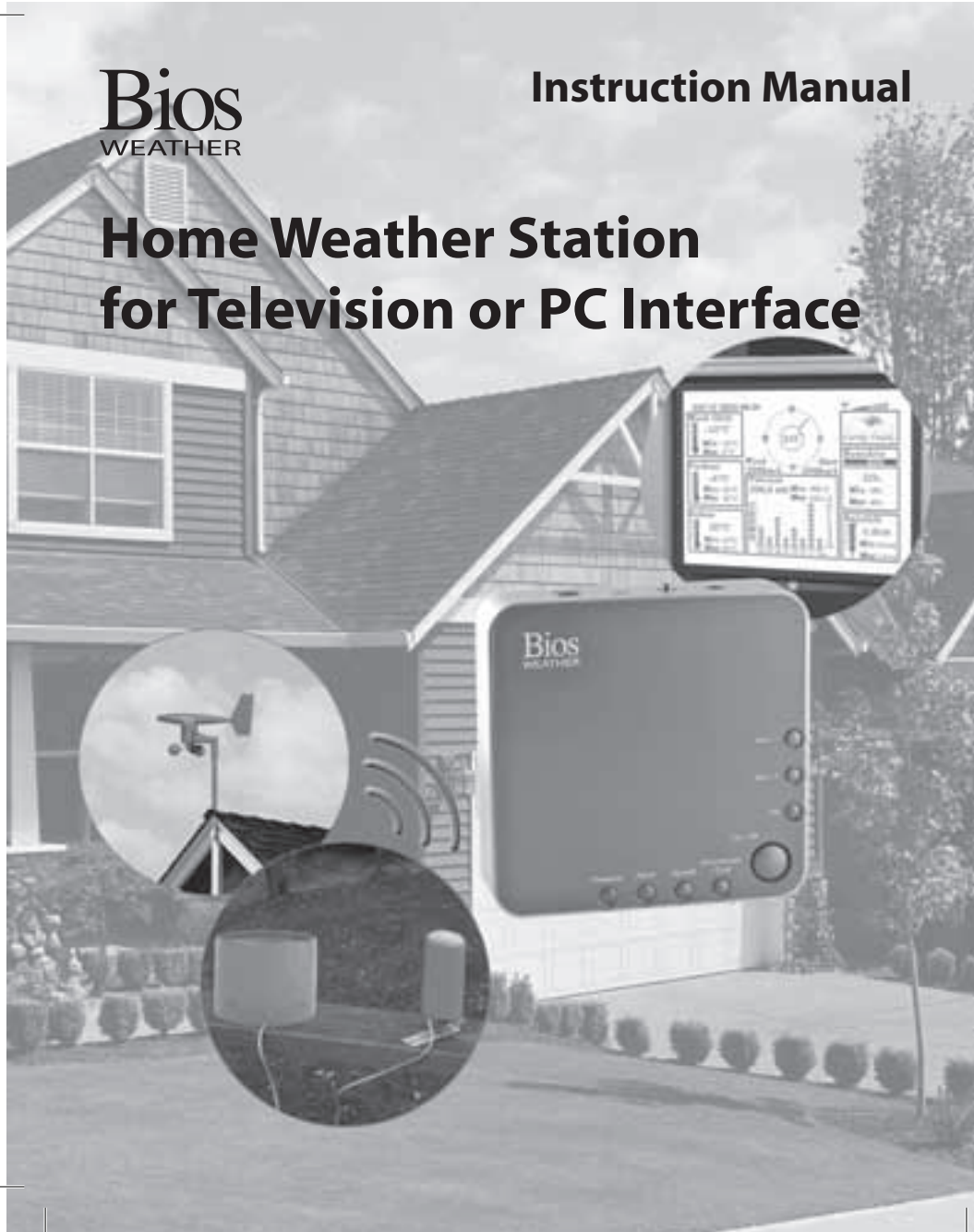


Bios
WEATHER

Instruction Manual

Home Weather Station for Television or PC Interface



**Home Weather Station (HWS) for Television or PC Interface
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 (HWS) for Television or PC Interface. 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. This product is intended for use at home. It has not been designed for scientific or commercial applications.

IMPORTANT: Before setting up your HWS, you should first decide which interface you would like to use to view the weather readings.

To set up the HWS for PC please refer to the Weather Analyzer Software Instruction Manual enclosed with this unit.

To set up the HWS for television please continue on with this instruction manual.

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.
- To operate the weather station, use only supplied adaptor and batteries of the recommended type.
- 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 to be used for medical purposes or for public information.

3. FUNCTION AND FEATURES FOR TELEVISION AND PC

A. Indoor Receiver

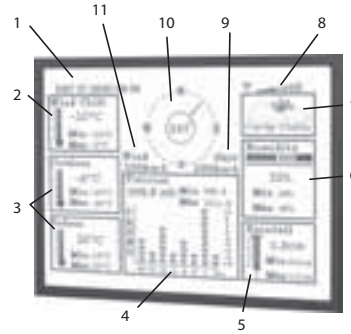
- The indoor receiver measures the indoor temperature, humidity, atmospheric pressure and receives weather data from the thermometer-transmitter sensor, wind sensor, and rain gauge sensor.
- Displays time and date
- Displays indoor and outdoor temperature in Fahrenheit (°F) or Celsius (°C) -- user selectable
- Displays indoor relative humidity (RH%)
- Displays barometric (air) pressure reading in inches or millibars (mb) of mercury (inHg) -- user selectable
- Displays cumulative rainfall data since last reset in inches (in) or centimeters (cm) -- user selectable
- Displays wind speed and gust in miles per hour (mph) or kilometers per hour (km) -- user selectable
- Wind direction display with compass as well as numerical (e.g. 225°) and abbreviated characters (e.g. NE)
- Wind chill temperature in Fahrenheit (°F) or Celsius (°C) -- user selectable
- Displays weather forecast using weather icons (sunny, partly cloudy, cloudy or rainy)
- Barometric trend chart in inches of mercury (inHg) or millibars (mb) -- user selectable
- Indoor and outdoor temperature alarms that are set by the user (PC only)

NOTE: To view the image of the screen on the PC please refer to the "Weather Analyzer Software Instruction Manual" enclosed with this unit (Section 7: Using the Weather Analyzer Software).

B. Thermometer-Transmitter Sensor

The data from the outdoor sensor is transmitted every 128 seconds to bring you the latest weather information which is displayed on the television screen or PC (updating information faster is prohibited by FCC criteria and would drastically reduce battery life). The thermometer-transmitter sensor connects to the wind and rain sensors via insulated cables, whereby power and weather information is transferred. The collected data is then transmitted by the thermometer-transmitter back to the indoor receiver wirelessly. Weather data is sent from the thermometer-transmitter sensor by radio signal at 433MHz (up to 60 yards / 60 meters, approximately 200 feet, in open space). The thermometer-transmitter sensor consists of the main unit, rain protection cover and base bracket.

Power Adaptor: 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 1-866-753-0181 for ordering information if not found at your local retailer.



Television Screen

1. Date & Time
2. Wind Chill °C/°F (min/max)
3. Outdoor & Indoor Temperature °C/°F (min/max)
4. Barometric Pressure & Trend mb/inHg (min/max), over the last 24 hours
5. Rainfall cm/in (min/max)
6. Indoor Relative Humidity (min/max)
7. Forecasts the next 12 hours based on trends over the past 72 hours
8. Transmission Signal
9. Gust km/mph
10. Wind Direction
11. Wind Speed km/mph (min/max)



C. 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 indoor receiver. Operating power is taken from the thermometer-transmitter sensor by cable connection. The wind sensor consists of the main unit with wind vane, 30 ft./9 m wired phone cord (already attached to the main unit), mast, and base bracket.

D. Rain Sensor

The self-emptying rain sensor measures cumulative rainfall and sends the data to the thermometer-transmitter sensor which in turn transmits the data to the indoor receiver. Operating power is taken from the thermometer-transmitter sensor by cable connection. The rain sensor consists of the main unit and 30 ft./9 m wired phone cord (already attached to the main unit).

4. MOUNTING

CAUTION: Great care must be taken when mounting the Home Weather Station for Television or PC components. The manufacturer/supplier can not 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 indoor receiver 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. Indoor Receiver

For accurate data transmission:

- Make sure that the indoor receiver is not placed in direct sunlight or placed in an area with drafts caused by heaters or air conditioners
- Do not mount the indoor receiver on a wall
- Do not place the indoor receiver on or near any appliances that emit heat, i.e. televisions, VCR's, DVD players, amplifiers, etc. Doing so may result in inaccurate temperature and humidity readings.
- The receiver has air vents to help ensure accurate temperature. Make sure that water does not enter the unit.

B. Wind Sensor

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)

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.).

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 the 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 sensors 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 0.25" 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 sensors base-bracket to a flat surface.

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)

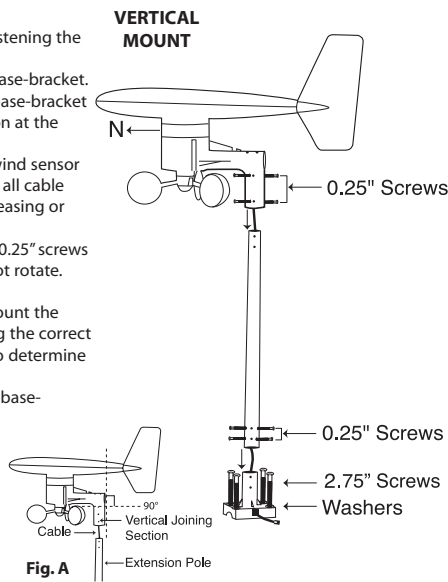
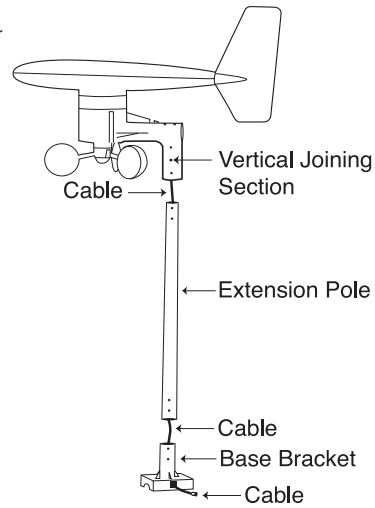


Fig. A

Horizontal Mounting

Cable Preparation for Horizontal Mounting

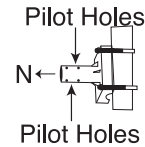
1. Run the cable that is already fastened to the wind sensor through the horizontal joining section (see below).
2. Run the cable through the extension pole but do not secure the pole to any sections yet.
3. Now run the cable through the top of the base-bracket and then through the small rectangular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

1. Make sure that the wind vane can rotate freely before fastening the unit permanently.
2. Using 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).

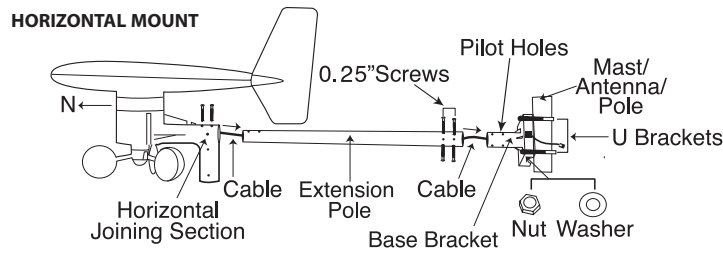


IMPORTANT: Make sure that the pole insert of the base-bracket is facing north (N) and the pilot holes are on the top AND bottom.

3. Use the pole extension provided to distance the wind sensor from the stable mast/antenna/pole. Insert one end of the pole extension 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 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).

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. Secure the horizontal joining section to the mounting pole using the 0.25" screws provided to make sure that the pole connection does not rotate.



C. Self-Emptying 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 rain sensor 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 sensor.

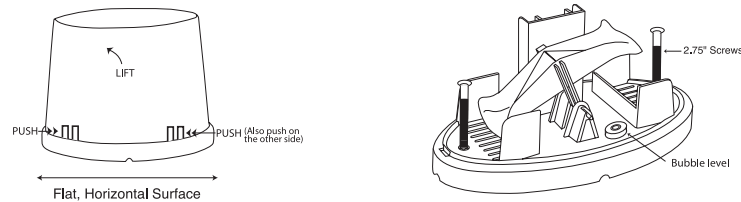
1. **In order for the rain sensor to work properly, you MUST place the rain sensor on a level, horizontal surface. Use of a bubble level (not included) will ensure a proper mounting.**

2. Remove the rain sensor lid by pushing on the tabs on the front and back, 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.

D. Thermometer-Transmitter Sensor

NOTE: make sure the following contents have been included with your HWS for mounting the thermometer-transmitter sensor:

- 2 x 1.75" wall mounting screws
- plastic anchors for screws
- requires 4 x "AA" batteries



It is recommended that you mount the transmitter in a shaded area out of direct sunlight. Placing the transmitter in direct sunlight will affect the outdoor temperature considerably.

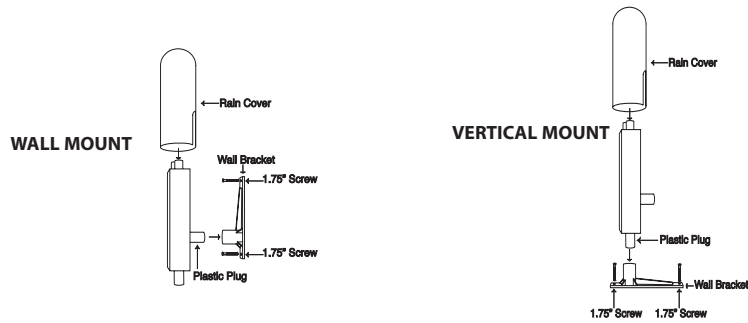
It is recommended to mount the unit approximately 6 ft/2 m above the ground on the north side of a structure, preferably in a shaded area.

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 plastic plug found on the bottom of the sensor into the wall bracket socket. **DO NOT** mount the thermometer-transmitter sensor upside down.



5. CONNECTING THE SENSORS

Thermometer-Transmitter Sensor

You must insert the cables that run from the outdoor sensors into the corresponding sockets on the thermometer-transmitter before you begin to power up your Home Weather Station for Television or PC.

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

6. POWERING UP YOUR HWS FOR TELEVISION

1. Plug in the AC/DC adaptor to the power outlet in your wall.
2. Insert the adaptor into the DC socket located on the back of the indoor receiver.
3. Turn on the television and plug in one side of the video cable to the indoor receiver and the other side to the television.

IMPORTANT: Make sure the television is set on the correct video input to view the screen.

4. Press the ON/OFF button on the indoor receiver.
5. A blue LED light will turn on and a red LED light will flash quickly. The red LED light indicates that the indoor receiver is searching for a transmission ID number from the transmitter.
6. Remove the battery cover on the thermometer-transmitter.
7. Insert 4 x "AA" batteries (new) according to the correct polarity.
8. Once the indoor receiver has received a transmission ID number from the transmitter the red LED light will flash slowly.

NOTE: If no transmission ID number is received and the red LED light is still flashing quickly after 4 minutes, remove all batteries and AC/DC adaptor and start again from Step 2.

9. Press the SET button on the indoor receiver to store the transmission ID number.

NOTE: If the SET button is pressed before the indoor receiver receives a transmission ID number, both the blue and the red LED light will stay on and not flash.

NOTE: During initial set-up the info will update in stages every 40 seconds. This will occur until all the information is showing with the exception of the barometer pressure which will take 24 hours.

7. POWERING UP YOUR HWS FOR PC

1. Plug in the AC/DC adaptor to the power outlet in your wall.
2. Insert the adaptor into the DC socket located on the back of the indoor receiver.
3. Press the ON/OFF button on the indoor receiver.
4. A blue LED light will turn on and a red LED light will flash quickly. The red LED light indicates that the indoor receiver is searching for a transmission ID number from the transmitter.
5. Remove the battery cover on the transmitter.
6. Insert 4 x "AA" batteries according to the correct polarity.
7. Once the indoor receiver has received a transmission ID number the red LED light will flash slowly.
NOTE: If no transmission ID number received and the red LED light is still flashing quickly after 4 minutes, remove all batteries and AC/DC adaptor and start again from step 2.
8. Press the SET button on the indoor receiver to store the transmission ID number.
NOTE: If the SET button is pressed before the indoor receiver receives a transmission ID number, both the blue and red LED light will stay on and not flash.
9. To install the Weather Analyzer Software and connect the indoor receiver to your PC please refer to the Weather Analyzer Software instruction manual enclosed with this unit (Section 5: Installing the PC Software).

8. CHANGING THE BATTERIES IN THE TRANSMITTER

1. Press and hold the RAINFALL and WIND SPEED/GUST button at the same time until the red LED light starts to flash quickly.
2. Follow steps 6-9 in the "Powering up your HWS for Television" section above.

9. WIRELESS TRANSMISSION

The HWS utilizes a transmitter, which broadcasts at 433MHz approximately every 128 seconds. 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 indoor receiver. If the conditions are good, you will be able to transmit at the maximum range of 60 yards / 60 meters but if you are in an area with a lot of interference, the range will be less.

10. WIRED TRANSMISSION

You may also link your indoor receiver directly to the transmitter using wired cord, rather than using batteries. This is a perfect solution for your home weather station during the cold months when the life of batteries is drastically reduced or non-existent.

To purchase wired phone cord, you can go to your local phone and electronics store.

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

To power up your HWS using wired phone cord, follow the "Powering up your HWS for Television" steps, except don't insert any batteries into the transmitter, instead insert one end of the wired phone cord into the indoor receiver and the other end into the transmitter. Do the same when powering up your HWS for PC.

11. BUTTON BREAKDOWN (Quick Reference) FOR TELEVISION ONLY



No.	Button	Function
1. and 2.	Min/- Max/+	<ul style="list-style-type: none"> • Increase/decrease values in the "Set Display Mode" (time and date) • Press and hold to reset the minimum and maximum memory recordings
3.	Set button	• Press to store the transmission ID when in the "ID Setting Mode"
4.	On/Off button	• Press to turn indoor receiver on and off
5.	Wind Speed/ gust button	• Press to change the measurement value (mph, km)
6.	Rainfall button	<ul style="list-style-type: none"> • Press to change the measurement value (inch, cm) • Press and hold to reset the rainfall reading
7.	Temp button	• Press to change the measurement value (°F, °C)
8.	Pressure button	• Press to change the measurement value (inHg, mb)

12. SETTING THE INDOOR RECEIVER

If you pause at any time for more than 7 seconds while setting the time or date, the indoor receiver will automatically exit the "Set Display Mode".

A. Setting Time and Date For Television and PC

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. Using the "+" or "-", toggle until you reach the correct minute(s).
7. Follow steps 3-4 to set the year, month and date.

NOTE: To set the time and date on PC the indoor receiver must be plugged into the television and PC at the same time.

B. Setting Measurement Preferences for Television Only

1. Press the WIND SPEED/GUST button to switch to your preferred unit of measure - miles (mph) or kilometers (km).
2. Press the RAINFALL button to switch to your preferred unit of measure - inches (in) or centimeters (cm).
3. Press the TEMP button to switch to your preferred unit of measure - Fahrenheit (°F) or Celsius (°C).
4. Press the PRESSURE button to switch to your preferred unit of measure - inches or millibars (mb) of mercury (inHg).

NOTE: To set measurement preferences for PC please refer to the Weather Analyzer Software instruction manual enclosed with this unit (Section 8: Basic Settings and Alarm Settings).

13. 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.

14. RAINFALL MEASUREMENT RESET FOR TELEVISION ONLY

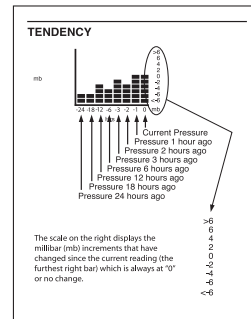
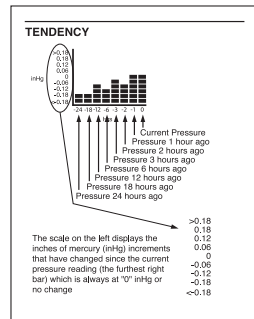
The Home Weather Station calculates cumulative rainfall. To reset the rainfall reading, press and hold the RAINFALL button for 4 or more seconds. "--" (dashes) will appear to indicate that the rainfall has reset. After about 40 seconds, the reading will return to 0.0 inch (or 0.0 cm).

15. RAIN GAUGE MAINTENANCE

- 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, especially after a particularly windy period.
- 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.

16. TREND CHART

Please review the following tips on understanding your trend chart.

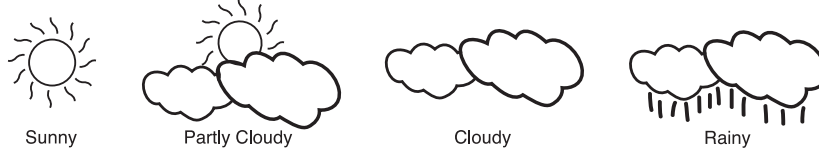


NOTE:

- The trend chart will not appear on the television screen or PC after powering up the indoor receiver 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 indoor receiver, all trend information will be erased and must be collected again for 24 hours to display a trend once the power is restored.

17. 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 influences** the forecast icon.



IMPORTANT:

- The forecast icon will always appear as "Partly Cloudy" upon powering up the indoor receiver. 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 the station is powered increases the forecast accuracy.

18. WIND CHILL

- Wind chill is a combination of both the outdoor temperature and wind speed.
- For the wind chill to display on the television screen the outdoor temperature needs to be above -58°F (-50°C) and below 50 °F (10 °C) and the wind speed needs to be above 3 mph (4.8 km/hr) and below 110 mph (177 km/hr). If the outdoor temperature and wind speed are out of range, the wind chill will display dashes ("---").

19. BAROMETRIC PRESSURE

- The Home Weather Station's barometer display will differ from local sources (TV, radio, internet, etc.). This is because 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.
- To determine **theoretical atmospheric pressure**, please follow this procedure:

NOTE: If using the PC please refer to the Weather Analyzer Software instruction manual enclosed with this unit (Section 6B: Basic Settings and Alarm Settings - Altitude).

1. Determine your elevation (meters or feet above sea level) by using **TABLE 1 or 2** below. The internet or an atlas are also good sources to determine your elevation if the chart does not provide the correct information for your general area (View section: Resources to look at).
2. Using the barometric tables (**TABLE 3 - TABLE 11**), find the table that is close to your current elevation:

TABLE 3 = 250 m above sea level	TABLE 8 = 1500 m above sea level
TABLE 4 = 500 m above sea level	TABLE 9 = 1750 m above sea level
TABLE 5 = 750 m above sea level	TABLE 10 = 2000 m above sea level
TABLE 6 = 1000 m above sea level	TABLE 11 = 2250 m above sea level
TABLE 7 = 1250 m above sea level	
3. Once you have chosen the correct table, view the pressure reading on the television screen and run your finger along the top of the table until the current pressure falls between the correct range.
4. Now view the outdoor temperature reading on the television screen and run your finger down the pressure column to match the temperature range along the left side of the table.
5. Your finger now lays on the number of millibars (mb) you must add to the absolute pressure on the television screen to determine theoretical atmospheric pressure.

NOTE: You must repeat the actions above every time there is a change in pressure, temperature or altitude to retrieve the correct theoretical atmospheric pressure.

Example:

AUSTIN, TX

Elevation (TABLE 1): 505 ft above sea level

HWS current barometric pressure reading: 29.16 inHg

HWS current outdoor temperature reading: 77°F

- a) Go to TABLE 3 (820 ft above sea level), which is the closest table to Austin's elevation.
 - b) Run finger along the top of table to reach 28.64-29.23 inHg.
 - c) Run finger down chart to reach 60.8 to 78.7 °F.
 - d) Add 0.85 inHg to the current pressure reading on HWS: 0.85 inHg + 29.16 inHg = 30.01 inHg
- Theoretical Atmospheric Pressure = 30.01 inHg**

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

City	Above Sea Level	
	m	ft.
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	ft.
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

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.weatheroffice.ec.gc.ca/climateData/canada_e.html

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		

20. BAROMETRIC PRESSURE CONVERSIONS

TABLE 3

Elevation at Station		820 feet						
Add to Station Pressure to obtain Mean Sea Level Pressure								
Temp °F	Station Pressure, mb							
	27.46	28.05	28.64	29.24	29.83	30.42	31.01	
	28.04	28.63	29.23	29.82	30.41	31.00	31.59	
-47.2 to -29.3	1.02	1.05	1.07	1.09	1.11	1.13	1.16	
-29.2 to -11.3	0.98	1.00	1.02	1.04	1.06	1.08	1.11	
-11.2 to 6.7	0.94	0.96	0.98	1.00	1.02	1.04	1.06	
6.8 to 24.7	0.90	0.93	0.94	0.96	0.98	1.00	1.02	
24.8 to 42.7	0.87	0.89	0.91	0.93	0.95	0.96	0.98	
42.8 to 60.7	0.84	0.86	0.87	0.89	0.91	0.93	0.95	
60.8 to 78.7	0.81	0.83	0.85	0.86	0.88	0.90	0.92	
78.8 to 96.6	0.78	0.80	0.82	0.83	0.85	0.87	0.88	

TABLE 4

Elevation at Station		1640 feet						
Add to Station Pressure to obtain Mean Sea Level Pressure								
Temp °F	Station Pressure, mb							
	26.58	27.17	27.76	28.35	28.94	29.53	30.12	
	27.16	27.75	28.34	28.93	29.52	30.11	30.71	
-47.2 to -29.3	2.02	2.06	2.10	2.15	2.19	2.24	2.28	
-29.2 to -11.3	1.93	1.98	2.02	2.06	2.10	2.14	2.19	
-11.2 to -6.7	1.85	1.89	1.93	1.98	2.02	2.06	2.10	
6.8 to 24.7	1.78	1.82	1.86	1.90	1.94	1.98	2.02	
24.8 to 42.7	1.72	1.75	1.79	1.83	1.87	1.90	1.94	
42.8 to 60.7	1.65	1.69	1.72	1.76	1.80	1.83	1.87	
60.8 to 78.7	1.59	1.63	1.66	1.70	1.74	1.77	1.81	
78.8 to 96.6	1.54	1.58	1.61	1.64	1.68	1.71	1.75	

TABLE 5

Elevation at Station		2460 feet						
Add to Station Pressure to obtain Mean Sea Level Pressure								
Temp °F	Station Pressure, mb							
	25.69	26.29	26.88	27.47	28.06	28.65	29.24	
	26.28	26.87	27.46	28.05	28.64	29.23	29.82	
-47.2 to -29.3	2.97	3.04	3.11	3.17	3.24	3.31	3.37	
-29.2 to -11.3	2.84	2.91	2.97	3.04	3.10	3.17	3.23	
-11.2 to 6.7	2.73	2.79	2.85	2.91	2.98	3.04	3.10	
6.8 to 24.7	2.62	2.68	2.74	2.80	2.86	2.92	2.98	
24.8 to 42.7	2.52	2.58	2.63	2.69	2.75	2.81	2.86	
42.8 to 60.7	2.43	2.48	2.54	2.59	2.65	2.70	2.76	
60.8 to 78.7	2.34	2.39	2.45	2.50	2.56	2.61	2.66	
78.8 to 96.6	2.26	2.31	2.36	2.42	2.47	2.52	2.57	

TABLE 6

Elevation at Station 3280 feet							
Add to Station Pressure to obtain Mean Sea Level Pressure							
Temp °F	Station Pressure, mb						
		24.80	25.40	25.99	26.58	27.17	27.76
	25.39	25.98	26.57	27.16	27.75	28.34	28.93
-47.2 to -29.3	3.88	3.97	4.07	4.16	4.25	4.34	4.43
-29.2 to -11.3	3.71	3.80	3.89	3.98	4.07	4.15	4.24
-11.2 to 6.7	3.56	3.64	3.73	3.81	3.90	3.98	4.07
6.8 to 24.7	3.42	3.50	3.58	3.66	3.74	3.82	3.90
24.8 to 42.7	3.29	3.36	3.44	3.52	3.60	3.68	3.75
42.8 to 60.7	3.17	3.24	3.32	3.39	3.47	3.54	3.61
60.8 to 78.7	3.05	3.13	3.20	3.27	3.34	3.41	3.48
78.8 to 96.6	2.95	3.02	3.09	3.16	3.23	3.29	3.37

TABLE 7

Elevation at Station 4100 feet							
Add to Station Pressure to obtain Mean Sea Level Pressure							
Temp °F	Station Pressure, mb						
		23.92	24.51	25.10	25.69	26.28	26.88
	24.50	25.09	25.68	26.27	26.87	27.46	28.05
-47.2 to -29.3	4.76	4.87	4.99	5.10	5.22	5.33	5.45
-29.2 to -11.3	4.54	4.66	4.77	4.88	4.99	5.10	5.21
-11.2 to -6.7	4.35	4.46	4.57	4.67	4.78	4.89	4.99
6.8 to 24.7	4.18	4.28	4.38	4.48	4.58	4.69	4.79
24.8 to 42.7	4.01	4.11	4.21	4.31	4.41	4.51	4.60
42.8 to 60.7	3.86	3.96	4.05	4.15	4.24	4.34	4.43
60.8 to 78.7	3.73	3.82	3.91	4.00	4.09	4.18	4.27
78.8 to 96.6	3.59	3.68	3.77	3.86	3.95	4.04	4.12

TABLE 8

Elevation at Station 4920 feet							
Add to Station Pressure to obtain Mean Sea Level Pressure							
Temp °F	Station Pressure, mb						
		23.32	23.92	24.51	25.10	25.69	26.28
	23.91	24.50	25.09	25.68	26.27	26.86	27.46
-47.2 to -29.3	5.65	5.79	5.93	6.07	6.22	6.35	6.50
-29.2 to -11.3	5.40	5.53	5.67	5.80	5.94	6.07	6.21
-11.2 to 6.7	5.17	5.30	5.43	5.56	5.68	5.81	5.94
6.8 to 24.7	4.96	5.08	5.21	5.33	5.45	5.58	5.70
24.8 to 42.7	4.76	4.88	5.00	5.12	5.24	5.36	5.48
42.8 to 60.7	4.58	4.70	4.81	4.92	5.04	5.15	5.27
60.8 to 78.7	4.41	4.53	4.64	4.75	4.86	4.97	5.08
78.8 to 96.6	4.26	4.37	4.47	4.58	4.69	4.79	4.90

TABLE 9

Elevation at Station 5740 feet							
Add to Station Pressure to obtain Mean Sea Level Pressure							
Temp °F	Station Pressure, mb						
	22.73	23.33	23.92	24.51	25.10	25.69	26.28
	<u>23.32</u>	<u>23.91</u>	<u>24.50</u>	<u>25.09</u>	<u>25.68</u>	<u>26.27</u>	<u>26.87</u>
-47.2 to -29.3	6.52	6.69	6.86	7.02	7.19	7.36	7.53
-29.2 to -11.3	6.23	6.39	6.55	6.71	6.87	7.03	7.19
-11.2 to 6.7	5.96	6.11	6.27	6.42	6.57	6.72	6.88
6.8 to 24.7	5.71	5.86	6.01	6.15	6.30	6.45	6.59
24.8 to 42.7	5.49	5.63	5.77	5.90	6.05	6.19	6.33
42.8 to 60.7	5.28	5.41	5.55	5.68	5.82	5.95	6.09
60.8 to 78.7	5.08	5.21	5.34	5.47	5.60	5.73	5.86
78.8 to 96.6	4.90	5.03	5.15	5.28	5.40	5.53	5.66

TABLE 10

Elevation at Station 6560 feet							
Add to Station Pressure to obtain Mean Sea Level Pressure							
Temp °F	Station Pressure, mb						
	21.85	22.44	23.03	23.63	24.22	24.81	25.40
	<u>22.43</u>	<u>23.02</u>	<u>23.62</u>	<u>24.21</u>	<u>24.80</u>	<u>25.39</u>	<u>25.98</u>
-47.2 to -29.3	7.28	7.47	7.66	7.86	8.05	8.24	8.44
-29.2 to -11.3	6.94	7.13	7.31	7.50	7.68	7.87	8.05
-11.2 to -6.7	6.64	6.82	6.99	7.17	7.35	7.53	7.70
6.8 to 24.7	6.36	6.53	6.70	6.87	7.04	7.21	7.38
24.8 to 42.7	6.11	6.27	6.43	6.59	6.76	6.92	7.08
42.8 to 60.7	5.87	6.03	6.18	6.34	6.50	6.65	6.81
60.8 to 78.7	5.65	5.80	5.95	6.10	6.25	6.40	6.55
78.8 to 96.6	5.45	5.59	5.74	5.88	6.03	6.17	6.32

TABLE 11

Elevation at Station 7380 feet							
Add to Station Pressure to obtain Mean Sea Level Pressure							
Temp °F	Station Pressure, mb						
	21.26	21.85	22.44	23.03	23.63	24.22	29.81
	<u>21.84</u>	<u>22.43</u>	<u>23.02</u>	<u>23.62</u>	<u>24.21</u>	<u>24.80</u>	<u>25.39</u>
-47.2 to -29.3	8.08	8.31	8.53	8.75	8.97	9.19	9.41
-29.2 to -11.3	7.71	7.92	8.13	8.34	8.56	8.77	8.98
-11.2 to 6.7	7.37	7.57	7.77	7.97	8.18	8.38	8.58
6.8 to 24.7	7.06	7.25	7.44	7.64	7.83	8.03	8.22
24.8 to 42.7	6.77	6.96	7.14	7.33	7.51	7.70	7.88
42.8 to 60.7	6.51	6.68	6.86	7.04	7.22	7.40	7.58
60.8 to 78.7	6.26	6.43	6.60	6.78	6.95	7.12	7.29
78.8 to 96.6	6.03	6.20	6.37	6.53	6.70	6.86	7.03

21. TROUBLESHOOTING

<p>Screen does not appear on television or PC</p>	<p>A. This occurs because there is no power supplied to the main unit.</p> <ol style="list-style-type: none"> 1. Check the AC power connections to the receiving unit and the power from the wall outlet. 2. Check the batteries and replace if needed. (View section 8: Changing Batteries in the Transmitter) 3. Check the polarity of the batteries in the battery compartment. 4. Check to make sure your television is on the correct video/input.
<p>Outdoor information not displayed, "----"</p> <p>Items in the home that generate frequency trouble:</p> <ul style="list-style-type: none"> • Family radios (CB's, walkie-talkie) • Digital cable or satellite boxes radiate frequencies that will interfere with transmission • HAM radios • Microwave ovens • High voltage wiring 	<p>A. This is usually caused by transmission interference or low battery power in the transmitter.</p> <p>B. Did you perform the SET ID operation with the outdoor sensors plugged into the thermometer-transmitter?</p> <ol style="list-style-type: none"> i) Are there dashes for the outdoor temperature reading? ii) Are there dashes for the wind speed reading? iii) Are there dashes for the wind direction reading? <p>IF YES TO ALL QUESTIONS ABOVE:</p> <ol style="list-style-type: none"> 1. Check batteries in the transmitter. Replace if needed. (View section 7: Changing Batteries in the Transmitter) 2. Bring the indoor receiver beside the transmitter and remove all the batteries and AC adaptor. Replace them all (View section 6: Powering up Your HWS) and observe whether ALL the outdoor readings show up. Check the timing of updates on the television screen or PC (outdoor readings should change every 128 seconds). Then, place the indoor receiver back in the regular position. Check the timing of updates AGAIN on the television screen or PC. If you notice the updates occur every 40 seconds, there should be no problem. <p>If the screen has not updated within 5 minutes or no updates occur there is transmission interference between the indoor receiver and the transmitter. BOTH UNITS MUST BE PLACED IN DIFFERENT LOCATIONS TO REDUCE TRANSMISSION INTERFERENCE.</p> <p>IF THERE ARE DASHES ONLY WHERE THE WIND SPEED AND DIRECTION ARE DISPLAYED AND THE UNIT IS REGISTERING AN OUTDOOR TEMPERATURE:</p> <ol style="list-style-type: none"> 3. Check that the wires are connected from the wind sensor to the transmitter in the right slot (labeled "wind") and are fully inserted. If the wind sensor was not inserted properly, remove the batteries / AC adaptor from both components and re-insert them. (View section 6 or 7: Powering up Your HWS)

<p>Outdoor readings stopped after two days, one week, etc</p>	<p>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 14 °F/-10 °C, it is suggested to use lithium batteries and place the indoor receiver and transmitter as close as possible to each other.</p> <p>Power Adaptor: 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 1-866-753-0181 for ordering information.</p> <p>Wired Transmission: you may also link your indoor receiver directly to the transmitter using wired phone cord (View section 10: Wired Transmission)</p> <p>1. Electrical storms can cause transmission to stop. If this occurs, you must reset the indoor receiver and transmitter by removing the batteries / AC adaptor and resetting the HWS (View section 6 or 7: Powering up your HWS). DO NOT do this during the electrical storm!</p> <p>2. Electromagnetic interference can occur from different sources that transmit radio waves that may affect how the indoor receiver receives data from the transmitter (if at all). It is recommended that you place the transmitter and indoor receiver 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>3. Bring the indoor receiver beside the transmitter and remove all the batteries and AC adaptor. Replace them all (View section 6 or 7: Powering up Your HWS) and observe whether ALL the outdoor readings show up. Check the timing of updates on the television screen or PC (outdoor readings should change every 128 seconds). Then, place the indoor receiver back in the regular position. Check the timing of updates AGAIN on the television screen or PC. If you notice the updates occur every 128 seconds, there should be no problem.</p> <p>If the screen has not updated within 5 minutes or no updates occur there is transmission interference between the indoor receiver and the transmitter. BOTH UNITS MUST BE PLACED IN DIFFERENT LOCATIONS TO REDUCE TRANSMISSION INTERFERENCE.</p>
<p>Wind direction is displaying faulty readings</p> <p>Wind direction is stuck on one direction</p>	<p>i) Are you mounting the unit on a mast or metal pole? 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 4B: 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 strongly advised to wait for milder weather to do so.</p> <p>3. This is also an indication that there is transmission interference or batteries have died in the transmitter. Check the batteries in the transmitter. Replace if needed. (View section 8: Changing Batteries in the Transmitter).</p> <p>4. Make sure that the wind speed sensor is securely fastened in the “wind” slot on the transmitter. (View section 5: Connecting the Sensors)</p> <p>5. Bring the indoor receiver beside the transmitter and remove all the batteries and AC adaptor. Replace them all (View section 6 or 7: Powering up Your HWS) and observe whether ALL the outdoor readings show up. Check the timing of updates on the television screen or PC (outdoor readings should change every 128 seconds). Then, place the indoor receiver back in the regular position. Check the timing of updates AGAIN on the television screen or PC. If you notice the updates occur every 128 seconds, there should be no problem.</p> <p>If the screen has not updated within 5 minutes or no updates occur there is transmission interference between the indoor receiver and the transmitter. BOTH UNITS MUST BE PLACED IN DIFFERENT LOCATIONS TO REDUCE TRANSMISSION INTERFERENCE.</p>
<p>Only transmits when the transmitter is right beside the indoor receiver</p>	<p>A. There is a large amount of transmission interference with the current location of the indoor receiver and transmitter. There may be too many walls or electrical interference (caused by appliances in your home) between the two units.</p> <p>1. Significantly reduce the distance between the indoor receiver and the transmitter.</p> <p>2. Bring the indoor receiver beside the transmitter and remove all the batteries and AC adaptor. Replace them all (View section 6 or 7: Powering up Your HWS) and observe whether ALL the outdoor readings show up. Check the timing of updates on the television screen or PC (outdoor readings should change every 128 seconds). Then, place the indoor receiver back in the regular position. Check the timing of updates AGAIN on the television screen or PC. If you notice the updates occur every 128 seconds, there should be no problem.</p> <p>If the screen has not updated within 5 minutes or no updates occur there is transmission interference between the indoor receiver and the transmitter. BOTH UNITS MUST BE PLACED IN DIFFERENT LOCATIONS TO REDUCE TRANSMISSION INTERFERENCE.</p>

<p>No outdoor readings occur even after resetting the units</p>	<p>A. Make sure that you have unplugged and removed the batteries / AC adaptor from the main unit AND the transmitter. Re-insert the batteries in the transmitter ONLY. Put the transmitter directly on top of a radio (preferably a clock-radio due to the size – stereo radios may be too large for this test), and tune the radio to FM 107.9. You should hear a loud beep or pulse roughly every 128 seconds. Time the pulse to ensure this occurs approximately every 128 seconds. If no pulse is heard, the transmitter's batteries are dead or the transmitter is defective.</p> <p>If the pulse does occur approximately every 10 seconds, place the main unit and the transmitter side by side (turn off your radio). Remove all the batteries and AC adaptor. Replace them all (View section 6 or 7: Powering up Your HWS) and observe whether ALL the outdoor readings show up. Check the timing of updates on the television screen or PC (outdoor readings should change every 128 seconds). Then, place the indoor receiver back in the regular position. Check the timing of updates AGAIN on the television screen or PC. 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 indoor receiver and the transmitter. BOTH UNITS MUST BE PLACED IN DIFFERENT LOCATIONS TO REDUCE TRANSMISSION INTERFERENCE.</p> <p>** NOTE: the radio test is only confirming that the transmitter is sending out a signal. This proves that the transmitter should not be sent back because it is diagnosed as faulty**</p>
<p>Wind speed too high (117 mph to 124 mph / 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 8: Changing Batteries in the Transmitter) and possibly moving the location of the transmitter and indoor receiver.</p>
<p>Wind speed too low Wind speed not accurate Wind speed does not change</p>	<p>1. This situation can occur because the wind speed transmission is NOT REAL TIME. 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.</p> <p>2. Is the wind sensor clear of obstructions?</p> <p>Wind speed & 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 yards from the sensor on the roof of a house will disturb enough wind that the unit will never give proper data from the direction of that tree.</p>

	<p>3. Wind speed and directional data will not change if there is “transmission interference”. That means that some of the data transmitted has been corrupted by other sources emitting waves. This could be anything – wiring in walls, appliances, other electrical devices operating in proximity of the indoor receiver or transmitter, or between the two.</p> <p>4. Freezing rain can cause the wind speed cups to stop moving, thus constantly displaying 0.0 wind speed. You can attempt to remove the ice from the wind sensor, but it is strongly advised to wait for milder weather to do so.</p> <p>5. Make sure the wind speed sensor cord is securely fastened in the “wind” slot on the transmitter. (View section 5: Connecting the Sensors) and that the sensor is level with the horizon.</p> <p>Bring the indoor receiver beside the transmitter and remove all the batteries and AC adaptor. Replace them all (View section 6 or 7: Powering up Your HWS) and observe whether ALL the outdoor readings show up. Check the timing of updates on the television screen or PC (outdoor readings should change every 128 seconds). Then, place the indoor receiver in the regular position. Check the timing of updates AGAIN on the television screen or PC. If you notice the updates occur every 128 seconds, there should be no problem.</p> <p>If the screen has not updated within 5 minutes or no updates occur there is transmission interference between the indoor receiver and the transmitter. BOTH UNITS MUST BE PLACED IN DIFFERENT LOCATIONS TO REDUCE TRANSMISSION INTERFERENCE.</p>
<p>Barometric trend doesn't work</p> <p>Forecast icons don't change</p>	<p>The trend function will not display after power up until it has collected 24 hours of pressure data. (View section 16: Trend Chart).</p> <p>The forecast icon will always appear as “Partly Cloudy” upon powering up the indoor receiver. The first several hours of forecast data may be inaccurate, because the indoor receiver needs to collect barometric pressure information. Over time the forecast icon's accuracy will improve. (View section 17: Weather Forecasting)</p>
<p>Battery consumption</p>	<p>The Home Weather station requires constant battery power to accurately scan outdoor weather readings. The wind speed sensor and the 60 yards (200 ft. approximately) transmission is the main cause of power consumption. In normal temperature ranges (50 °F to 80 °F/10 °C to 25 °C), you can expect that the 4 x “AA” batteries in the transmitter will last approximately 7 weeks (even lithium batteries).</p> <p>In colder temperatures, battery life is much less – note that the use of lithium batteries allow the chemical reaction that is creating power to occur in colder temperatures (-40 °F / -40 °C) compared to alkaline batteries, which fail at approximately 14 °F (-10°C), 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>

	<p>Power Adaptor: 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 1-866-753-0181 for ordering information.</p> <p>Wired Transmission: you may also link your indoor receiver directly to the transmitter using wired phone cord. (View section 10:Wired Transmission)</p>
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22. PRODUCT SPECIFICATIONS

Reading	Range	Accuracy/Precision
Outdoor temperature	-40 °F to 140 °F (-40 °C to 60 °C)	+/- 4 °F (+/- 2 °C)
Indoor temperature	32 °F to 104°F (0 °C to 40 °C)	+/- 4 °F (+/-2 °C)
Humidity	20% to 95% relative humidity	+/- 7%
Wind Speed	0 to 60 mph (0 to 100 km/h)	+/- 4 km of the range (mph or km/h)
Air Pressure	24.8-35.4 inHg (840 - 1200 mb)	+/- 0.2 inHg (+/- 4 mb)
Wind direction	16 directions	
Rainfall	0 to 39.3 in (0 to 99.9 cm)	+/- 0.2 in (+/- 0.5 cm)
Transmission distance	Over 60 yards (60 meters)	Like a cellular phone, this is dependent upon transmission interference.
Wind Chill	-101°F to 49°F (-74 °C to 10 °C)	+/- 4 °F (+/- 2 °C)

23. 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 AT:

1-866-753-0181

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 Inc.
2221 Niagara Falls Blvd.
Niagara Falls, NY
14304

24. RESOURCES TO LOOK AT...

National Weather Service:

<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

Real Estate Journal -- Wall Street Journal (for US city elevation information):

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

25. 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 for 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 into 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.

26. RSS-210 INFORMATION

“Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.”

L'utilisation de ce dispositif est autorisée seulement aux deux conditions suivantes : (1) il ne doit pas produire de brouillage, et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

27. R&TTE INFORMATION

Hereby, Smart Union, declares that this Home Weather Station TV, 433 MHz Thermo-Hygro is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.