

APPLICATION NOTE

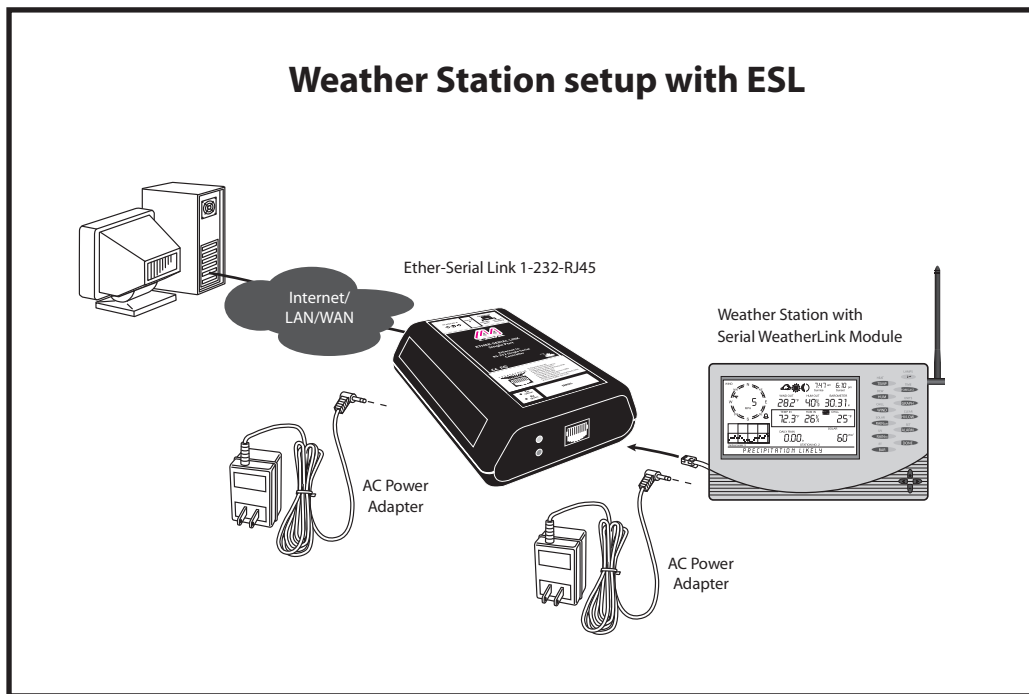
IP-Enabling Davis Instruments Weather Stations using LAVA Ether-Serial Links (ESLs)

Applies to : Davis Instruments Vantage Pro, Vantage Pro2, Vantage Vue, Envoy, Weather Wizard III, and Perception II weather stations

Methodology: Ethernet to serial connection for weather station consoles for communication over Internet or LAN

Equipment needed:

- LAVA Ether-Serial Link (ESL 1-232-RJ45 has an RJ45 serial connector to match the WeatherLink hardware)
- Davis Instruments WeatherLink serial module
- Davis Instruments WeatherLink software (Windows; included with WeatherLink hardware, non-Windows software is also useable)
- CAT 5 network cable
- functional Ethernet network with a switch or router



Setup methodology:

- 1) Install LAVA ESL driver (setup .exe) on computer.
- 2) Activate serial port on computer.
- 3) Set serial port to match the Davis console's serial port settings.
- 4) Configure Weather Link software to use the COM port related to the ESL.
- 5) If Internet access is desired, configure the router that will be the gateway to the ESL. To do this, you need: the internal IP address of ESL and the external IP address assigned to router by your ISP. Then configure the router to route external traffic to the internal IP address of the ESL.

If the gateway is not at a static IP address, register for a dynamic IP mapping service such as dyndns.org that will assign a fixed name that will always point to the changing (dynamic) IP address of the gateway. This name will be entered into the Ether-Serial Link.

CONFIGURE ESL NETWORK SETTINGS

Set ESL IP address, netmask, gateway etc.

CONFIGURE ESL SERIAL PORT SETTINGS

- For Davis Instruments Monitor/ Wizard/Perception weather stations: , 2400 baud, 8, N, 1
- For Davis Instruments Vantage Pro, Vantage Pro2: 19200, 8,n,1

You can if you wish set passwords on the ESL (This is preferable if the router is open on the Internet).

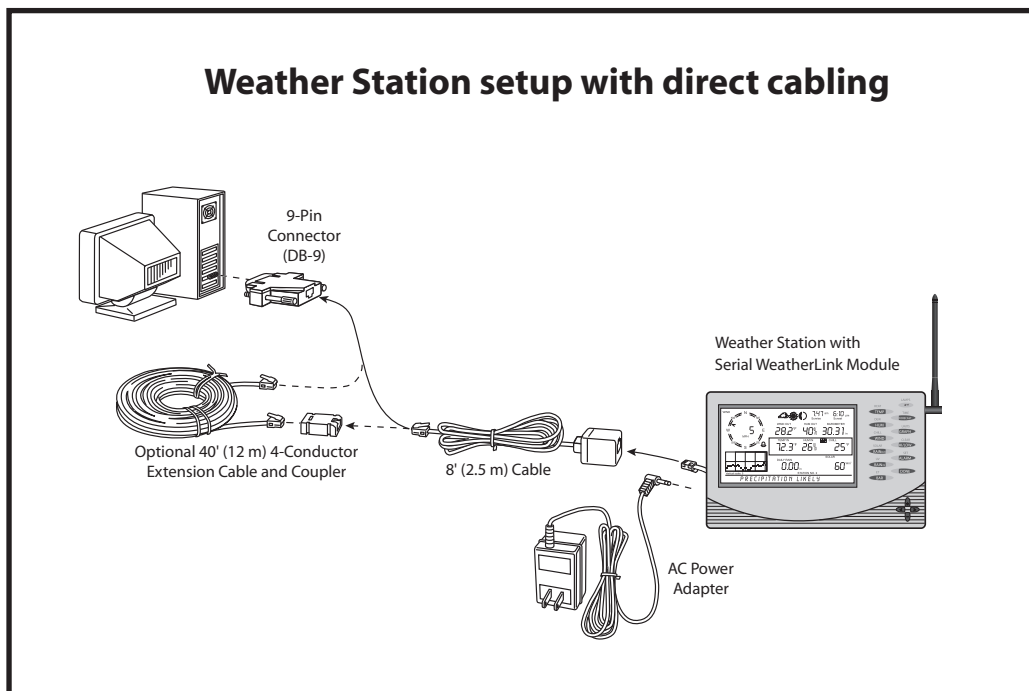
Ensure that the ESL is set up on one of COM ports 1 to 18, as the WeatherLink operates only with these ports.

Ensure that the WeatherLink port settings match the serial port settings of the ESL.

CONFIGURE ROUTER PORT MAPPING

The router needs to be set up to correctly route Internet traffic to the IP address and TCP port number that represent the serial port on the ESL. Routers from different manufacturers differ in their configuration screens for setting up port forwarding.

LAVA recommends the web site portforward.com as a good resource for understanding the port forwarding methodologies for a wide variety of routers. They have step-by-step port forwarding instructions for many many routers.



Instructions for a setup using Linux can be found at: <http://www.joejaworski.com/weather/>