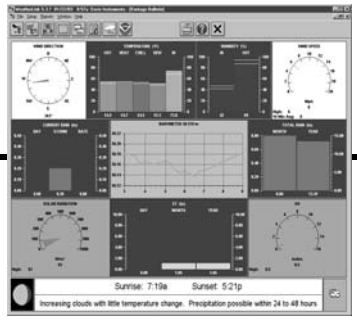
WeatherLink 5.6 for Windows™ 7862



Data Logger and Software

The WeatherLink data logger (referred to as the WeatherLink) contains a microprocessor, ROM, and 32K RAM. When used with the WeatherLink software, it does the following:

- **Makes current sensor output data available for real-time "bulletin" display on the computer.**
- **Logs weather data for subsequent transfer to the computer.**
- **Enables user to set and clear data in the weather station console (time and date, highs and lows, alarm thresholds, calibration numbers, etc.) from the computer.**
- **Manages data communication with the computer.**

Details of data formatting and content are contained in the Programmer's Reference Library (#7864, available upon request); the contents of the Library may be downloaded from the Davis website (http://www.davisnet.com/support/download).

The WeatherLink software provides a wide range of numeric and graphical display features.

General Description

The WeatherLink software enables transfer of data from the WeatherLink to your computer for creation of a permanent weather database. Once stored in the database, the information may be used in the generation of a wide variety of numerical reports and graphical displays.

System Requirements

Computer running Windows™ 95, 98, ME, NT 4.0, Windows 2000 or XP with at least one free serial port and 5 MB of free disk space, or Computer running Windows™ 98 SE, ME, Windows 2000 or XP with at least one free USB port and 5 MB free disk space. The amount of disk space necessary for the data files depends on the archive interval. 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 MB/month, while the data stored at a 2-hour interval requires approximately 9K/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 run at either 1200 or 2400 baud), and Telephone Modem Adapter (#7870).

Current Data

Current data are contained in an 18-byte "sensor image" which is available to be transmitted to the computer for real-time "bulletin" display.

Sensor Image Data	Inside Temperature, Outside Temperature, Wind Direction (0°-360°), Wind Speed, Rainfall Total, Inside Humidity, Outside Humidity, Barometer
Transmission Interval	Once per second (approximately)

Data Logging

Weather data are stored in 21-byte archive records. The records are contained in the 32K "archive" (1560 records) which may be transferred to the computer using the software. Maxima, minima, and averages are taken over the archive interval.

Archive Record Data	Inside Temperature (avg.), Outside Temperature (avg.), Maximum Air Temperature, Minimum Air Temperature, Wind Direction (dominant), Wind Speed (avg.), Maximum Wind Speed, Rainfall (increment), Inside Humidity (last), Outside Humidity (last), Barometric Pressure (last), Time/Date of Record
Archive Interval	User-selectable from the following intervals (in minutes): 1, 5, 10, 15, 30, 60, or 120

DAVIS Davis Instruments 3465 Diablo Ave., Hayward, CA 94545-2778
(510) 732-9229 • FAX (510) 670-0589 • sales@davisnet.com • www.davisnet.com
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Storage Capacity (the amount of time before the archive is completely filled)

1 Minute Archive Interval	1 day
5 Minute Archive Interval	5 days
10 Minute Archive Interval	10 days
15 Minute Archive Interval	15 days
30 Minute Archive Interval	30 days
60 Minute Archive Interval	60 days
120 Minute Archive Interval	120 days

Communication Protocol (See Programmer's Reference Disk)

Data Channel Characteristics	1200 or 2400 baud (switch-selectable), RS-232, half-duplex, data only (no CTS or RTS)
Isolation	Ground isolation is provided by photo-couplers in the Link Isolator Kit (available separately).

WeatherLink for Windows Software Information

Data Display Options

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

Graphical Bulletin	Displays current conditions, highs and lows, and barometric trend.
Text-Based Summary	Displays current conditions and highs and lows along with the time at which they occurred.

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).
Yearly Rainfall	Accumulates 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.
Degree-Days	Tracks degree-days and progress towards development for an unlimited number of crops/pests; base and upper development thresholds and development totals entered by user.
Reports (generated using sensor data)	Temperature/Humidity Hours, Soil Temperature Hours, Chilling Requirements, Sunrise & Sunset Times, NOAA Monthly Summary, NOAA Yearly Summary

Control

The user may exercise a number of control functions via the WeatherLink:

Control Functions Available	Set Archive Interval, Set Calibration Numbers, Set Alarm Thresholds and Time, Clear Total Values, Set Time and Date
Automatic Download	Data may be transferred from the WeatherLink to the computer once per hour. Software may be configured to fax last 2 days worth of data immediately following automatic download.
Automatic Clear	Selected highs, lows, and rainfall totals may be automatically cleared at the same time each day.