Ambient Weather WS-1285 Advanced Weather Station User Manual

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1. Introduction

Thank you for your purchase of the Ambient Weather WS-1285 Weather Station with time, indoor temperature and humidity, outdoor temperature and outdoor humidity, barometer and weather forecasting. The following user guide provides step by step instructions for installation, operation and troubleshooting. To download the latest manual and additional troubleshooting tips, please visit:

http://ambientweather.wikispaces.com/ws1285

2. Getting Started

The WS-1285 weather station consists of a display console (receiver), and a wireless thermometer (remote transmitter).

2.1 Parts List

QTY	Item
1	Display Console Frame Dimensions (LxWxH): 5.5 x 3.0 x 1.0 in LCD Dimensions (LxW): 3.5 x 2.0"
1	Thermo-hygrometer transmitter (WH5) with mounting bracket Dimensions (LxWxH): 4.5" x 1.25" x 0.5"
1	User Manual

2.2 Recommend Tools

- Philips screwdriver (precision)
- Drill for mounting bracket

2.3 Remote Thermometer Sensor Set Up

Note: To avoid permanent damage, please take note of the battery polarity before inserting the batteries.

Remove the battery door on the back of the sensor with a Philips screwdriver (there is only one screw, in the middle of the unit). Insert two AAA batteries as shown in **Error! Reference source not found.** (we recommend lithium batteries for cold weather climates, but alkaline batteries are sufficient for most climates).

Replace the battery door and set screw. Note that the temperature and humidity will be displayed on the LCD display. Looking at the back of the unit from top to bottom, the polarity is (+) (-) for the left battery and (-) (+) for the right battery.
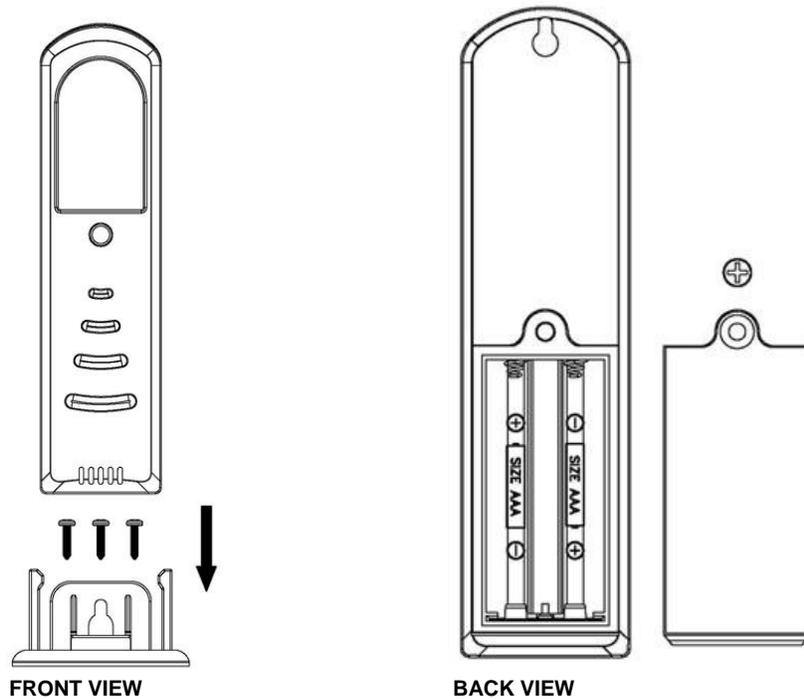
FRONT VIEW   **BACK VIEW**

Figure 1

2.4 Display Console Set Up

Note: To avoid permanent damage, please take note of the battery polarity before inserting the batteries.

Move the remote thermometer at least 10' away from the display console (if the sensor is too close, it may not be received by the display console).

Remove the battery door on the back of the display. Insert two AA (alkaline or lithium, avoid rechargeable) batteries in the back of the display console.

All of the LCD segments will light up for a few seconds to verify all segments are operating properly.

Replace the battery door, and fold out the desk stand and place the console in the upright position.

The console will instantly display indoor temperature, date and time.   The outdoor temperature and humidity will display --, then update on the display within a few minutes. *Do not touch any buttons* until the remote sensor reports in, otherwise the remote sensor search mode will be terminated, and you must power down and power up the console again. When the remote sensor data has been received, the console will automatically switch to the normal mode, and all further settings can be performed.

If the remote does not update, please reference the troubleshooting guide in Section 7.

2.4.1 Display Console Layout

Note: The following illustration shows the full segments of the LCD for description purposes

only and will not appear like this during normal operation.
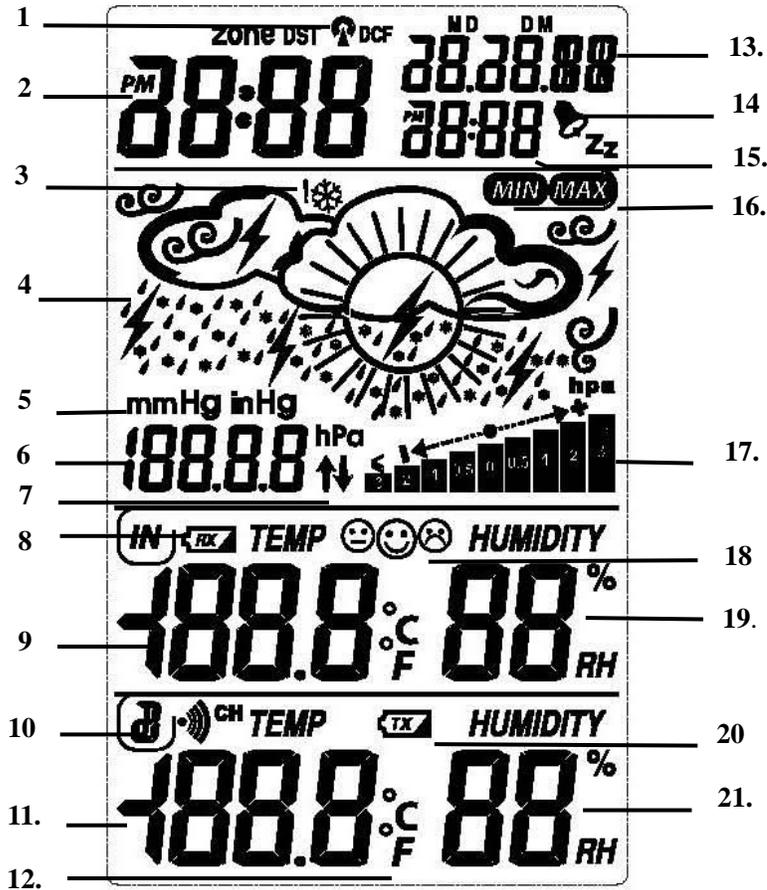
Figure 2

1. WWVB radio controlled time signal
2. time
3. ice alert
4. weather forecast icon
5. barometric pressure units of measure
6. barometeric pressure
7. weather tendency arrow .
8. indoor temperature display
9. base station low battery indicator
10. sensor channel indication
11. outdoor temperature display
12. temperature units of measure
13. date/day of week
14. alarm icon
15. alarm time
16. MIN/MAX icon
17. barograph
18. comfort icon
19. indoor humidity display
20. transmitter low battery indicator
21. Outdoor humidity display

2.5 Sensor Operation Verification

Verify the indoor and outdoor humidity match closely with the console and sensor array in the same location (about 10' apart). The sensors should be within 8% (the accuracy is ± 4%).   Allow about 30 minutes for both sensors to stabilize.

Verify the indoor and outdoor temperature match closely with the console and sensor array in the same location (about 10' apart). The sensors should be within 4°F (the accuracy is ± 2°F). Allow about 30 minutes for both sensors to stabilize.

3. Remote Sensor Installation

It is recommended you mount the remote sensor on a north facing wall, in a shaded area (the sensor can mount to a horizontal or vertical surface). Direct sunlight and radiant heat sources will result in inaccurate temperature readings. Although the sensor is water resistant, it is best to mount in a well protected area, such as an eve.

Use 3 screws to affix the mounting bracket to the wall, as shown in Figure 1. Connect the remote sensor to the wall bracket (it will snap into place).

4. Console Operation

Note: After 30 seconds of inactivity, the display will automatically revert to the normal display mode (automatic time out).

Note: The **MIN/MAX/-** functions use the same button and are used interchangeably. The **CH/+** functions use the same button and are used interchangeably.

Note: There are two modes of operation (1) normal mode, and (2) set mode, where settings are programmed.

4.1 Quick Display Mode

While in Normal Mode, press the **SET** key to toggle between the time of day and the year.

4.2 Set (Program) Mode

While in Normal Mode, press and hold the **SET** key for at least three seconds to enter the Set Mode. The first setting will begin flashing. You can press the **SET** key again to skip any step, as defined below.

Note: In the Set mode, press the + key or the - key to change or scroll the value. Hold the + key or the - key for 3 seconds to increase/decrease rapidly.

Note: To exit the Set Mode, press and hold the **ALARM** key for 3 seconds (or wait 30 seconds), and the Set Mode will return to Normal Mode.

1. **Language**. The English (EN) language setting will begin flashing. Press the + key to toggle between the following languages:
   English:EN→Russian:RU→German:GE→French:FR→Spanish:ES.

2. **Contrast**. Press the **SET** key to change the contrast. The default contrast is 4. Press the + key or - key to increase or decrease the contrast level (1-8).

3. **Time Zone Settings**. Press the **SET** key again to adjust the Time Zone (TZ) setting.

Press the + key or – key to adjust the time zone from -12 to 12, based on the number of hours from Coordinated Universal Time, or Greenwich Mean Time (GMT).

The following table provides times zones throughout the world. Locations in the eastern hemisphere are positive, and locations in the western hemisphere are negative.

Hours from GMT	Time Zone	Cities
-12	IDLW: International Date Line West	---
-11	NT: Nome	Nome, AK
-10	AHST: Alaska-Hawaii Standard CAT: Central Alaska HST: Hawaii Standard	Honolulu, HI
-9	YST: Yukon Standard	Yukon Territory
-8	PST: Pacific Standard	Los Angeles, CA, USA
-7	MST: Mountain Standard	Denver, CO, USA
-6	CST: Central Standard	Chicago, IL, USA
-5	EST: Eastern Standard	New York, NY, USA
-4	AST: Atlantic Standard	Caracas
-3	---	São Paulo, Brazil
-2	AT: Azores	Azores, Cape Verde Islands
-1	WAT: West Africa	---
0	GMT: Greenwich Mean WET: Western European	London, England
1	CET: Central European	Paris, France
2	EET: Eastern European	Athens, Greece
3	BT: Baghdad	Moscow, Russia
4	---	Abu Dhabi, UAE
5	---	Tashkent
6	---	Astana
7	---	Bangkok
8	CCT: China Coast	Bejing
9	JST: Japan Standard	Tokyo
10	GST: Guam Standard	Sydney
11	---	Magadan
12	IDLE: International Date Line East NZST: New Zealand Standard	Wellington, New Zealand

4. **Radio Controlled Clock (RCC).** Press the **SET** key again to change the RCC.   The **RCC** (ON or OFF) setting will begin flashing. Press the + key to toggle between RCC ON (adjusts automatically to the atomic clock) and RCC OFF (uses the quartz clock).

Note: The time and date display is based on the signal provided by the highly accurate government operated atomic clock in Fort Collins, CO. The base station will continue to scan for the radio controlled time signal each day at 2:00, 8:00, 12:00 and 20:00, despite if you manually set the date and time. If reception is unsuccessful, the radio controlled time icon will not appear but reception attempts will continue. If reception has been successful, the received time and date will overwrite the manually set time and date.

5. **Daylight Savings Time (DST)**. Press the **SET** key again to adjust the DST.   The **DST** (ON or OFF) setting will begin flashing. Press the + key to toggle between DST ON and DST

OFF.

6. **12/24 Hour Format**. Press the **SET** key again to adjust the 12/24 hour format setting. Press the ⊞ key to change between 12 hour and 24 hour format.

7. **Day/Month and Month/Day Format.** Press the **SET** key again to adjust the Day/Month and Month/Day format. Pres the ⊞ key to toggle between month/day (mm/dd) format and day/month (dd/mm) format.

8. **Change Year.** Press the **SET** key again to set the calendar year. Press the ⊞ key or ⊟ key to adjust the calendar year.

9. **Change Month.** Press the **SET** key again to set the calendar month. Press the ⊞ key or **MIN/MAX** key to adjust the calendar month.

10. **Change Day.** Press the **SET** key again to set the calendar day. Press the ⊞ key or ⊟ key to adjust the calendar day (note that the display format is Month/Day/Year).

11. **Change Hour.** Press the **SET** key again to set the hour. Press the ⊞ key or ⊟ key to adjust the hour up or down.

12. **Change Minute.** Press the **SET** key again to set the minute. Press the ⊞ key or ⊟ key to adjust the minute.

13. **Temperature Units** (Celsius or Fahrenheit). Press the **SET** key again to change the temperature units. Press the ⊞ key to toggle the temperature units from Celsius to Fahrenheit.

14. **Barometric Pressure Display Units** (mmHg, hPa or inHg). Press the **SET** key again to change the barometric pressure units. Press the ⊞ key to toggle the pressure units between mmHg, hPa and inHg.

15. **Relative Pressure Calibration**. Press the **SET** key to adjust the relative barometric pressure. Press the ⊞ key or ⊟ key to adjust the relative barometric pressure up or down. Reference **Section 4.2.1 Setting Barometric Pressure** for more details on this function.

16. **Pressure Threshold Setting** (default level 2). Press the **SET** key again to adjust the pressure threshold setting. Press the ⊞ key or ⊟ key to adjust the pressure threshold up or down. Reference **Section** Error! Reference source not found. for more details on this function.

17. **Storm Threshold Setting** (default level 4). Press the **SET** key again to adjust the storm threshold setting. Press the ⊞ key or ⊟ key to adjust the storm threshold up or down. Reference **Section** Error! Reference source not found. for more details on this function.

18. **Weather Forecast Icon Setting.** Press the **SET** key again to set the weather forecast icon setting. the ⊞ key to toggle between Sunny, Partly Cloudy, Cloudy, and Rainy.

4.2.1 Setting Barometric Pressure

To compare pressure conditions from one location to another, meteorologists correct pressure to sea-level conditions. Because the air pressure decreases as you rise in altitude, the sea-level corrected

pressure (the pressure your location would be at if located at sea-level) is generally higher than your measured pressure.

Thus, your absolute pressure may read 28.62 inHg (969 mb) at an altitude of 1000 feet (305 m), but the relative pressure is 30.00 inHg (1016 mb).

The standard sea-level pressure is 29.92 in Hg (1013 mb). This is the average sea-level pressure around the world. Relative pressure measurements greater than 29.92 inHg (1013 mb) are considered high pressure and relative pressure measurements less than 29.92 inHg are considered low pressure.

To determine the relative pressure for your location, locate an official reporting station near you (the internet is the best source for real time barometer conditions, such as Weather.com or Wunderground.com), and set your weather station to match the official reporting station.

To change the relative pressure when flashing, press the + key or - key to increase or decrease the relative pressure setting to match the official reporting station.

4.3   Alarm Mode

4.3.1 Time Alarm

While in Normal Mode, press the **ALARM** key to activate or de-activate the alarm. If the alarm is active, the alarm time will be displayed next to the alarm icon 🔔. If the alarm is de-active, **OFF** will be displayed next to the alarm icon 🔔.

4.3.2 Setting the Time Alarm

To set the alarm time, press and hold the **ALARM** key for 3 seconds. The alarm hour will begin flashing.

Change Alarm Hour. Press the + key or - key to adjust the alarm hour up or down.

Change Alarm Minute. Press the **SET** key again to set the alarm minute. Press the + key or - key to adjust the alarm minute. Press the **SET** key again to exit the exit the

4.3.3 Cancelling the Alarm

When an alarm has been triggered, the alarm will sound and the alarm icon 🔔 will flash for 120 seconds. Press the **ALARM** key to silence the alarm.

4.4 Min/Max Mode

While in Normal Mode, press the **MIN/MAX** key to enter the min/max mode.

📝 **Note:** If you have multiple remote temperature and humidity sensors, select the Channel you wish to view the min/max data before you enter the min/max mode.

1. **Maximum Barometric Pressure.** The maximum barometric pressure, associated date and time, and the **MAX** icon will be displayed. To reset the maximum barometric pressure to the current pressure, press and hold the **MIN/MAX** key for two seconds.

2. **Minimum Barometric Pressure.** Press the **MIN/MAX** key again. The minimum barometric pressure, associated date and time, and the **MIN** icon will be displayed. To reset

the minimum barometric pressure to the current pressure, press and hold the **MIN/MAX** key for two seconds.

3. **Maximum Remote Temperature (Chanel 1, 2 or 3).** Press the **MIN/MAX** key again. The maximum remote temperature (if you have multiple temperature/humidity sensors, the channel currently selected on the display), associated date and time, and the **MAX** icon will be displayed. To reset the maximum remote temperature to the current temperature, press and hold the **MIN/MAX** key for two seconds.

4. **Minimum Remote Temperature (Chanel 1, 2 or 3).** Press the **MIN/MAX** key again. The minimum remote temperature (if you have multiple temperature/humidity sensors, the channel currently selected on the display), associated date and time, and the **MAX** icon will be displayed. To reset the minimum remote temperature to the current temperature, press and hold the **MIN/MAX** key for two seconds.

5. **Maximum Remote Humidity (Chanel 1, 2 or 3).** Press the **MIN/MAX** key again. The maximum remote humidity (if you have multiple temperature/humidity sensors, the channel currently selected on the display), associated date and time, and the **MAX** icon will be displayed. To reset the maximum remote humidity to the current humidity, press and hold the **MIN/MAX** key for two seconds.

6. **Minimum Remote Humidity (Chanel 1, 2 or 3).** Press the **MIN/MAX** key again. The minimum remote humidity (if you have multiple temperature/humidity sensors, the channel currently selected on the display), associated date and time, and the **MAX** icon will be displayed. To reset the minimum remote humidity to the current humidity, press and hold the **MIN/MAX** key for two seconds.

7. Press the **MIN/MAX** key again to exit the min/max mode.

4.5 Other Console Features

The following section describes additional console features.

4.5.1 Weather Forecasting and Tendency

Note: The weather forecast or pressure tendency is based on the rate of change of barometric pressure. In general, when the pressure increases, the weather improves (sunny to partly cloudy) and when the pressure decreases, the weather degrades (cloudy to rain). For significant decreases in barometric pressure, the storm icon will be displayed. If the temperature is below freezing (32 degF), the snow icon will replace the rainy or stormy icon.

The weather forecast is an estimation or generalization of weather changes in the next 24 to 48 hours, and varies from location to location. The tendency is simply a tool for projecting weather conditions and is never to be relied upon as an accurate method to predict the weather.

The weather tendency arrow shows positive (↑) and negative (↓) trends in barometric pressure.

4.5.2 Weather Icons

The six weather icons are Sunny, Partly Cloudy, Cloudy, Rainy, Stormy and Snowy, as shown in Figure 3. If there is no significant change in pressure, the forecast icon will not change.
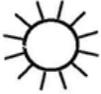
Sunny	Partly Cloudy	Cloudy	Rainy	Stormy	Snowy

Figure 3

4.5.3 Wind Icon

If the air pressure decreases less than -3 mmHg within 3 hours, the wind icon will be displayed, as shown in Figure 4.   This rapid decrease in barometric pressure indicates winds are expected.

Figure 4

4.5.4 Pressure threshold setting

The pressure threshold (the negative or positive rate of change of pressure signifying a change in the weather) can be adjusted by the user from level 2 to level 4 (default level 2 mbar/hour).

The lower the level pressure threshold setting, the higher sensitivity for weather forecast changes. Locations that experience frequent changes in air pressure require a higher setting compared to locations where the air pressure is typically stagnant.

4.5.5 Storm alert threshold

The storm threshold (the negative rate of pressure change signifying a storm is expected) can be adjusted by the user from level 3 to level 5 (the default level 4 mbar/hour).

When negative rate of change of pressure is exceeded for 3 hours, the storm warning indicator will be activated, and the clouds with rain icon and tendency arrows will flash for 3 hours indicating the storm warning feature has been activated.

4.5.6 Pressure Rate of Change Indication

The pressure rate of change icon is updated every 10 minutes and provides an indication in short term pressure changes. The icon displays - $\rightarrow$ + if pressure is increasing, and + $\rightarrow$ - if pressure is decreasing. The arrow is not present if there are no pressure changes in the last 10 minutes.

The values indicated are based on the changes in pressure (mbar) per 10 minutes.
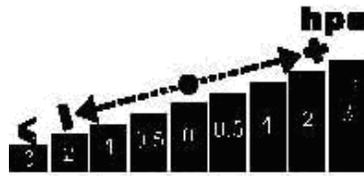
Figure 5

4.5.7 Ice Alert

When the temperature is between 27 degC and 34 degC, the ice alert icon will be present.

Figure 6

4.5.8 Indoor Comfort Icon

An indoor comfort icon indicates the comfort zone based on indoor humidity, as shown in Figure 7.

RH<45%	RH 45%~65%	RH >65%
Dry	Comfortable	Wet

Figure 7

4.6 Multi-Channel Operation

The WS-1285 supports up to three WH5 remote thermometers (one is included). The optional sensors can be purchased at AmbientWeather.com.

4.6.1 Sensor Initialization

Power up the sensors and console in the following order:

1. Power up the console. Do not touch any of the buttons, as described in Section 2.4.
2. Power up the first remote thermometer as described in Section 2.5. Wait until the sensor reports into the console.
3. Power up the second remote thermometer as described in Section 2.5. Wait until the sensor reports to the console. The first sensor will be designated as Channel 1 and the second sensor will be designated as Channel 2.
4. Power up the third remote thermometer as described in Section 2.5. Wait until the sensor reports to the console. The third sensor will be designated as Channel 3. The display will switch between each sensor until you exit the initialization state by pressing any button.

4.6.2 Sensor Accuracy Note

Verify the temperature values match closely with the console and sensor array in the same location (about 10' apart). The sensors should be within 4°F (the accuracy is ± 2°F).

Allow about 30 minutes for both sensors to stabilize.

4.6.3 Viewing the 3 Sensor Channels

To view the 3 sensor channels, select the **CH/+** button. The minimum and maximum can be viewed for each channel as specified in Section 4.3.

If the sensor communication has been lost (blank display where temperature and humidity are displayed), hold the **CH/+** key for 3 seconds to re-acquire the current channel sensor signal. If you have additional remote sensors, hold the **CH/+** key for 5 seconds to re-acquire all of the sensor signals.

5. Glossary of Terms

Term	Definition
Absolute Barometric Pressure	Relative barometric pressure, corrected to sea-level. To compare pressure conditions from one location to another, meteorologists correct pressure to sea-level conditions. Because the air pressure decreases as you rise in altitude, the sea-level corrected pressure (the pressure your location would be at if located at sea-level) is generally higher than your measured pressure.
Accuracy	Accuracy is defined as the ability of a measurement to match the actual value of the quantity being measured.
HectoPascals (hPa)	Pressure units in SI (international system) units of measurement. Same as millibars (1 hPa = 1 mbar)
Hygrometer	A hygrometer is a device that measures relative humidity. Relative humidity is a term used to describe the amount or percentage of water vapor that exists in air.
Inches of Mercury (inHg)	Pressure in Imperial units of measure. 1 inch of mercury = 33.86 millibars
Range	Range is defined as the amount or extent a value can be measured.
Relative Barometric Pressure	Measured barometric pressure relative to your location or ambient conditions.

6. Specifications

6.1 Wireless Specifications

- Line of sight wireless transmission (in open air): 300 feet
- Frequency: 433 MHz
- Update Rate: 60 seconds

6.2 Measurement Specifications

The following table provides specifications for the measured parameters.

Measurement	Range	Accuracy	Resolution
Indoor Temperature	14 to 140 °F	± 2 °F	0.1 °F
Outdoor Temperature	-40 to 140 °F	± 2 °F	0.1 °F
Indoor Humidity	20 to 95%	± 5%	1 %
Outdoor Humidity	20 to 95%	± 5%	1 %
Barometric Pressure	8.85 to 32.50 inHg	± 0.08 inHg (within range of 27.13 to 32.50 inHg)	0.01 inHg

6.3 Power Consumption

- Base station : 2 x AA 1.5V Alkaline batteries
- Remote sensor : 2 x AAA 1.5V Alkaline batteries
- Battery life: Minimum 24 months for base station
  Minimum 24 months for remote thermometer sensor (use lithium batteries in cold weather climates)

7. Troubleshooting Guide

If your question is not answered here, you can contact us as follows:

1. Email Support: support@ambientweather.com
2. Live Chat Support: www.ambientweather.com/chat.html (M-F 8am to 4pm Arizona Time)
3. Technical Support: 480-283-1644 (M-F 8am to 4pm Arizona Time)

Problem	Solution
Wireless remote (thermo-hygrometer) not reporting in to console. The temperature and humidity are blank the display console.	The maximum line of sight communication range is 300'. Move the sensor assembly closer to the display console. If the sensor assembly is too close (less than 10'), move the sensor assembly away from the display console. Cycle power on the console. The console may have exited the search mode. Install a fresh set of batteries in the remote thermo-hygrometer. For cold weather environments, install lithium batteries. Make sure the remote sensors are not transmitting through solid metal (acts as an RF shield), or earth barrier (down a hill). Move the display console around electrical noise generating devices, such as computers, TVs and other wireless transmitters or receivers.

	Move the remote sensor to a higher location. Move the remote sensor to a closer location. Radio Frequency (RF) Sensors cannot transmit through metal barriers (example, aluminum siding) or multiple, thick walls.
Temperature sensor reads too high in the day time.	Make sure the thermo-hygrometer is mounted in a shaded area on the north facing wall. Consider the following radiation shield if this is not possible: http://www.ambientweather.com/amwesrpatean.html
Indoor and Outdoor Temperature do not agree	Allow up to one hour for the sensors to stabilize due to signal filtering. The indoor and outdoor temperature sensors should agree within 4 °F (the sensor accuracy is ± 2 °F)
Indoor and Outdoor Humidity do not agree	Allow up to one hour for the sensors to stabilize due to signal filtering. The indoor and outdoor humidity sensors should agree within 10 % (the sensor accuracy is ± 5 %)
Humidity is reading 20% at low humidity or 95% at high humidity	The humidity sensor is out of range (20 to 95%)
Absolute pressure does not agree with official reporting station	Make sure you properly calibrate the sensor to an official local weather station (reference 4.2 Set (Program) Mode4.2 Set (Program) Mode The barometer is only accurate to ± 0.08 inHg within the following relative pressure range: 27.13 to 32.50 inHg, which corresponds to an altitude of -2,200 to 2,700 feet. At higher altitudes, expect some non-linearity or error.
The forecast icon is not accurate	The weather station console must run for several days to trend barometric pressure. The weather forecast is an estimation or generalization of weather changes in the next 24 to 48 hours, and varies from location to location. The tendency is simply a tool for projecting weather conditions and is never to be relied upon as an accurate method to predict the weather.
Display console contrast is weak	Replace console batteries with a fresh set of batteries.

8. Accessories

The following software and hardware accessories are available for this weather station at www.AmbientWeather.com .

Accessory	Image	Description
Energizer AA Lithium Battery (2-pack) - Batteries for Long Life and Cold Climates		AA lithium batteries for cold weather climates.

Accessory	Image	Description
SRS100LX Temperature and Humidity Solar Radiation Shield		Solar Radiation Shield improves temperature accuracy for hot weather climates. Remove the rain guard and install over thermometer.
Ambient Weather WH5 WH5 Wireless Thermometer		Add two additional remote wireless thermometers for a total of three remote sensors.
Ambient Weather WS-1285-C Wireless Weather Forecaster with Indoor Temperature, Humidity and Outdoor Temperature (console only)		Add multiple consoles throughout your house or business. Each console can read up to three remote sensors.

9. Liability Disclaimer

Please help in the preservation of the environment and return used batteries to an authorized depot. The electrical and electronic wastes contain hazardous substances. Disposal of electronic waste in wild country and/or in unauthorized grounds strongly damages the environment.

Reading the "User manual" is highly recommended. The manufacturer and supplier cannot accept any responsibility for any incorrect readings and any consequences that occur should an inaccurate reading take place.

This product is designed for use in the home only as indication of weather conditions. This product is not to be used for medical purposes or for public information.

The specifications of this product may change without prior notice.

This product is not a toy. Keep out of the reach of children.

No part of this manual may be reproduced without written authorization of the manufacturer.

Ambient, LLC WILL NOT ASSUME LIABILITY FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR OTHER SIMILAR DAMAGES ASSOCIATED WITH THE OPERATION OR MALFUNCTION OF THIS PRODUCT.

10. FCC Statement

Statement according to FCC part 15.19:
This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:
1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Statement according to FCC part 15.21:

Modifications not expressly approved by this company could void the user's authority to operate the equipment.

Statement according to FCC part 15.105:

NOTE: This equipment has been tested and found to comply with the limits for a 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.

11. Warranty Information

Ambient, LLC provides a 1-year limited warranty on this product against manufacturing defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased and only to the original purchaser of this product. To receive warranty service, the purchaser must contact Ambient, LLC for problem determination and service procedures.

Warranty service can only be performed by a Ambient, LLC. The original dated bill of sale must be presented upon request as proof of purchase to Ambient, LLC.

Your Ambient, LLC warranty covers all defects in material and workmanship with the following specified exceptions: (1) damage caused by accident, unreasonable use or neglect (lack of reasonable and necessary maintenance); (2) damage resulting from failure to follow instructions contained in your owner's manual; (3) damage resulting from the performance of repairs or alterations by someone other than an authorized Ambient, LLC authorized service center; (4) units used for other than home use (5) applications and uses that this product was not intended (6) the products inability to receive a signal due to any source of interference or metal obstructions and (7) extreme acts of nature, such as lightning strikes or floods.

This warranty covers only actual defects within the product itself, and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.