

# WEATHER

*EURO-DISTRIBUTOR EKOPOWER IS INTRODUCING:*

## Vantage PRO2

- Transmits weather data wirelessly up to 300m!  
**new: up to several km with long range repeaters**
- Over 3 times the distance of competing stations!
- **Special (CE)-EURO versions are supplied all over Europe with low freight!**



**TECHNOLOGY  
BREAKTHROUGH!**

The first & only weather stations  
in their class to use frequency hopping  
spread spectrum radio technology.

**Davis**  
Davis Instruments

## What's New?

**Vantage Pro2.** Over 3 times the transmission distance, improved reception through multiple walls, and greater immunity from RF interference.

**USB Version of WeatherLink.** Our popular data logger and software package is now available with USB.

**Streaming Data Loggers.** New WeatherLink models specially designed for emergency response teams, ham radio operators, and irrigation control.

## On Our Cover

**Daytime Fan-Aspirated Radiation Shield Kit 7747.** Nearly 75% as effective as our 24-hour radiation shields, at half the cost.

## Original Vantage Pro

Because it uses a different radio, Vantage Pro2 is not compatible with our original Vantage Pro stations. If you've been thinking about adding to your current system, act now while original Vantage Pro is still available. Visit our Clearance Center at [www.davisnet.com](http://www.davisnet.com).

As always, please contact service department if you have any questions. We're always glad to help.

## EURO distributor for DAVIS Instruments: EKOPOWER

We supply only EURO versions for the European market! PO BOX 4904, 5604 CC Eindhoven, The Netherlands

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[www.ekopower.nl](http://www.ekopower.nl) Visit our web site.

[info@ekopower.nl](mailto:info@ekopower.nl) E-mail to Customer Service.



## The GLOBE Program

Students of all ages can participate in the worldwide GLOBE® program with the new protocols developed just for Davis weather stations. See [www.globe.gov](http://www.globe.gov).

GLOBE, The GLOBE Program, and the GLOBE logo are trademarks of the U.S. Government. Use of these trademarks and certification by this company that its products conform to specifications of The GLOBE Program do not imply endorsement of this company or its products by the U.S. Government.

With Vantage Pro2, our wireless weather stations are now even better than ever. The first and only stations in their price range to use frequency hopping spread spectrum radio, our wireless Vantage Pro2s transmit and receive data up to 1000' (300 m) line of sight. That's over three football fields in length—and three times farther than competing stations! At the same time, we've kept all the features that have made Vantage Pro famous. You'll get highs and lows (and/or totals or averages) for virtually all weather variables for the last 24 days, months, or years, and your own local forecast—all without a PC.

**Graph icon shows which function is currently being displayed on the graph.**

**View current data or highs and lows for up to 24 different days, months, or years.**

**Inside compass rose, view wind direction to 1° resolution. Or view wind speed.**


**Compass rose with 16 compass points shows current and dominant wind direction.**

**Set over 70 alarms for multiple functions simultaneously. Alarm bell indicates that alarm is set.**

**Graph last 24 hours, days, or months of readings or highs and lows. View over 80 graphs including additional analysis of temperature, rain, rain rate, wind, and barometric pressure. All without a computer!**

**Vertical scale changes depending on what you are graphing.**

**Look for the following logos throughout the catalog:**

- NIST** Identifies the stations or sensors that may be NIST certified. See page 16 for details.
-  Identifies stations suitable for use with GLOBE protocol.

**Ticker-tape display shows expanded forecast details and additional information on current conditions. Over 100 different messages!**

**Davis Instruments**

**Vantage Pro2™ Features:**

- Large 3½" x 6" (9 x 15 cm) LCD screen.
- Backlit display for easy viewing.
- U.S. and metric units of measure.
- Optional WeatherLink data logger and software for even more analysis.

Forecast icons let you know whether to expect sun, part sun, clouds and rain, or snow.

Eight phases of the moon, from new moon through full moon.

Time and date fields let you view:

- Time of sunrise and sunset
- Current time and date
- Time and date of highs and lows
- Time and date of graphed data point

New longer antenna for frequency hopping spread spectrum radio, for better reception and more than twice the distance—up to 1000' (300 m) line of sight!

Five-position trend arrow shows whether barometric pressure is rising, falling, or stable.

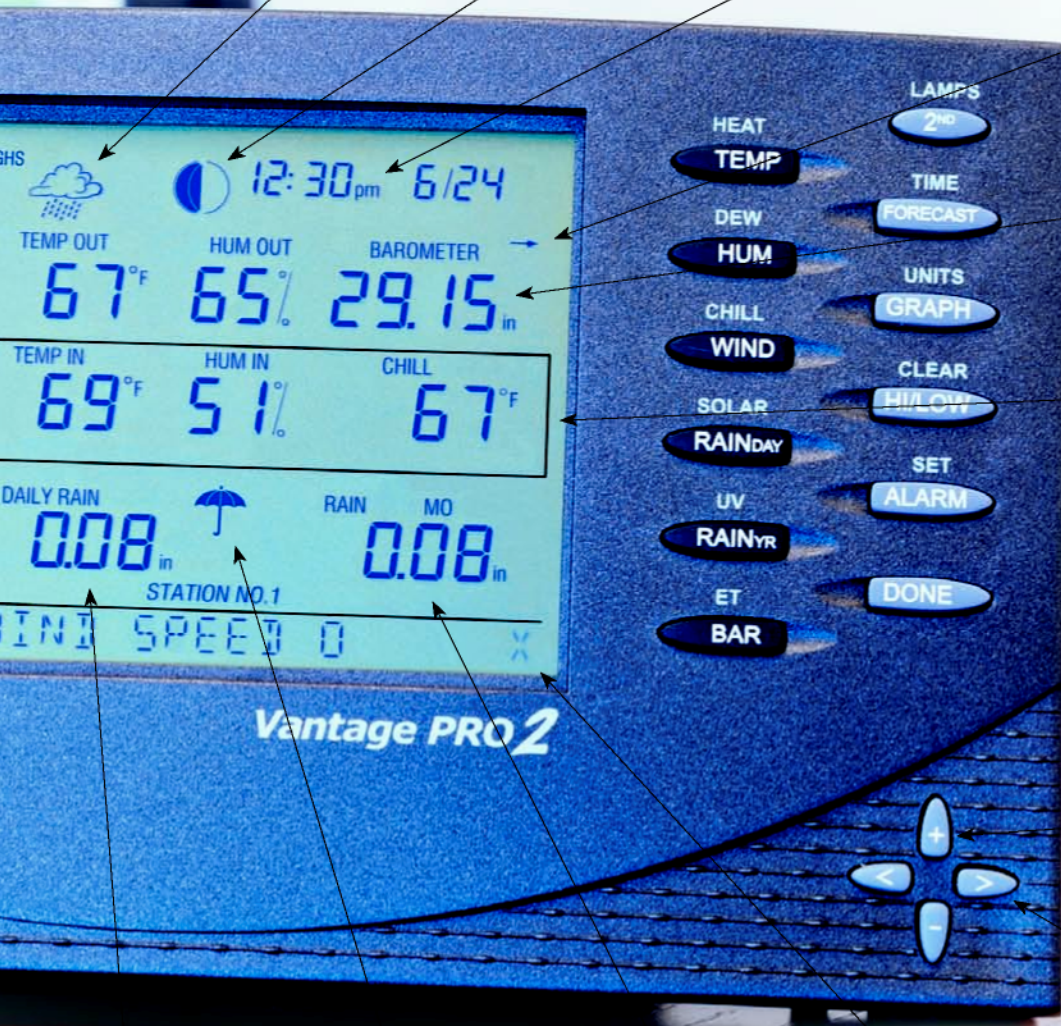
Fixed display area shows the most important weather variables at all times.

Variable display area lets you pick between:

- Inside or additional temperatures or soil moisture
- Inside or additional humidity, UV index, or leaf wetness
- Wind chill, dew point, or two different heat indices

Plus and minus keys simplify data entry.

Use arrow keys to scroll through data on graph or view highs and lows over time.



View daily rain or rain for this storm.

Umbrella icon appears when it is currently raining.

View monthly or yearly rainfall, rain rate, evapotranspiration, or intensity of solar radiation.

Blinks to let you know that data is being received.

Optional sensors or stations are required to view additional temperatures or humidities, soil moisture, UV index, solar radiation, and evapotranspiration.

## Vantage Pro2

Vantage Pro2™ weather stations are available in both wireless and cabled versions. All include our innovative integrated sensor suite, which combines our rain collector, temperature and humidity sensors, and anemometer all into one package—making setup easier than ever and improving performance and reliability. Customize your weather station by adding additional consoles or one or more of the special-purpose stations shown on the following pages.



Designed to meet the guidelines of the World Meteorological Organization, our aluminum-plated **tipping bucket** is corrosion-resistant and laser-calibrated for accuracy.

**Anemometer** includes both wind speed and wind direction sensors. Rugged components stand up to hurricane-force winds, yet are sensitive to the lightest breeze. Wind-tunnel tested to speeds in excess of 170 miles per hour (274 km/h).

**Rain collector** with self-emptying tipping bucket is exceptionally accurate. Read rainfall amounts in 0.01" or 0.2 mm increments.

**Weather-resistant shelter** houses electronic components for added protection against the elements.

**Wireless integrated sensor suite** runs on solar power. Lithium battery provides backup at night and during cloudy, wintry days. (Solar panel is not included with cabled version.)

Models with **24-Hour Fan-Aspirated Radiation Shields** include additional radiation shield plates and a second solar panel, which powers the motor-driven fan.

**Temperature and humidity sensors** are located inside the radiation shield. The shield protects the sensors from solar radiation and other sources of radiated and reflected heat.

**Optional Mounting Pole** is just one of several installation options. For more, see the fence-post installation and the mounting tripod on page 6.

**6153EU WirelessVantage Pro2 with 24-Hour Fan-Aspirated Radiation Shield**



### All Vantage Pro2™ stations include:

- Console with AC-power adapter. Wireless console may also be run using three C batteries. Batteries should also be added to cabled console for backup during power outages.
- Integrated sensor suite with rain collector, temperature and humidity sensors, and anemometer.
- 40' (12 m) anemometer cable.
- Mounting hardware.



### Vantage Pro2 Plus™ stations also include:

- Solar radiation sensor.
- UV radiation sensor.
- Sensor mounting shelf.

### Cabled stations also include:

- 100' (30 m) cable from console to integrated sensor suite.

### Wireless stations also include:

- Transmitter (in weather-resistant shelter) and receiver (in console). Range is up to 1000' (300 m) outdoors, line of sight. Typical range through walls under most conditions is 200' to 400' (60 to 120 m).

Ability to receive data from more than one transmitter. See the chart on page - for the maximum number of each station type.

- Ability to retransmit from one console/receiver (or wireless Weather Envoy) to another, so you can view the same weather data in more than one location.

Our temperature sensors have an accuracy of  $<0.5^{\circ}\text{C}$ , and the accuracy of our outside humidity sensors is  $\pm 3\%$ . In real-life situations, though, solar radiation and the reflected heat from rooftops or pavement can result in greater variances. The radiation shields included with our standard Vantage Pro2 and Pro2 Plus models provide considerable protection, but for even better accuracy—especially on warm, sunny days with little or no wind—choose one of our fan-aspirated stations. The motor-driven fan draws air through the sensor chamber and exhausts it through the top of the shield. With this improved air flow comes improved temperature and humidity readings. The effects of radiated and reflected heat are minimized, and conditions inside the radiation shield come as close as possible to the ambient air conditions. **We recommend to use model 7747 if accurate temperature measurements are required**

*In side-by-side testing, our radiation shields beat or came close to matching the performance of equivalent models costing as much as seven times more. For details, see our study at [www.davisnet.com/links](http://www.davisnet.com/links).*



**NEW!**

See page 16 for extension cables.

**Vantage Pro2™**

Our most popular station. Choose the wireless model for:

- Easiest installation.
- Ability to add additional consoles or special-purpose stations.
- Reduced risk of damage from lightning strikes.

Choose the cabled model for:

- Most economical installation.

**6152EU Wireless Vantage Pro2 Most sold MODEL!**

6152CEU Cabled Vantage Pro2



**NEW!**

See page 7 for details on UV and solar radiation sensors.

**Vantage Pro2 Plus™**

Includes all the features of Vantage Pro, plus everything you need for reading:

- UV index and dose.
- Solar radiation.
- Evapotranspiration.

UV and solar radiation sensors are **pre-installed on sensor mounting shelf.**

6162EU Wireless Vantage Pro2 Plus

6162CEU Cabled Vantage Pro2 Plus

**ALSO PROFESSIONAL WIND SENSORS AVAILABLE FOR 6152/6162!**



**NEW!**

**Vantage Pro2™**

**with 24-Hour Fan-Aspirated Radiation Shield**

Includes our patented solar-powered 24-hour fan-aspirated radiation shield for maximum accuracy of temperature and humidity readings, along

with all the features of Vantage

Pro2. **6153EU Wireless Vantage Pro2 with 24-Hour Fan-Aspirated Radiation Shield**



**NEW!**

**Vantage Pro2 Plus™**

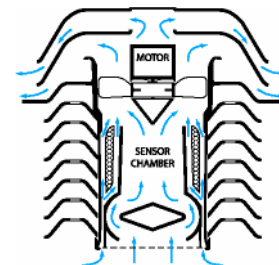
**with 24-Hour Fan-Aspirated Radiation Shield**

Includes our patented solar-powered 24-hour fan-aspirated radiation shield for maximum accuracy of temperature and humidity readings, along with all the features of Vantage Pro2 Plus.

**6163EU Wireless Vantage Pro2 Plus with 24-Hour Fan-Aspirated Radiation Shield**



**24-Hour Fan-Aspirated Radiation Shield see also item 7747!!**



Motor-driven fan draws air through the sensor chamber 24 hours a day, 7 days a week (only if there is enough solar power available!!) Air flow across the sensors is 500 feet per minute (2.5 m/s). At night, when the effects of radiation are less, the solar-powered model runs on battery power and the air flow is 280 feet per minute (1.4 m/s).

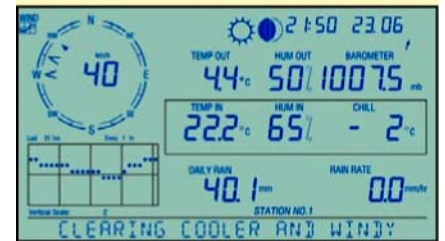
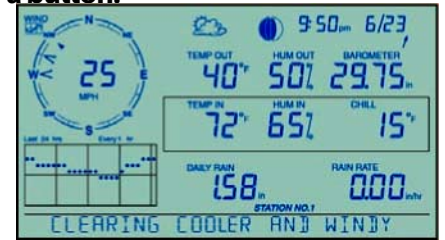
## Vantage Pro2 Options

Build your own customized weather station by adding one or more of the options or special-purpose stations shown on the following pages. Each Vantage Pro2 console/receiver can receive data from up to eight different transmitting stations. Start with one of our wireless Vantage Pro2 or Vantage Pro2 Plus stations (which include both the console and the integrated sensor suite), and add up to seven additional Temperature or Temperature/Humidity Stations. Or buy the Vantage Pro2 console alone (without the integrated sensor suite), and add up to eight special-purpose stations of your choice. See the chart for maximum number of each station type.



Use the console on a desk or at a table.

**Switch between EURO (metric) and U.S. units of measure at the push of a button!**



## Flexible mounting options let you customize the installation to suit your needs.



### 40' (12 m) Anemometer Cable

All Vantage Pro2 stations, whether wireless or cabled, include a cable that lets you mount the anemometer and rain collector up to 40' (12 m) apart. When the cable is not needed, simply lash the coil out of the way on your mounting pole. Hardware for mounting on a pole or post is included; mounting pole is not.



### Mounting Pole Kit

Optional Mounting Pole Kit includes two galvanized steel poles, connector, and mounting hardware. Poles measure 19½" (0.50 m) and 21" (0.53 m) long. Assemble the two together to make a single 37½" (0.95 m) long pole. Outside diameter is 1<sup>5</sup>/<sub>16</sub>" (33 mm).

**7717 Mounting Pole Kit**



### Mounting Tripod

Optional tripod makes installation even easier. Brackets at the base of legs tilt to mount on roof or uneven terrain. Made of galvanized steel. Includes two 36<sup>3</sup>/<sub>8</sub>" (0.92 m)-long poles, which may be used separately or together to make a single 69<sup>3</sup>/<sub>4</sub>" (1.77 m)-long pole.

**7716 Mounting Tripod**



**NEW!**

**Anemometer Transmitter Kit**

Solar-powered kit for use with wireless Vantage Pro2 or Vantage Pro2 Plus. Allows you to locate the anemometer independently from the rain collector, up to 1000' (300 m) away from the console/receiver. For longer distances, add one or more wireless repeaters. Kit includes transmitter inside weather-resistant shelter, solar panel, battery, and mounting hardware.

**6332OV Anemometer Transmitter Kit** **RECOMMENDED ITEM!**

**ALSO PROFESSIONAL WIND SENSORS AVAILABLE!!**

**Solar Radiation Sensor**

To measure solar radiation and solar energy. Diffuser element and housing are carefully designed for accurate cosine response. Silicon photo diode provides good match to solar spectrum. Two-piece housing minimizes radiation heating, allows convection cooling of the sensor, and prevents the trapping of water



or dust. To mount next to a rain collector, add our Sensor Mounting Shelf (not included).

**6450 Solar Radiation Sensor**

Includes 4' (1.2 m) cable.(When sold pre-installed on a Vantage Pro2 Plus,includes 3' (0.9 m) cable.) Use Standard 4-Conductor Extension Cable.Maximum cable length is 125' (38 m) from sensor to integrated sensor suite. 7876-008 Cable, 8' (2.4 m) 7876-040 Cable, 40' (12 m) 7876-100 Cable, 100' (30 m)

**UV Sensor**

Measures the sunburning portion of the UV spectrum. Allows you to display UV index, dose rate, and daily and accumulated dose. Multi-layer filter provides a spectral response that closely matches the Erythema Action Spectrum. Diffuser provides excellent cosine response.



Two-piece housing minimizes radiation heating, allows convection cooling of the sensor, and prevents the trapping of water or dust. To mount next to a rain collector, add our Sensor Mounting Shelf (not included).

**6490 UV Sensor**

Includes 4' (1.2 m) cable.(When sold pre-installed on a Vantage Pro2 Plus,includes 3' (0.9 m) cable.) Use Standard 4-Conductor Extension Cable.Maximum cable length is 125' (38 m) from sensor to integrated sensor suite. 7876-008 Cable, 8' (2.4 m) 7876-040 Cable, 40' (12 m) 7876-100 Cable, 100' (30 m)



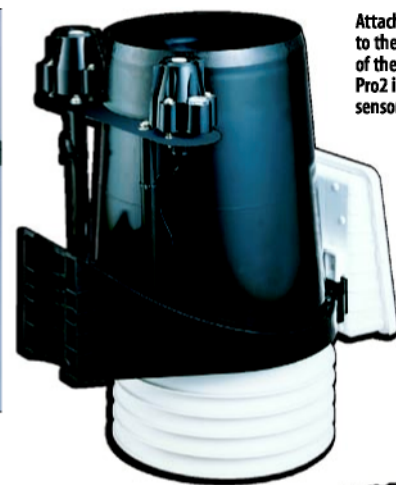
**NEW!**

**Daytime Fan-Aspirated Radiation Shield Kit**

An economical solution for adding the benefits of fan aspiration to your wireless or cabled Vantage Pro2 or Pro2 Plus. Half the cost of our 24-hour fan-aspirated radiation shield, but nearly 75% as effective in reducing the effects of daytime radiation. Solar-powered fan runs during the day. Since there is no backup battery, the fan will cease running when night falls and the effects of radiation are less. Kit includes fan, solar panel, additional radiation shield plates, and hardware, as shown in inset photo. Larger photo shows the kit as installed on a wireless Vantage Pro2. Note that this kit is not compatible with our original Vantage Pro stations. Kits for those stations may still be available; check our website for details and availability.

**7747 Daytime Fan-Aspirated Radiation Shield Kit**

**RECOMMENDED ITEM!**



Attaches easily to the outside of the Vantage Pro2 integrated sensor suite.

**Sensor Mounting Shelf**

For mounting Vantage Pro2 solar radiation and/or UV sensors. Rigid shelf with anodized aluminum posts and stainless steel hardware attaches easily next to the rain collector on the outside of the integrated sensor suite.

**6673 Sensor Mounting Shelf**

# Vantage Pro2 Options



In Canton, Georgia, Andy and Angi Mills grow tomatoes, peppers, and okra with the help of a Wireless Leaf & Soil Moisture/Temperature Station.



## Wireless Temperature/Humidity Station

Battery-powered station includes temperature and humidity sensors inside protective radiation shield, and transmitter and lithium battery inside weather-resistant shelter. Battery lasts up to one year under normal conditions. To view the data, add a wireless Vantage Pro2 console/receiver or Weather Envoy and WeatherLink. Includes hardware for mounting on fence post or pole. Mounting pole is not included.

**NIST**

**63820V Wireless Temperature/Humidity Station**

## Wireless Leaf & Soil Moisture/Temperature Station

Solar-powered station includes transmitter and battery inside weather-resistant shelter. To view the data, add a wireless Vantage Pro2 console/receiver, or Weather Envoy and WeatherLink. Each can receive data from *either*:

- A single fully-populated station with 2 leaf wetness sensors, 4 soil moisture sensors, and 4 temperature probes,
- or
- Two partially-populated stations, one with 2 leaf wetness sensors and 2 temperature probes, and the other with 4 soil moisture sensors and 4 temperature probes.

Available in two models. Choose the model without sensors, and add only those you need to meet your requirements. Or choose the Complete Soil Moisture/Temperature Station, and add one or two leaf wetness sensors as desired.

For teachers participating in the GLOBE program, see the special protocol developed for the 6345CS at [www.globe.gov](http://www.globe.gov), or visit our website at [www.davisnet.com/links](http://www.davisnet.com/links).

**NIST**

**63450V Wireless Leaf & Soil Moisture/Temperature Station** without sensors

**6345CSOV Complete Soil Moisture/Temperature Station** with 4 soil moisture sensors and 4 temperature probes



## Wireless Temperature Station

Battery-powered station includes stainless steel temperature probe with 12' (2.6 m) cable, transmitter and battery inside weather-resistant shelter, and mounting hardware. To view the data, add a wireless Vantage Pro2 console/receiver, or Weather Envoy and WeatherLink. Battery lasts up to one year under normal conditions.

**NIST**

**63720V Wireless Temperature Station**

## Leaf Wetness Sensor

Use to monitor the level of surface moisture on foliage, with range from 0 (completely dry) to 15 (saturated). Add up to two sensors to a single Wireless Leaf & Soil Moisture/Temperature Station. Includes 40' (12 m) cable.

**6420 Leaf Wetness Sensor**



## Stainless Steel Temperature Probe

Multi-purpose temperature probe with 2½" (64 mm)-long stainless steel housing. Use to measure temperature of air, soil, or water. Add up four probes to a single Leaf & Soil Moisture/Temperature Station. Includes 15' (4.6 m) direct-burial cable.

**NIST**

**6470 Stainless Steel Temperature Probe**

## Soil Moisture Sensor

Watermark<sup>®</sup> soil moisture sensor uses electrical resistance to measure the moisture level of the soil. Does not require periodic maintenance during the growing season. Simply bury at the desired depth, then monitor moisture levels throughout the season. Add up to four sensors to a single

Leaf & Soil Moisture/Temperature Station. Includes 15' (4.6 m) cable.

**6440 Soil Moisture Sensor**





Receive data from a Vantage Pro2 integrated sensor suite or special-purpose station, and post it to your computer—no console required! Weather Envoy, when used along with WeatherLink, will collect and store data from the outdoor sensors. Download to your computer at your convenience, then use the WeatherLink software to view current conditions, graph and chart historical data, or even create your own weather web pages.

**NEW!**

**Weather Envoy™**

Weather Envoy includes its own barometer and inside temperature and humidity sensors. Both the wireless and cabled versions include an AC-power adapter. Either may also be run using one of our solar power kits. The wireless model may also be run using three

AAA batteries. Batteries will last up to six months, depending on the logging interval. Batteries should also be added to the cabled model for backup during power outages.

6316 EU Wireless Weather Envoy  
6316CEU Cabled Weather Envoy

**NIST**



Shown with WeatherLink data logger installed.

Requires WeatherLink data logger and software package (not included).



**NEW!**

6328 with 24-Hour Fan-Aspirated Radiation Shield

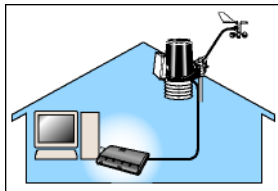
**Integrated Sensor Suite**

For use with Weather Envoy and WeatherLink. Includes all the features of the Vantage Pro2 or Pro2 Plus integrated sensor suites :Tripod not included.

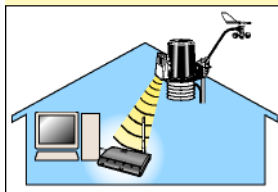
**NIST**

**Receive data directly from the outdoor sensors—no console required!**

Install wireless or cabled Weather Envoy in your home or office, next to your computer for easy and convenient downloading. For field installation options.



Cabled Home/Office Station



Wireless Home/Office Station

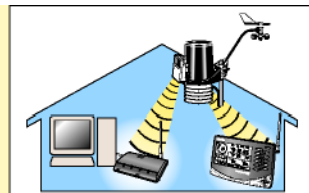
A cabled Weather Envoy can be used with ONE of the following:

- Cabled Integrated Sensor Suite, or
- Cabled Integrated Sensor Suite Plus

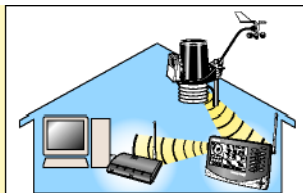
A wireless Weather Envoy can be used with ALL of the following:

- One wireless Integrated Sensor Suite or Integrated Sensor Suite Plus
- One Anemometer Transmitter Kit
- One Leaf & Soil Moisture/Temperature Station or one Soil Moisture/Temperature Station
- Three Temperature Stations or one Temperature Station and two Temperature/Humidity Stations.

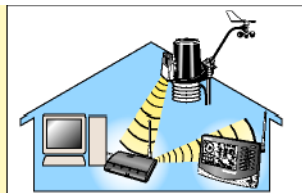
**Or use in addition to a wireless Vantage Pro2 console/receiver.**



Transmit to Both Simultaneously



Retransmit Data to Weather Envoy



Retransmit from Weather Envoy

**Wireless Repeaters**

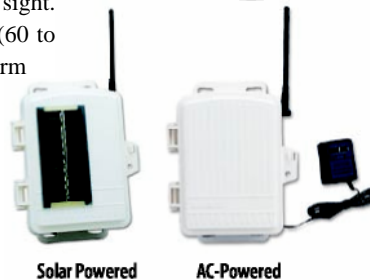
---NEW: LONG RANGE REPEATERS (up to 3km) ask ekopower

**NEW!**

wireless repeaters. Range is up to 1000' (300 m) outdoors, line of sight. Typical range through walls under most conditions is 200' to 400' (60 to 120 m). Use up to eight repeaters with a single wireless station, or form a network of weather stations by linking eight repeaters to eight different wireless stations. AC-powered model includes power adapter. Solar-powered model includes solar panel, regulator circuit, and rechargeable battery. Both models available Spring, 2005.

7626 EUW ireless Repeater, AC-Powered

7627 OV Wireless Repeater, Solar-



Solar Powered

AC-Powered



**NEW!**

**Vantage Pro2 Console/Receiver**

To view data from a wireless Vantage Pro2 station in additional locations, or for use with any of the special-purpose wireless stations shown on the previous pages. Includes all the features shown on pages 2-3.

**NIST**

6312EU Vantage Pro2 Console/Receiver

# OTHER WEATHER ITEMS:

## Radiation Shield

The most effective passive shelter available. Protects temperature sensor from solar radiation and other sources of radiated and reflected heat. Multi-plate construction for maximum airflow. Assembly required.

### 7714 Radiation Shield

for Wizard or Monitor, or for Wireless Temperature Station or Leaf & Soil Moisture/Temperature Station (or separate temperature sensor!)

## Weather Wizard III®

The most-requested features at an economic price inside and outside temperature, wind speed and direction! Complete with wind sensors! Optional: rain collector and weatherlink.

### 7425 Weather Wizard III



## Rain Collector

Designed to meet the guidelines of the World Meteorological Organization, our self-emptying tipping-bucket design is exceptionally accurate. Measures in 0.01" or 0.2 mm increments.

### 7852 Rain Collector for Wizard or Monitor

Includes 40' (12 m) cable. Use Standard 4-Conductor Extension Cable. Maximum cable length is (270 m) from rain collector to console including junction box cable.

7876-008 Cable, 8' (2.4 m)

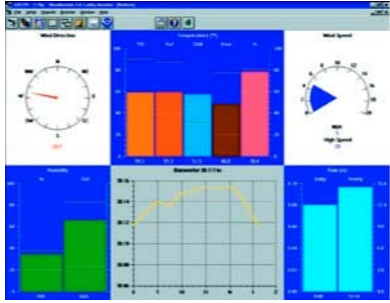
7876-100 Cable, 100' (30 m)

7876-040 Cable, 40' (12 m)

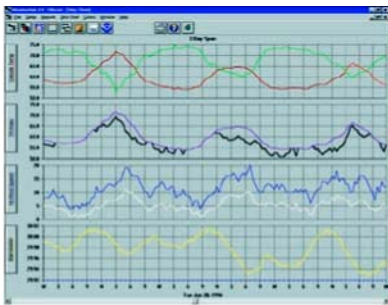
7876-200 Cable, 200' (60 m)

## Computer Interfaces

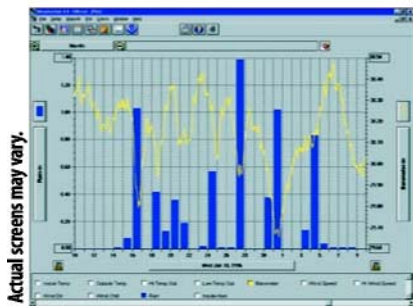
For the ultimate in weather monitoring, add WeatherLink to any of our weather stations. The data logger fits neatly into the weather station console or Weather Envoy, storing weather data even when it's not connected to your PC. Later, download the data and use the software for detailed analysis and graphing.



See current conditions at a glance on the instant weather bulletin.



Graph data on a daily, weekly, or yearly basis.



Actual screens may vary.

View multiple weather variables at the same time to see their relationships.

NASA and NSF. See [www.globe.gov](http://www.globe.gov).

• **Weather World 'Round.** Send your URL to [news@davisnet.com](mailto:news@davisnet.com) and we'll add it to our growing list of Davis stations around the world. See [www.davisnet.com/links](http://www.davisnet.com/links).

## Expanded Reporting

- **Expanded Temperature Reporting.** Heating degree days, cooling degree days, and fuel-oil demand.
- **Optional Sensor Reporting.** Evapotranspiration, leaf wetness, soil moisture, soil temperature, sunburn risk for each skin type, and solar energy.
- **Weather Watcher Reports** in NOAA National Climatic Data Center format.

## Weather Website

Create your own weather website or post weather conditions to a LAN. Use our included HTML templates or design your own. Add graphs, text lines, or scrolling ticker tapes, and upload other files (such as images from a webcam) along with your weather data.

## New Features

Our latest versions of WeatherLink include a host of new and improved features.

- **Weather Forecast.** Lets you know what to expect, with quick-view icons for the forecast at a glance and text messages for expanded details.
- **Moon Phase.** With eight phases of the moon, from new moon through full moon.
- **Updated Wind Chill.** Uses the new formula adopted by the National Weather Service which incorporates modern heat transfer theory and a lower calm wind threshold.

## Sharing Your Weather Data

WeatherLink makes it easy for you to participate in a number of worthwhile programs including:

- **The Citizen Weather Observer Program.** Your data, submitted via APRS or the Internet, can help the National Weather Service develop improved weather prediction models. See [www.wxqa.com](http://www.wxqa.com).
- **The GLOBE Program.** An international weather-related science

program for students from elementary through high school, supported by



In Spain, a network of twelve Vantage Pro Plus stations form the Meteorological Educational Network of Cataluña. For more about the program, visit [www.xtec.es/edumet](http://www.xtec.es/edumet).

## WeatherLink with Standard Data Logger

With our standard data logger, you choose the logging interval: every 1, 5, 10, 15, 30, 60, or 120 minutes. Depending on the logging interval, you can store up to six months of data before downloading. (Up to four months for Perception, Wizard, or Monitor.) Set the system to download automatically every day, or download manually whenever you like. After downloading, use the included software for detailed analysis and graphing, or export the data to most popular spreadsheet, database, and word processing programs. Available in five models; be sure to choose the model that is right for your system.



Vantage Pro2 Data Logger

## WeatherLink for Vantage Pro2

**6510USB** USB version for Windows 98SE/2000/ME/XP (recommended item)

**6510SER** Serial port version for Windows 95/NT4.0/98/2000/ME/XP

**6510X** Extra User License Kit for 6510USB, 6510SER, 6540, 6550, or 6560

**6520** Mac version for Mac OS X v 10.1 or above

**6520X** Extra User License Kit for 6520

Includes USB version of data logger. Unlike the Windows version, does not log data from leaf wetness, soil moisture, solar radiation, or UV sensors. Also does not include the Citizen Weather Observer, GLOBE Program, Expanded Temperature Reporting, or Optional Sensor Reporting capabilities.

## WeatherLink for Perception, Wizard, or Monitor

**7862** Serial port version for Windows 95/NT4.0/98/2000/ME/XP **7862X** Extra User License Kit

**7855** Mac version for Mac OS X v 10.1 or above

**7855X** Extra User License Kit Requires a USB serial adapter. Does not include any of the features listed above under 6520 and 6520X. Also does not include the Weather Forecast or Moon Phase features.

## All WeatherLinks with Standard Data Loggers include:

- Software on CD
- Data logger
- 8' (2.4 m) cable to connect the data logger to your computer

## Extra User License Kits include:

- Software on CD
- Extra user license

To track multiple stations on the same computer, add one WeatherLink for each station. To view the data from the same weather station on multiple computers, add one Extra User License Kit for each computer.



On his 1400-acre corn and soybean farm in Iowa, Al Schafbuch uses WeatherLink to track degree days and rainfall.

## Agricultural/Turf Management Module

Optional software module adds specialized reports for farmers, growers, and turf managers, with user-defined growing season and 24-hour period. You'll get evapotranspiration, chilling requirement, leaf wetness hours, and soil temperature hours—all with user-entered thresholds and starting and ending dates. Plus growing degree-days and temperature-humidity hours (with user-entered names of crops, pests, or diseases) and crop water management (with irrigation values and user-entered K-factor profiles).

### 6511 Agricultural/Turf Management Module

For use with WeatherLink 6510USB, 6510SER, 6540, 6550, 6560, or 7862. Some reports require the use of optional sensors. For owners of GroWeather who wish to upgrade to Vantage Pro2, includes the ability to import files from GroWeatherLink.

## Vantage Pro2 Updater

Take advantage of the latest developments with our Vantage Pro2 Updater. Simply plug the Updater into the

expansion port on your Vantage Pro2 console (where the WeatherLink data logger plugs in), and press the start button. The console will be automatically updated with the latest version of the firmware. Future updates may be downloaded from our website at no charge.

6311 Vantage Pro2 Updater [ASK FOR UPDATES OF YOUR CONSOLE : EKOPOWER.NL](http://www.davisinstruments.com/ask-for-updates-of-your-console-eko-power-nl)



On the island of Flekkerøy, off the southern coast of Norway, Preben Keim's Vantage Pro keeps watch over the village below. To see the current weather report, visit <http://home.tiscali.no/paulen>.



## Telephone Modem Adapter

For transmission of data from any of the serial port versions of our WeatherLink data loggers using a modem.

**Telephone Modem Adapter 6533**  
for WeatherLink for Vantage Pro2 **7870** for WeatherLink for Wizard/Monitor



## WeatherLink Downloader for Palm PDA

Use to download data from a WeatherLink

data logger into your Palm™ Pilot or compatible PDA, for later transfer to your PC. Kit includes 9-pin cable adapter and software on CD. For PDAs with Palm OS 3.5.1 to 5.x and serial interface. For use with WeatherLink models

6510SER, 6540, 6550, or 6560. Not for use with 6510USB.



## Rain Collector Heater

For use in cold climates to measure

freezing rain or the moisture content of snowfall. Requires access to AC power; may not be run using a solar power kit. Includes 24-watt, 24-volt heater with thermal cut-off switch,



control unit, insulating reflective blanket, and AC-power adapter.

### 7720 EURain Collector Heater

Includes 50' (15 m) cable. Use Shielded 4-Conductor Extension Cable. Maximum cable length is 120' (36 m).  
7895-050 Cable, 50' (15 m)      7895-100 Cable, 100' (30 m)

## Complete System Shelter

To locate your station console and other components outside, at a field or remote location. Weather-resistant NEMA 4X enclosure provides protection from the elements for any of the following:

- Vantage Pro2 console or console/receiver with WeatherLink data logger.
- Weather Wizard III or Weather Monitor II console with WeatherLink data logger,

protected junction box, regulator circuit from solar power kit, and 7.0-amp-hour battery.

Measures 15½" × 7¾" × 13½" (395 × 195 × 345 mm).

### 7724 Complete System Shelter



Complete System Shelter with Vantage Pro2 console.

## Multi-Purpose Shelter

Use to shelter any of the following sub-systems:

- Weather Envoy with WeatherLink data logger.
- Weather Wizard III or Weather Monitor II console with WeatherLink data logger and protected junction box.

Measures 3¾" × 9½" × 12½" (95 × 240 × 320 mm).

### 7728 Multi-Purpose Shelter



Multi-Purpose Shelter with Weather Envoy.



**Solar Power Kit**

**for Wireless Vantage Pro2 or Wireless Weather Envoy**

Powers the wireless console/receiver or Weather Envoy. (Outdoor sensors are powered by the solar panel that is included with the station.) Includes solar panel, regulator circuit, rechargeable battery, and 20' (6 m) cable.

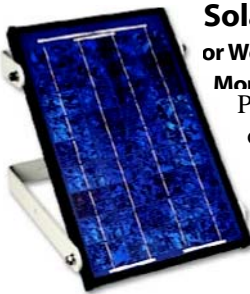
**6610 Solar Power Kit** for Wireless Vantage Pro2



**Solar Power Kit for Cabled Vantage Pro2 or Cabled Weather Envoy**

Powers both the console (or Weather Envoy) and the outdoor sensors. Includes solar panel, regulator circuit, rechargeable battery, and 16' (4.9 m) cable.

**7707 Solar Power Kit** for Cabled Vantage Pro2



**Solar Power Kit or Weather Wizard III or Weather Monitor II**

Powers both the console and the outdoor sensors. Generates enough power to run the station under most low-light conditions. After one hour of bright sunlight, will supply sufficient energy to

run the station for 16 hours in total darkness.

Dual-bracket design provides stability in winds up to 140 mph (225 km/hr). Includes 10-watt solar panel, regulator circuit, and battery mounting bracket. Use with our 7.0-Amp Hour Battery or other battery of your choice.

**7708 Solar Power Kit** for Wizard or Monitor

**7.0-Amp-Hour Battery**

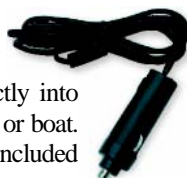
For use with our 7708 Solar Power Kit. When fully charged, the battery will run the system for eight days at 68°F (20°C) or five days at -4°F (-20°C).



**7711 7.0-Amp-Hour Battery**

**Car/Boat/RV Lighter Cord**

For powering any of our weather station consoles or console/receivers. Plugs directly into the cigarette lighter in your car, truck, RV, or boat. Replaces the AC-power adapter that is included with the station. Includes 8' (2.4 m) cable.



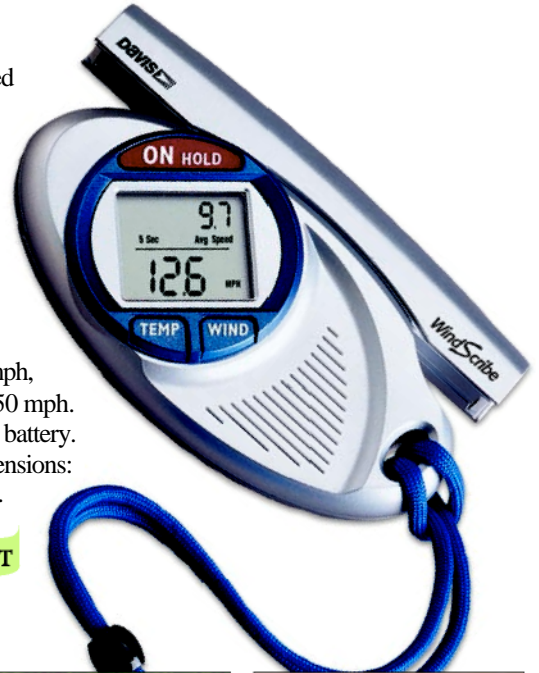
**6604 Car/Boat/RV Lighter Cord** for Vantage Pro2

**7873 Car/Boat/RV Lighter Cord** for Wizard or Monitor

**WindScribe™**

Ultrasonic wind meter uses patented technology to read current wind speed, highest positive speed (headwind), lowest negative speed (tailwind), 5-second average, and running average. Select from mph, km/h, fpm, m/s, f/s, or knots, plus temperature and wind chill in tenths of °F or °C.

Sensitive to breezes as low as 0.4 mph, yet withstands winds as high as 150 mph. Includes replaceable 3-volt lithium battery. Battery lasts up to 600 hours. Dimensions: 5" x 3" x 3/4" (12.7 x 7.6 x 1.9 cm). Weight: 3 1/2 oz (100 grams).



NIST

**Use Three Ways**



Handheld with adjustable lanyard.



Tripod mount with 1/4" thread.



Mounting bracket with Velcro® strap.

**Hand-Held Wind Speed Indicators**

For instantaneous wind speed readings, where you need them, when you need them. Rugged, high-impact plastic with corrosion-resistant components, protective vinyl case, and attached wrist lanyard.

**Wind Wizard™**

Reads wind speed in miles/hour, meters/second, and Beaufort. Readout dial is supported on sapphire jewel bearings and steadied by a rare-earth magnetic dampening system. Folding handle quickly and securely latches into place. No batteries needed. Dimensions: 3 5/8" x 2 7/8" x 1" (92 x 73 x 25 mm) with handle folded. Weight: 2.5 oz (71 g).

**281 Wind Wizard**



**Turbo Meter™**

Reads wind speed in miles/hour, knots, feet/minute, or meters/second. Turbine suspended on sapphire jewel bearings responds to the lightest of winds. Three-digit display offers excellent viewing contrast in bright sunlight or at night. Requires three AAA alkaline batteries (not included). Dimensions: 4 5/8" x 2 5/8" x 1 1/8" (118 x 66 x 30 mm). Weight: 3 oz (85 g) not including batteries.

**271 Turbo Meter**



NIST

# Sensor Accuracy, Resolution, and Range

Function					U.S.A. Units			Metric Units		
					Resolution	Range	Accuracy ±	Resolution	Range	Accuracy ±
Evapotranspiration	L				0.01"	Day: to 99.99" Month: to 199.99" Year: to 199.99"	5%	0.1 mm	Day: to 999.9 mm Month: to 1999.9 mm Year: to 1999.9 mm	5%
Growing Degree-Days	M				Day: 0.1 D-Day Avg: 0.1 D-Day Total: 1 D-Day	Day: to 400 D-Days Avg: to 400 D-Days Total: to 19,999 D-Days		Day: 0.1 D-Day Avg: 0.1 D-Day Total: 1 D-Day	Day: to 220 D-Days Avg: to 220 D-Days Total: to 19,999 D-Days	
Leaf Wetness	L				1	0 to 15	0.5	1	0 to 15	0.5
Soil Moisture	L				1 cb	0 to 200 cb		1 cb	0 200	
Barometric Pressure (Elevation range: -1000' to +12,500'; -300 to +3800 m)					0.01" Hg	26" to 32" Hg	0.03" Hg	0.1 mm Hg	660 to 810 mm Hg	0.8 mm Hg
								0.1 mb	880 to 1080 mb	1.0 mb
								0.1 hPa	880 to 1080 hPa	1.0 hPa
Three-Hour Trend					Slow 0.02" Hg Rapid 0.06" Hg	5-Position Arrow		Slow 0.5 mm (0.7 mb) Rapid 1.5 mm (2 mb)	5-Position Arrow	
One-Hour Trend					Change 0.02" Hg	3-Position Arrow		Change 5 mm (0.7 mb, 0.7 hPa)	3-Position Arrow	
Inside Humidity					1%	10% to 90%	5%	1%	10% to 90%	5%
Outside Humidity			L		1%	0% to 100%	3%	1%	0% to 100%	3%
Dew Point			L		1°F	-105° to +130°F	3°F	1°C	-76° to +54°C	1.5°C
Rainfall					0.01"	Day: 0 to 99.99" Storm: 0 to 99.99" Month: 0 to 199.99" Year: 0 to 199.99"	4%	0.2 mm. (Rounded to 1 mm at 2000 mm and above.)	Day: 0 to 9999 mm Storm: 0 to 9999 mm Month: 0 to 19,999 mm Year: 0 to 19,999 mm	4%
			L	L	0.01"	Day: 0 to 40.95" Total: 0 to 99.99"	4%	0.2 mm	Day: 0 to 819 mm Total: 0 to 9999 mm	4%
Rate of Rainfall					0.01"	0 to 99.99"/hr	5%	0.1 mm	0 to 1999.9 mm/hr	5%
Solar Radiation	L				1 W/m <sup>2</sup>	0 to 1800 W/m <sup>2</sup>	5%	1 W/m <sup>2</sup>	0 to 1800 W/m <sup>2</sup>	5%
Solar Energy	M				0.1 Ly	1999.9 Ly	5%	PC: 0.1 J/cm <sup>2</sup>	PC: 1999.9 J/cm <sup>2</sup>	5%
UV Dose	L				0.1 MEDs	0 to 199 MEDs	5%	0.1 MEDs	0 to 199 MEDs	5%
UV Index	L				0.1	0 to 16	5%	0.1	0 to 16	5%
Inside Temperature					0.1°F	32° to 140°F	1°F	0.1°C	0° to 60°C	0.5°C
Outside Temperature					0.1°F	-40° to +150°F	1°F	0.1°C	-40° to +65°C	0.5°C
Soil or Water Temperature	L				1°F	-40° to +150°F	1°F	1°C	-40° to +65°C	0.5°C
Outside Temp-Hum Index					1°F	-40° to +135°F	3°F	1°C	-40° to +57°C	1.5°C
Temp-Hum-Sun-Wind Index	L				1°F	-90° to +135°F	4°F	1°C	-68° to +64°C	2°C
Wind Chill					1°F	-110° to +130°F	2°F	1°C	-79° to +54°C	1°C
Time					1 minute	12 hours	8 sec/mo	1 minute	24 hours	8 sec/mo
Date					month/day		8 sec/mo	day/month		8 sec/mo
Sunrise & Sunset					1			1		
Wind Direction					1°	0° to 360°	7°	1°	0° to 360°	7°
					10°	0° to 360°	7°	10°	0° to 360°	7°
Compass Rose					22.5°	16 compass points	7°	22.5°	16 compass points	7°
Wind Speed					1 mph 1 knot	2 to 150 mph 2 to 130 knots	5%	0.1 m/s 1 km/hr	1 to 67 m/s, 3 to 241 km/hr	5%
Direction of High Speed					22.5°	16 compass points	7°	22.5°	16 compass points	7°

**Included**

L **Optional, shown on console**  
M **Optional, requires WeatherLink**

Unless listed separately, accuracy, resolution, and range are for Vantage Pro2 stations. Specifications for Perception, Wizard, and Monitor may be somewhat different. For complete specifications, visit our website at [www.davisnet.com/links](http://www.davisnet.com/links).

"Resolution" refers to the number of digits or decimal places displayed on the console. Our rain collector reads in true 0.01" or 0.2 mm increments. All other weather variables are measured and accumulated in U.S. units of measure, which are then converted to metric units for display purposes.

Wizard and Monitor calculate and display wind chill according to the original National Weather Service Formula. A new formula was adopted in 2001. For wind chill using this formula, view the data using WeatherLink or choose Vantage Pro2 instead.





**TECHNOLOGY  
BREAKTHROUGH!**  
The first & only weather stations  
in their class to use frequency hopping  
spread spectrum radio technology.

## INTRODUCING

# Vantage Pro2™

- Transmits weather data wirelessly up to 1000'!
- Over 3 times the distance of competing stations!

- **Barometric Pressure.** Currently and for each of the last 24 hours. Five-position trend arrow shows whether pressure is rising, falling, or stable.
- **Temperature.** Inside and outside temperature, currently and for each of the last 24 hours. High and low temperature alarms.
- **Humidity.** Inside and outside humidity, currently and for each of the last 24 hours. High and low humidity alarms.
- **Rain.** Rainfall for the last 15 minutes and the last 24 hours, days, months, and years. Flash flood and 24-hour rain alarms.
- **Rain Rate.** Currently and for each of the last 24 minutes. Rain rate alarm.
- **Rain Storm.** Rainfall for the last 24 storms, with beginning and ending dates for each storm. Rain storm warning and alarm.
- **Wind Speed.** Current wind speed. Average for the last ten minutes and each of the last 24 hours. High and average wind speed alarms.
- **Wind Direction.** Currently and for the last 24 hours, days, and months. Direction of high wind speed.
- **Wind Chill.** Current wind chill. Wind chill alarm.
- **Dew Point.** Currently and for each of the last 24 hours. High and low dew point alarms.
- **Heat Index.** Currently and for each of the last 24 hours. Heat index alarm.
- **Sunrise & Sunset.** Time of sunrise and sunset at your location—it even takes daylight savings time into account!
- **Highs & Lows.** For most weather variables, with time and/or date, for each of the last 24 hours, days, months, and years.
- **Optional Sensors.** For UV and solar radiation, evapotranspiration, soil moisture, and more.
- **On-screen graphing.** Graph current conditions, averages, or highs and lows for the last 24 hours, days, months, or years.
- **Your own local forecast.** Forecast icons show sun, part sun, clouds and rain, or snow. Check the scrolling ticker-tape

for more details.

**All this—and much more—in a station that's easy to set up and fun to use.**

More info for all EURO items at:

**EKOPOWER.NL**