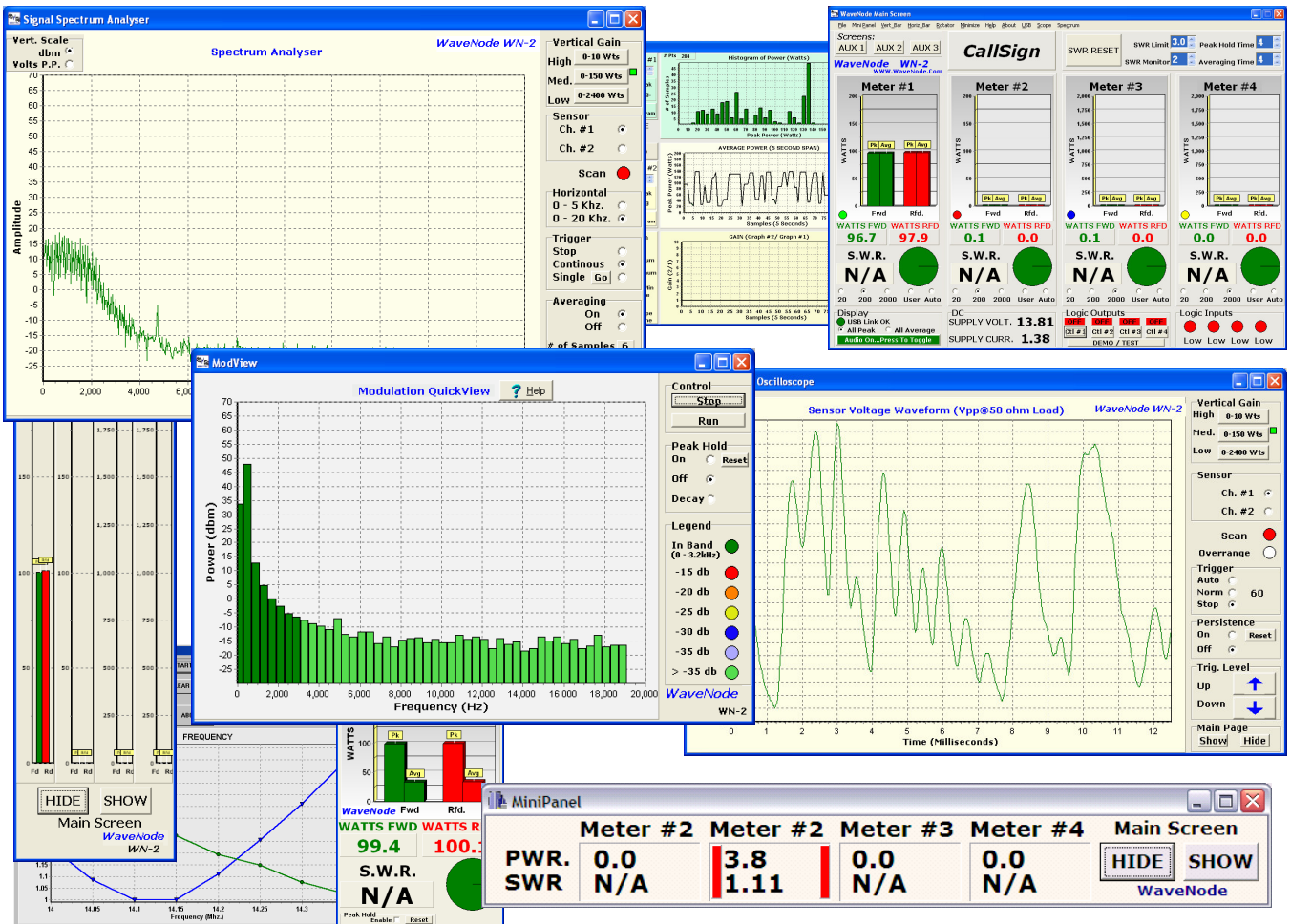


# WaveNode WN-2 Digital Wattmeter and RF Monitor



## A Sample of Screen Views with Provided CDROM Software



## 1. Description and Capabilities:

- A. The WN-2 unit allows simultaneous monitoring of RF power/SWR on four separate coax sensors. All data is viewed on the LCD display, or remotely on a PC (Software supplied with WN-2 on CDROM).
- B. WN-2 calculates SWR, peak and average power for display on the built-in LCD display. A bargraph display of peak power is shown when the RF power exceeds 2 watts.
- C. High-speed USB 2.0 computer interface for fast data sampling and transfer.
- D. A 16-bit RISC microprocessor, 12-bit A/D converter, and precision peak/average detection circuitry for each of the four RF sensors. All firmware and software is written and managed in C++.
- E. Additional monitoring circuitry is provided for station DC voltage/current.
- F. Four digital inputs and four digital outputs allow monitoring and control via the USB interface with remote PC.
- G. Four additional analog inputs allow real-time monitoring on the local LCD display or remotely through USB interconnect to a host PC.
- H. 40 KHz sampling of the RF envelope provides a digital Oscilloscope view of the modulation envelope up to 20KHz modulation bandwidth. Provides **direct** monitoring of the RF envelope at the coax sensor, not through your PC soundcard.
- I. Spectrum Analysis is provided to monitor the data content and bandwidth of the modulation speech or data stream. Identify problems immediately related to overmodulation, IM distortion, and "splatter". Constantly monitors modulation bandwidth and indicates out-of-bound, undesired modulation components.
- J. Relay provided to trigger on excess SWR for equipment protection. Sensor settable at the PC.
- K. All data viewing and control can be done locally or remotely via PC. Perfect for remotely operated radio operation.
- L. WN-2 is shipped with your choice of RF coax sensor, CDROM, USB cable, ground wire, and AC power adapter. There is nothing else required to install and operate the system. Add additional coax sensors at any time.

## Specifications:

<i>RF Power measurement accuracy:</i>	<i>+/- 10% full scale. +/-5% @ 100 watts.</i>
<i>Power Requirements:</i>	<i>9-16 Volts DC @ 200ma maximum. (power supplied via standard 5mm connector)</i>
<i>PC requirements (if PC interconnect required):</i>	<i>Windows XP, 2000, Vista. USB interconnect. (USB type-A to type-B cable) supplied.</i>
<i>LCD Display:</i>	<i>Yellow Backlit, high contrast, 16X2 display. Data update rate 20X/second.</i>
<i>Size and Weight</i>	<i>6.25 inches wide X 5.50 inches deep X 1.875 inches high. 1 pound (without sensors)</i>
<i>Auxiliary Voltage and Current measurement (2- Screw Terminal Block on Rear Panel)</i>	<i>0-20 volts range. 0-25 amps DC range</i>
<i>Auxiliary Logic Inputs (four). Logic low. Logic high.</i>	<i>&lt; 1.2 volts DC &gt; 2.0 volts DC</i>
<i>Auxiliary Logic Outputs(four). Logic low. Logic High.</i>	<i>&lt; 0.3 volts DC &gt; 3.3 volts DC (1K ohm series resistor)</i>
<i>Auxiliary Voltage Measurement Input (four) Input Voltage Range Input Impedance Accuracy</i>	<i>0-20 volts DC 10K Ohms +/- 5%</i>
<i>Peak detector capture time (full scale). Peak detector hold time</i>	<i>250 Microseconds 50 milliseconds to infinite (user selectable)</i>
<i>Modulation Oscilloscope update time. Viewing Bandwidth.</i>	<i>2 updates/second 20 Khz (-3db bandwidth)</i>
<i>Modulation Spectrum Analyser update time. Viewing Bandwidth. Resolution</i>	<i>2 updates/second 20 Khz.(-6dBm Bandwidth) 20 Hz.</i>
<i>Completely backward compatible with all WaveNode RF sensors.</i>	

## Rear Panel View and Connections.

The rear panel connections are:

1. Sensor #1 Input
2. Sensor #2 Input
3. Sensor #3 Input
4. Sensor #4 Input

5. Input DC Power Connector
6. SWR Trip Relay Contacts
7. The External Serial Buss Connector (USB type-B Connector). Do not connect this to your PC. Reserved for future expansion.
8. Expansion Connector (16 Pin Ribbon Cable Connector).
9. USB Connector to PC.
10. 2-Pin Terminal Strip (for monitoring an external power supply DC voltage and Current)