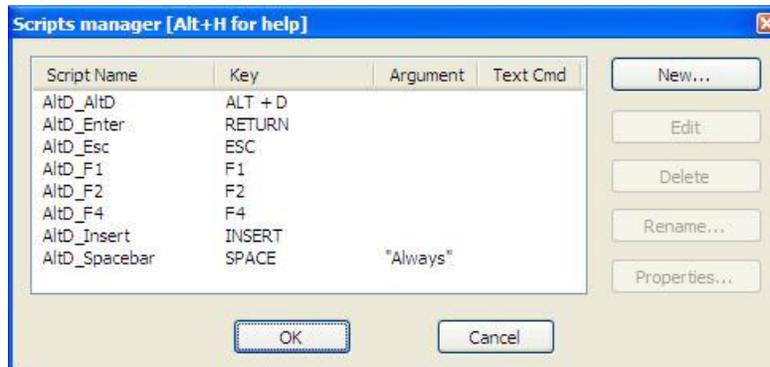
## Install Scripts (Mandatory)

**Download N6TV's latest desired scripts** from <http://bit.ly/wtscripts> unzip/extract and save in easy access location. For this example, the AltD scripts are used. (There are others for, e.g. K3 RIT and DVK control.)

In the scripts package, open "Read me" for each set of scripts (e.g. AltD and K3) and follow installation instructions there or use the less eloquent ones below:

- In Windows Explorer, select scripts files to install, highlight and copy (e.g. AltD\_AltD.wts and seven other AltD\_ files)
  
- In Win-Test:
  - File / Explore / /scripts directory** (CLICK ON) (this opens Windows explorer to the scripts file location)
    - o Right click on 'scripts' file and click 'paste' to paste script files into scripts directory
    - o Close window
  
  - Tools / Scripts manager** (CLICK ON) (you'll see pasted file names under 'Script Name')
  - o Highlight each file, click 'properties' then 'define' then hit key(s) for each script, then 'OK.'

Recommended key assignments:



Notes:

1. "Always" (note upper case A and the mandatory double-quotes) means that hitting spacebar while running always sends call on second radio, even if there is a call in the run radio window.

2. If you need to delete the scripts or add updated new ones, **MANAGE ALL SCRIPTS IN THIS WINDOW, NOT BY NAVIGATING INTO THE SCRIPTS FOLDER IN WINDOWS AND ERASING FILES.**
3. **NOTE:** There are several possible nuanced changes to the scripts files, some included in the file / readme.
  - a. For example, I like to open the AltD\_Spacebar file and ‘uncomment’ the “ - - rc = -1” statement at the end (i.e. change it to “rc = -1”). This has the effect of keeping the tab in the callsign window on the secondary radio until the station responds. When he does, hit TAB to move the cursor to the exchange window, enter/verify exchange, then hit ENTER to finish per above. This allows you to call again by hitting any of the following keys: F4, SPACEBAR, or ENTER and keeps from getting the cursor out of sequence if you accidently hit SPACEBAR to call again.
  - b. Also, four of the scripts have built in 100ms delays to allow ongoing messages to stop. Those delays are hardly discernible, but they can be shortened simply by opening the scripts and editing the ‘100’ in ‘wtApp:Sleep(100)’ line to a smaller value (e.g. ‘10’) or commenting out the command with two hyphens (‘ - - wtApp:Sleep(100)’). The four scripts involved are: AltD\_INSERT, AltD\_ENTER, AltD\_F2, and AltD\_F4

## Modifying the scenarios to use Alt D (Mandatory)

Set up new scenarios.

*Operating / Modify the Scenarios*

1. New Scenario 1: TRlogCW-Plain (for “Plain” pile up) (K0DQ preferred settings)

The screenshot shows the 'Scenarios configuration (CW) [Alt+H for help]' dialog box. The 'Scenario 1' tab is selected, and the 'Scenario name' is 'TRLog - Plain'. The dialog is divided into two columns: 'Primary radio' and 'Secondary radio'. The 'Primary radio' column contains fields for F1 through F7, INSERT, and PLUS, with the following values: F1: \$RESET \$R2R2 \$F1 \$RESET \$R1R2; F2: \$RESET \$R2R2 \$F2 \$R1R2; F3: \$F3; F4: \$F4; F5: \$F5; F6: \$F6; F7: \$F7; INSERT: \$RESET \$R2R2 \$INSERT \$RESET \$R1R2; PLUS: \$RESET \$R2R2 \$PLUS \$RESET \$R1R2. The 'Secondary radio' column contains fields for F1 through F7, INSERT, and PLUS, with the following values: F1: \$TR1 \$F4 \$TR2 \$F1; F2: \$TR1 \$F2 \$TR2 \$F1; F3: \$F3; F4: \$TR1 \$F4 \$TR2 \$F1; F5: \$F5; F6: \$F6; F7: \$F7; INSERT: \$TR1 \$F2 \$TR2 \$F1; PLUS: \$PLUS. At the bottom, there is a 'Wizard' section with five buttons: 'Plain pile up', 'Heavy pile up', 'Multiplier', 'Alternate CQ', and 'Check band'. The 'Plain pile up' button is selected. 'OK' and 'Cancel' buttons are at the bottom center.

2. New Scenario 2: TRlogCW-Heavy (for Heavy pile up) (K0DQ preferred settings)

The screenshot shows the 'Scenarios configuration (CW) [Alt+H for help]' dialog box. The 'Scenario 2' tab is selected, and the 'Scenario name' is 'TRlog-Heavy'. The dialog is divided into two columns: 'Primary radio' and 'Secondary radio'. The 'Primary radio' column contains fields for F1 through F7, INSERT, and PLUS, with the following values: F1: \$RESET \$R2R2 \$F1 \$RESET \$R1R1; F2: \$RESET \$R2R2 \$F2 \$R1R1; F3: \$F3; F4: \$F4; F5: \$F5; F6: \$F6; F7: \$F7; INSERT: \$RESET \$R2R2 \$INSERT \$RESET \$R1R1; PLUS: \$RESET \$R2R2 \$PLUS \$RESET \$R1R1. The 'Secondary radio' column contains fields for F1 through F7, INSERT, and PLUS, with the following values: F1: \$TR1 \$F4 \$TR2 \$F1; F2: \$TR1 \$F2 \$TR2 \$F1; F3: \$F3; F4: \$TR1 \$F4 \$TR2 \$F1; F5: \$F5; F6: \$F6; F7: \$F7; INSERT: \$TR1 \$F2 \$TR2 \$F1; PLUS: \$PLUS. At the bottom, there is a 'Wizard' section with five buttons: 'Plain pile up', 'Heavy pile up', 'Multiplier', 'Alternate CQ', and 'Check band'. The 'Heavy pile up' button is selected. 'OK' and 'Cancel' buttons are at the bottom center.

Notes on scenarios:

1. The only difference between these two scenarios (plain and heavy pileup) is that in the heavy pile-up scenario both ears are on the Run Radio (except when transmitting on the run radio)
2. You must set up the scenarios separately, once for each mode, then make sure they are selected in the Secondary Radio Window. You can select scenarios by clicking on the desired one with the mouse (OK to change while operating – the change will take effect on the next cycle). You can also change scenarios by using Ctrl-Alt-1 (or AltGr-1 on European keyboard) to activate the first Advanced SO2R Scenario, Ctrl-Alt-2 (or AltGr-2) the second, etc.
3. If you do not want the automatic CQ to happen on the primary radio after pressing F1, F2, F4 or INSERT when the secondary radio window is highlighted, eliminate the "\$TR2 \$F1" from the above scenarios. In particular, to eliminate the automatic CQ on Radio 1 after calling on Radio 2 (i.e. hitting SPACEBAR), cut "\$TR2 \$F1" from F4 on Secondary Radio. To cut the automatic CQ on Radio 1 after working the station on Radio 2, cut "\$TR2 \$F1" from F2 on Secondary Radio.

## **Kick the tires, light the fires, and launch**

That's it. Overall, it's a relatively painless effort to see if it appeals to you. If not, you're wiser and out only an hour or so of time. If you like it, maybe you too will be able to chuck that old DOS box.

## **Section 2: SET hardware configuration**

### **Computer**

Win-Test runs on, *inter alia*, Windows 2000, Windows XP, Windows VISTA, and Windows 7. By all reports, and personal experience, reasonably fast modern computers send CW without ‘stutter.’ There are scattered reports of computer generated sound stuttering, but not the actual CW. If in doubt, listen to your radio side tone. Slower CPU computers may require use of a WinKey or similar device. Also, on some modern laptops you’ll just get incoherent beeps from the soundcard but actual keying is OK (type “NOSOUND” in the call window to mute the computer beeps and listen to your transceiver side tone).

### **DX Doubler settings**

Using the DX Doubler with Win-Test (with SO2Rxlat or with true LPT) is straightforward.

1. Change the configuration of the internal jumpers as follows:
  - a. Jumper 1: pins 2-3
  - b. Jumper 2: pins 5-6
  - c. Jumper 3: pins 8-9(this puts Jumpers 1 and 2 in the NA setup, Jumper 3 in the CT/TR position)
2. Put Audio and Transmit switches in “Auto” position.
3. Thanks to Denis K7GK for the above. He also notes: “In this configuration my paddle was only able to key the main radio, not the secondary radio (if selected by the Caps-Lock). I only thought of this towards the end of the contest, but this can be overcome by manually switching the TX to the second radio when using the paddle for fills.” (or by switching radios with the \* key)

### **Options to Control DX Doubler SO2R switching**

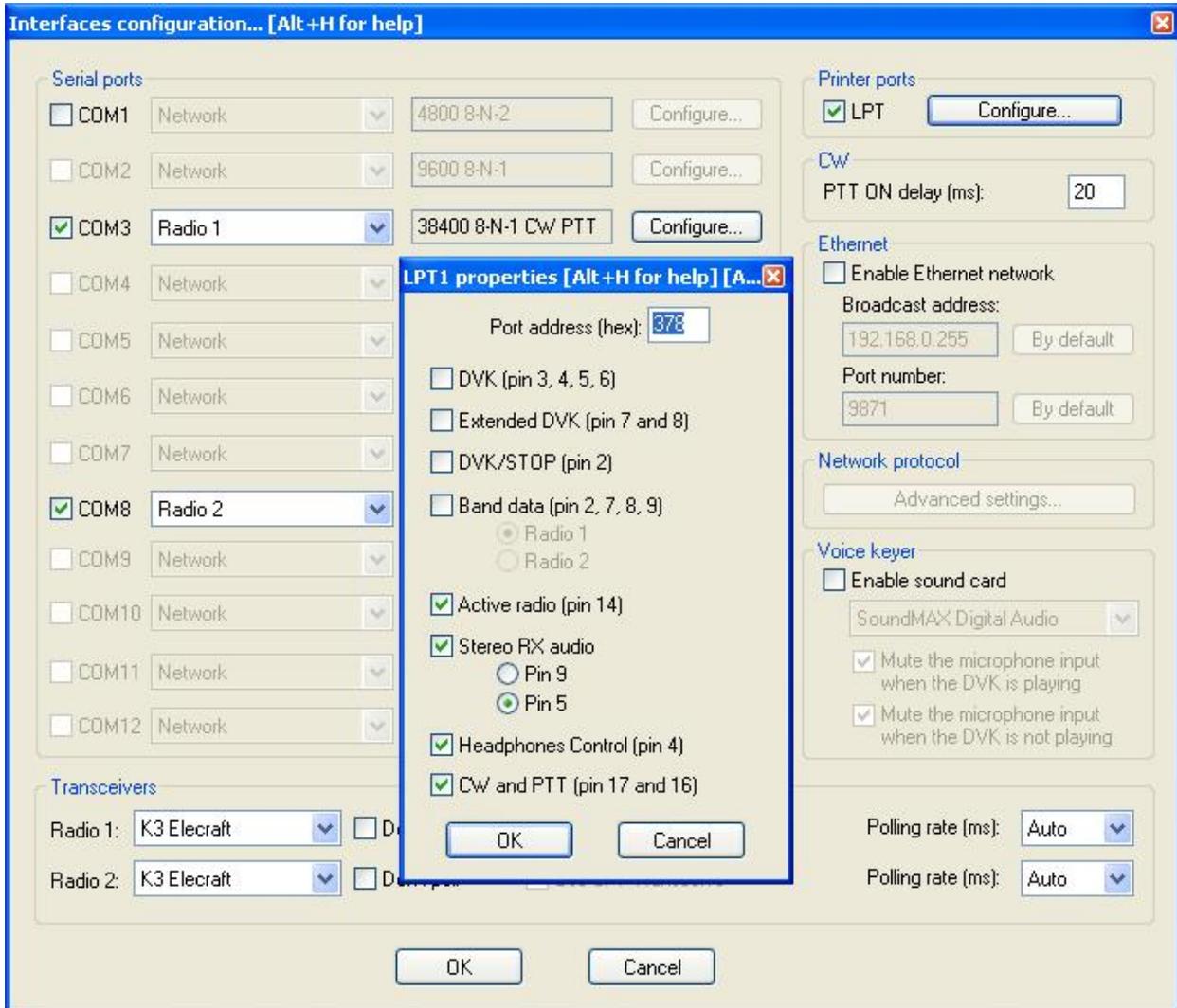
The DX Doubler relies on parallel port (LPT) signal(s) to switch headphone audio and transmitted signals from one radio to another.

Essentially, there are two ways to provide the signals: (1) a legacy LPT port (most Desktops have PCI card bays and PCI LPT ports are still available), or (2) the PIEXX SO2Rxlat device.

As noted above, while USB-to-Serial adapters are readily available and function effectively for CAT control of radios and CW, USB-to-LPT adapters do not.

## Legacy LPT port setup for DX Doubler

This set up is very straightforward. In Win-Test, go to *Options / Interface Configuration /* CHECK the LPT box in upper right hand corner and click “Configure.” For CW, set up as follows:



## **PIEXX SO2Rxlat**

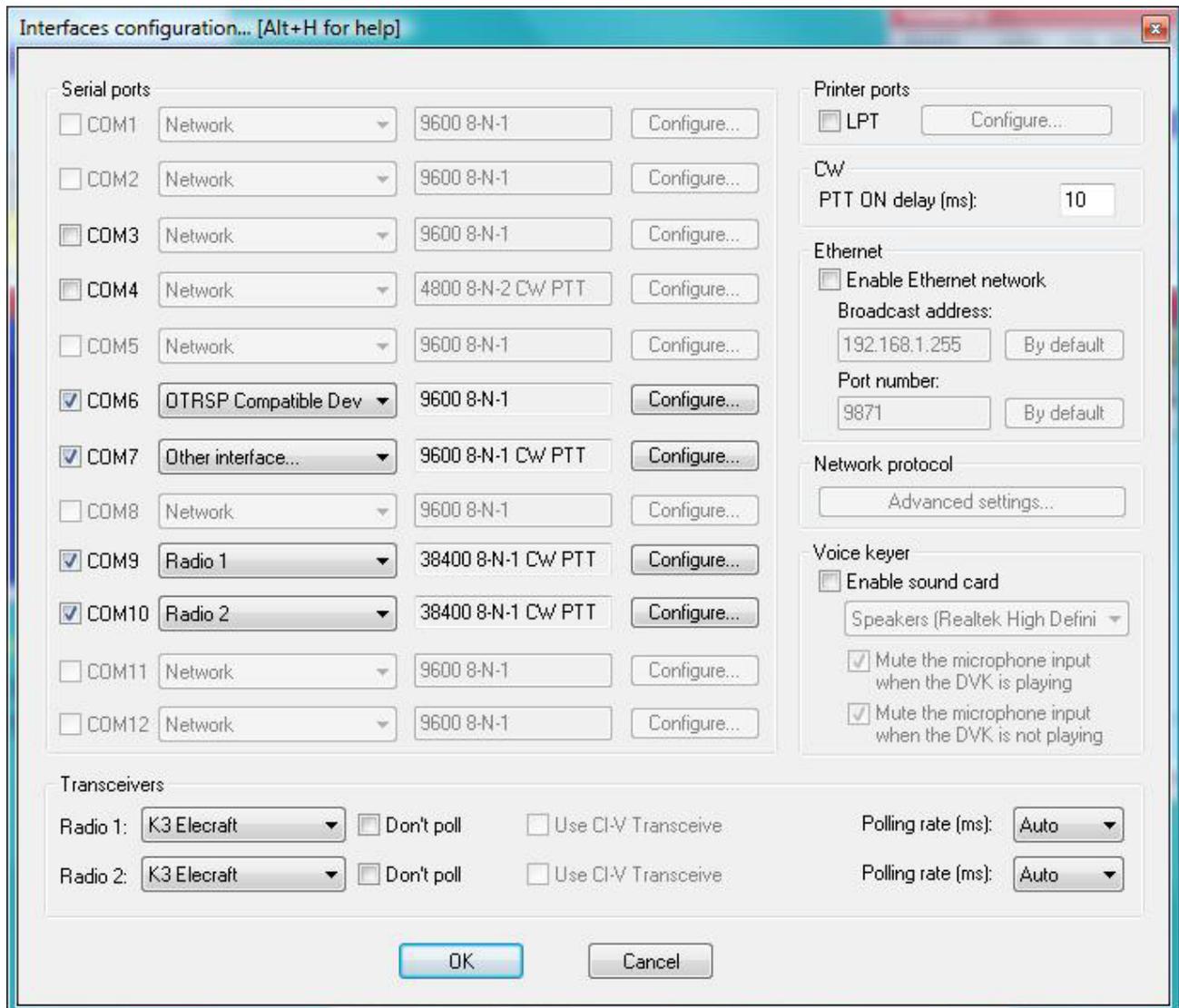
A second option for controlling the DX Doubler is use of the PIEXX SO2Rxlat.

Installing the PIEXX SO2Rxlat.

- The SO2Rxlat plugs into a USB port and has two outputs: A DB-25 LPT (female) port and an outboard port (when ordering you select either DB-9/RS-232 Serial port or CI-V for ICOM radios)
- **Set the data rate** on the small pot (full clockwise for 9600 baud, full counterclockwise for 4800 baud). 9600 used in this example.
- **Plug in the SO2Rxlat** to a USB port.
- When installed the SO2Rxlat will show up as two consecutive COM ports in Windows. Normally the lowest number COM port X (1 in this example) will be set as an “OTRSP compatible device” and the second COM port X+1 (2 in this example) is set for Radio 1 or Network (Radio 1 in this example).
- For SO2R you will need at least one USB-to-Serial adapter (two if you prefer not to use the SO2Rxlat for one radio control – no reason not to). Thankfully these are readily available and DO work in CAT application (I bought several from Amazon at prices of \$8 - \$17). Many have reported better success using USB-to-Serial adapters based on the FTDI chipset rather than the Prolific chipset.
- **Set up the SO2Rxlat COM Ports in Windows**  
*START / Control Panel / System / Device Manager / Ports (COM and USB)* (in VISTA)
  - o In this example, set COM Port 1 for 9600,8,N,1 (SO2Rxlat set for 9600) and set COM Port 2 for Radio 1 parameters (e.g. 4800,8,N,2 for Yaesu FT990).
- **Configure the SO2Rxlat, Radio 1 and Radio 2 in Win-Test:**  
*Options / Configure interfaces*

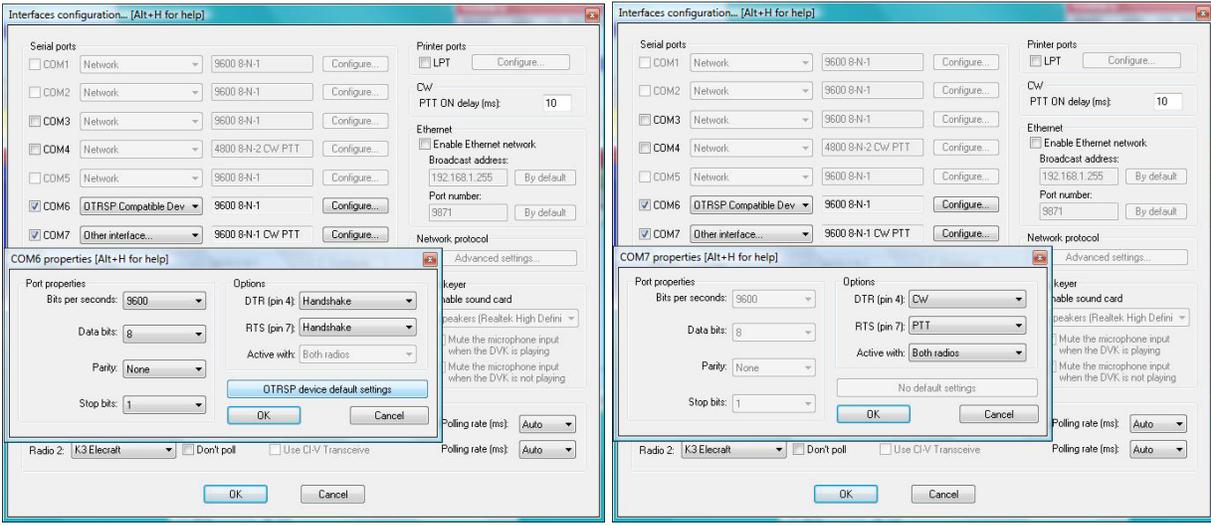
## Example 1: Setup with 2 x Elecraft K3

Overall set up – COM port usage and select radios  
SO2Rxlant (COM6 and COM7) and two USB-to-Serial adapters for Radio 1 & 2 (COM9 and COM10)

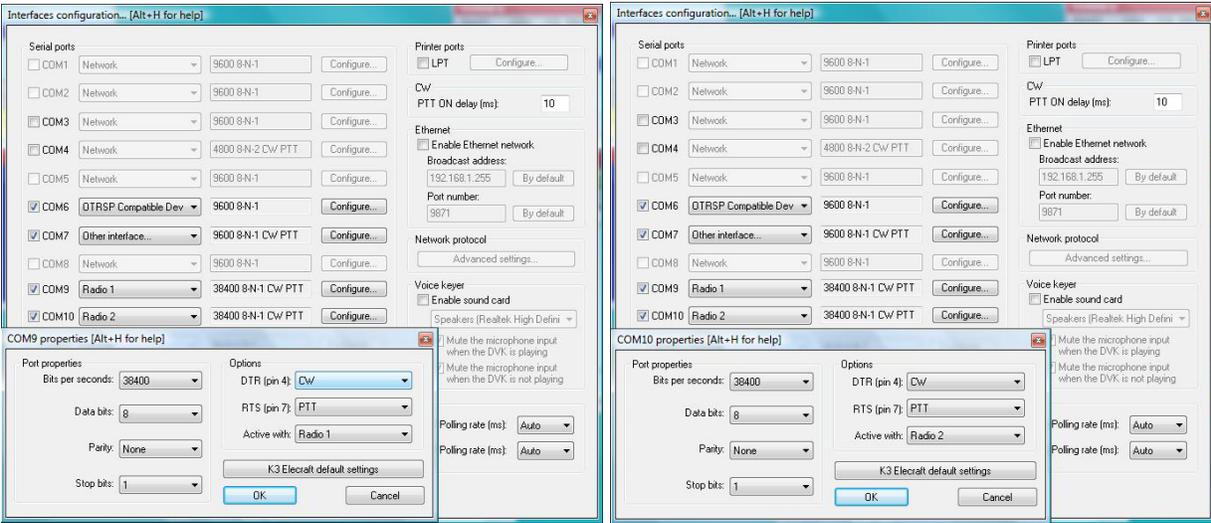


Note: Even though the SO2Rxlant has an LPT-looking port, do NOT check the LPT box

## SO2Rxlnt configuration – First & Second COM ports (COM5 & 6 here)



## 2 x K3 Radio 1 & 2 Configuration (here COM 9 & 10)



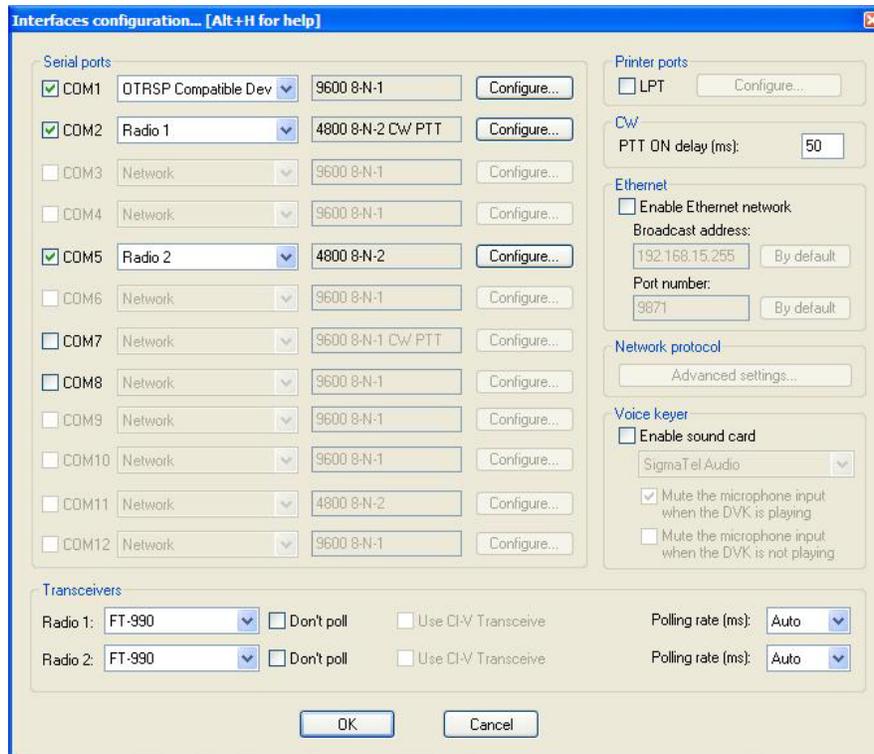
### Notes:

1. With some radios (including the K3) you have the option of sending CW and PTT signals through the COM port DTR & RTS as well as through the SO2Rxlnt (need to set K3 menu CONFIG:PTT-KEY to RTS-DTR). In this configuration, that is done through COMPORTS 9 & 10. DX Doubler RX/TX switching signals are sent through the SO2Rxlnt in all cases.
2. If you use a conventional keyer (e.g. Logikey) for manual keying with paddles, you can route it through the DX Doubler and turn on VOX. That obviates the need for a separate PTT signal in most circumstances.

## **Example 2: SO2R with two FT-990, PIEXX SO2Rxlat**

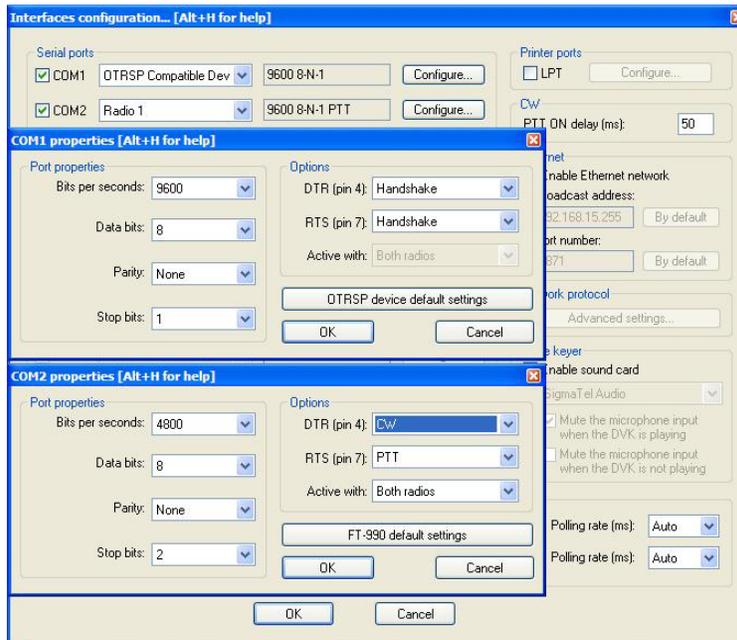
Overall set up – COM port usage and select radios  
SO2Rxlat (COM1 and COM2) and one USB-to-Serial adapter for Radio 2 (COM5)

Note: This example used the second SO2Rxlat COM port (COM2) for C.A.T. of Radio 1

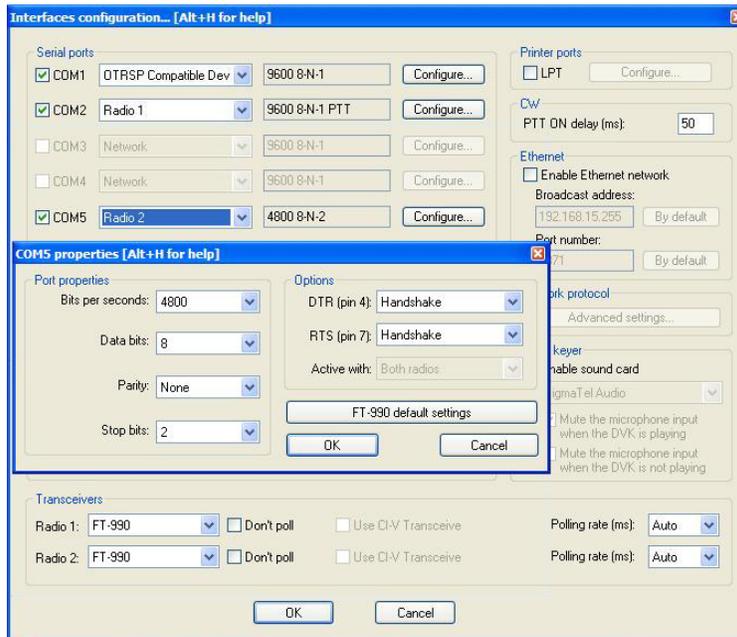


Note: Even though the SO2Rxlat has an LPT-looking port, do NOT check the LPT box

## Configure COM1 and COM2 (SO2Rxlat and Radio 1 – FT-990)



## Configure Radio 2 – FT-990 (COM5)

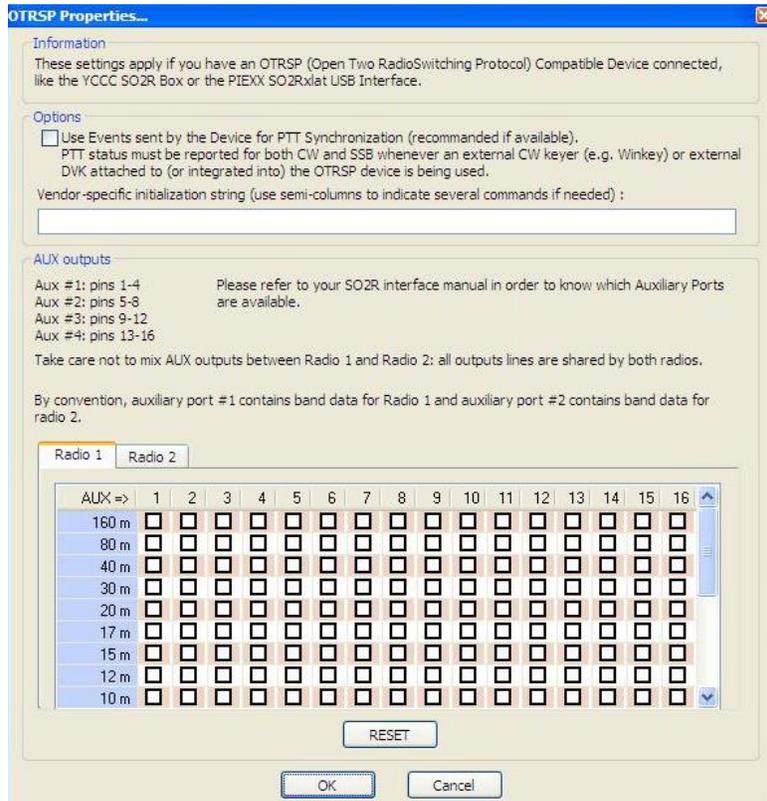


### Notes:

1. Note that the second COM port associated with the SO2Rxlat (COM2) is set for DTR=CW and RTS=PTT. This is (always) required for the equivalent CW/PTT pins (17/16) on the DB25 “LPT” connector to function correctly.
2. For Yaesu radios (here FT-990): The default Win-Test settings have DTR and RTS set OFF, which appears to work with powered interfaces such as the FIF-232. However, use of unpowered (e.g. K1NU) interface cables may require setting DTR and RTS for “Handshake,” as shown here.

3. Of course, it is also possible to use two separate USB-to-Serial adapters to control the two radios (and not the second PIEXX SO2Rxlat port. In that case, set the SO2Rxlat second port – here COM2 – to “Other Interface” or “Network”)

## Set up OTRSP Properties in Win-Test: *Options / OTRSP Configuration*



**Notes:**

1. No need to configure anything if you're using only computer keying.
2. I haven't used them, but if you are using a WinKeyer or outboard DVK you may need to check the Options box.
3. In that event, newer versions of the SO2Rxlat reportedly have a switch to activate the PTT feedback signal. For older versions, the PTT feedback signal is not sent through the SO2Rxlat but can be modified to do so (see next). I understand this signal is used to tell WinTest that the DVK/CW message is complete.
4. From PIEXX: For older versions of the SO2Rxlat:  
 "If you plan on using the PTT and PTT feedback as Win-Test likes you will need to jumper pin 15 to 16 on the P1 connector of the SO2Rxlat. This is so the SO2Rxlat will respond to the PTT state change and provide Win-Test with this information. If you do this you will need to issue, once, the following command to the SO2Rxlat control port: "FSP10(cr)"  
 This command sets up the polarities of the inputs appropriately to work with the jumper just mentioned. The install documents have been updated to describe the SO2Rxlat OSTRP protocol...."