



## Software and Data Logger

WeatherLink 5.0 for Vantage Pro consists of our WeatherLink software and a data logger that connects to a Vantage Pro console. Used together, they enable the transfer of data from your Vantage Pro console to your computer for creation of a permanent weather database. Once stored in the database, the information may be used to generate a wide variety of numerical reports and graphical displays.

### WeatherLink Software Features

- ▲ Displays the current weather station data in a real-time "bulletin" on the computer.
- ▲ Allows you to set and clear data in the weather station console (time and date, highs and lows, alarm thresholds, calibration numbers, etc.) from the computer.
- ▲ Graphs archived weather data on an hourly, daily, weekly, monthly, or yearly basis.
- ▲ Generates Weather Watcher reports in the National Climatic Data Center (NOAA) format.
- ▲ Collects data from multiple weather stations on the same computer.

### WeatherLink Data Logger Features

- ▲ Archives weather data for subsequent transfer to the computer.
- ▲ Manages data communication between the Vantage Pro weather station and the WeatherLink software.

Details of data formatting and content are contained in the Programmer's Reference Library. Check for availability at the Davis website (<http://www.davisnet.com/support/weather/software.asp>).

## Specifications

### Software System Requirements

Computer running Windows™ ME, 2000, 98, 95 or NT 4.0 with at least one free serial port and 5 MB of free disk space. The amount of disk space necessary for the data files depends on the archive interval. Each archive record requires 21 bytes of disk space. Database files containing data stored at a 30-minute archive interval require approximately 36K of disk space per month of data. The file size changes in a linear fashion depending on the archive interval. For example, data stored at a 1-minute interval requires approximately 1.1 MB per month, while the data stored at a 2-hour interval requires approximately 9K per month.

For phone modem connections, the following additional hardware is required: One external modem to connect to the WeatherLink and one internal modem or external modem connected to your computer (modems must be Hayes compatible), and Telephone Modem Adapter (#6533).

### Communication Protocol

Data Channel Characteristics . . . . . 1200, 2400, 4800, 9600, 14,400 and 19,200 baud (software-selectable), RS-232, half-duplex, data only (no CTS or RTS)

### Data Logger Functions

Control Functions . . . . . Set Archive Interval, Set/Clear Calibration Numbers, Set Longitude and Latitude, Set Year-to-Date Rain Total, Set/Clear Alarm Thresholds, Clear Total Values, Set Time and Date

Download . . . . . Data may be transferred automatically from the data logger to your computer at various times during the day selected by the user, from once every minute up to once every two hours. Only new archive data is transferred during the download.

### Data Logger Archived Data

The Data Logger stores up to 2560 archive records (one 52-byte record per archive interval) for later transfer to your computer. The archive records are stored in 128K of non-volatile memory; protecting the data even if the console loses power. Maxima, minima, averages, and totals are taken over the archive interval.

Archive Record Data . . . . . Inside Temperature (last), Outside Temperature (last), Maximum Air Temperature, Minimum Air Temperature, Wind Direction (dominant), Wind Speed (average), Maximum Wind Speed, Rainfall (total), Inside Humidity (last), Outside Humidity (last), Barometric Pressure (last), Time/Date of Record, Length of Archive Interval

Archive Interval. . . . . User-selectable from the following intervals (in minutes): 1, 5, 10, 15, 30, 60, or 120

Archive Storage Capacity (the amount of time before the archive is completely filled)

- 1 Minute Archive Interval . . . . . 42 hours
- 5 Minute Archive Interval . . . . . 8 days
- 10 Minute Archive Interval . . . . . 17 days
- 15 Minute Archive Interval . . . . . 26 days
- 30 Minute Archive Interval . . . . . 53 days
- 60 Minute Archive Interval . . . . . 106 days
- 120 Minute Archive Interval . . . . . 213 days

## Data Display Options

### Real-Time Displays (these displays update in real-time)

- Graphical Bulletin . . . . . Inside Temperature, Outside Temperature, Wind Direction (0°-360°), Wind Speed, Daily Rain Total, Monthly Rain Total, Year-to-Date Rain Total, Storm Total, Rain Rate, Inside Humidity, Outside Humidity, Barometer, Barometer 6-hour Plot, Evapotranspiration (ET) (day, month, year), Today's Highs and Lows, Forecast Icons, Forecast Text, and Illuminated Fraction of the Moon Disk.
- Text-Based Summary . . . . . Inside Temperature, Outside Temperature, Wind Direction (0°-360°), Wind Speed, Daily Rain Total, Monthly Rain Total, Year-to-Date Rain Total, Storm Total, Rain Rate, Inside Humidity, Outside Humidity, Barometer, UV, Solar Radiation, ET (day, month, year), Today's Highs and Lows, Forecast Text, and Moon Phase.
- Update Interval . . . . . Two seconds (approximately)

### Plotting Displays

- Plot Window . . . . . Enables graphing of all database information (multiple variables may be plotted on a single graph) over any of the following spans (1 hr, 4 hr, 8 hr, 12 hr, 1 day, 3 days, Week, Month, Year). Multiple dates may also be plotted on the same graph.
- Strip Charts . . . . . Four stacked line graphs (multiple variables may be plotted on a single graph), which update at the time of each archive interval. Strip charts may use any of the following spans (1 hr, 4 hr, 8 hr, 12 hr, 1 day, 3 days, Week, Month, Year).

### Reports

- Chilling Requirements . . . . . Calculates the number of hours spent below a specified temperature during a specified period of time. Typically used to determine if the coldness requirement for a fruit tree in dormancy has been met.
- Degree-Days . . . . . Tracks degree-days and progress towards development for an unlimited number of crops or pests; base and upper development thresholds and development totals entered by user.
- NOAA Monthly Summary . . . . . Based on the National Oceanic and Atmospheric Administration (NOAA) Monthly Weather Watcher report
- NOAA Yearly Summary . . . . . Based on the National Oceanic and Atmospheric Administration (NOAA) Yearly Weather Watcher report
- Soil Temperature Hours . . . . . Calculates the time that soil temperature has been above freezing (or some other threshold). Typically used to determine a time to plant crops.
- Sunrise & Sunset Times . . . . . Calculates sunrise and sunset times for any given latitude, longitude and date.
- Temperature/Humidity Hours . . . . . Calculates the number of hours the temperature has been either above or below a given threshold, and that during which time the humidity was above a given threshold from a given start date. Typically used to track conditions for the development of agricultural pests and molds.
- Yearly Rainfall . . . . . Calculates rainfall totals broken down by month and year. Rainfall data may be altered and data may be added to reflect rainfall totals for months and years which are not contained in your weather database.