Weather Station Network Server

Weather Wing
WS-2

Introductory Guide
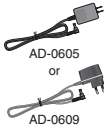
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T&D

Package Contents

Besides the WS-2, the following items are included in the package:

| Software | AC Adaptor x1 | LAN Cable | Introductory Guide |
| CD-ROM x 1 | AD-0605 or AD-0609 | LN-20W x 1 | (Warranty) x 1 |

FCC Compliance Statement for American Users

This device complies with Part 15 of the FCC Rules.
Operation is subject to following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

T&D CORPORATION

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Weather Wing WS-2   Warranty

Provisions for Free Repair

1. If the unit does not work properly despite the fact that the customer used it properly and in line with the User's Manual, the unit shall be repaired free of charge through the distributor from which the unit was purchased.
2. If the customer requests free repair because of trouble within the warranty period, bring or send the unit along with the warranty to the dealer. A service charge may be added if a repairperson must be sent out to the place of use for repair.
3. If you have moved after purchasing, or the product was received as a gift, or there are some difficulties contacting the shop from which you purchased the unit, please contact us directly for service.
4. Free repair is not available in the following cases even though it is within the warranty period:
   (i)   Trouble or damage was caused by careless operation, natural disaster, fire, public pollution, or use of a power source other than specified.
   (ii) If repair, adjustment, disassembly or modification of the unit has been carried out by a person other than a T&D authorized engineer.
   (iii) Trouble or damage was caused by transportation, movement or dropping of the unit after purchase.
   (iiii) Failure to submit the Warranty or failure to fill in all items required in the Warranty.
5. The Warranty cannot be reissued.

* This Warranty only promises customers free repair within the period and conditions clarified in this Warranty. Therefore, the customer's legal rights will not be limited by this Warranty. For further information on repair and other service questions after the termination of the warranty period, contact your dealer.

T&D CORPORATION

Safety Precautions and Instructions

*Please carefully observe the following safety measures when using our product.

The following items should be strictly obeyed for the safe usage of this unit, and for protecting yourself and other people from bodily harm and/or damage to property. Before using make sure to carefully read, understand and follow the safety rules and precautions for our products as outlined below.

■ Explanation of Symbols

Explanation of Warning Symbols

| ⚠ WARNING | These entries are actions that absolutely under no circumstance should be taken. The taking of such an action may cause serious personal physical damage or death. |
| ⚠ CAUTION | These entries are actions that if taken may lead to physical injury or damage to persons or things. |

Explanation of Picture Symbols

△	Denotes an important warning or caution. Inside or near the symbol will appear another symbol giving details. (EX: ⚠ Be careful of electrocution)
⊘	Denotes a forbidden action. Inside or near the symbol will appear another symbol giving details. (EX: Do not use in wet areas)
●	Denotes an action that you must take. Inside or near the symbol will appear another symbol giving details. (EX: Unplug power plug from outlet)

⚠ WARNING

Do not take apart, repair or modify the main unit.
This may cause fire or electrocution.

Do not unplug the AC adaptor with wet hands.
This may cause electrocution.

If water or a foreign body enters into this unit, immediately unplug the AC adaptor and stop using.
Continued use may cause fire or electrocution.

If any smoke or strange smells are emitted from the unit, immediately pull out the AC adaptor and cease using it.
Continued use may cause fire or electrocution.

Do not drop the unit, or expose the unit to a strong impact. If that happens to the unit, immediately remove the batteries and stop using.
Continued use may cause fire or electrocution.

Make sure to periodically remove dust and dirt from the AC adaptor plug.
If dust is allowed to accumulate on the plug, moisture may cause poor insulation and result in fire.

Store main units, AC adaptors, and LAN cables out of the reach of children. Touching them may result in injury and it is dangerous if they are dropped.

When installing and using this product, make sure to follow all warnings and directions from your computer manufacturer.

Do not use this unit in wet or humid places, such as a bathroom.
It may cause a fire or other trouble including malfunction.

⚠ CAUTION

This unit is not waterproof.
If the unit gets dirty, wipe it with a clean cloth dipped in alcohol.

We are not responsible for any damage, malfunction or trouble, whether direct or indirect, caused by the use of our product. Please be fully aware of this before using our product.

This product has been designed for private or industrial use only. It is not for use in situations where strict safety precautions are necessary such as in connection with medical equipment, whether directly or indirectly.

Harmful gases or chemicals may cause corrosion and/or other danger to the unit. Also, by coming in contact with hazardous substances, harm may occur to the people handling the unit. Therefore, do not use in any environment that is exposed to chemicals and harmful gases.

Do not put anything on top of the AC adaptor.
This may cause overheating.

Condensation may occur if the unit is moved from one environment to another where the difference in temperature is great.
Use the unit in an environment where the ambient temperature is from 0 to 50℃ and the humidity is between 20% and 80% RH (no condensation).
When using a Wireless LAN card, please follow all instructions included with the card.

Make sure that the LAN cable and AC adaptor are inserted fully, so as not to cause an improper connection.

Also, when unplugging the LAN cable from the main unit, do not pull the cord, but hold the connector to disconnect.

To prevent damage to the unit from static electricity, remove static electricity from your body by touching metal around you (door knob, window frame) before touching the unit. Static electricity may cause not only damage to the unit, but may cause breaks in or a loss of data.

Do not use or store the unit in places such as listed below:
Doing so may cause electrocution, fire and/or other adverse effects to the device and/or your computer.
- Areas exposed to direct sunlight
  This will cause the inside of the device to become overheated and may cause fire, deformation, and/or other damage including malfunction.
- Areas prone to strong magnetic fields
  This may cause damage including malfunction.
- Areas exposed to water leakage
  This may cause electrocution or other damage including malfunction.
- Areas exposed to excessive vibration
  This may cause injury, malfunction, damage or loss of proper electrical contact.
- Areas that are not flat or level
  This may cause the unit to fall and result in injury and/or damage.
- Areas near fire or exposed to excessive heat
  This may cause damage including malfunction and deformation.
- Areas prone to smoke, dust and dirt
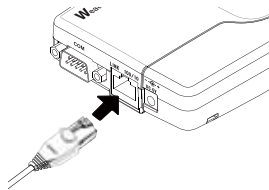 This may cause damage including malfunction.

- This Introductory Guide explains in a simple manner the basic operations and set up for WS-2.
   For a more detailed explanation, see the User's Manual on the provided CD-ROM.

- Weather Wing WS-2 allows the user to monitor real time measurements of weather data when connected to a <u>weather station</u>.*
   * Weather Stations : Vantage PRO2 ™ can be purchased from Davis Instruments Corp.
                        Weather Processing System (WPS series)® can be purchased from Texas Weather Instruments Inc.

   - Vantage Pro2 ™ are trademarks of Davis Instruments Corp., Hayward, CA.
   - Weather Processing System® and WPS series® are trademarks of Texas Weather Instruments Inc., Dallas, TX.

PC Operating Environment

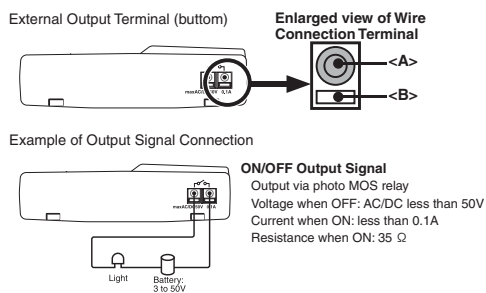|	
OS	Micrsoft Windows® 2000/XP ENG To install the Network Settings Utility, it is necessary to have Administrator Rights for the computer into which it will be installed.
PC/CPU	A Stable Windows® Operating Environment LAN TCP/IP Communication Possible
Memory	Enough memory to stably operate Windows®
Hard Disk	More than 10 MB of free space (Data will need more space)
Monitor	SVGA (higher than 800 × 600 recommended) · more than 256 colors
LAN	100BASE-TX or 10BASE-T Twisted pair cable conforming to Category 5 (STP/UTP)
Browser	Internet Explorer 6 or higher Fire Fox 2.0 or higher

1. Getting the WS-2 Ready to Use

① Connecting the LAN Cable

- When first making settings, please connect to a computer that is connected to the local network (same broadcast domain).
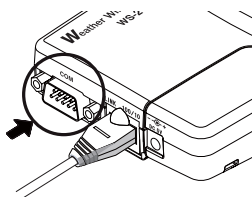- To avoid poor connections, be sure to push the sensor connector securely into the jack.

② Connecting the Signal Wire （When wishing to use contact output for a warning occurrence）

  1. Prepare a Φ 0.5 〜 0.9 single type wire and remove the covering to about 10mm from the tip.

  2. Using a screwdriver or other such tool, while pressing down on the terminal button <B> at the back of the unit, insert the wire into the hole <A>.

External Output Terminal (buttom)

Enlarged view of Wire Connection Terminal

<A>
<B>

Example of Output Signal Connection

ON/OFF Output Signal
Output via photo MOS relay
Voltage when OFF: AC/DC less than 50V
Current when ON: less than 0.1A
Resistance when ON: 35 Ω

Light   Battery: 3 to 50V

③ Connecting a Weather Station to the WS-2

   Connect the Weather Station you will be using to the COM Connector on the WS-2 unit.
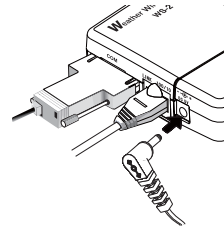

For connecting Davis® Vantage PRO2
In order to connect a Davis Vantage PRO2 to a WS-2, it is necessary to use a Windows compatible version of Weather Link for Davis Vantage PRO2 with a Serial Port connection. For details about the Weather Link, please contact the shop where you purchased the Davis Vantage PRO2.

For connecting Texas Weather Instruments®
Weather Processing System (WPS series)
Please use the serial communication cable that is included with the product.

④ Connecting the AC Adaptor

- To avoid poor connections, be sure to push the sensor connector securely into the jack.
- Do not use an AC adaptor other than the one that is supplied with the product. Doing so may cause fire or other trouble.
- Insert the AC adaptor plug into an AC 100V socket. Inserting the plug into a socket with different voltage may cause fire or other trouble.
- Do not insert or pull out the AC adaptor plug with wet hands or if there are water drops on the plug. This may cause electrocution.

2. Installation

Is Windows® operating properly?
If Windows is not operating properly, "WS-2 for Windows" may not be installed correctly or it may not operate properly.

Please quit all other applications.
If other programs are open, please close and quit all of them, making sure to quit all Quick Start programs such as a virus checker.

- To install "WS-2 for Windows", it is necessary to have Administrator rights (Computer Administrator) for the computer in which you wish to install it.

① Open Windows®.

② Place the accompanying CD-ROM into your CD-ROM drive. In a few seconds, the [Install Program] window will appear.

   - If that window does not automatically open, please open it by double clicking the CD-ROM icon in [My Computer] on your desktop. Or, if after double clicking the CR-ROM drive, the file appears in the CD-ROM folder, double click on the "start.exe" icon.

Select

WS-2 for Windows

Install WS-2 Settings Utility

View T&D Web Site

[Execute] Button

③ Select [Install WS-2 for Windows] and click the [Execute] button to start the installation.

④ Continue the installation by following the directions as they appear.

⑤ After installation has been completed, "WS-2 for Windows" will be registered in Window's [Start] Menu.

3. Opening the WS-2 Settings Utility

From the list of programs in the Window's Start Menu, click on [WS-2 for Windows] - [WS-2 Settings Utility].

- For details about how to use the software, please see the explanations in the Software Help Menu.

[WS-2 Settings Utility]
The WS-2 Settings Utility contains operational settings for such functions as Network Initialization Settings, Mail Server Settings and others.

NOTE:
- If you open the WS-2 Settings Utility on multiple computers in the same network, it may not work properly. Please open the Network Settings Utility from only one computer at a time in the same network (same broadcast domain).

4. WS-2 Network Initialization

To connect a WS-2 to a network, it is necessary to enter an IP Address and Subnet Mask that are appropriate for your network.
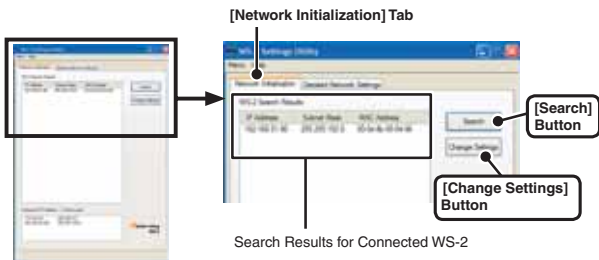
- Please note, that upon purchase, all WS-2 units are set with the same IP address. Do not connect more than one unit with the same address to the network at the same time.
- To make IP address changes, connect one WS-2 unit at a time and carry out the changes.
- Also, if the unit connects to an outside network via a router, it will be impossible to carry out initialization settings.

① Connect the WS-2 via cable to a network.

It is necessary to connect the WS-2 to the same network as the computer running the [WS-2 for Windows] application.

② In [WS-2 Settings Utility], click on the [Network Initialization] Tab and then click on the [Search] button.

After clicking, the search results will be shown in a few seconds.

[Network Initialization] Tab

[Search] Button

[Change Settings] Button

Search Results for Connected WS-2

③ From the displayed list, select the WS-2 to which you wish to make settings and then either double click on that address or click on the [Change Settings] button to open the [Network Settings] window.

Enter the "IP address" and "Subnet Mask"

Enter the "LoginID"and "Password"

[Send] Button

④ Enter an IP address and Subnet Mask.

- Enter an IP address and subnet mask that is appropriate for your network.
- Do not use the same IP address for two different units.It may cause abnormalities to the entire network system.

⑤ Enter the "Login ID" and "Password".

WS-2 Factory Default Settings : Login ID "wsc-user"
Password "wsc-passwd"
- You cannot make any necessary changes to the login ID and password here. Make changes to them from [Detailed Network Settings].

⑥ After checking for entry errors, click the [Send] button. After transmission has been completed, a message will appear.

⑦ Click the [OK] button to finish.

- After settings are completed, the WS-2 will automatically restart. During the restarting process, a search cannot be performed, even if you click the [Search] button. Please try again after one minute.

5. Detailed Network Settings

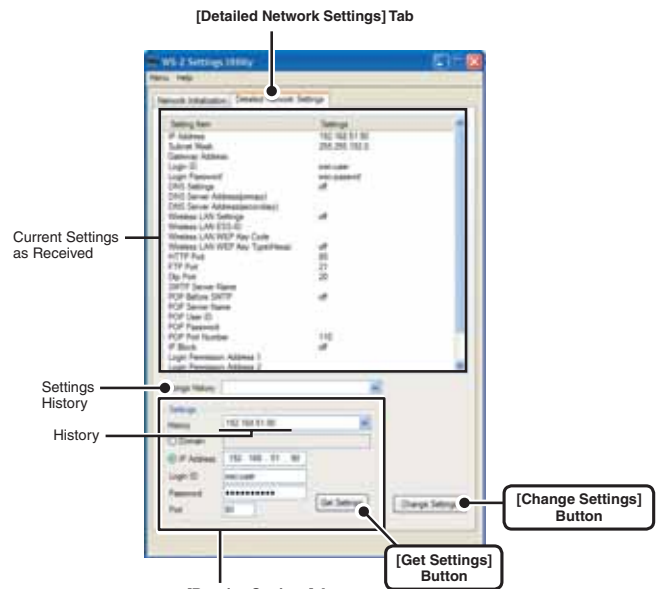The reception of WS-2 settings and more detailed network settings can be made here.

- To make these settings it is necessary to have first made proper settings with a correct IP address.

Receiving the Settings

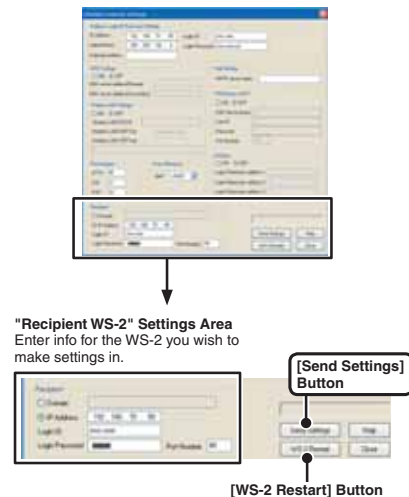① Click the [Detailed Network Settings] Tab.

② In the [Receive Settings] Area (see *1 below), enter the information for the WS-2 you wish to make settings for and click the [Get Settings] button. The current settings will appear.

- A list that shows all of the IP addresses and domain names with which successful communication has occurred until now can be viewed in the [Settings History] pull down menu.
- If you select an IP address or domain name here, the Login ID, Password and Port Number will be entered automatically.
- Note that if you have turned [OFF] the [Login History] in the [Menu] or if you have deleted the Login history by having clicked [Clear Login History] the Settings History will not appear.
- By clicking the [Settings History] button you can receive the current settings.
- Communication is impossible via a proxy server.

[Detailed Network Settings] Tab

Current Settings as Received

Settings History

History

[Change Settings] Button

[Get Settings] Button

*1: **[Receive Settings] Area**
Enter info for the WS-2 you wish to make settings in.

③ In the [Detailed Network Settings] tab page, click the [Change Settings] button at the bottom right to make any necessary changes.

"Recipient WS-2" Settings Area
Enter info for the WS-2 you wish to make settings in.

[Send Settings] Button

[WS-2 Restart] Button

④ Enter the info for the recipient of the settings and click the [Send Settings] button to have the settings sent to the Recipient WS-2.

⑤ Once the settings have been successfully transmitted, a message will appear asking you if it is OK to restart the system.

⑥ Click the [OK] button to restart the WS-2.

- The new settings will not become valid until the WS-2 is restarted.

6. Opening the Weather Display Live

"Weather Display Live" allows users to monitor real time measurements of weather data when connected to a weather station, delivering clear, graphical presentations.

Before opening Weather Display Live...

The WS-2 has been designed to be used with a weather station. Please make any necessary settings to the weather station you will be using with the WS-2 as outlined in the guide that comes with the product.
To view Weather Display Live in your browser, it is necessary to have Adobe Flash Player (Version 7 or higher) installed on your computer.
For more information, see "Weather Display Live" in the User's Manual (PDF) on the provided CD-ROM.

① Open Internet Explorer.

- If you wish to use the Internet, make sure that the power for the router and computer are on so as to enable connection to the Internet.
- Set the browser so as to enable Cookies.
- Make settings to enable both Java applets and Java script.

② In the address section, enter the WS-2 IP address you wish to view, and press the [Enter] key. A confirmation window will appear showing the connection between the WS-2 and the weather station.
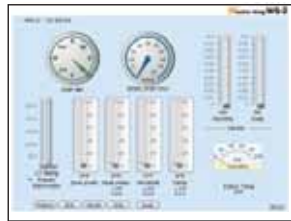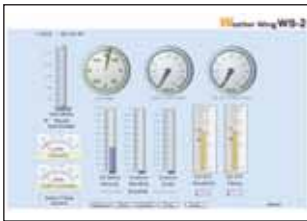

Enter address

③ After the connection has been confirmed, the window will automatically change to view Weather Display Live.

Weather Display Live

If you are using
Davis Vantage PRO2

If you are using
Texas Weather Instruments WPS series

To download Flash go to : http://www.adobe.com/
To view Weather Display Live in your browser, it is necessary to have Macromedia Flash Player (Version 7 or higher) installed on your computer. Please install it from the Adobe Macromedia Flash Player Website.

- The installation of Flash is completely the responsibility of the user. Please carry out the installtion by following the directions as they appear.
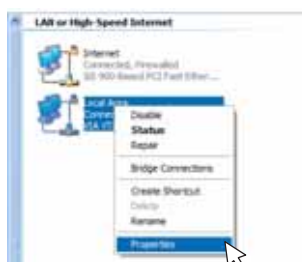
Viewing Current Readings via Mobile Phone
It is possible to view the current readings via your mobile phone by accessing the URL for the Weather Display Live.

- Depending on the type of mobile phone, current readings may not be viewable.
- To view the current readings monitor via mobile phone, it is necessary to open the WS-2 to the public on the Internet.
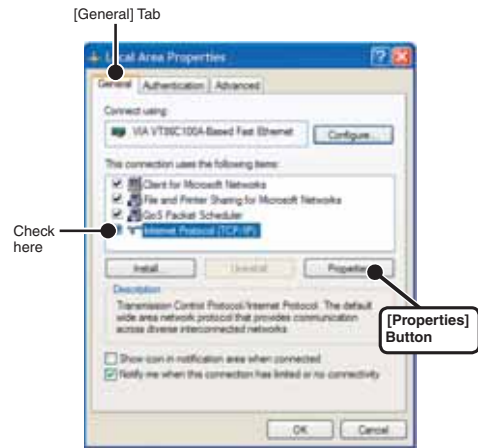
7. Checking and Making Changes to your Computer Network Settings

In some network environments, it may be necessary to make changes to the IP address and subnet mask at the computer side in order to carry out a search. See the following procedures for checking and making changes to your computer network settings.
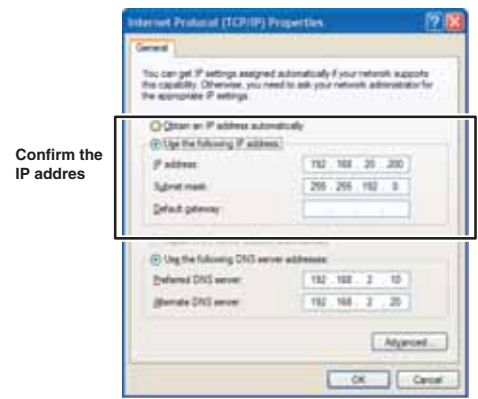
① In the Windows [Control Panel], open [Network Connections].

② Select the Network adaptor that you are using, and right click with the mouse and open the "Properties".

③ Under the [General] Tab, in [This connection uses the following items:] select "Internet Protocol (TCP / IP)" and click on [Properties] button.
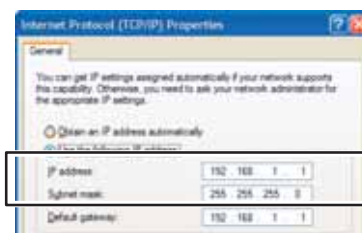
[General] Tab

Check here

[Properties] Button

④ In the [Internet Protocol (TCP / IP) Properties] window, under [Use the following IP address:] make sure that the IP address and Subnet Mask are correct.

Confirm the IP addres

⑤ In order to return the settings back to the original ones make sure to write down the current settings for "IP address", "Subnet mask", "Default gateway", "Primary DNS server" and "Alternate DNS server".

⑥ Enter "192.168.1.1" as the IP address and "255.255.255.0" as the Subnet mask.

Enter the IP address and the Subnet mask

⑦ After entering, click the [OK] button.

⑧ Clicking the [OK] button in the "Network Connections" [Properties] window as seen in step ③ above will close the window.

⑨ Once again, in the [WS-2 Settings Utility] run a search and check whether the IP address for the WS-2 connected to the network is displayed.

⑩ If it is displayed properly, make the initial network settings.

⑪ After making the initial network settings, follow steps ① - ④ above to open the [Internet Protocol (TCP / IP) Properties] window. Re-enter the "IP address", "Subnet mask", "Default gateway", "Preferred DNS server", and "Alternate DNS server" that you had written down before and click the [OK] button.

⑫ Open the browser, enter the address (URL) that you set in the settings utility and check to make sure that the display is proper or not.

- If you are using a company network or are working in an environment that may have special settings and after having followed the above procedures still cannot view the display properly, please connect your network administrator.