Davis

SHORT-RANGE MODEM PAIR

The Short Range Modem Pair (simply referred to as the SR Modems in this manual) allows you to transmit data from Davis' WeatherLink® data loggers (which are attached to a station console) over twisted-pair cable to a PC at a distance of up to 7 miles (11 km).

CAUTION: *Please note that we have made every attempt to provide a safe product, but Davis Instruments assumes no liability for any injury or damage caused directly or indirectly by the installation or use of this product.*
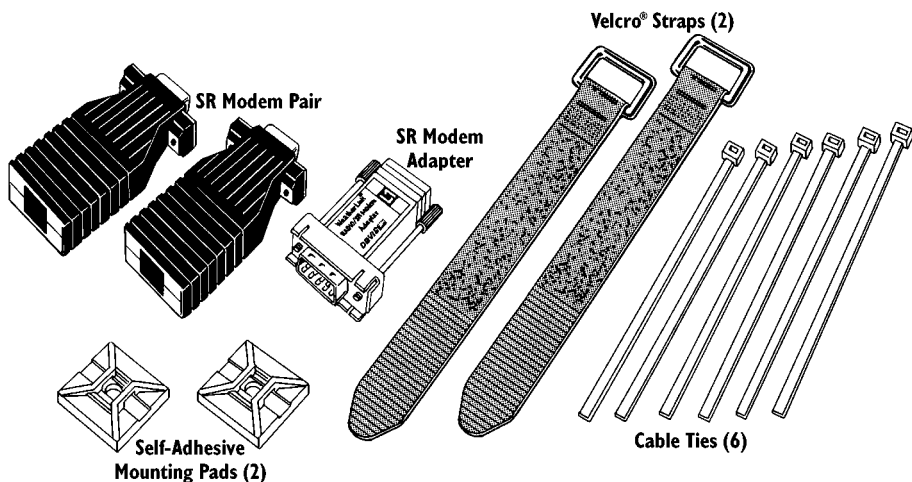
COMPONENTS

The SR Modem includes the components shown below. Please make sure that you have all the listed components before continuing.

Note: *Not shown below is the hardware and manual supplied with the SR Modems. You will need them to complete the installation, however.*

Velcro® Straps (2)

SR Modem Pair

SR Modem Adapter

Cable Ties (6)

Self-Adhesive Mounting Pads (2)

SR MODEM COMPONENTS

TOOLS AND MATERIALS NEEDED FOR INSTALLATION

In addition to the components listed above, you may need the following tools and materials. Please be sure you have everything you need before beginning the installation.

✦ **Rev. D (or later) WeatherLink Data Logger**
All GroWeatherLinks, Health WeatherLinks, and Energy WeatherLinks use the Rev. D (or later) WeatherLink data logger. If you intend to attach the SR Modem to Davis' Perception®, Weather Wizard III®, Weather Wizard II-S® or Weather Monitor II®, you need to be sure that you have a Rev. D (or later) WeatherLink. Check the manufacturing code on the underside of the WeatherLink; if it begins with the letter(s) L, LB, or LC, contact Davis for information on swapping your WeatherLink for the latest version.

✦ **2-Twisted-Pair Cable**
You will need a length of 2-twisted-pair cable to run between the SR Modems. Consult the table below to determine the maximum cable run for either 22 or 19 AWG cables.

AWG	MAXIMUM CABLE RUN
22	4 Miles (6.4 km)
19	7 Miles (11 km)

✦ **Small Screwdriver**

✦ **Wire Cutter**

✦ **Wire Stripper or Knife**

LABELLING YOUR CABLES

Before beginning the installation, consult your WeatherLink user's guide for instructions on labeling the WeatherLink cables.
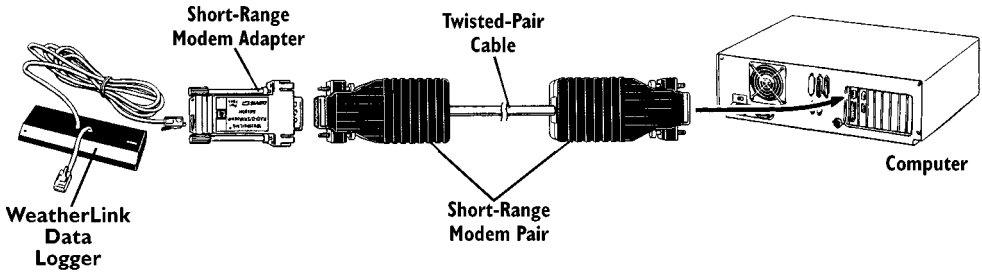
INSTALLING THE SHORT RANGE MODEM PAIR

The SR Modem needs to be installed in a protected location, such as the Complete System Shelter (Davis Product # 7724).

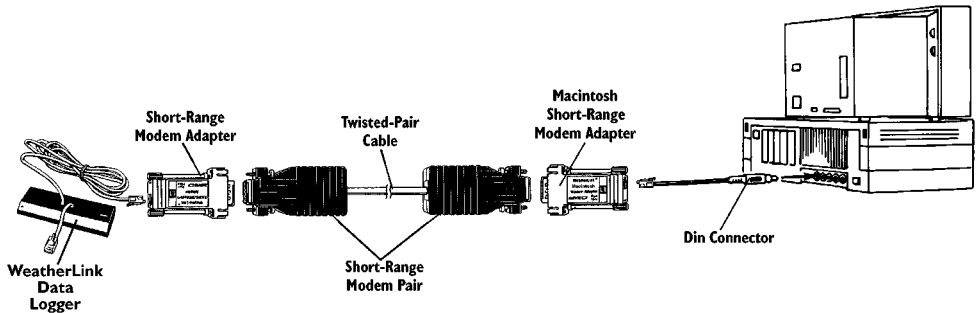### Typical Windows™-Based Computer Connection

The illustration below shows a typical SR Modem connection to a Windows-based computer.

TYPICAL WINDOWS-BASED COMPUTER CONNECTION

Typical Macintosh® Connection

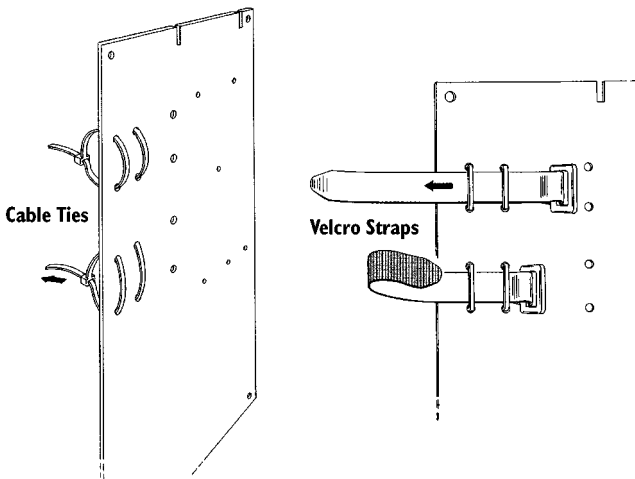The illustration below shows a typical SR Modem connection to a Macintosh computer.

TYPICAL MACINTOSH CONNECTION

Installing the SR Modem in the Complete System Shelter (CSS)

The instructions below will take you through the procedure for installing the SR Modem into the CSS. If not installing in the CSS, you will need to adapt the instructions to suit your individual needs.

1. **Remove the back panel from the CSS (consult the CSS instruction for instructions).**

2. **Slide four of the cable ties through the holes in the panel as shown below.** Loosely join the cable ties in back of the panel. Do not tighten yet.

3. **Slide the Velcro straps under the cable ties on the front of the panel as shown below.**

4. **Secure the Velcro straps in place by tightening the cable ties.** Cut off any excess cable tie.
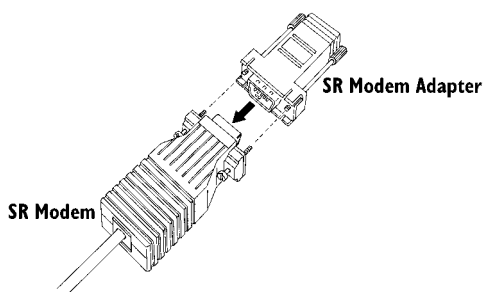

ATTACHING VELCRO STRAPS TO CSS PANEL

5. **Pass one end of the twisted-pair cable through the strain relief in the base of the CSS.**

6. **Attach the twisted pair cable to the terminal block on one of the SR Modems. Consult the manual supplied with the SR Modem itself for instructions. If desired, you may ignore the instructions regarding installing the captive screws and saddle washers in the SR Modem. The captive screws and saddle washers are not necessary (though all subsequent illustrations show them installed).** Note that we do not recommend connecting the drain wire to ground; cut off any excess drain wire. For greatest communication range, use unshielded cable. If shielding is desired (for noise suppression), ground the drain wire at the computer end of the connection only.
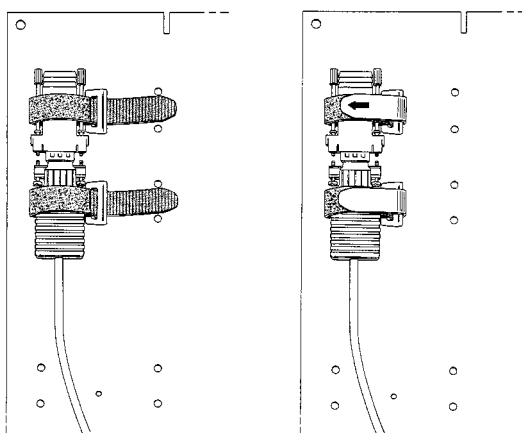
7. **Attach the SR Modem Adapter to the SR Modem.**

ATTACHING SR MODEM ADAPTER TO THE SR MODEM

8. **Secure the SR Modem and SR Modem Adapter to the CSS Panel by placing them on top of the Velcro straps and tightening the straps as shown below.**
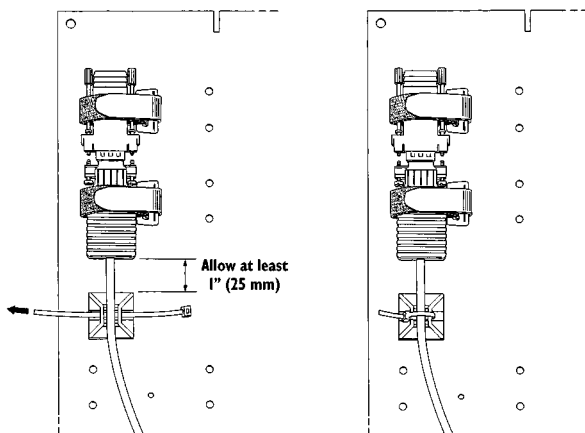

SECURING SR MODEM

9. **Place a self-adhesive mounting pad onto the CSS panel below the SR Modem, allowing at least 1" (25 mm) as shown below.**

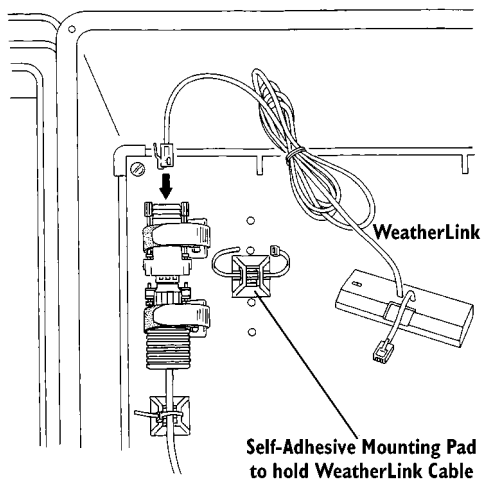**10.** **Position the twisted-pair cable over the mounting pad as shown below.**

11.Slide a cable tie into the mounting pad and secure the twisted-pair cable to the mounting pad by tightening the cable tie.

Cut off any excess cable tie.

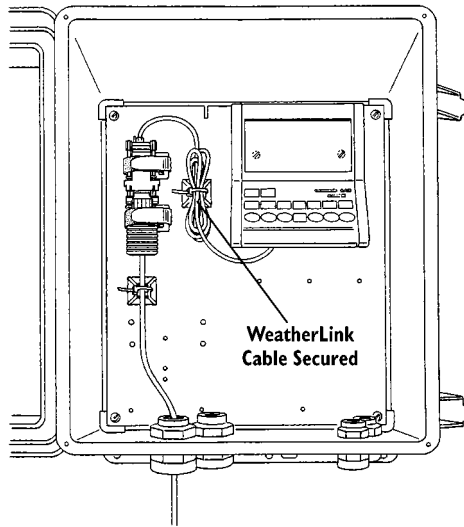

Allow at least 1" (25 mm)

SECURING TWISTED-PAIR CABLE

12.Reattach the CSS panel to the CSS and insert the console mounting screws into the panel (consult the CSS instruction for instructions).

13.Plug the WeatherLink cable into the SR Modem Adapter.

14.Attach the second self-adhesive mounting pad onto the CSS panel as shown below.

WeatherLink

Self-Adhesive Mounting Pad to hold WeatherLink Cable

ATTACHING WEATHERLINK CABLE

15.Connect the WeatherLink to the console and attach the console to the CSS panel (consult the necessary manuals for instructions).

16.Bundle the excess WeatherLink cable together and position the bundle over the mounting pad as shown below.

17.Slide a cable tie into the mounting pad and secure the WeatherLink cable to the mounting pad by tightening the cable tie.
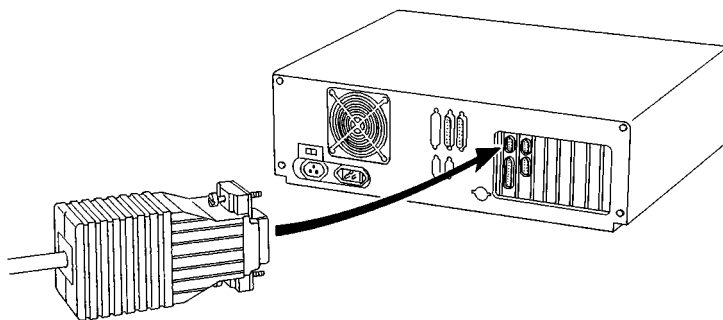
Cut off any excess cable tie.

SECURING WEATHERLINK CABLE

18.Go to the other end of the twisted-pair cable and attach the twisted pair cable to the terminal block on the second SR Modem. Consult the manual supplied with the SR Modem itself for instructions. If desired, you may ignore the instructions regarding installing the captive screws and saddle washers in the SR Modem. The captive screws and saddle washers are not necessary (though all subsequent illustrations show them installed).

Note that we do not recommend connecting the drain wire to ground; cut off any excess drain wire. For greatest communication range, use unshielded cable. If shielding is desired (for noise suppression), ground the drain wire at the computer end of the connection only.

19. Plug the second SR Modem into an available serial port on your PC.

CONNECTING TO SERIAL PORT

Installing the SR Modem in the Multi-Purpose Shelter

Consult the Multi-Purpose Shelter manual for mounting instructions. You will still need to use the manual supplied with the SR Modem itself for instructions on connecting twisted-pair cable to the terminal blocks.

Using Surge Protectors with the Short-Range Modem Pair

The SR modems contain 600 Watt surge protectors. If the cable run between modems is exposed to lightning-induced or other surges, you may want to add additional surge protectors at one or both ends of the cable. Two Surge Protectors (Davis Product # 7767) housed in a Small Surge Protector Shelter (Davis Product #7768) are well-suited for this. If the cable is exposed, we suggest the use of one pair of surge protectors where the cable enters the building containing the computer.

Product Numbers: 7875