
Ambient Weather WS-0211 Wireless “Wendy the Weather Wizard” User Manual



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1. Introduction

Thank you for your purchase of the Ambient Weather WS-0211 Wireless Wendy the Weather Wizard with Indoor and Outdoor Temperature, Time and Animated Temperature Index. 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/ws0211>

2. Getting Started

 **Note:** The power up sequence must be performed in the order shown in this section (remote transmitter first, Display Console second).

The WS-0211 weather station consists of a display console (receiver), and a thermometer (remote transmitter).


2.1 Parts List

QTY	Item
1	Display Console Frame Dimensions (LxWxH): 5.5 x 2.5 x 0.7 in LCD Dimensions (LxW): 2.5 x 3.5"
1	Thermometer transmitter (WH-6) with mounting bracket Dimensions (LxWxH): 4.5" x 1.25" x 0.6"

2.2 Recommend Tools

- Philips screwdriver
- Drill for mounting bracket

2.3 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. Insert two AAA batteries as shown in Figure 1 (we recommend lithium batteries for cold weather climates, but alkaline batteries are sufficient for most climates). Looking at the back of the unit from top to bottom, the polarity is (+) (-) for the left battery and (-) (+) for the right battery.

The LED light will flash once after the batteries are installed, and flash once per 45 seconds thereafter.

Replace the battery door and set screw.

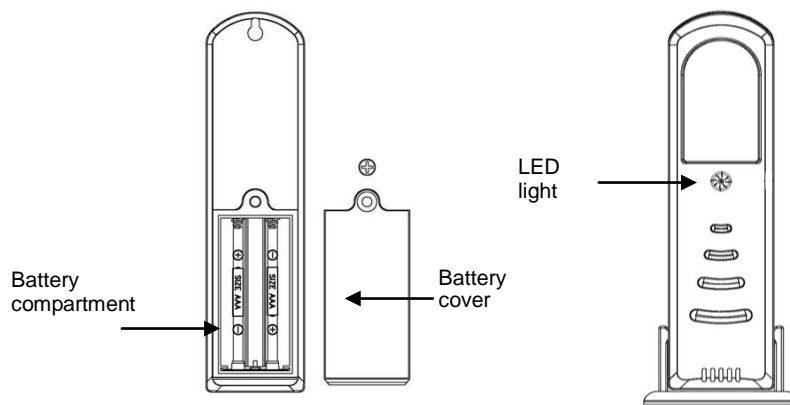



Figure 1

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 AAA (alkaline or lithium, avoid rechargeable) batteries in the back of the display console. Looking at the back of the unit (top to bottom), the polarity is (+) (-) for the left battery, and (-) (+) for the right battery.

The display will beep three times and all of the LCD segments will light up for a few seconds to verify all segments are operating properly.

Replace the battery door, and insert the desk stand and place the console in the upright position, as shown in Figure 2.

The console will instantly display indoor temperature, date and time. The outdoor temperature will update on the display within a few minutes. Do not touch any buttons until the remote sensor reports in to the console, otherwise the remote sensor search mode will be terminated. 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.

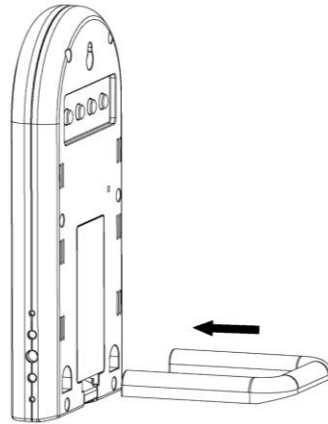


Figure 2

2.4.2 Display Console Layout

 **Note:** The following illustration shows basic operation of the display console.

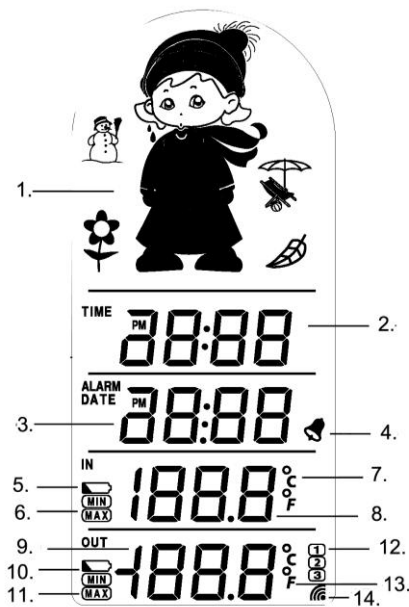


Figure 3

- | | |
|---|---|
| 1. Wendy the Weather Wizard outdoor temperature index and four season icons | 8. Indoor temperature display |
| 2. Time | 9. Outdoor temperature display |
| 3. Alarm time / Date | 10. Transmitter low battery indicator |
| 4. Time alarm icon | 11. Outdoor temperature MIN/MAX icon |
| 5. Receiver low battery indicator | 12. Sensor channel display |
| 6. Indoor temperature MIN/MAX icon. | 13. Temperature display unit (°C or °F) |
| 7. Temperature display unit (°C or °F) | 14. Outdoor reception signal |

2.4.3 Sensor Operation Verification

Verify the indoor and outdoor temperature match closely with the console and sensor in the same location. The sensors should be within 4°F (the accuracy is $\pm 2^\circ\text{F}$). 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. 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 eave.

Use 3 screws to affix the mounting bracket to the wall. Connect the remote sensor to the wall bracket, as shown in Figure 4.

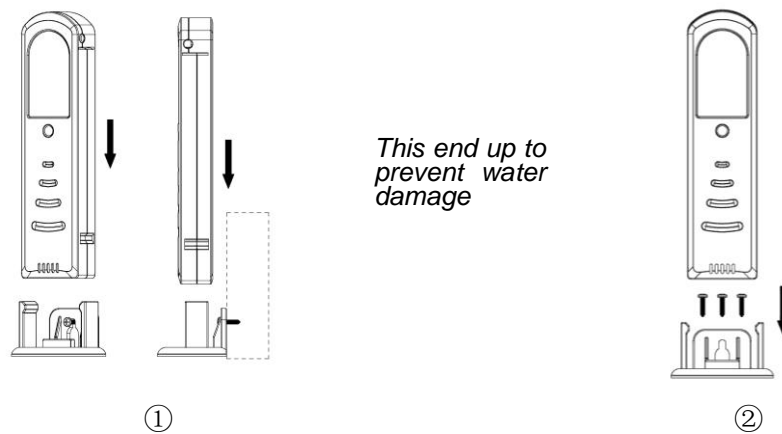



Figure 4

4. Console Operation

 **Note:** The console has four buttons on the back: **SNOOZE/ALARM** key, **+/CH** key, **-/MIN/MAX** and a **SET** key. There are four program modes: Quick Display Mode, Set Mode, Alarm Mode and Min/Max Mode.

Since the buttons are on the back of the display, we have reversed the order for easy reference in Figure 5. Use this template below to assist while programming the features in this section.

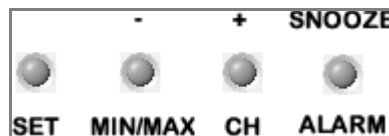


Figure 5

4.1 Quick Display Mode

While in Normal Mode, press the **SET** key to enter the Quick Display Mode. Press the SET key again

to toggle between the date and alarm time.

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 display will beep). The first setting will begin flashing. You can press the **SET** key again to skip any step, as defined below.


1. 12/24 hour format
2. Time setting (hours/minutes)
3. Calendar setting (year /month /date)
4. Temperature display units (Celsius or Fahrenheit)

In the Set mode, press the **CH/+** key or **MIN/MAX/-** key to change or scroll the value. Hold the **CH/+** key or **MIN/MAX/-** key for 3 seconds to increase/decrease rapidly.

Wait 10 seconds and the Set Mode will return to Normal Mode.

4.3 Alarm Mode

4.3.1 Time Alarm

While in Normal Mode, press the **ALARM** key to active the time alarm. Press the **ALARM** key again to de-active the time alarm. If the alarm is enabled, the alarm icon will be displayed .

4.3.2 Alarm Programming


While in Normal Mode, press the **ALARM** button for at least three seconds to enter the alarm programming mode (the display will beep). The alarm hour will flash.

In the alarm mode, Press the **CH/+** key or **MIN/MAX/-** key to change or scroll the alarm hour.

Press the **ALARM** button to change the alarm minute. Press the **CH/+** key or **MIN/MAX/-** key to change or scroll the alarm minute.

Wait 10 seconds, and the alarm mode will return to the normal mode.

4.3.2 Snooze Function

The snooze time is 10 minutes. The snooze function can be activated when the alarm is sounding by pressing the **ALARM/SNOOZE** key. When the alarm snooze is active, the alarm icon () will begin flashing, indicating that the alarm is active but is in snooze mode. To turn off the snooze function when it is active, press and release any of the **SET**, **MIN/MAX/-**, or **CH/+** keys.

4.3.3 Cancelling the Alarm when Sounding

When the time alarm is active, the alarm will sound for 120 seconds. Press and release any of the **SET**, **MIN/MAX/-**, or **CH/+** keys. to mute the alarm.

4.4 Min/Max Mode

While in Normal Mode, press the **MIN/MAX** key to display the maximum indoor temperature. Press and hold the **MIN/MAX** key for three seconds to reset the maximum indoor temperature to the current value.

Press the **MIN/MAX** key again to display the minimum indoor temperature. Press and hold the **MIN/MAX** key for three seconds to reset the minimum indoor temperature to the current value.

Press the **MIN/MAX** key to display the maximum outdoor temperature. Press and hold the **MIN/MAX** key for three seconds to reset the maximum outdoor temperature to the current value.

Press the **MIN/MAX** key again to display the minimum outdoor temperature. Press and hold the **MIN/MAX** key for three seconds to reset the minimum outdoor temperature to the current value.



Note: This weather station supports up to three remote temperature sensors. Repeat this procedure for Channels 2 and 3 if these sensors are installed.

Press **MIN/MAX** key again to return the Normal Mode.

4.5 Other Console Features

The following section describes additional console features.

4.5.1 Temperature Icons

The following icons will be displayed based on the temperature range (channel 1 only if you have multiple outdoor sensors).

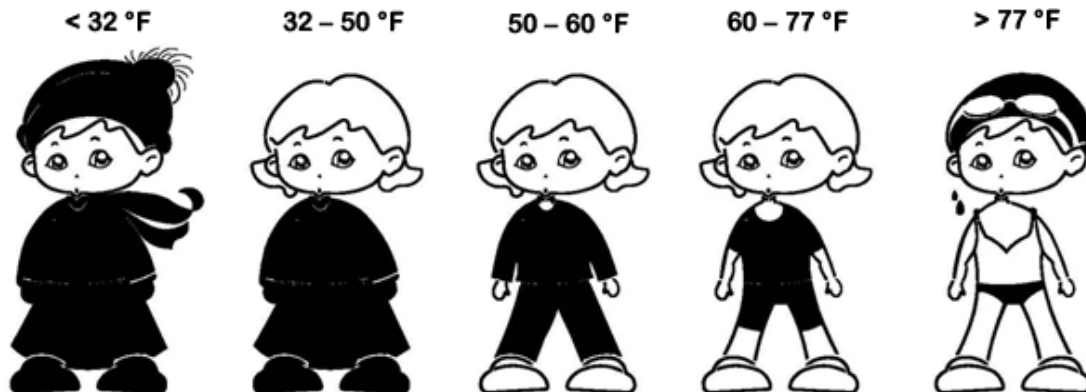


Figure 6

4.5.2 Season Icons

The following seasonal icons will be displayed based on the date.



4.6 Multi-Channel Operation

The WS-0211 supports up to three WH-6 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 **Error! Reference source not found.** Wait until the sensor reports into the console.
3. Power up the second remote thermometer as described in Section **Error! Reference source not found.** 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 **Error! Reference source not found.** 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 $\pm 2^\circ\text{F}$).

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 4.4.

5 Glossary of Terms

Term	Definition
Accuracy	Accuracy is defined as the ability of a measurement to match the actual value of the quantity being measured.
Range	Range is defined as the amount or extent a value can be measured.

6 Specifications

6.1 Wireless Specifications

- Line of sight wireless transmission (in open air): 300 feet
- Frequency: 433 MHz
- Update Rate: 48 seconds

6.2 Measurement Specifications

The following table provides specifications for the measured parameters.

Measurement	Range	Accuracy	Resolution
Indoor Temperature	32 to 140 °F	$\pm 2^\circ\text{F}$	0.1 °F
Outdoor Temperature	-40 to 149 °F	$\pm 2^\circ\text{F}$	0.1 °F

6.3 Power Consumption

- Base station : 2 x AAA batteries
- Remote sensor : 2 x AAA batteries
- Battery life: Minimum 12 months for base station
Minimum 12 months for thermometer sensor (use lithium batteries in cold weather climates)

7 Troubleshooting Guide



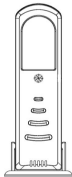
If your question is not answered here, you can contact us as follows:

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
<p>Wireless remote (thermometer) not reporting in to console.</p> <p>There are dashes on the display console.</p>	<p>The maximum line of sight communication range is 300'. Move the sensor assembly closer to the display console.</p> <p>If the sensor assembly is too close (less than 10'), move the sensor assembly away from the display console.</p> <p>Cycle power on the console. The console may have exited the search mode.</p> <p>Install a fresh set of batteries in the remote thermometer. For cold weather environments, install lithium batteries.</p> <p>Make sure the remote sensors are not transmitting through solid metal (acts as an RF shield), or earth barrier (down a hill).</p> <p>Move the display console around electrical noise generating devices, such as computers, TVs and other wireless transmitters or receivers.</p> <p>Move the remote sensor to a higher location. Move the remote sensor to a closer location.</p> <p>Radio Frequency (RF) Sensors cannot transmit through metal barriers (example, aluminum siding) or multiple, thick walls.</p>
<p>Temperature sensor reads too high in the day time.</p>	<p>Make sure the thermometer 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/amwespatean.html</p>
<p>Indoor and Outdoor Temperature do not agree</p>	<p>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)</p>
<p>Display console contrast is weak</p>	<p>Replace console batteries with a fresh set of batteries.</p>

8 Accessories

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

Accessory	Image	Description
Energizer AAA Lithium Battery (2-pack) - Batteries for Long Life and Cold Weather		AAA lithium batteries for cold weather climates.
Ambient Weather SRS100LX Temperature Solar Radiation Shield		Solar Radiation Shield improves temperature accuracy for hot weather climates.
Ambient Weather WH-6 Wireless Thermometer		Add two additional remote wireless thermometers for a total of 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.

