

# Bios WEATHER

# Home Weather Station with PC Interface and Modems

## Instruction Manual



# HOME WEATHER STATION (HWS) with PC Interface and Modems

## Instruction Manual

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This instruction manual is part of this product and should be kept in a safe place for future reference. It contains important information on setup and operation.

## **1. INTRODUCTION**

Thank you for purchasing the Bios Weather Home Weather Station with PC Interface with Modems. Developed with state of the art technology and digital electronics, this device provides instant readouts of the weather conditions around you.

To understand how to properly install and program your weather station, please read this instruction manual carefully and keep it in a safe place. To install the *Weather Analyzer* software please read the *Weather Analyzer* software instruction manual enclosed with this unit.

## **2. SAFETY NOTES**

- Damage caused by failure to comply with this instruction manual will invalidate any warranty! The manufacturer and supplier will not be held liable for any damages due to failure to comply with this product!
- In case of harm or damage to a person or property caused by improper handling or failure to comply with this instruction manual, the manufacturer and supplier cannot be held liable.
- For reason of safety and operation, alteration to this device is strictly prohibited.
- Do not leave discharged batteries in the device as these may corrode and release chemicals that may damage the unit.
- Do not dispose of new or used batteries in a fire as they may explode or release dangerous chemicals into the environment.
- This product is not a toy; keep out of reach of children.
- This product is not to be used for medical purposes or for public information.

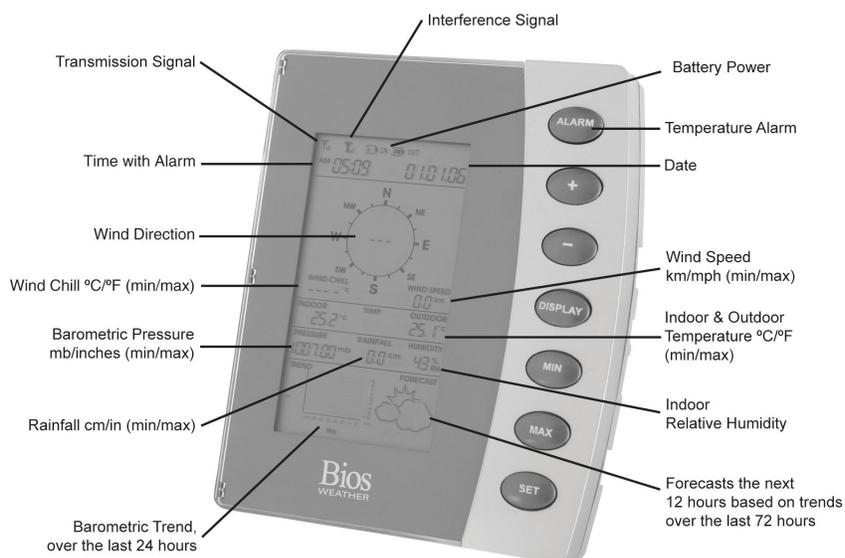
## **3. WEATHER STATION FUNCTION AND FEATURES**

The home monitor measures the indoor environment of its surrounding area (temperature, humidity and atmospheric pressure) and receives weather data from the following three outdoor sensors:

- 1) Thermometer-Transmitter Sensor
- 2) Wind Sensor (speed and direction)
- 3) Rain Gauge Sensor (cumulative rainfall)

## Features of the Home Monitor

- Displays time and date with alarm clock
- Displays weather conditions and records minimum and maximum values
- Displays indoor and outdoor temperature in Celsius (°C) or Fahrenheit (°F) -- user selectable
- Displays indoor relative humidity (RH%)
- Displays barometric (air) pressure reading in millibars (mb) or inches of mercury (inHg) -- user selectable
- Displays cumulative rainfall data since last reset in centimeters (cm) or inches (in) -- user selectable
- Displays wind speed in kilometers per hour (km) or miles per hour (mph) -- user selectable
- Wind direction display with LCD compass as well as numerical (e.g. 225°) and abbreviated characters (e.g. NE)
- Wind chill temperature display
- Displays weather forecast using weather icons (sunny, partly cloudy, cloudy or rainy)
- Barometric trend chart in millibars (mb) or inches of mercury (inHg) -- user selectable
- Indoor and outdoor temperature alarms that are set by the user



## Features of the Thermometer-Transmitter Sensor

The thermometer-transmitter sensor measures the outdoor temperature. It also collects readings from the rain gauge and wind sensor, then transmits the data to the home monitor via wireless 433MHz transmission. The transmitter uses four "AA" batteries (not included). The data from the outdoor sensors are transmitted every 128 seconds to bring you the latest weather information which is displayed on the home monitor's LCD (updating the information is prohibited by FCC criteria and would drastically reduce battery life).

**Power Adaptor:** A special transmitter adaptor is available to supply power to the transmitter rather than using batteries. It is one of the solutions for your HWS during extremely cold temperatures in the winter months when batteries may cause problems. Please call 1-800-387-8520 for ordering information, if not found at your local retailer.

**Solar Panel:** A solar panel for the transmitter is available to supply power to the transmitter rather than using batteries. It is one of the solutions for your HWS during extremely cold temperatures in the winter months when batteries may cause problems. Please call 1-800-387-8520 for ordering information, if not found at your local retailer.

## Wind Sensor



## Thermometer-Transmitter Sensor



## Rain Sensor

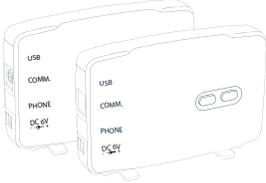
## Features of the Wind Sensor

The wind sensor measures wind speed and wind direction and sends the data to the thermometer-transmitter sensor, which in turn transmits the data to the home monitor. Operating power is taken from the thermometer-transmitter sensor by cable connection. The wind sensor consists of the main unit with wind vane, 9m/30 ft. cable (already attached to the main unit) mast, and base bracket.

## Features of the Rain Sensor

The rain sensor measures cumulative rainfall and sends the data to the thermometer-transmitter sensor via cable connection, which is then transmitted back to the home monitor. The cable connection also supplies operating power from the thermometer-transmitter sensor to the rain sensor. The rain sensor consists of the main unit and 9m/30 ft. cable (already attached to the main unit).

## 4. COMPONENTS OF YOUR HOME WEATHER STATION

| Item                           | Components   | Illustration  |
|--------------------------------|--|---|
| Home Monitor                   | <ul style="list-style-type: none"> <li>• Main unit</li> <li>• One adaptor</li> </ul>   |    |
| Thermometer-Transmitter Sensor | <ul style="list-style-type: none"> <li>• Main unit</li> <li>• Rain protection cover</li> <li>• Base bracket</li> </ul>                                 |    |
| Wind Sensor                    | <ul style="list-style-type: none"> <li>• Main unit</li> <li>• 30 ft cable</li> <li>• Mast</li> <li>• Base bracket</li> <li>• Extension pole</li> </ul> |   |
| Rain Sensor                    | <ul style="list-style-type: none"> <li>• Main unit</li> <li>• 30 ft cable</li> </ul>   |  |
| Modems                         | <ul style="list-style-type: none"> <li>• Main unit x 2</li> <li>• One adaptor</li> </ul>   |  |
| USB Cable                      | <ul style="list-style-type: none"> <li>• One set of USB cable to connect modem to PC</li> </ul>  |  |
| Comm Cable                     | <ul style="list-style-type: none"> <li>• One set of cable to connect modem to home monitor</li> </ul>  |  |
| Weather Analyzer Software      | <ul style="list-style-type: none"> <li>• Weather Analyzer Software CD</li> </ul>   |  |

## 5. MOUNTING

**CAUTION:** Great care must be taken when mounting the HWS components. The manufacture/supplier cannot be held liable for personal or property damage when setting up the components. Please use caution when choosing a mounting point.

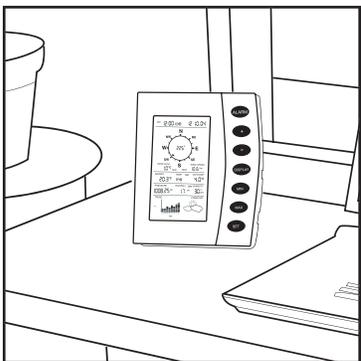
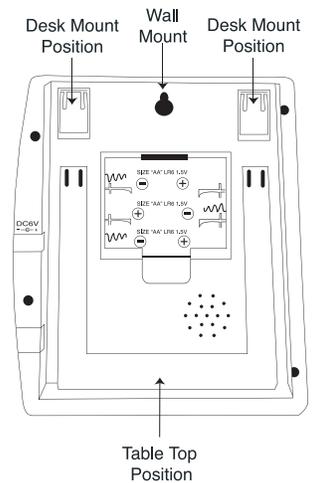
Prior to drilling mounting holes and permanently affixing any of the units, please ensure the following points are considered:

1. Cable lengths of the units meet with your distance requirements at mounting points.
2. Signal from the thermometer-transmitter sensor can be received by the home monitor at mounting point.
3. Make sure the transmitter is easily accessible. You will have to periodically replace batteries. Mount it as close to the ground as possible.

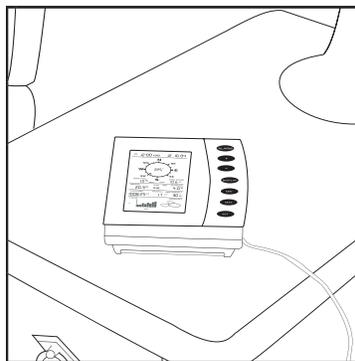
### A. Home Monitor

With three retractable legs at the back of the home monitor, the unit can be placed onto any flat surface or mounted on a wall by using a nail or screw (not provided).

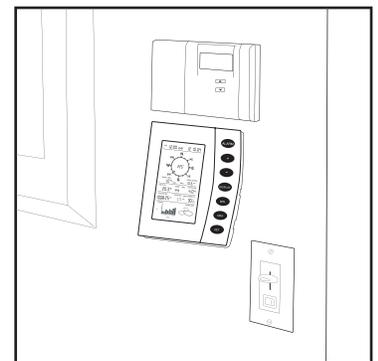
- For accurate data transmission, make sure that the home monitor is not placed in direct sunlight, or placed in an area with drafts caused by heaters or air conditioners.
- Do not mount the home monitor on a wall which has metal heat/air conditioning ductwork or high voltage wiring in the wall behind the station, it may interfere with its ability to receive data from the transmitter.
- Do not mount the home monitor close to fluorescent lights or other electrical appliance. Such devices dramatically decrease signal reception, and in some cases, prevent all signals from reaching the home monitor.
- If the main unit is in area of transmission interference (e.g. on or near concrete walls, home appliances, computers or metal objects) the distance of transmission will be drastically reduced or non-existent.



**Desk Mount Position**



**Table Top Position**



**Wall Mount**

## B. Wind Sensor

First, choose whether the wind sensor will be mounted vertically or horizontally (on a mast). Make sure that you position the wind sensor in a free, open area that is not protected by objects, which may distort or interfere with the wind (e.g. large buildings, trees, chimney, etc.).

**NOTE:** Make sure the following contents have been included with your HWS for mounting the wind sensor:

- 2 x U-bolts to secure to a mast
- 8 x washers
- 4 x nuts
- 8 x 0.25" screws (to fix mast to main unit and base bracket)
- 4 x 2.75" screws (to fix base bracket to a flat surface)

### Cable Preparation for Vertical Mounting

1. Run the cable that is already fastened to the wind sensor through the vertical joining section (see right).
2. Run the cable through the extension pole but do not secure the pole to any sections yet.
3. Now run the cable through the top of the base-bracket and then through the small rectangular section found on one side of the base-bracket.

**NOTE:** Make sure that you completely pull the cable through the wind sensor's extension pole and base-bracket to reduce the amount of slack on the cord.

### Vertical Mount

1. Make sure that the wind vane can rotate freely before fastening the unit permanently into position.
2. Insert one end of the extension pole provided into the base-bracket.
3. Secure the connection point of the extension pole and base-bracket using the 0.25" metal screws provided to prevent rotation at the joining point. (Use 4 x 0.25" screws to ensure stability).
4. Insert the vertical joining section on the bottom of the wind sensor into the top of the extension pole. (Ensure that you pull all cable slack through the side of the base-bracket to prevent creasing or cutting the cable).
5. Secure the wind sensor to the extension pole using the 0.25" screws provided to make sure that the pole connection does not rotate. (Use 4 x 2.75" screws to ensure stability).

**IMPORTANT:** For accurate readings, it is important to mount the wind sensor so that the "N" (north) on the casing is facing the correct direction (north). If necessary, use a standard compass to determine north.

6. Using 4 x 2.75" screws provided, secure the wind sensor's base-bracket to a flat surface.

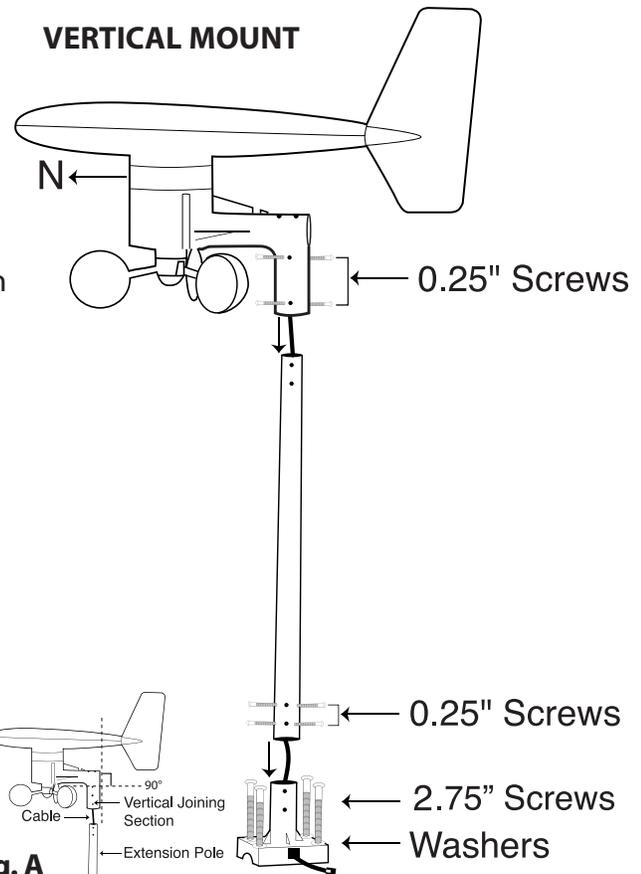
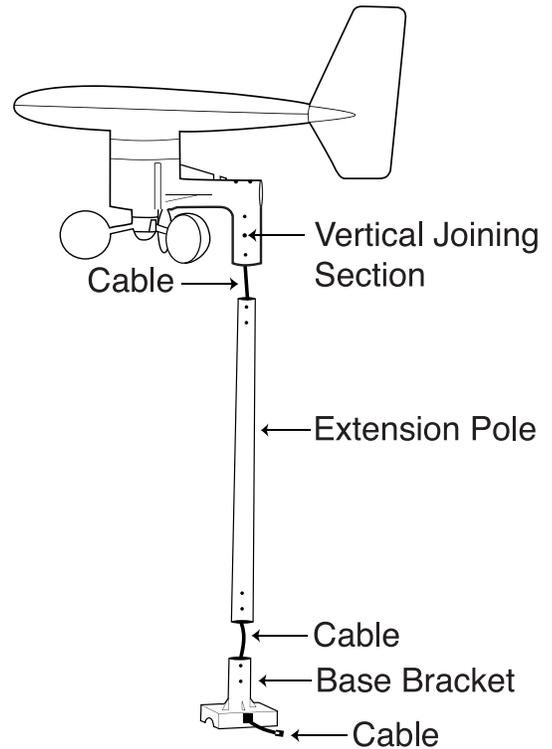


Fig. A

**NOTE:** Make sure that when you are securing the base bracket with the 2.75" screws, you are aware of the cable. Prevent driving a screw through the cable!

**NOTE :** For proper wind speed measurement ensure the vertical joining section is at 90° to the horizon (Fig.A).

## Horizontal Mounting

### Cable Preparation for Horizontal Mounting

1. Run the cable that is already fastened to the wind sensor through the horizontal joining section (see below).
2. Run the cable through the extension pole but do not secure the pole to any sections yet.
3. Now run the cable through the top of the base-bracket and then through the small rectangular section found on one side of the base-bracket.

**NOTE:** Make sure that you completely pull the cable through the wind sensor's extension pole and base-bracket to reduce the amount of slack on the cord.

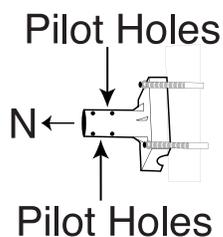
### Horizontal mount - using a mast/antenna/pole

**NOTE:** It is not recommended to secure the wind sensor horizontally from a wall or chimney because doing so will interrupt the flow of wind from at least one direction.

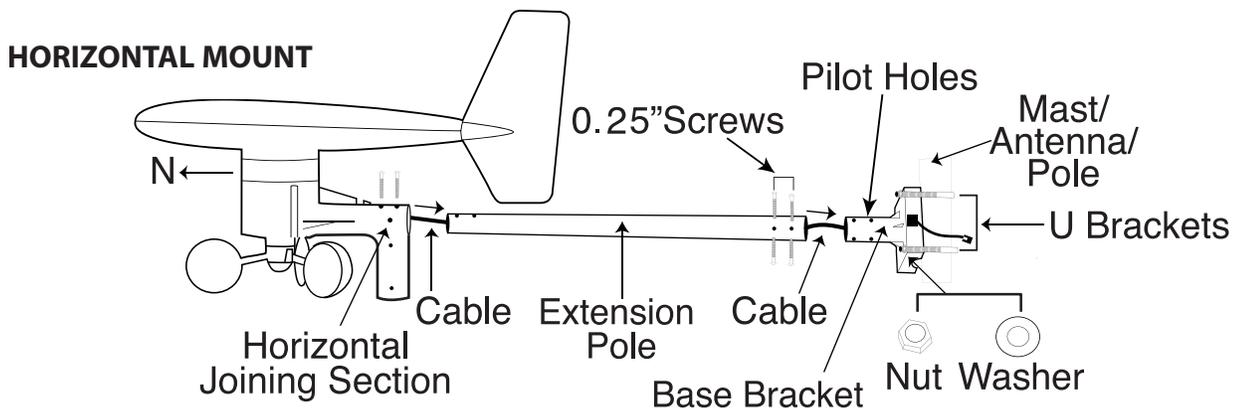
### MOUNT WITH "N" FACING NORTH:

For accurate readings , it is important to mount the wind sensor so that the north (**N**) on the casing is facing the correct direction (north). If necessary, use a standard compass to determine north.

1. Make sure that the wind vane can rotate freely before fastening the unit permanently.
2. Using the 2 x U-bolts, 4 x nuts and 4 x washers, secure the base-bracket of the wind sensor to a stable mast/ antenna/pole. (Masts made of magnetic materials, such as lead or other dense metals will cause faulty readings).
3. Use the extension pole provided to distance the wind sensor from the stable mast/antenna/pole. Insert one end of the extension pole into the base-bracket.
4. Secure the connection point of the pole extension and base-bracket using the 0.25" screws provided to prevent rotation at joining point. (Use the 4 x 0.25" screws to ensure stability).



5. Insert the pole extension into the horizontal joining section. (Ensure that you pull all cable slack through the side of the base-bracket to prevent creasing or cutting the cable).
6. Secure the horizontal joining section to the mount pole using the 0.25" screws provided to make sure that the pole connection does not rotate.



### C. RAIN SENSOR

**NOTE:** Make sure the following contents have been included with your HWS for mounting the rain sensor.

- 2 x 2.75" screws (to fix rain sensor to a flat surface)

Place the rain sensor as far away as possible from tall buildings, trees or other obstructions. It is suggested that the rain sensor should be no closer to tall objects or obstructions than twice the height of the object compared to the sensor. However, low bushes, fences or walls in the vicinity of the gauge are not objectionable, as these usually help break up the force of the wind during stormy weather conditions.

**NOTE:** It is recommended that you mount the rain sensor 18" (46 cm) above ground or surface to prevent water from splashing off the ground/surface, into your rain gauge.

1. **In order for the rain sensor to work properly, you MUST place the rain sensor on a level, horizontal surface. Use of a bubble level (not included) will ensure proper mounting.**
  2. Remove the rain gauge lid by pushing on the tabs at either end, and pulling it upwards off the base.
  3. Test that water can flow freely between the base of the rain sensor and horizontal mounting surface - pour clear water over the water collection device and view the flow.
  4. Using 2 x 2.75" screws, secure the base of the rain gauge to the flat, horizontal surface.
- It is recommended that you inspect and clean your rain gauge every couple of months. Remove any leaves that may have fallen into the collection bowl.
  - Remove the lid on the rain gauge and check if there is anything obstructing the tipping bucket mechanism.
  - The rain gauge is not designed to register snowfall, therefore to avoid damage to the unit, it is recommended that you bring the unit in during the winter, or if it is mounted in a permanent position, cover it to protect it from snowfall.



### D. THERMOMETER-TRANSMITTER SENSOR

It is recommended to mount the thermometer-transmitter sensor in a shaded area out of reach of direct sunlight. Placing the transmitter in direct sunlight will affect the outdoor temperature considerably.

It is recommended to mount the unit approximately 2 m / 6 ft above the ground on the north side of a structure preferably in a shaded area.

**NOTE:** Make sure the following contents have been included with your HWS for mounting the transmitter:

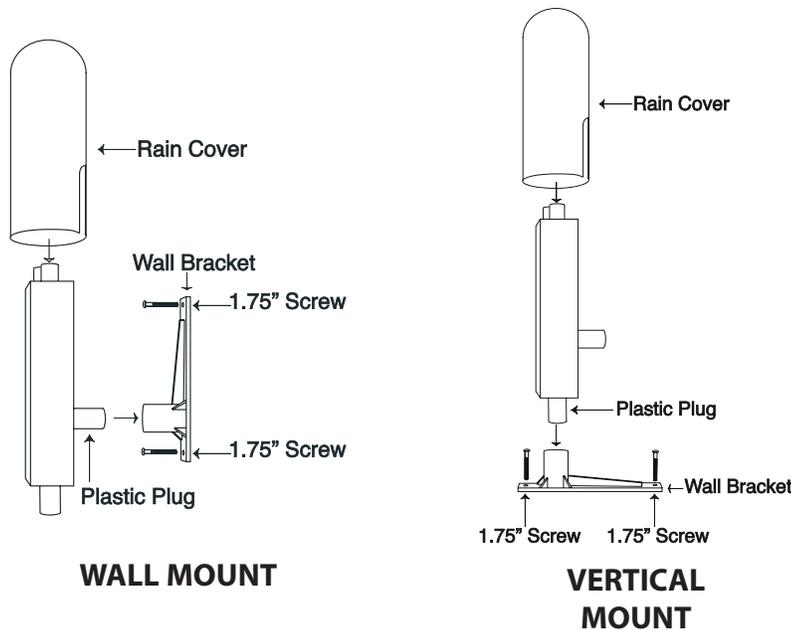
- 2 x 1.75" wall mounting screws
- plastic anchors for screws

### Wall Mount

1. Affix the wall bracket onto a desired wall using the 1.75" screws provided
2. Insert the plastic plug on the back of the thermometer-transmitter sensor into the wall bracket socket.

### Vertical Mount

1. Affix the wall bracket onto a flat, horizontal surface using the 1.75" screws provided.
2. Plug in the thermometer-transmitter using the plug found on the bottom of the sensor into the wall bracket socket. **DO NOT** mount the thermometer-transmitter sensor upside down.



## 6. CONNECTING THE SENSOR

### Thermometer-Transmitter Sensor

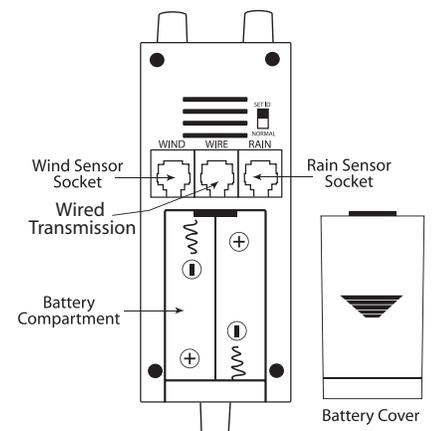
You must insert the cables that run from the outdoor sensors into the corresponding sockets on the thermometer-transmitter before you can begin to power up your HWS.

1. You will see three sockets: one for the wind sensor, one for the wired transmission, another for the rain sensor (see Diagram C).
2. Connect the cables of the wind and rain sensors to the corresponding sockets on the thermometer-transmitter by 'clicking' them into place.

## 7. POWERING UP YOUR HWS WITH PC INTERFACE

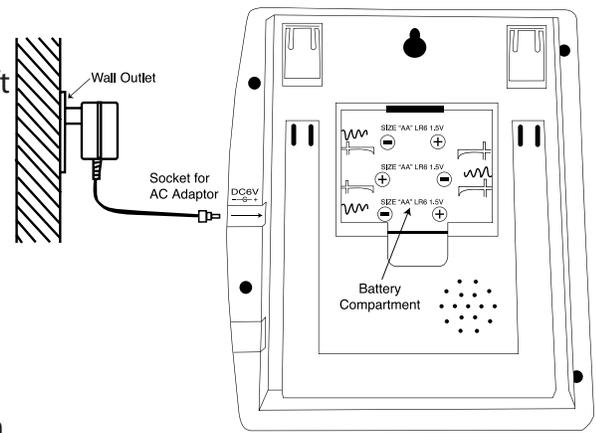
For best results it is recommended that the thermometer-transmitter sensor is directly linked to the home monitor using wired phone cord. (Section 12: Wired Transmission). There is a smaller chance of the HWS losing transmission signal because of interference.

**NOTE:** The AC/DC adaptor should be used as the primary power source for the home monitor and batteries should only be used for back up purposes in case of a power outage.



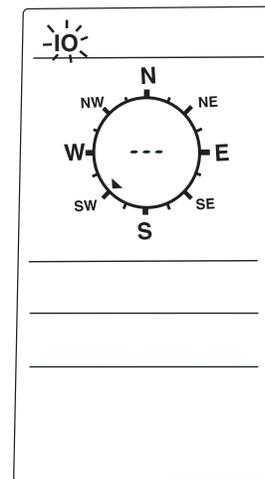
**Diagram C**

1. Plug in the AC/DC adaptor (for the home monitor) to the power outlet in your wall.
2. Insert the adaptor into the DC socket located on the right side of the home monitor.
3. Once the adaptor has been plugged in, "IO" will flash on the top left side of the LCD and "---" will appear in the center of the compass rose. See diagram A.
4. Remove the battery cover on the thermometer-transmitter sensor.
5. Insert 4 x "AA" batteries according to the correct polarity.
6. If the home monitor is receiving transmissions properly from the thermometer-transmitter sensor, a transmission ID number will appear in the center of the compass rose on the home monitor (e.g. 104, 241, etc.), see diagram B.
7. Wait until the transmission ID number and the "IO" stop flashing on the LCD.
8. Press the SET button on the monitor to store the transmission ID number.
9. Replace the battery cover on the thermometer-transmitter sensor.
10. After the set up is complete you can now insert 3 x "AA" batteries into the home monitor for back up purposes only.
11. If using wired transmission (Section 12: Wired Transmission) insert one end of the wired phone cord into the socket located on the right side of the monitor and the other end of the wired phone cord into the center socket on the thermometer-transmitter sensor.

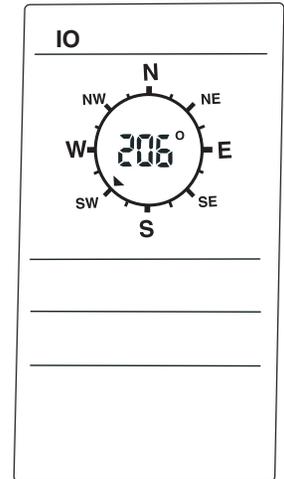


**NOTE:** If using the wired transmission remove all batteries in the thermometer-transmitter sensor.

**IMPORTANT:** It is very important that the steps in "Powering Up Your HWS with PC Interface" are followed precisely. Missing a step or not performing the steps in order will result in the HWS not functioning properly and therefore show in incorrect readings.



**Diagram A**



**Diagram B**

## 8. POWERING UP THE MODEMS

**NOTE:** It does not matter which modem is used to connect to the HWS or the PC, they are both the same.

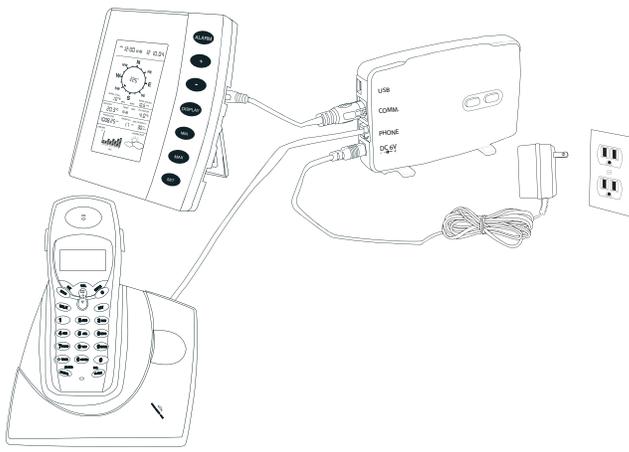
### A. HWS Modem

1. Plug in the AC/DC adaptor (for the HWS modem) to the power outlet in your wall.
2. Insert the adaptor into the DC socket located on the left side of the HWS modem. A blue light should turn on, on the modem.

**NOTE:** If no blue light turns on there is no power being supplied to the HWS modem. Check the AC/DC adaptor and the outlet to make sure everything is inserted correctly.

3. Insert one end of the Comm wire into the HWS modem and the other end to the home monitor.
4. Take your phone connection and insert it into the socket located on the left side of the modem.
5. Your Home Weather Station and the HWS modem are now ready for connection.

**IMPORTANT:** If you have an answering machine or voice mail it is very important to have the rings set to a higher number than the HWS modem, otherwise the answering machine or voice mail will pick up first and there will be no connection between the two modems. It is recommended to set the answering machine or voice mail to 5 rings or higher.



## Weather Analyzer Software and the PC Modem

Once the weather station and modem is set up in one location you are now ready to install the Weather Analyzer software onto your PC and the PC modem in a different location. To install the *Weather Analyzer* software please refer to the *Weather Analyzer* software instruction manual enclosed with this unit. (Section 3: Installing the PC Software).

### B. PC Modem

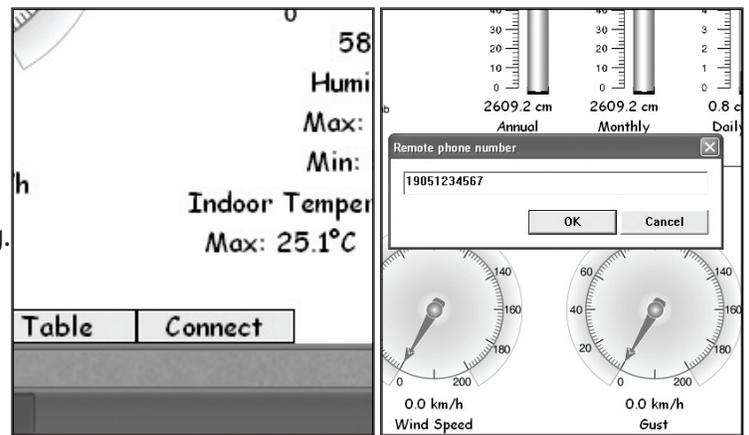
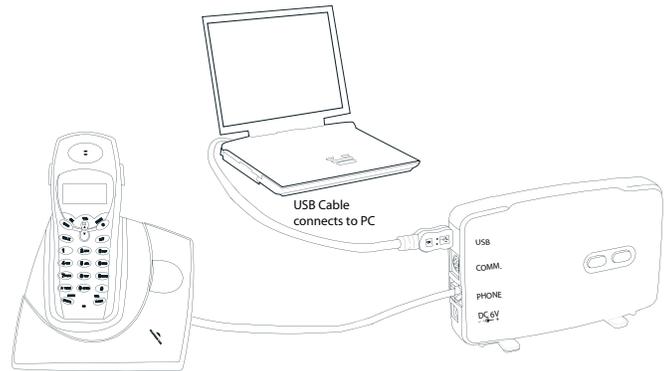
1. Once the installation of the *Weather Analyzer* software is completed, connect the PC modem to the PC using the USB cable. A blue light should turn on, on the PC modem.
- NOTE:** If no blue light turns on there is no power being supplied to the PC modem. Check the USB cable to make sure it is connected accurately.
2. Take your phone connection and insert it into the socket located on the left side of the PC modem.
  3. Your PC modem is now ready for connection.

### 9. CONNECTING THE MODEMS

1. Open the *Weather Analyzer* program on your PC.
2. Click on the *Connect* tab on the bottom of the screen. A window will open. (See Screen 1).
3. Type in the phone number of where the HWS and HWS modem are located. (See Screen 2).

**NOTE:** Make sure to type in the long distance code and area code if necessary.

4. Click the OK button.
  5. On the PC modem a green light will turn on, this light indicates that the PC modem is trying to connect to the HWS modem.
  6. The phone will ring 3 times (at the location where the HWS is) and the HWS modem will pick up on the 4th ring. The green light will flash with each ring.
  7. Once the connection has been established the HWS modem will start sending weather information to the PC modem. The PC will display the weather data accordingly.
  8. The HWS modem sends weather readings in a random cycle every 7-10 seconds from the weather station to the PC. For example: the HWS modem will transmit the indoor temperature measurement first, 7-10 seconds later the HWS modem will transmit the indoor humidity measurement next, 7-10 seconds later the HWS modem will transmit the barometric pressure, etc. This cycle will repeat for as long as the two modems are connected.
- NOTE:** The sequence in which the data is transmitted is random.
9. To disconnect the two modems, click on the Disconnect tab on the bottom of the PC screen.



Screen 1

Screen 2

## 10. CHANGING BATTERIES IN THE TRANSMITTER

1. Press and hold the DISPLAY button until the LCD exits the normal display mode and "IO" begins to flash in the top left corner.
2. Follow steps 5-9 in the "Powering Up Your HWS" section above.

## 11. WIRELESS TRANSMISSION

The HWS utilizes a transmitter, which broadcasts at 433 MHz approximately every 128 seconds to conserve battery life. Like a cell phone signal, the transmission strength is affected by many external objects that cause electromagnetic interference. Proximity to power and electrical appliances adversely affect the signal. Therefore, we strongly advise that you experiment with the placement of both the transmitter and the home monitor. If the conditions are good, you will be able to transmit at the maximum range of 60 meters, but if you are in an area with a lot of interference, the range will be less (View "Mounting Home Monitor" on page 5).

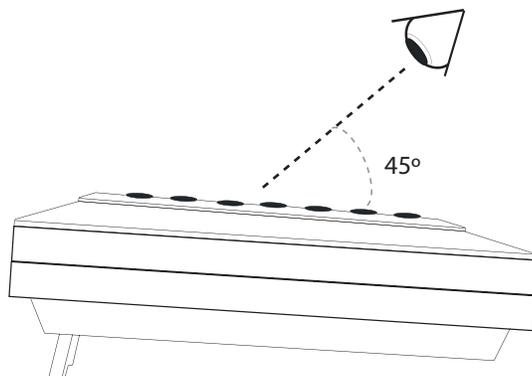
## 12. WIRED TRANSMISSION

You may also link your home monitor directly to the transmitter using wired phone cord, rather than using batteries. This is a perfect solution for your HWS during the cold months when the life of the batteries is drastically reduced or non-existent. Wired phone cord, can be purchased at your local phone or electronics store.

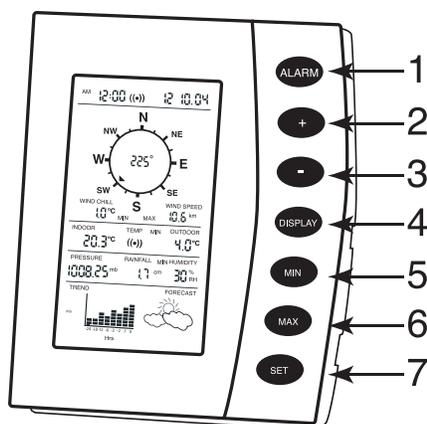
**NOTE:** It is important to only use "4 conductor" phone cord.

## 13. OPTIMUM VIEWING ANGLE

You must always keep in mind that the LCD screen is constructed with an "optimum viewing angle". Your eye should be at a 45° angle to view the LCD screen clearly.



## 14. BUTTON BREAKDOWN (Quick Reference)



| No.             | BUTTON   | FUNCTION  |
|-----------------|--|---|
| 1.              | <b>ALARM</b><br>Button                           | <ul style="list-style-type: none"> <li>• Press and release to enter "Alarm Set Mode"</li> <li>• Toggles between the multiple segments of the "Alarm Set Mode"</li> <li>• Turns all sounding alarms off (alarm clock, indoor/outdoor temperature alarms)</li> </ul>  |
| 2.<br>and<br>3. | "+" Button<br><br>"- " Button                    | <ul style="list-style-type: none"> <li>• Increases/decreases values in the "Set Display Mode" (time and date)</li> <li>• Increases/decreases values in "Alarm Display Mode" (alarm clock, indoor/outdoor temperature alarms)</li> <li>• Press and hold the "+" button to reset cumulative rainfall memory</li> <li>• Toggles between mode settings in the "Set Display Mode" (°C , °F, km, mph, mb, inHg, cm, inch)</li> <li>• "-" button activates backlight in the "Normal Display Mode"</li> </ul> |
| 4.              | <b>Display</b><br>Button                         | <ul style="list-style-type: none"> <li>• Runs through 10 different display combinations with assorted sections on the LCD</li> <li>• Press and hold to enter "ID Setting Mode" if changing transmitter batteries</li> </ul>   |
| 5.<br>and<br>6. | <b>MIN</b><br>Button<br><br><b>MAX</b><br>Button | <ul style="list-style-type: none"> <li>• Displays minimum/maximum memory recordings (Wind Chill, Wind Speed, Indoor/Outdoor Temperature, Pressure, Rainfall and Humidity)</li> <li>• Press and hold the MIN button to reset ALL minimum memory recordings</li> <li>• Press and hold the MAX button to reset ALL maximum memory recordings</li> </ul>  |
| 7.              | <b>SET</b><br>Button                             | <ul style="list-style-type: none"> <li>• Press and hold to enter "Set Display Mode"</li> <li>• Toggles between the multiple segments of the "Set Display Mode"</li> <li>• Activates alarms in the "Alarm Set Mode" (alarm clock, indoor/outdoor temperature alarms)</li> <li>• Press to store the transmission ID when in the "ID Setting Mode"</li> </ul>  |

## 15. SETTING THE HOME MONITOR

**NOTE :** If you press the DISPLAY button, the LCD screen will display certain sections. Continually press the DISPLAY button to get through the different display sections eventually returning to the "Normal Display Mode". If you pause at any time for more than 7 seconds while setting the time, date or measurement preferences, the home monitor will automatically exit the "Set Display Mode".

### "Set Display Mode" - Personalized Settings

#### Time:

1. Press and hold the **SET** button for 3 seconds to enter "Set Display Mode".
2. The hour digit(s) will begin to flash.
3. Using the "+" or "-", toggle until you reach the correct hour(s).
4. Press the **SET** button again.
5. The minute digit(s) will begin to flash.
6. Repeat steps 3-4 to set the minutes, year, month and date.

#### Wind Speed, Temperature, Pressure, Rainfall:

7. After setting the date, the "Wind Speed" and the current unit of measurement (km or mph) will begin to flash.
8. Using the "+" or "-", toggle to your preferred unit of measure - kilometers (km) or miles (mph).
9. Once you have decided on your preference, press the **SET** button .
10. Repeat steps 8-9 to set your preferred measurements for temperature (°C or °F), pressure (mb or inHg) and rainfall (cm or in).

**NOTE:** Inches of mercury are represented as "inHg" (on the "Trend" chart) and as "inch" (under the "Pressure" segment) - both represent the same unit of measure.

## 16. SETTING THE ALARM

If you pause at any time for more than 7 seconds while setting the time, indoor or outdoor temperature alarms, the home monitor will automatically exit the "Alarm Set Mode".

#### Alarm Clock:

1. Firmly press and release the **ALARM** button for no more than 2 seconds to enter the "Alarm Set Mode".
2. The hour digits will begin to flash.
3. Using the "+" or "-", toggle until you reach the desired hour(s) for the alarm clock to sound.
4. Press the **ALARM** button again.
5. The minute digit(s) will begin to flash.
6. Repeat steps 3-4 to set the minutes.
7. "((•))" icon will begin to flash.
8. To activate the alarm, press the **SET** button. The "((•))" icon will stop flashing to indicate that the alarm is active. (To have the alarm inactive, ensure that the "((•))" icon is flashing).

#### Indoor Temperature Alarm:

9. Press the **ALARM** button again to progress to the indoor temperature alarm.
10. "INDOOR" and "TEMP" will begin to flash.
11. Using the "+" or "-", toggle until you reach the desired temperature for the temperature alarm to sound.
12. Press the **ALARM** button again.
13. "((•))" icon will begin to flash.
14. To activate the indoor temperature alarm, press the **SET** button. The "((•))" icon will stop flashing to indicate that the alarm is active. (To have the alarm inactive, ensure that the "((•))" icon is flashing).

## Outdoor Temperature Alarm

15. Press the **ALARM** button again to progress to the outdoor temperature alarm.

16. "TEMP" and "OUTDOOR" will begin to flash.

17. Repeat steps 11-14 to set your outdoor temperature alarm.

### NOTE:

- When the clock alarm sounds, the "((•))" logo on the LCD will begin to flash to the right of the time.
- When the temperature alarm sounds, the LCD will indicate which alarm is ringing by flashing "INDOOR" or "OUTDOOR" and the "((•))" logo.
- If both the indoor and outdoor alarms are sounding, "INDOOR" and "OUTDOOR" and the "((•))" logo will flash.
- Setting the alarms on the HWS will not affect the alarm set on the *Weather Analyzer Software*.

## 17. TURNING OFF THE ALARM(S)

- If any of the alarms sound, press and release the **ALARM** button to deactivate the signal ("beeping"). "((•))" flashes to indicate which alarm has sounded. This will only turn off the alarm that has sounded at that particular point in time. **Example:** If the alarm clock sounds the temperature alarms will remain active.
- Once you have deactivated a sounding alarm by pressing the **ALARM** button, you must reset the alarm by following all the steps in the "Setting the Alarm" section.

## 18. SIGNAL STRENGTH

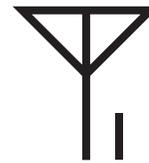
This icon indicates the strength of the transmission between the transmitter and the home monitor. The signal strength is represented by three levels:



Strong



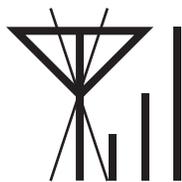
Medium



Weak

## 19 . INTERFERENCE LEVEL

This interference icon determines the amount of transmission interference that is around the home monitor. If the home monitor is in an area with high transmission interference the icon on the monitor will constantly be displayed. The interference signal is represented by three levels:



Strong



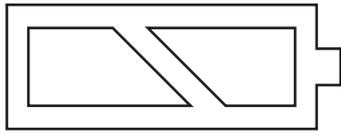
Medium



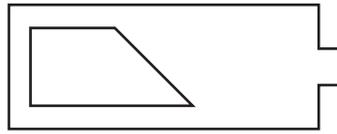
Weak

## 20. INDOOR/OUTDOOR BATTERY LEVEL

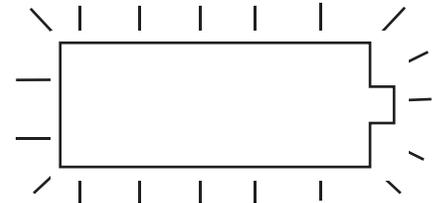
The battery level shows the actual voltage of the battery in the transmitter and the home monitor. The battery level is represented by three levels:



Battery Level is Full



Battery Level is Half



Battery Level is Low

When there are no batteries in the home monitor or transmitter the battery icon will not appear.

## 21. MINIMUM OR MAXIMUM MEMORY RECALL

Press the MIN button to recall all the minimum recorded weather measurements. (Including Wind Chill, Wind Speed, Indoor Temperature, Outdoor Temperature, Pressure and Humidity).

Press the MAX button to recall all the maximum recorded weather measurements. (Including Wind Chill, Wind Speed, Indoor Temperature, Outdoor Temperature, Pressure, Humidity and Rainfall).

## 22. MINIMUM OR MAXIMUM MEMORY RESET

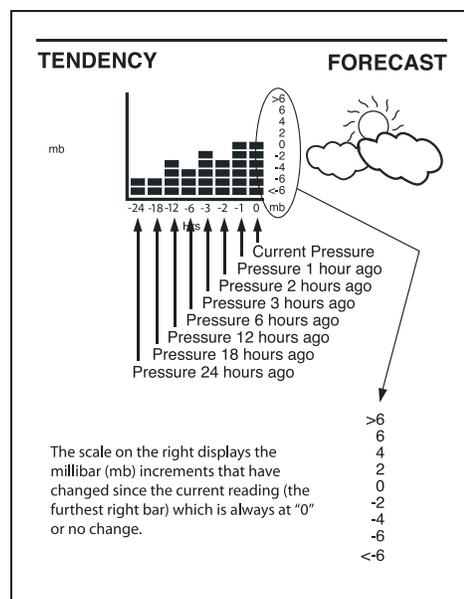
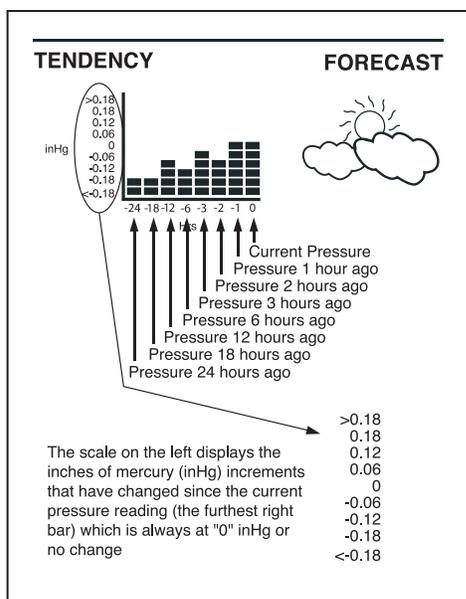
Press and hold the MIN button for 4 or more seconds to reset all the minimum recorded weather measurements. Press and hold the MAX button for 4 or more seconds to reset all the maximum recorded weather measurements.

## 23. RAINFALL MEASUREMENT RESET

The Home Weather Station calculates cumulative rainfall. To reset the rainfall reading, press and hold the "+" button for 4 or more seconds. "----" (dashes) will appear to indicate that the rainfall has reset. After 128 seconds, the reading will return to 0.0 cm (or 0.0 inch).

## 24. TREND CHART

Please review the following tips on understanding your trend chart.

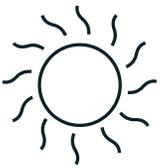


**NOTE:**

- The trend chart will not appear on the LCD after powering up the home monitor for the first time. It has to collect air pressure data for 24 hours before it can display a trend.
- If at anytime power is lost to the home monitor, all trend information will be erased and must be collected again for 24 hours to display a trend once the power is restored.

**25. WEATHER FORECASTING**

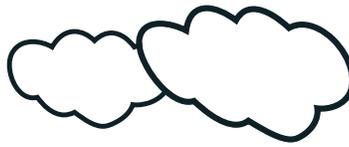
- Weather forecasting is an extremely complex science. Even professional meteorologists with the best equipment and the aid of radar and satellite imagery often have difficulty forecasting with absolute certainty. The prediction models meteorologists use consider many weather variables, including; barometric pressure, wind direction, wind speed, dew point, etc.
- The forecast function in the Home Weather Station is based solely on barometric pressure and the trend recordings of general weather conditions associated with various pressure levels. It therefore has a limited ability to forecast for the multitude of specific conditions it will encounter. It provides a general forecast of weather changes in the same way a wall barometer forecasts changes in weather, however it does record and account for trends that influence the forecast icon.



Sunny



Partly Cloudy



Cloudy



Rainy

**IMPORTANT:**

- The forecast icon will always appear as "Partly Cloudy" upon powering up the home monitor. During this time, the main station is collecting pressure information in order to generate a proper forecast.
- The first 72 hours of forecast icons may be inaccurate from what you are viewing out your window, however, the unit continually gathers pressure data to develop trends, in turn predicting forecasts of coming weather conditions. The longer that station is powered increases the forecast accuracy.

**26. WIND CHILL**

- Wind chill is a combination of both outdoor temperature and wind speed.
- For the wind chill to display on the home monitor the outdoor temperature needs to be above  $-50^{\circ}\text{C}$  ( $-58^{\circ}\text{F}$ ) and below  $10^{\circ}\text{C}$  ( $50^{\circ}\text{F}$ ) and the wind speed needs to be above 4.8 km/hr (3 mph) and below 177 km/hr (110 mph). If the outdoor temperature and wind speed are out of the range the wind chill will display dashes ("---").

**27. BAROMETRIC PRESSURE**

- The Home Weather Station's barometer display will differ from local sources (TV, radio, internet, etc.). This is because the barometric pressure quoted in these types of mediums is "barometric pressure adjusted to sea level", which is theoretical atmospheric pressure that accounts for decreasing air pressure with elevation. Air pressure decreases 1.0 inHg for every 1000 feet you go up in elevation. Consequently, the air pressure at the top of a mountain is considerably less than at sea level.
- The HWS uses a sensor to measure the "absolute" or actual barometric pressure. For forecasting purposes, however, the relative changes in pressure and pressure trends indicate the coming weather. In general, rising pressure indicates improving weather, while falling pressure indicates deterioration of current conditions.
- The *Weather Analyzer* software has the ability to determine theoretical atmospheric pressure (or barometric pressure adjusted to sea level). To determine theoretical atmospheric pressure, please refer to the *Weather Analyzer* software instruction manual enclosed with this unit (View Section 6B: Basic Settings and Alarm Settings - Altitude).

**TABLE 1: Elevation of Major Cities in Canada**

**NOTE:** The elevation in meters (m) and feet (ft) refers to the elevation of the observing location above mean sea level according to Environment Canada: [http://www.climate.weather-office.ec.gc.ca/climateData/canada\\_e.html](http://www.climate.weather-office.ec.gc.ca/climateData/canada_e.html)

| City                | Above Sea Level |         |
|---------------------|-----------------|---------|
|                     | m               | feet    |
| Calgary, AB         | 1049            | 3440    |
| Charlottetown, PE   | 49              | 161     |
| Churchill Falls, NF | 449             | 1443.20 |
| Edmonton, AB        | 670             | 2198    |
| Fredericton, NB     | 21              | 69      |
| Halifax, NS         | 51              | 167     |
| Iqaluit, NU         | 33              | 108     |
| Montreal, QC        | 36              | 118     |
| Ottawa, ON          | 114             | 374     |
| Quebec City, QC     | 74              | 243     |
| Regina, SK          | 577             | 1893    |

| City              | Above Sea Level |      |
|-------------------|-----------------|------|
|                   | m               | feet |
| Saskatoon, SK     | 504             | 1653 |
| Prince George, BC | 691             | 2266 |
| St. John's, NF    | 140             | 459  |
| Thunder Bay, ON   | 199             | 653  |
| Toronto, ON       | 173             | 567  |
| Vancouver, BC     | 4               | 13   |
| Victoria, BC      | 19              | 62   |
| Whitehorse, YT    | 706             | 703  |
| Winnipeg, MA      | 239             | 784  |
| Yellowknife, NT   | 206             | 676  |

**TABLE 2: Elevation of Major Cities in the US**

| US City              | Altitude (feet above sea level) | US City                | Altitude (feet above sea level) |
|----------------------|---------------------------------|------------------------|---------------------------------|
| Albuquerque, NM      | 4,945                           | Miami, FL              | 10                              |
| Austin, TX           | 505                             | Milwaukee, WI          | 635                             |
| Baltimore, MD        | 20                              | Minneapolis, MN        | 815                             |
| Boston, MA           | 21                              | Nashville-Davidson, TN | 450                             |
| Charlotte, NC        | 720                             | New Orleans, LA        | 5                               |
| Chicago, IL          | 595                             | New York, NY           | 55                              |
| Cleveland, OH        | 660                             | Oakland, CA            | 25                              |
| Colorado Springs, CO | 5,890                           | Oklahoma City, OK      | 1,195                           |
| Columbus, OH         | 780                             | Omaha, NE              | 1,040                           |
| Dallas, TX           | 435                             | Philadelphia, PA       | 100                             |
| Denver, CO           | 5,280                           | Phoenix, AZ            | 1,090                           |
| Detroit, MI          | 585                             | Portland, OR           | 77                              |
| El Paso, TX          | 3,695                           | Sacramento, CA         | 30                              |
| Fort Worth, TX       | 670                             | St. Louis, MO          | 455                             |
| Fresno, CA           | 285                             | San Antonio, TX        | 650                             |
| Honolulu, HI         | 21                              | San Diego, CA          | 20                              |
| Houston, TX          | 40                              | San Francisco, CA      | 65                              |
| Indianapolis, IN     | 717                             | San Jose, CA           | 90                              |
| Jacksonville, FL     | 20                              | Seattle, WA            | 125                             |
| Kansas City, MO      | 750                             | Tucson, AZ             | 2,390                           |
| Las Vegas, NV        | 2,030                           | Tulsa, OK              | 804                             |
| Long Beach, CA       | 29                              | Virginia Beach, VA     | 10                              |
| Los Angeles, CA      | 340                             | Washington, DC         | 25                              |
| Memphis, TN          | 275                             | Wichita, KS            | 1,290                           |
| Mesa, AZ             | 244                             |                        |                                 |

## 28. TROUBLESHOOTING

|   |   |
|---|---|
| <p>LCD is blank</p>   | <p>A. This occurs because there is no power supplied to the main unit.</p> <ol style="list-style-type: none"> <li>1. Check the AC power connections to the receiving unit and the power from the wall outlet.</li> <li>2. Check the batteries and replace if needed (View Section 10: Changing Batteries in the Transmitter).</li> <li>3. Check the polarity of the batteries in the battery compartment.</li> <li>4. Press the DISPLAY button to see if you are in a particular display mode screen.</li> </ol>  |
| <p>Outdoor information is not displayed, "---"</p> <p><b>NOTES on items in the home that generate frequency trouble:</b></p> <ul style="list-style-type: none"> <li>• Family radios (CB's, walkie-talkies)</li> <li>• Digital cable or satellite boxes radiate frequencies that will interfere with transmission</li> <li>• HAM radios</li> <li>• Microwave Ovens</li> <li>• High voltage wiring</li> </ul> | <p>A. This is usually caused by transmission interference or low battery power in the transmitter.</p> <ol style="list-style-type: none"> <li>i) Are there dashes for the outdoor temperature reading?</li> <li>ii) Are there dashes for the wind speed reading?</li> <li>iii) Are there dashes for the wind direction reading?</li> </ol> <p><b>IF YES TO ALL QUESTIONS ABOVE:</b></p> <ol style="list-style-type: none"> <li>1. Check batteries in the transmitter. Replace if needed. (View Section 10: Changing Batteries in the Transmitter).</li> <li>2. Bring the monitor beside the transmitter and remove all the batteries. Replace them all (View Section 7: Powering Up Your HWS) and observe whether ALL the outdoor readings show up. Check the timing of updates on the home monitor (outdoor readings should change every 128 seconds). Then, place the monitor back in the regular position. Check the timing of updates AGAIN on the monitor. If you notice the updates occur every 128 seconds, there should be no problem. If the screen has not updated within 5 minutes or no updates occur there is transmission interference between the receiver and the transmitter. BOTH UNITS MUST BE PLACED IN DIFFERENT LOCATIONS TO REDUCE TRANSMISSION INTERFERENCE.</li> </ol> <p><b>IF THERE ARE DASHES ONLY WHERE THE WIND SPEED AND DIRECTION ARE DISPLAYED AND THE UNIT IS REGISTERING AN OUTDOOR TEMPERATURE:</b></p> <ol style="list-style-type: none"> <li>3. Check that the wires are connected from the wind speed to the transmitter in the right slot (labeled "wind") and are fully inserted. If the wind sensor was not inserted properly, remove the batteries from both components and re-insert them. (View Section 7: Powering Up Your HWS).</li> </ol> |
| <p>Wind speed does not change</p>   | <p>A. This is usually an indication that the batteries have died in the transmitter.</p> <ol style="list-style-type: none"> <li>1. To conserve battery power, the transmitter broadcasts the wind speed data (and all other weather information) every 128 seconds (2 min. 8 sec.)</li> </ol>   |

|  |   |
|--|---|
|  | <p>to the home monitor. (View Section 11: Wireless Transmission).</p> <ol style="list-style-type: none"> <li>2. Check the batteries in the transmitter. Replace if needed. (View Section 10: Changing Batteries in the Transmitter).</li> <li>3. Make sure that the wind speed sensor cord is securely fastened in the "wind" slot on the transmitter. (View Section 6: Connecting the Sensors).</li> <li>4. Bring the monitor beside the transmitter and remove all the batteries. Replace them all (View Section 7: Powering Up Your HWS) and observe whether ALL the outdoor readings show up. Check the timing of updates on the receiving unit (outdoor readings should change every 128 seconds). Then, place the monitor back in the regular position. Check the timing of updates AGAIN on the receiving unit. If you notice the updates occur every 128 seconds, there should be no problem. If the screen has not updated within 5 minutes or no updates occur there is transmission interference between the receiver and the transmitter. BOTH UNITS MUST BE PLACED IN DIFFERENT LOCATIONS TO REDUCE TRANSMISSION INTERFERENCE.</li> <li>5. Freezing rain can cause the wind direction pointer to stop moving, thus constantly displaying the same direction. You can attempt to remove the ice from the wind sensor, but it is <u>strongly advised to wait</u> for milder weather to do so.</li> </ol>   |
| <p>Outdoor readings stopped after two days, one week, etc.</p> | <ol style="list-style-type: none"> <li>1. Battery voltage supplied by the 4 x "AA" batteries in the transmitter is affected by cold weather, especially alkaline batteries. Low voltage decreases the transmission distance significantly. If you are experiencing weather below -10°C/14°F, it is suggested to use lithium batteries and place the monitor and transmitter as close as possible to each other. <ul style="list-style-type: none"> <li>• <b>Power Adaptor:</b> a special transmitter adaptor is available to supply power to the transmitter rather than using batteries. It is a perfect solution for your HWS during extremely cold temperatures in the winter months when batteries may cause problems. Please call 1-800-387-8520 for ordering information if not found at a local retailer.</li> <li>• <b>Wired Transmission:</b> You may also link your home monitor directly to the transmitter using wired phone cord (View Section 12: Wired Transmission).</li> <li>• <b>Solar Panel:</b> a solar panel for the transmitter is available to supply power to the transmitter rather than using the batteries. It is one of the solutions for our HWS during extreme cold temperatures in the winter months when batteries may cause problems. Please call 1-800-387-8520 for ordering information.</li> </ul> </li> <li>2. Electrical storms can cause transmission to stop. If this occurs, you must reset the monitor and transmitter by removing the batteries and re-inserting them correctly (View Section 7: Powering Up Your HWS). DO NOT do this during the electrical storm!</li> </ol> |

|  |   |
|--|---|
|  | <p>3. Electromagnetic interference can occur from different sources that transmit radio waves that may affect how the main unit receives data from the transmitter (if at all). It is recommended that you place the transmitter and monitor significantly close together if there is a large amount of electromagnetic interference in your area. Even interference from appliances in your home may cause transmission to stop.</p> <p>4. Bring the monitor beside the transmitter and remove all the batteries. Replace them all (View Section 7: Powering Up Your HWS) and observe whether ALL the outdoor readings show up. Check the timing of updates on the home monitor (outdoor readings should change every 128 seconds). Then, place the monitor back in the regular position. Check the timing of updates AGAIN on the receiving unit. If you notice the updates occur every 128 seconds, there should be no problem. If the screen has not updated within 5 minutes or no updates occur there is transmission interference between the receiver and the transmitter. BOTH UNITS MUST BE PLACED IN DIFFERENT LOCATIONS TO REDUCE TRANSMISSION INTERFERENCE.</p>  |
| <p>Wind direction is displaying faculty readings</p> <p>Wind direction is stuck on one direction</p> | <p>i) Are you mounting the unit on a mast or metal pole?<br/>ii) Do you know what the pole is made of?</p> <p>1. Aluminum poles should not affect the wind direction readings, however, masts or poles made of lead or other dense metals can affect the magnetic sensors in the wind sensor causing the unusual readings. Move the wind sensor, if necessary, or use the vertical mount procedure. (View Section 5: Mounting).</p> <p>2. Freezing rain can cause the wind direction pointer to stop moving, thus constantly displaying the same direction. You can attempt to remove the ice from the wind sensor, but it is <u>strongly advised to wait</u> for milder weather to do so.</p> <p>3. Check the batteries in the transmitter. Replace if needed. (View Section 6: Powering Up Your HWS).</p> <p>4. Make sure that the wind speed sensor is securely fastened in the "wind" slot on the transmitter. (View Section 6: Connecting the Sensors).</p> <p>5. Bring the monitor beside the transmitter and remove all the batteries. Replace them all (View Section 7: Powering Up Your HWS) and observe whether ALL the outdoor readings show up. Check the timing of updates on the home monitor (outdoor readings should change every 128 seconds). Then, place the monitor back in the regular position. Check the timing of updates AGAIN on the receiving unit. If you notice the updates occur every 128 seconds, there should be no problem. If the screen has not updated within 5 minutes or no updates occur there is transmission interference between the receiver and the transmitter. BOTH UNITS MUST BE PLACED IN DIFFERENT LOCATIONS TO REDUCE TRANSMISSION INTERFERENCE.</p> |

|   |   |
|---|---|
| <p>Pressure reading is too high / low / changed</p>                     | <p>The pressure sensor in your weather station is very sensitive to voltage changes if you scroll through the display screen (using the DISPLAY button) or plug in the AC adaptor with the batteries in it, the pressure may change because the voltage to the sensor has either increases or decreased. After a very short period of time, the pressure sensor will adjust itself back to the correct pressure readings.</p>   |
| <p>Only transmits when the transmitter is right beside the receiver</p> | <p>A. There is a large amount of transmission interference with the current location of the main unit and transmitter. There may be too many walls or electrical interference (caused by appliances in your home) between the two units.</p> <ol style="list-style-type: none"> <li>1. Significantly reduce the distance between the main unit and the transmitter.</li> <li>2. Bring the monitor beside the transmitter and remove all the batteries. Replace them all (View Section 7: Powering Up Your HWS). Connect the sensors and observe whether ALL the outdoor readings show up. Check the timing of updates on the home monitor (outdoor readings should change every 128 seconds). Then, place the monitor back in the regular position. Check the timing of updates AGAIN on the receiving unit. If you notice the updates occur every 128 seconds, there should be no problem. If the screen has not updated within 5 minutes or no updates occur there is transmission interference between the receiver and the transmitter. BOTH UNITS MUST BE PLACED IN DIFFERENT LOCATIONS TO REDUCE TRANSMISSION INTERFERENCE.</li> </ol> <p>** NOTE: the radio test is only confirming that the transmitter is sending out a signal. **</p> |
| <p>Wind speed too high (190 km to 200 km)</p>                           | <p>Transmission issues usually cause this to occur from other appliances or radio waves in the air. If the problem persists, you should consider replacing the batteries in the transmitter (View Section 7: Powering Up Your HWS) and possibly moving the location of the transmitter and monitor.</p>   |
| <p>Wind speed to low<br/>Wind speed not accurate</p>                    | <ol style="list-style-type: none"> <li>1. This situation can occur because the wind speed transmission is <b>NOT REAL TIME</b>. The wind speed is an average reading of gusts collected before transmission, therefore if wind gusts happen (every 128 seconds) to dip below the perceived wind speed over the measuring period, the average will be reduced, resulting in what appears to be a low reading.</li> <li>2. Is the <u>anemometer clear of obstructions?</u></li> </ol> <p>Wind speed &amp; direction can be affected radically by obstructions that interfere with actual wind. This affect can take place many meters away from the sensor.</p> <p>Example: a 40' tree even 50 meters from the sensor on the roof of a house will disturb enough wind that the unit will never give proper data</p>   |



|  |   |
|--|---|
|  | <p>In colder temperatures, battery life is much less - not that the use of lithium batteries allow the chemical reaction that is creating power to occur in colder temperatures (-40°C / -40°F) compared to alkaline batteries, which fail at approximately -10°C (14°F), but it does not necessarily mean that the battery's charge will last longer.</p> <p>Consider the amount of times you must recharge your cell phone or digital camera. All of these items, including the HWS, use a lot of power to perform perfectly. For power saving consider:</p> <ul style="list-style-type: none"> <li>• <b>Power Adaptor:</b> A special transmitter adaptor is available to supply power to the transmitter rather than using batteries. It is a perfect solution for your HWS during extremely cold temperatures in the winter months when batteries may cause problems. Please call 1-800-387-8520 for ordering information if not found at a local retailer.</li> <li>• <b>Wired Transmission:</b> You may also link your home monitor directly to the transmitter using wired phone cord (View Section 12: Wired Transmission).</li> <li>• <b>Solar Panel:</b> A solar panel for the transmitter is available to supply power to the transmitter rather than using the batteries. It is one of the solutions for our HWS during extreme cold temperatures in the winter months when batteries may cause problems. Please call 1-800-387-8520 for ordering information, if not found at a local retailer.</li> </ul> |
| <p>The blue light on the modems are not on</p>     | <p>A. This occurs because there is no power supplied to the modems.</p> <ol style="list-style-type: none"> <li>1. Check the AC/DC adaptor connection to the HWS modem and the power from the wall outlet.</li> <li>2. Check the USB cable connections to the PC modem and the PC.</li> </ol>  |
| <p>The PC modem can't connect to the HWS modem</p> | <ol style="list-style-type: none"> <li>i) Are the modems connected properly to the HWS and the PC?</li> <li>ii) Is the correct phone number being dialed?</li> <li>iii) Do you have an answering machine or voice mail?</li> </ol> <ol style="list-style-type: none"> <li>1. Check the connection between the HWS modem and the HWS and the PC modem and the PC. Reset the modems (View Section 8: Powering Up The Modems).</li> <li>2. When dialing the phone number make sure to type in the long distance code and the area code if the phone number is a long distance number (View Section 9: Connecting the Modems). Also, do not insert any spaces when typing in the phone number.</li> <li>3. Make sure the whole phone number is typed in. If you require to input a number to be able to dial out from your office or home, you must type that number in before typing in the phone number in the <i>Weather</i></li> </ol>  |

*Analyzer Software.*

4. If you have an answering machine or voice mail it is very important to have the rings set to a higher number than the HWS modem (over 5 rings), otherwise the answering machine or voice mail will pick up first and there will be no connection between the two modems.

## 29. PRODUCT SPECIFICATIONS

| Reading               | Range                              | Accuracy/Precision   |
|-----------------------|------------------------------------|--|
| Outdoor Temperature   | -40 °C to 60 °C (-40 °F to 140 °F) | +/- 2 °C (+/- 4°F)   |
| Indoor Temperature    | -0°C to 40°C (32 °F to 104 °F)     | +/- 2 °C (+/- 4°F)   |
| Humidity              | 20 % to 95 % relative humidity     | +/- 7 %  |
| Wind Speed            | 0 to 100 km/h (0 to 60 mph)        | +/-4 km of the range<br>(km/h or mph)  |
| Air Pressure          | 840 – 1200 mb (24.8-35.4 inHg)     | +/- 4 mb (+/- 0.2 inHg)  |
| Wind Direction        | 16 directions                      |  |
| Rainfall              | 0 to 99.9 cm (0 to 39.3 in)        | +/- 0.05 cm (+/- 0.02 in)  |
| Transmission Distance | Over 60 meters (60 yards)          | Like a cellular phone,<br>this is dependent upon<br>transmission interference. |
| Wind Chill            | -74 °C to 10 °C (-101 °F to 49 °F) | +/- 2 °C (+/- 4 °F)  |

## 30. WARRANTY

Bios Weather Home Weather Station is guaranteed to be free from defects in material and workmanship for one year from the date of purchase. The warranty does not apply if the defect or malfunction is a result of user abuse, misuse, alteration, modification or damages in transit.

PLEASE CONTACT THERMOR LTD. BEFORE SENDING THE UNIT IN FOR REPAIRS:

**1-800-387-8520**

If necessary, send the defective or malfunctioning unit, freight and insurance prepaid, with the original sales receipt and a cheque for \$10.00 to cover return shipping and handling to:

Thermor Ltd.  
395 Cochrane Drive  
Markham, ON  
CANADA  
L3R 9R5

## 31. RESOURCES TO LOOK AT...

### **National Weather Services**

<http://www.nws.noaa.gov>

### **US Environment Protection Agency:**

<http://www.epa.gov>

### **Environment Canada:**

[http://www.weatheroffice.ec.gc.ca/climateData/canada\\_e.html](http://www.weatheroffice.ec.gc.ca/climateData/canada_e.html)

### **Real Estate Journal – Wall Street Journal (for US city elevation information):**

<http://homes.wsj.com/cityprofiles/>

## 32. FCC INFORMATION

**Warning:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits of Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment onto an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.