MMTTY plus DPSC plus 4SD equals SO2V(FSK)

MMTTY + Dual Port Serial Card + Four Silicon Diodes

Equals

Single Operator Dual VFO Operation with Frequency Shift Keying

Catchy title, huh? Guess I was feeling creative when I wrote that one! This article describes a simple hardware installation that enables SO2V operation using two instances of MMTTY, driving a dual VFO radio, with transmit capability from either VFO.

Anyone running Windows with multiple communications programs knows that Windows does not like to share com ports. One program per one com port. Period. That's the Redmond rule. Otherwise – BOOM! Error message.

- Yes, I can configure two instances of MMTTY and run them both at the same time.

- Yes, I can install two com ports in my PC.

- Yes, I can have each instance of MMTTY talk FSK to each com port.

The challenge is getting those *two com ports* connected to my *one radio*.

Studying the MMTTY output signals necessary to operate FSK from a serial card, you learn that you only need two signals:

1. Data Terminal Ready (DTR) on serial db9 pin 4, which equates to Push To Talk (PTT)
2. Serial Data (Data) on serial db9 pin 2, which equates to Frequency Shift Keying (FSK)

What's the cheapest and easiest way to tie those two digital signals together? Diodes! Two signals times two ports equals four diodes.
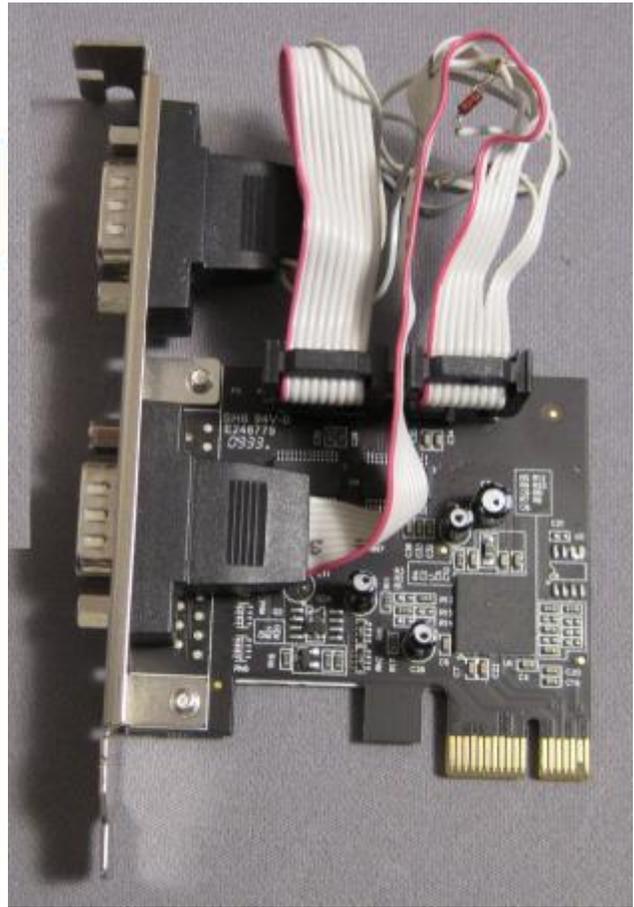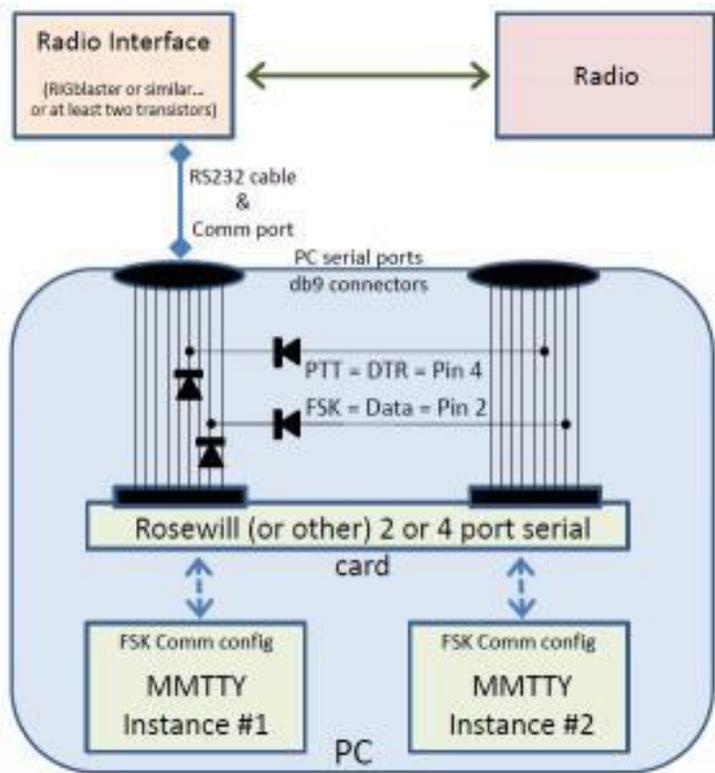
CONSTRUCTION

Although I have no particular affinity for Rosewill products, its serial cards are inexpensive (Newegg.com $15 - $20) and have one attractive feature – all of the ports are fed with ribbon cable (rather than db9 connectors soldered onto circuit boards). This feature allows me to easily combine the PTT and FSK lines from two serial ports simply by cutting the ribbon cables and attaching a few diodes.

- COM1: Separate the ribbon cable, identify lines 2 and 4, cut the lines, and insert diodes with the banded ends facing toward the db9 connector.
- COM2: Separate the ribbon cable, identify lines 2 and 4, and solder diodes on lines 2 and 4 with the banded end facing away from the COM2 cable (it is not necessary to cut the lines on COM2). Solder the banded end of the COM2 diodes to the corresponding lines of COM1 – at the banded end of COM1's diodes.

See photo of my completed wiring project

CONFIGURATION and TESTING

You must install two copies of MMTTY in separate directories. Configure each for PTT/FSK operation, with each pointed at a different com port. If your configuration works correctly, pressing the MMTTY <TX> button in either instance of MMTTY window will cause the radio to transmit with RTTY diddle tones.

OPERATION

Your logging and contesting software dictates exactly how you will exploit your new SO2V capability. I operate in contests with N1MM Logger, and use VFOa for Running and calling CQ, and VFOb for Search and Pounce operation between the CQs. N1MM Logger understands VFO switching and selects the correct VFO depending on whether I want to respond to someone on VFOa or call someone on VFOb.

SHORT SUMMARY

- Pretty? No
- Easy? Yes
- Functional? Absolutely
- Expensive? Hardly!

REFERENCE

Newegg.com - Rosewill models RC-301, RC-305, RC-305e