

Frequently Asked Questions — Vantage Pro

COMPATIBILITY WITH OTHER STATIONS

Will my current Davis wireless weather station work with the new Vantage Pro?

Yes, the Vantage Pro display console will receive the transmission from your wireless SensorLink sensor array. Also, the Weather Monitor II and Weather Wizard III display console/receiver will be able to receive the transmission from the Vantage Pro integrated sensor suite (ISS). However, if you have a Vantage Pro Plus, the Weather Monitor II and Weather Wizard III display consoles will not display the solar radiation or UV sensor values.

Will my cabled Davis weather station work with the new Vantage Pro?

No, it will not. The cable between the sensor array and Vantage Pro display console transmits the data differently than on prior stations. Cabled systems are incompatible.

If I currently have a cabled system and connect a ConsoleLink to the display console, will the Vantage Pro be able to read it?

Yes, this is actually the only way for a cabled Weather Monitor II or cabled Weather Wizard III to work with Vantage Pro. Connect the ConsoleLink to the Monitor/Wizard display console and set the ID code to match the ID code on the Vantage Pro display console/receiver, and it will work.

Can I use the Weather Echo or Weather Echo Plus with Vantage Pro?

Yes. The Echo and Echo Plus will be able to read the transmission from the Vantage Pro ISS. Also, the Vantage Pro display console/receiver has the ability to re-transmit a signal so it can send a transmission to the Echo or Echo Plus without the Echo being in range of the original transmitter.

Will my current datalogger and software work with the new Vantage Pro?

No. The Vantage Pro has its own unique datalogger and software. However, you can copy your current data from your WeatherLink 4.0x software over to the new WeatherLink 5.4 for Vantage Pro software.

Will third-party software work with Vantage Pro?

Not unless it's programmed to specifically communicate with Vantage Pro. Vantage Pro has a different command set than Weather Wizard III, Weather Monitor II, GroWeather, and Energy and Health Environmental Monitors.

POWER

Warning: Vantage Pro requires less voltage than our prior stations do. Do not put more than 6 volts DC into the Vantage display.

How is the cabled Vantage Pro powered?

The cabled Vantage Pro console supplies power to the sensor array through a connecting cable, and it uses more current than the wireless console. Therefore, you must use the AC-power adapter to supply primary power. These adapters have a 5-volt 200 mA output. The three C-cell batteries on the cabled system provide back-up power and will last only four to six weeks if you use them as primary power. See warning above about power.

How is the wireless Vantage Pro powered?

Either an AC-adaptor or three C-cell batteries power the Vantage Pro display console. Although you may use the AC-adaptor if you wish, it is not required because the wireless Vantage Pro console does not supply power to the ISS and therefore uses much less current. The output of the AC-adaptor is 5-v DC and 200 mA. Regarding battery use, under normal conditions the three C-cell alkaline batteries should power your console for approximately one year. We recommend that you do not use nicad batteries because Vantage Pro will not charge them and they will not last as long. See warning above about power.

How is the cabled integrated sensor suite (ISS) powered?

The cabled ISS receives power from the Vantage Pro display console via the 100-foot cable that runs between them. This cable can be extended up to 1000 feet.

How is the wireless integrated sensor suite (ISS) powered?

The wireless ISS receives power from the solar panel during the day. The solar power components store electricity in a super capacitor that powers the ISS at night. If, during the night, the energy in the super capacitor is depleted, the ISS uses power from a 3-volt lithium battery. The battery will last one year in no sunlight.

DISPLAY

What is the range of transmission between the ISS and the display console?

With wireless transmissions, it is hard to state a specific distance. The range varies depending on the environmental conditions. The range could be up to 400 feet line of sight with no radio frequency interference (RFI). Typical range under most conditions is 100 to 200 feet, but walls, ceilings, trees or foliage may reduce this. RFI will also reduce transmission distance. Cordless phones and HAM radios are examples of RFI. Occasionally, transmission between wireless units is obscured by something you cannot identify or by some object you cannot work around. You can add wireless repeaters if you are having transmission problems or if you want to send the transmission further.

How far can I extend the cable on my cabled Vantage Pro system?

The maximum distance is 1000 feet. The system comes with 100 feet. We use four-conductor 26-gauge cable with RJ-11 plugs.

How do you mount the Vantage Pro display console?

You can either put the Vantage Pro display console on a table or shelf, or you can mount the display console on a wall. If you choose to put it on a table or shelf, there is a kickstand that allows you to place the display at five different angles. If you choose to put it on the wall there are two screw holes that you can use to mount it to the wall.

How often does the forecast update, and what period does it cover?

Vantage Pro will give a forecast after it has accumulated three hours of continuous data. It will update every hour after that. The period it covers can be up to 48 hours.

What frequency does the wireless Vantage Pro operate on?

The USA-version of Vantage Pro transmits at 916.5 MHz, and its signal power is less than 1 mW.

How do you interpret the moon phase icon?

A full circle with no dark areas shows a full moon. As the moon goes through its phase cycle a darkened area will show you what part of the moon cannot be seen.

What do the different arrows mean on the compass rose?

The solid arrow displays the current wind direction. The arrows that are not solid display the last six 10-minute dominant wind directions.

My backlight won't stay on?

If you are powering the Vantage Pro console with C-batteries, the backlight will stay on for ten seconds if none of the buttons are being used. If you want the backlight to stay on, then you will have to use the AC-power adapter. When using the AC adapter, the backlight will not turn itself off automatically.

How do you turn the backlight on and off?

You use the button labeled "2nd" and "LAMPS". Simply push and release that button once, and then push and release it again to turn the backlight on. Repeat this procedure to turn it off.

Where do you get the latitude, longitude and elevation settings?

The Weather Channel is a good source for your local latitude, longitude and elevation. Typically, this information is displayed every few minutes during the local forecast. Many atlases and maps include latitude and longitude lines. You also may check with the reference department of your local library, your local airport, the Internet or a USGS map.

Do you need to enter the latitude, longitude, and elevation settings?

To give you the best forecast, as well as calculate the correct times for sunset and sunrise, the latitude and longitude must be set. The elevation setting makes your barometric reading more accurate. The more accurate these three settings are, the better, but a reasonable estimate will work.

How do you know if the Vantage Pro console is receiving transmission packets?

A "X" will appear in the bottom right-hand corner of the screen every time the console receives a packet from the transmitter. If the Vantage Pro receiver is receiving all packets from the ISS, the "X" will blink on and off every 2.5 seconds.

How can I tell if it is raining outside right now?

If it is raining outside, an umbrella will appear in-between the bottom two rainfall readings.

Do the rain readings clear automatically?

Yes, the daily rain will clear at midnight, the monthly rain will clear at the end of each month, and the yearly rain will clear at the end of your rain year.

Can you select when yearly rain readings start and when they end?

Yes. In "set-up," you can define the beginning of the "rain year."

How do you set an alarm?

Press the 2nd button and then the ALARM button. Now you are in the alarm mode. The alarm icon and the word "Highs" will appear. If you don't want to set a "High" alarm but do want to set a "Low" alarm, press the HI/LOW button. The alarm icon stays but the word "Highs" changes to "Lows." Select any weather variable available by using the arrow keys. You'll know what variable is selected because the graph icon will be next to that variable. Press the 2nd button and then SET button. Key in the threshold value you want by using the arrow buttons. Press the DONE key when finished. At this point, you are still in the alarm mode so you can choose any other variable by using arrow keys. If you are finished setting alarms, press DONE again and the console will return to the current weather mode.

How do you clear an alarm?

Clearing an alarm is easy. If an alarm is sounding press the DONE key to silence the alarm. If you wish to clear an alarm setting, enter the alarm mode as described in the previous question. Use the HI/LOW key to go to the "highs" or "lows" alarms. Select the variable alarm you wish to clear by using the arrow keys. Then press the 2nd key then press and hold CLEAR. The threshold value will blink three times. The value will then change to dashed lines. At that point you have cleared the value.

Can I calibrate or fine-tune my weather readings?

Yes. To fine-tune your station, you can calibrate most of the weather variables, including wind direction, on your Vantage Pro display console. The following are instructions on how to calibrate some of the values:

Temperature and Humidity: Select the variable you would like to calibrate by pressing either the TEMP or HUM button. Press and hold the SET key. After a moment, the variable you selected will begin to blink. Keep holding the SET key until a message appears in the ticker stating "calibration offset 0." Use the + or - keys to add or subtract from the variable's value. The value will change and the ticker will show the offset you entered. **NOTE:** The inside and outside temperatures are calibrated in 0.1 increments up to a maximum offset of 12.7 degrees and a minimum of -12.8 degrees.

Wind Direction: Press WIND twice so that wind direction is displayed. Press and hold the SET key. The wind direction will begin to blink. Continue holding until "Cal 0" appears in the ticker. Use the + and - keys to add or subtract from the wind direction value. (Example: if you think the wind direction should be reading south, make the wind direction value 180 degrees.) Use the LEFT and RIGHT arrow keys to move between the hundred's, ten's, and one's places in the wind direction readout. Press DONE to exit calibration. The next time you enter the wind direction calibration, the ticker will display the current offset.

Barometric Pressure: Select the barometer by pressing BAR. Press and hold SET. The pressure variable will blink. Keep holding the SET until the ticker reads "set barometer". Use the + and - keys to add or subtract from each digit's value. Use the LEFT and RIGHT arrow keys to move between the digits in the pressure readout. Press DONE to exit calibration.

Do I have to manually clear my daily highs and lows?

No, you do not. The daily readings clear themselves out at midnight. The monthly readings clear out at the end of the month, and the yearly high/low readings (except for yearly rain) clear out at the end of the calendar year. The yearly rain clears out at the end of your rain year, which is selected by the user during the Vantage Pro setup.

Can I clear the high/low reading manually if I want to?

Yes, simply go to the HIGH/LOW screen. Select the reading you want to clear. Push the 2nd button and then the CLEAR button and hold it down. The reading will blink three times and then go to dashed lines. When you are finished, push the DONE button to exit.

How do you maneuver through the high/low screens?

Push the HIGH/LOW button to go to the high/low readings. When you do that, the screen will first read "Day Highs." Use the + and - button to get to the following screens: "Day Lows," "Month Highs," "Month Lows," "Year Highs," and "Year Lows." Use the LEFT and RIGHT arrow keys to scroll back and forth through the last 24 days, months, or years, depending on what screen you are in. As you use the arrow keys to scroll back and forth, the dots on the graph blink to correspond to the day, month or year you are looking at. Press the DONE key to exit the HIGH/LOW mode.

I don't understand how to use the graph, could you explain how to use it?

Although the available graphs vary depending on what weather reading you're plotting, you view each graph the same way. Enter the graph mode by pressing the GRAPH key. Select which reading you want to graph. For example, press the TEMP key. Temperatures from the last 24 hours will be displayed in the graph box. The dot at the right end of the graph is the current reading. You'll notice that the dot is blinking. Press the LEFT arrow key, and the next dot to the left will blink. The screen will display the new dot's value. The time display will show you which hour of the last 24 you're looking at. Keep pressing the LEFT and RIGHT arrow keys to view the temperature values of the last 24 hours. In addition, the console will display the maximum and minimum temperatures recorded in the last 24 hours.

Press the + and - keys to shift the graph's time range. If you press the - button after you've pressed GRAPH and TEMP, the graph will shift from the last 24 hours of temperature to the last 24 days of temperature. Now

each dot represents the high recorded on the day shown in the date field. To see the lows recorded in the last 24 days, press the HI/LOW key. Use the LEFT and RIGHT keys to move between days.

If you press the - key again, the graph will shift to show the highs for the last 24 months. As before, use the LEFT and RIGHT arrow keys to move between months. Press the HI/LOW key to shift between the last 24 months' highs and the last 24 months' lows. If you press the - key again, the graph will shift to show the highs for the last 24 years. Use the LEFT and RIGHT arrow keys to move between the years. Press HI/LOW key to shift between the highs and lows.

The console will beep when you have reached the last of the possible time ranges for any reading. Press DONE to leave graph mode.

View graphs of all other readings the same way:

1. Enter graph mode.
2. Select the reading you want to view.
3. Use the LEFT and RIGHT arrows to read different values on the graph.
4. Use the + and - keys to change time range. + shortens the range, - lengthens it.
5. Press HI/LOW to shift between recorded highs and lows.
6. Use DONE to return to current weather mode.

When you're looking at the current conditions screen, how do you know which reading is being plotted on the graph?

The reading with the small graph to the left of it is what is being plotted on the graph. You can change what is being plotted by simply pressing the button of the value you want to plot. For example, if temperature is being plotted on the graph, and you want the barometric pressure to be plotted, push the BAR button.

INTEGRATED SENSOR SUITE (ISS) AND OTHER TRANSMITTING STATIONS

How many different transmitting stations will the Vantage Pro console receive?

The Vantage Pro console/receiver can receive data from up to eight transmitting stations. The maximum number for each is shown below:

<u>Transmitting Station</u>	<u>Maximum #</u>
Integrated Sensor Suite from wireless Vantage Pro	1 of 8
Anemometer Transmitter Kit	1 of 8 (see note # 1)
Leaf & Soil Moisture/Temperature Station	1 of 8 (see note # 2)
Soil Moisture/Temperature Station	1 of 8 (see note # 3)
Temperature Station	7 of 8
Temperature/Humidity Station	7 of 8

Note 1: You can have only one anemometer reading, either from the ISS or from the Anemometer Transmitter Kit.

Note 2: Each Leaf & Soil Moisture/Temperature Station can have up to three soil moisture sensors, up to two leaf wetness sensors and up to three temperature sensors.

Note 3: Each Soil Moisture/Temperature station can have up to four soil moisture sensors and up to four temperature sensors.

Can I mount the sensors away from each other?

On the standard ISS, the only sensor that can be moved away from the suite is the anemometer. It comes with 40 feet of cable in case you want to get it up higher or to a space with better clearance. You can also use the Anemometer Transmitter Kit to move it even further away.

How do I install the anemometer so the wind vane is oriented correctly?

If you mount the anemometer so that the arm points north, the wind vane will be ready for use immediately. If you want to mount the anemometer such that it aims in a direction other than north, you will have to re-calibrate the wind direction. See “Can I calibrate or fine tune my weather readings?” above.

REPEATERS

Can you use one repeater for multiple transmitting stations?

You can set one repeater to listen to up to eight transmitters directly, and then re-transmit those signals to your consoles.

What is the range of the repeaters?

Transmitting and receiving ranges for each repeater are 100 to 400 feet depending on the terrain and environment. The 400 feet is for optimal conditions, i.e. outdoors, line of sight, nothing in the way, no radio frequency interference. NOTE: Repeaters are not only good for extending lengths, but can also improve reception in troublesome areas.

How many repeaters can you use?

You may use up to eight repeaters.