

WxSolution Version 1.2
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\$39.95 US for downloaded version
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WxSolution is one of the newer entries in the third-party software for the Vantage Pro arena. The product has previously supported the Heathkit ID-5001 weather station (and its various incarnations since the demise of Heathkit as we knew and loved it) and the Davis Weather Monitor and Weather Wizard models. In late March, a version for the Vantage Pro was released.

Installation of WxSolution is quite simple, and minimal configuration must be done. The default configuration is probably right for most users, and involves confirming the com port, transfer speed (needs to match the setting on the Vantage Pro console) and units of measurement (defaults to US settings). Other configuration settings pertain to the use of FTP, APRS/CWOP, paging, etc.

WxSolution has three primary screens on the PC. The monitor screen shows current readings in a fairly simplistic, easy to read format, along with highs and lows for the day. The left half of the screen depicts a compass rose, with pointers denoting the current and average wind direction. The center of the wind rose shows current (gust) speed and one minute average speed. Above the compass rose, if selected, is the five second wind speed average and the high five second average for the day.

The right side of the screen shows the current temperature, dew point, barometric pressure, humidity, wind chill or heat index, and rainfall rate. Each of these, along with the one minute wind speed, also will show arrows showing whether the trend is increasing or decreasing.

The bottom of the screen is dedicated to daily high/low data, without time of occurrence.

The "Details" screen shows current, five minute average, one hour average, and daily average readings for wind speed, wind direction, temperature, dew point, humidity, indoor temperature, barometric pressure, precipitation, wind chill average wind, and wind chill gust, and the peak wind gust occurring in the past ten minutes.

The graph screen graphs temperature, dew point, humidity, pressure, wind, and rain, for the past hour, along with a display of the current value of each observation.

WxSolution is relatively heavily text based, and the graphics that are used (the wind/compass rose and the graph) are text derivatives, looking somewhat like the old DOS days when ASCII characters were used to create simplistic graphics.

The monitor screen will be the one most often used by most users, and does indeed show current conditions at a glance. If you're like me (c'mon, admit it!), you spend some time staring at the screen watching weather conditions evolve. While the monitor screen shows all the most important data very cleanly, it gets a little boring to watch. Reaction time for recording changes in wind, for instance, seems good and nearly on par with WeatherLink.

Ease of use with WxSolution is very good, and I have never had this program crash, something I cannot state about any other package. Resource usage is fairly low, and WxSolution happily co-exists with every other piece of software I have had running at the same time.

WxSolution, perhaps more than any other package, is truly designed for full-time operation. When you see the reporting capabilities, you will understand why. Other products are also designed for 24/7 operation, but allow downloading of data from the Vantage Pro console bringing things pretty much up to date. While data can be downloaded quite successfully in WxSolution, the data fields are not entirely populated from this information for reporting purposes. Data can be imported and exported well, and many options for producing .csv files are provided for external analysis.

WxSolution currently produces a single HTML page for uploading to the internet. HTML tags are limited compared to the other programs on the market, but cover most of the basics. The default HTML page provided with WeatherLink is attractive, well, organized, and definitely produces most of the current information most users would want. It can be uploaded at intervals of 5, 10, 15, 30, or 60 minutes. Worth noting is that WxSolution requires a full-time internet connection to do it's uploading; the caveat provided is that it has not been tested with a dial up connection. So it may work in that environment, but will require manipulation by the user to have WxSolution start the dial-up connection to initiate the upload.

Along with the provided HTML template, WxSolution can also perform an automated daily upload of a daily and monthly report and daily strip chart. These formats are fixed and cannot be modified. The default HTML template can be modified extensively, using the HTML tags provided. A sample of the current.html file, heavily modified and enhanced by some javacripts is shown on my page.

WxSolution will also transmit data to the Citizen Weather Observer Program (CWOP)/APRS. This also requires a full-time internet connection, but does work flawlessly. WxSolution transmits data directly to CWOP without going through a third party. If you are not familiar with CWOP, it is a voluntary program that transmits data from private weather stations to NOAA (after going through a quality checking program), where the data is used by the National Weather Service as inputs to their various forecast

models, improving dramatically the quality of the models used. This is a tremendous service, and a way for the individual weather observer to make a real contribution to the quality of weather forecasts products delivered by the NWS. More information on the program is available at <http://www.findu.com>.

WxSolution can also generate e-mailed reports as well as dial-up a pager when user-defined alarm criteria are met. Setup for both these is quite simple.

Another unique feature of WxSolution is the ability to have remote users download a client application and attach to your IP address (which either must be static or use a third-party utility to make your dynamic address update itself to other applications) and allow real-time monitoring by others. This feature is also available, albeit in a somewhat more primitive screen, through direct modem dial-up and use of a terminal application such as Windows Hyperterminal. A demonstration of the client application is available at www.thunderheadtech.com.

Where WxSolution *really* shines is in the area of reporting. WxSolution produces documents called Local Climatological Data (LCD), and these can be produced on a daily, monthly, and annual basis. These are by far the most comprehensive reports I have seen, and make WxSolution a wonderful tool for the serious climatologist. The reports are easy to read, can be generated in a batch format, and provide everything I can imagine anyone wanting to know about weather conditions at the monitoring site. I cannot speak highly enough of the reporting capabilities. Along with the text based LCD reports, strip charts of whatever period of interest desired can be produced, as well as wind rose/wind run graphical reports which are the best way, hands down, to depict wind activity at the station. Samples of each of these are available on my "Climate" page or from www.thunderheadtech.com.

Documentation is another area often overlooked, but here again WxSolution is an exception. The documentation is thorough, well-written, easy to follow, and comprehensive. The documentation provided even details data formats (useful when importing and exporting or potential writing applications such as spread sheet macros for even more data analysis), something largely unheard of in this (or other) software markets.

For glitz, glamour, and fancy graphics, you may want to look elsewhere. For robustness, ease of use, and simply outstanding reports, I know of nothing that can compare to WxSolution. Like other programs on the market, a fully-functioning demo of WxSolution is available at the company web site. Unlike some others, this demo runs only 15 days, so you'll want to exercise it thoroughly during that relatively short time.

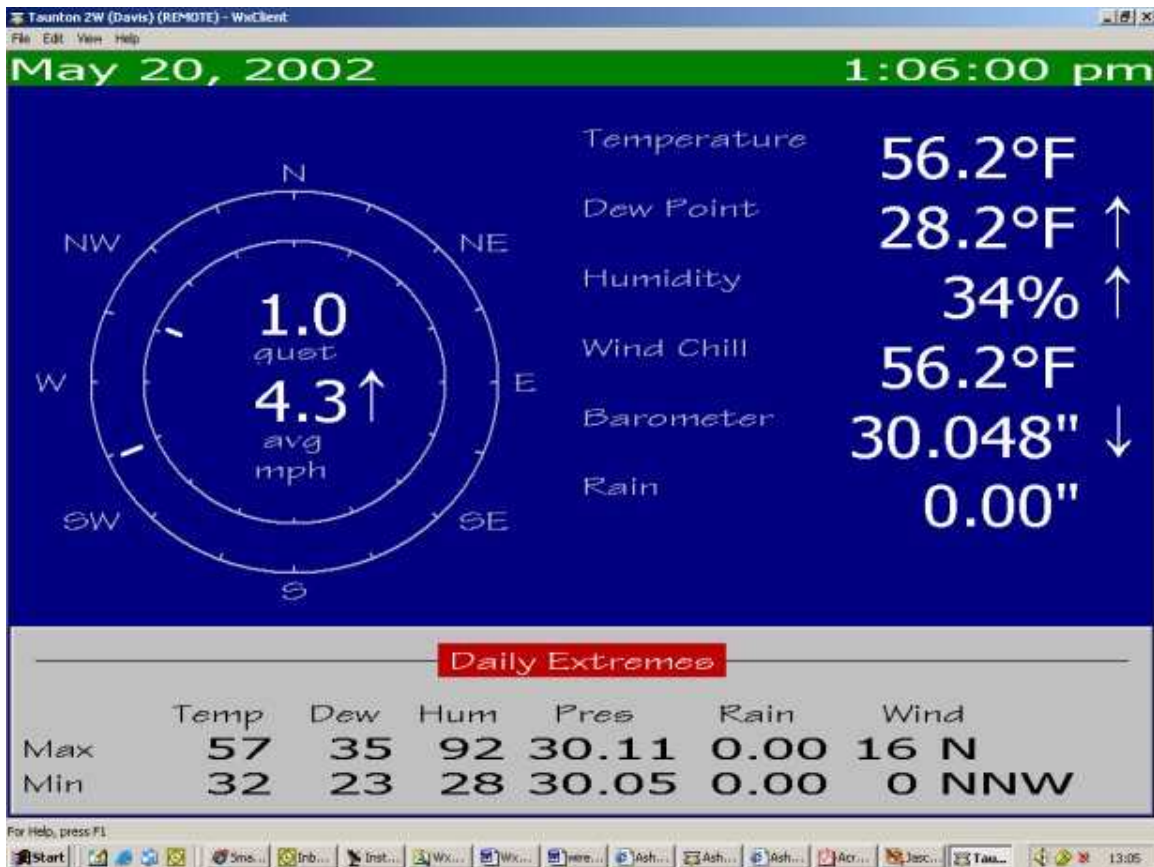
I look for more good things from WxSolution as the product evolves and matures. My own wish-list would include:

- 1) More HTML tags, especially for wind run data, but also for depicting data in other units of measurement than the one used "natively."

- 2) The ability to create multiple custom web pages
- 3) Some graphical output for dials, graphs, etc. and the ability to have the graph screen configurable to a time period other than one hour.
- 4) Display of time in 24-hour format

While I believe these items would make WxSolution an even more viable solution, I can enthusiastically recommend this product within the guidelines discussed above. If detailed reporting is your highest priority, this product delivers an outstanding reporting suite.

WxSolution Monitor Screen (using the WxSolution client connected to the Vantage Pro at Thunderhead Technologies facility in Taunton, Mass.)



WxSolution Detail screen (also via Client application)

	Current	Five	Hour	Day	Max	Min	Rate
Temperature	56.3	56.3	56.3	43.9	57.2	31.6	+0
Dew Point	28.3	29.2	29.2	30.2	35.2	23.3	+0
Humidity	34	35.2	35.3	62.5	92	28	+0
Wind Speed	3.0	7.5	7.5	2.0	16.0	0.0	--
Wind Direction	283	307.6	308.9	5.6	356	339	--
Avg Wind Speed	4.5	--	--	--	11.0	0.0	+1
Avg Wind Direction	279	--	--	--	2	12	--
Indoor Temperature	71.1	71.3	71.1	69.5	71.4	67.2	+0
Sunshine							
Precipitation	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Barometer	30.05	30.048	30.048	30.088	30.11	30.05	-0.01
Wind Chill Gust	56.3	54.7	54.7	43.4	57.2	31.6	--
Wind Chill Avg	55.9	--	--	--	57.2	31.6	--
Peak Gust Last 10 Minutes		12					