$130 PANADAPTER

Winrad (freeware) and the Soft66ADI (or any other version of Soft66) can be used as a very cost effective panadapter for the Omni VII. The Soft66ADI receiver is available from http://zao.jp/radio/soft66ad/. This little receiver costs about $130 with shipping and case and is very sensitive. I am using the sub-receiver mod that is outlined in subrx_mod.pdf by N4PY. Winrad uses Omni-Rig (freeware) for frequency coordination with N4PY or the Omni VII. There is latency in the processing of the I and Q signals within the soundcard, but it is not significant for panadapter use. Some of the latency could probably be reduced by adjusting buffers in the soundcard. I am extremely happy with this setup and it serves as a substitute for the promised real-time frequency sweep from Ten Tec for the Omni VII. Frequency can be tuned by the Omni VII knob, N4PY or the Panadapter with mouse click, mouse drag or Griffin knob. Any receiver that is supported by Winrad could be used for this configuration and would work exactly the same.

Winrad is far from the perfect program for this use, but I found it to be the best of those supporting the Soft66 series of receiver boards. The greatest problem with using Winrad is that it cannot be run in a window. The program occupies the entire screen and must be minimized to operate other software.

The following hardware is necessary to operate the Soft66 receiver:

USB to Mini USB Cable (Radio Shack or internet)
SMA to PL-259 Adaptor (Radio Shack or internet)
Male to Male Stereo mini jack
Computer

The following Free Software is necessary to run the panadapter:

NET. Framework (Latest version from Microsoft)
FTDI Driver   http://www.ftdichip.com/Drivers/D2XX.htm
Winrad Console (must also download the Soft66ADD Plug-in to same folder)
Com0Com
Omni Rig

Com0Com is a freeware program that allows the creation of Virtual Com cables to provide internal control other programs requiring com connections such as logging programs, rig control programs and etc. It is reasonably intuitive so you shouldn't have too much trouble setting it up. Virtual cables are setup in pairs as you can see in the graphic below. As example if you set up a virtual serial cable as Com9 then the other pair would be Com19. A screen shot of Com0Com is shown below:
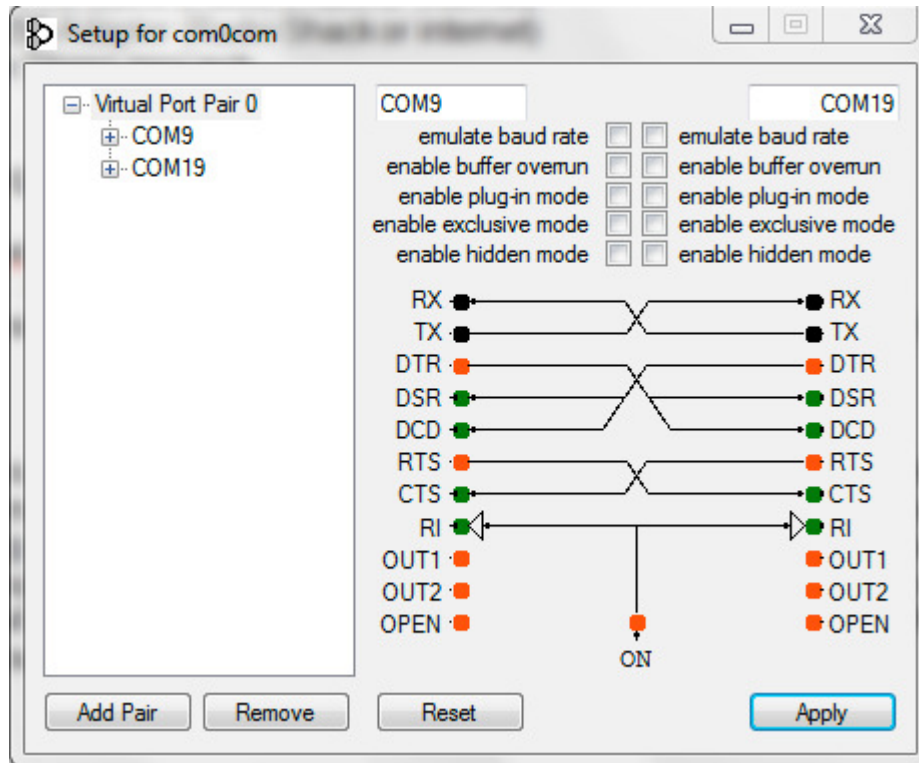
Omni-Rig is a freeware program that works with other applications to provide control of various radios or other control programs. It allows for control of two different rigs, by selecting rig 1 or 2 from the applicable software. One of the rigs must be set up as follows to control N4PY Software:
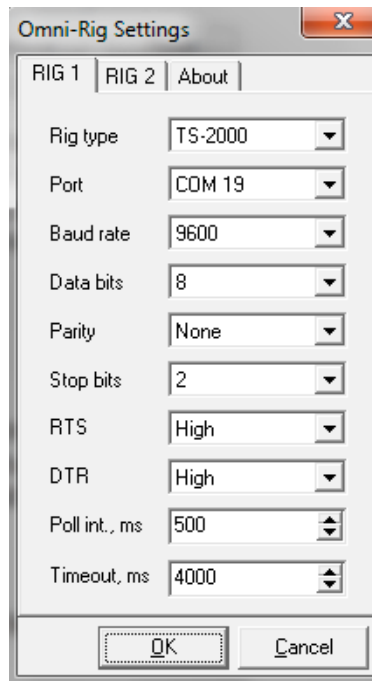
Winrad is a freeware SDR Console that provides the necessary software to run the Soft66 board. It also allows the control of a radio or other software using the Omni-rig control which is menu selectable. After Setting up Omni-rig for Kenwood TS-2000 control, select that rig.
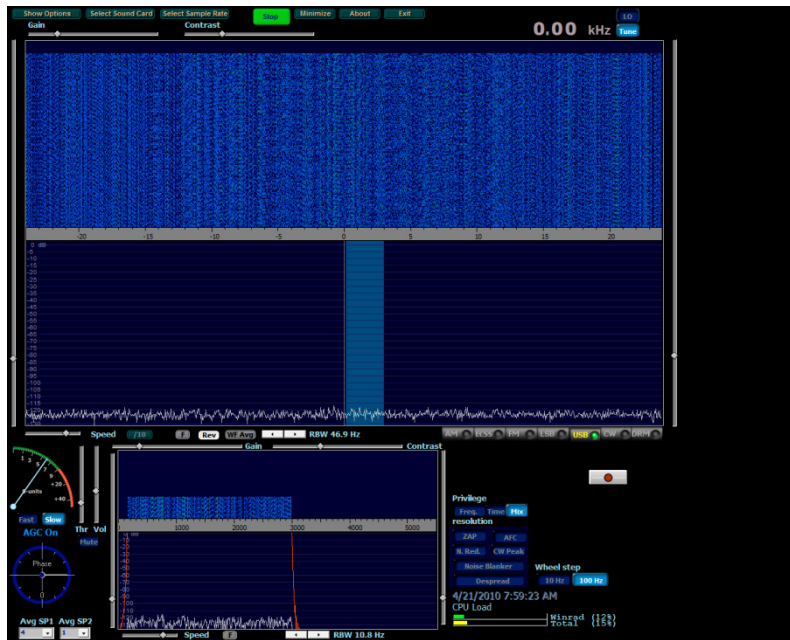
To allow reciprocal control of N4PY and Winrad, configure Usr5 TrnsV, as displayed in the figure below:
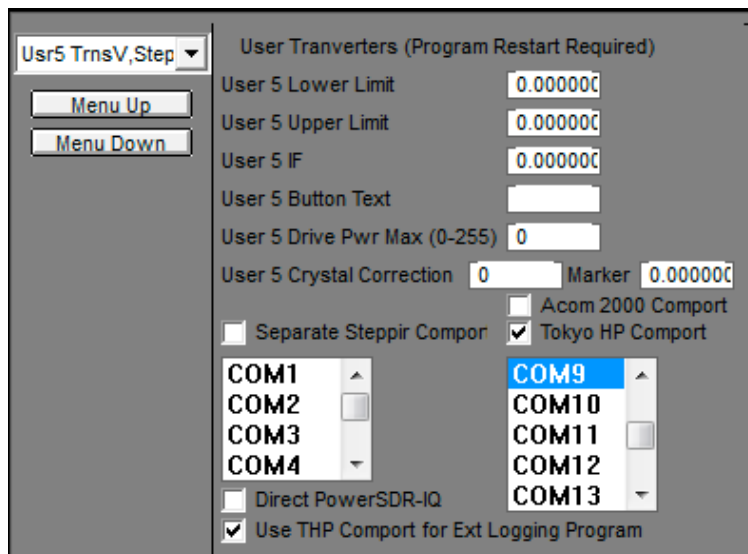
Winrad can be setup to directly control the Omni VII but you lose the ability to run other programs like a logbook that uses the Pegasus file for operational information exchange between the logging program and N4PY. N4PY also provides support for the following devices:

Telepost LP-100A
Griffin Technology Powermate
LDG AT-200PC Autotuner
LDG DTS-4 and DTS-6 coax Antenna Switch
Acom 2000 Amplifier

Another interesting concept is to use the Soft66 board at the remote site with receive antenna to provide panadapter support to N4PY. Since the interoperability of N4PY and Winrad are at a software level it only changes the frequency of N4PY which in turn controls the remote operation of the rig.