

One of the most powerful ways to use collected weather data is to share it with others. Sharing data allows you to contribute to large-scale forecasting, alert others when severe weather conditions exist, inform the public of local conditions, or simply check your home weather while you are away. This application note describes several ways that Davis weather station owners can share their data with the world at large.

## USING WEATHERLINK SOFTWARE IN A NETWORK ENVIRONMENT

The latest version of WeatherLink 4.0 for Windows allows a user to specify where archived data is stored. The program's default action is to place data files in a folder named with the station's name, in the same path as where the program itself resides. If the user is interested in sharing the data with others on a network, the station would be saved in a folder on a shared network drive instead of on the user's local (or C:\) drive.



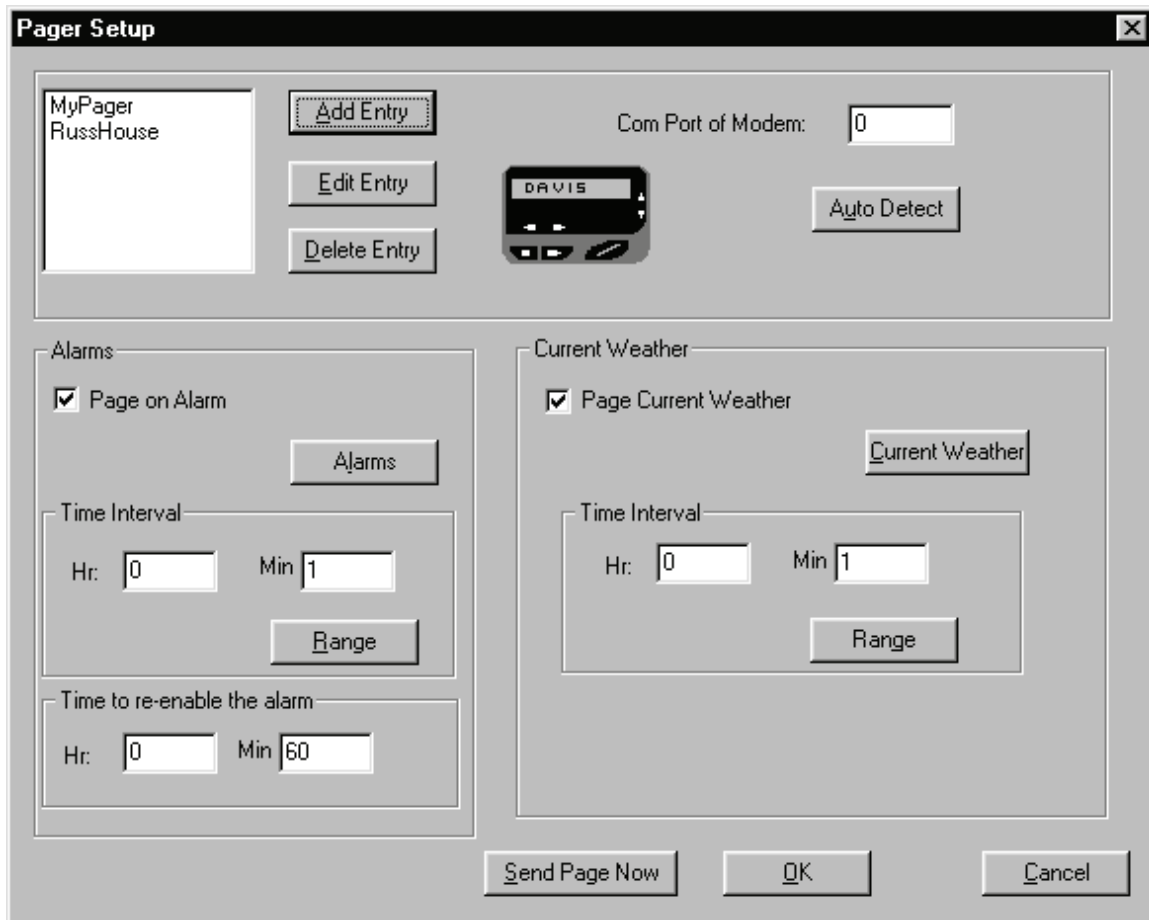
By placing the monthly data files in a shared location, any user running WeatherLink 4.0 software can access the available data files. There are limitations to this strategy. Since the weather station is not connected to a given machine in the network, certain features such as the bulletin and strip charts will not operate. Those functions require a direct serial link to the station.

One important note: The shared files will only allow one viewer at a time, so if the plan is to have a large amount of overlapping users, then other measures should be taken. The best way to avoid being locked out of the data location is to duplicate the files on the local machine. This process will automatically give 100% access to the user on that machine. The program will operate as if it is not on a network at all, since the program files, and station profile and data files are all on the local drive. Again, any software function that requires a direct serial connection to the station will not work.

## PAGING WEATHER DATA USING THE WEATHERLINK TOOLBOX™

Davis Instruments has developed additional tools to communicate weather data to many standard paging systems. Using the WeatherLink data logger and the WeatherLink Toolbox software package (#7802), a user can send messages to one or many pagers, reporting either current conditions, or specially set alarms. The current weather is reported according to a set schedule set by the program's operator. The alarms trigger an automatic page when the limits are reached.

The software supports three types of page, alphanumeric, numeric, and an audible tone. The alphanumeric version prints the type of weather condition, followed by the current value. The numeric pager uses a pre-defined numeric code to signal whether the page is for a routine update or an alarm condition, and a code for each weather parameter. The audible tone option will sound an alarm on a regular phone when the specified alarm is reached.



There are certain hardware and software requirements for the Toolbox software to operate. They include:

- Windows 95/98 or Windows NT 4.0
- Any of the following Davis Instruments weather stations: Weather Monitor II, Weather Wizard II, II-S or III, Perception, or GroWeather
- WeatherLink/Data Logger
- Modem

## POSTING WEATHER CONDITIONS AND DATA VIA THE INTERNET

The Toolbox software package handles two essential steps in the posting of weather data to the Internet. The software first polls the data to create the text, Java and picture files, then transfers the files to a specified address or file location. The software transfers the files using a protocol known as FTP (File Transfer Protocol). In order for the transfer to be successful, the destination site must support FTP access.

Data can be transferred to an Internet site using either a constant connection or a temporary dial-up connection. When a constant connection is used, the user specifies the frequency of the file generation and update. When a dial-up connection is used, the user still specifies how often he/she would like to generate and transfer the files, but then, on the user-determined schedule, the computer dials the network connection point, establishes a connection, transfers the files, and disconnects.

The screenshot shows the 'Internet Configuration' dialog box. It is divided into several sections:

- FTP:** Host: davisnet, Port: 21, User Name: russ, Password: [masked], Remote Server Path: /weather.
- Upload Interval:** Hr: 0, Min: 5, Sec: 0. A 'Range' button is located below the input fields.
- Internet Connection:** Radio buttons for 'Connect through a local server' (unselected) and 'Connect through a Dialup Connect' (selected). Below is a list box for 'Select a Dialup Connection' containing 'Best Internet', 'NT Server', and 'My Connection'. Below the list box are 'User Name:' and 'Password:' text boxes. At the bottom of this section are radio buttons for 'Stay Connected all the Time' (unselected) and 'Only Connect during Transfer' (selected).
- A section with two checkboxes: 'Enable Transfer via Internet Connection' (checked) and 'Enable Transfer to the local drive' (unchecked). Below these is a 'Path' text box containing '\', a 'Browse...' button, and 'Cancel' and 'OK' buttons.

The software comes with several templates for posting weather data and graphs. The user can modify the templates provided or create his/her own.

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- WeatherLink/Data Logger
- Modem for dial-up connection, or network card for a permanent network connection
- Ability to transfer files using FTP
- Space on a web server to receive the transferred files

## Example: Typical Home Usage

The Toolbox software performs the following steps to post data to the web site:

### *1. Read Data from the Station*

Reads data from the weather station  
Downloads archived records

### *2. Create Files*

Data file created from the WeatherLink data logger  
Two graphs for each sensor stored as GIF image files

### *3. Generate Web Page*

Replaces comment tags inside a HTML template with actual weather data  
Saves it as another file

### *4. Transfer Files*

Transfer the files to a web server using FTP. A typical location might look like: <ftp.davisnet.com/weather/>.

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