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› Davis Instruments Vantage Pro2 GroWeather Wireless ISS Instruction Manual

Davis Instruments 6820

Davis Instruments Vantage Pro2 GroWeather Wireless ISS

Model: 6820 - Instruction Manual

INTRODUCTION

This manual provides detailed instructions for the setup, operation, and maintenance of your Davis Instruments Vantage Pro2 GroWeather Wireless Integrated Sensor Suite (ISS), Model 6820. The Vantage Pro2 is designed for professional-grade weather monitoring, offering precise and reliable data for various applications, particularly in agriculture.

The GroWeather ISS is a robust, solar-powered system that measures key environmental parameters, providing critical information for informed decision-making. It is engineered for durability and accuracy, ensuring consistent performance in diverse weather conditions.



Figure 1: Davis Instruments Vantage Pro2 GroWeather Wireless ISS. This image shows the complete Integrated Sensor Suite mounted on

a pole, featuring the anemometer, rain collector, and radiation shield with solar panel.

SETUP

1. Unpacking and Component Identification

Carefully unpack all components. Verify that all parts listed in the packing list are present. The main components include the Integrated Sensor Suite (ISS) with rain collector, temperature/humidity sensors, solar panel, and a separate cabled anemometer.



Figure 2: Close-up of the Vantage Pro2 GroWeather Integrated Sensor Suite. This image highlights the rain collector with bird spikes, the solar panel, and the radiation shield housing temperature and humidity sensors.

2. Mounting the Integrated Sensor Suite (ISS)

Select a mounting location that provides accurate readings, free from obstructions. The ISS should be mounted on a pole or mast at least 5-7 feet (1.5-2.1 meters) above the ground for optimal temperature and humidity readings. Ensure the solar panel faces south (in the Northern Hemisphere) for maximum sun exposure.

3. Anemometer Connection

The Vantage Pro2 GroWeather includes a separate cabled anemometer for precise wind speed and direction measurements. Mount the anemometer at a height free from wind obstructions, typically 30 feet (9.1 meters) or higher. Connect the anemometer cable to the designated port on the ISS. This cabled connection ensures true wind readings, updated every 2.5 seconds, and is wind tunnel-tested up to 200 MPH.

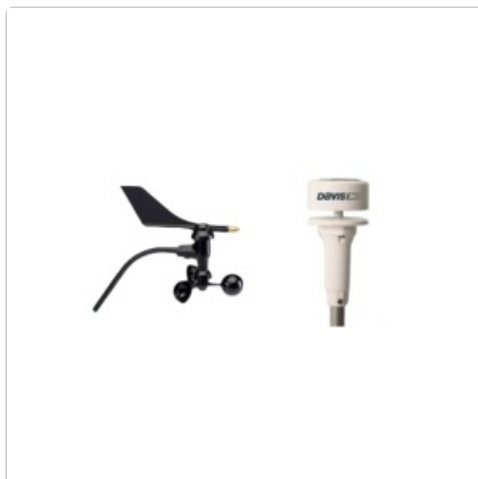


Figure 3: Davis Instruments Anemometer. This image displays the wind vane and anemometer cups, designed for accurate wind speed and direction measurement.

4. Powering the Unit

The ISS is primarily solar-powered. The integrated solar panel charges an internal supercapacitor during the day, providing power for continuous operation. A backup battery (not included) can be installed for extended periods of low light or night operation, though the unit is designed to function without it under normal conditions.

5. Initial Console Setup

Pair your ISS with a compatible Davis Instruments WeatherLink Console or connect it to the WeatherLink Live data logger (sold separately) to begin receiving data. Follow the instructions provided with your console or data logger for initial setup and configuration. The wireless transmission range is up to 1,000 feet (300 meters) line of sight.

OPERATING

1. Understanding Data Readings

Your Vantage Pro2 GroWeather ISS provides a comprehensive set of weather data, including:

- Wind Speed and Direction
- Temperature (Outdoor)
- Humidity (Outdoor)
- Rainfall (Daily, Monthly, Yearly)

Refer to your WeatherLink Console or app manual for detailed explanations of each data point and how to interpret them.

2. Accessing Data via WeatherLink

The WeatherLink platform allows you to access, analyze, and share your weather data anytime, anywhere. Data can be viewed on the WeatherLink Console, through the WeatherLink mobile app, or via the WeatherLink website on a computer.



Figure 4: WeatherLink Console. This console provides a clear display of real-time weather data from your Vantage Pro2 ISS.

3. Optional Sensors and Expansion

The Vantage Pro2 GroWeather system is expandable with various optional sensors to enhance its monitoring capabilities. These include:

- **Solar Radiation Sensor:** Measures solar energy for evapotranspiration calculations.
- **UV Sensor:** Measures ultraviolet radiation.
- **Soil Moisture Sensors:** Monitors soil moisture levels, crucial for irrigation management.
- **Leaf Wetness Sensors:** Detects the presence and duration of moisture on plant surfaces.
- **Stainless Steel Temperature Probes:** For precise temperature measurements in soil or water.



Figure 5: Solar Radiation Sensor. This sensor measures the intensity of solar radiation.



Figure 6: Stainless Steel Temperature Probe. Used for accurate temperature readings in various media.



Figure 7: Soil Moisture Sensor. This sensor helps monitor soil water content for efficient irrigation.



Figure 8: Leaf Wetness Sensor. This sensor detects moisture on plant surfaces, aiding in disease prevention.

MAINTENANCE

1. Rain Collector Cleaning

Periodically inspect the rain collector for debris such as leaves, insects, or bird nests. The integrated bird spikes help

deter birds, but regular checks are recommended to ensure accurate rainfall measurements. Clean the tipping bucket mechanism gently with water if necessary.

2. Solar Panel Inspection

Ensure the solar panel is clean and free of dirt or obstructions to maintain optimal charging efficiency. Wipe it gently with a soft, damp cloth if needed.

3. Anemometer Check

Occasionally check the anemometer cups and wind vane for free rotation. Remove any debris that might impede their movement. Avoid applying lubricants, as this can attract dirt.

TROUBLESHOOTING

If you encounter issues with your Vantage Pro2 GroWeather ISS, consider the following common troubleshooting steps:

- **No Data on Console:** Verify that the ISS is powered on and within range of the console or data logger. Check for any physical obstructions between the ISS and receiver.
- **Inaccurate Readings:** Ensure the sensors are clean and properly mounted. For wind, check the anemometer for free movement. For rain, ensure the collector is clear of debris.
- **Intermittent Data:** This could indicate interference or a weak signal. Try repositioning the ISS or receiver, or check for potential sources of electromagnetic interference.

For more detailed troubleshooting, refer to the comprehensive support resources available on the Davis Instruments website or contact customer support.

SPECIFICATIONS

Feature	Specification
Brand	Davis Instruments
Model Number	6820
Power Source	Solar Powered
Connectivity Technology	Wireless (1,000 ft / 300 m line of sight)
Temperature Accuracy	0.5 °C
Wind Speed Testing	Up to 200 MPH (wind tunnel-tested)
Wind Reading Update Frequency	Every 2.5 seconds
Material	Metal, Plastic
Item Weight	0.01 Ounces (Note: This is likely a packaging weight, not actual product weight)
UPC	011698012770

OFFICIAL PRODUCT VIDEO

Watch this video for an overview of the Davis Vantage Pro2 and its capabilities.

Your browser does not support the video tag.

Video 1: Davis Vantage Pro2: Built for the Toughest Demands. This video provides a visual demonstration of the Vantage Pro2 weather station, highlighting its features, durability, and professional applications.

WARRANTY AND SUPPORT

For warranty information, technical support, or to purchase additional sensors and accessories, please visit the official Davis Instruments website or contact their customer service department. Ensure you have your product model number (6820) and purchase date available when seeking support.

You can find more information and support at the [Davis Instruments Store on Amazon](#).

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