

Ambient Weather WH31PF Wireless Waterproof Floating Pool and Spa Thermometer User Manual



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1. Introduction


Thank you for your purchase of the Ambient Weather WH31PF Wireless Waterproof Floating Pool and Spa Thermometer. The following user guide provides step by step instructions for installation, operation, and troubleshooting. To download the latest manual, compatible devices, and additional troubleshooting tips, please visit:

<https://ambientweather.com/faqs/question/tags/tag/WH31PF/>

2. LCD display

Out of the box the new sensor is dormant, you should press and hold the main button for 3-5 seconds to wake up the device, and then you will see the following information in sequence:



1. The version number:	36	
2. The transmission frequency	915	
3. The device ID *This is unique to each sensor and will vary sensor-by-sensor	d0	
4. Full segment display		

3. Getting Started

3.1 Parts List

QTY	Item
1	Thermometer transmitter (WH31PF) for pool/SPA

	Dimensions (LxHxW): 6.1" x 2.5" x 2.5" (155x64x64mm) LCD Dimensions (LxW): 1" x 0.62" (26x15mm) Remote sensor depth: 6.1" (155mm)
2	User Manual

3.2 Sensor Placement

1. Place the sensor in the pool or spa within 100 feet of the display console (**Error! Reference source not found.**, reference A). Avoid transmitting through solid earth or ground (**Error! Reference source not found.**, reference B). Use a tether (string, not included) to affix the sensor location in the pool or spa using the attachment point. (Figure 2)
2. Other barriers to wireless transmission: concrete, cinder blocks, pavers, decking, water features, steps, etc.
3. Place the console at least three feet away from computers, TVs, and wireless phones.
4. Avoid transmitting through solid metal barriers

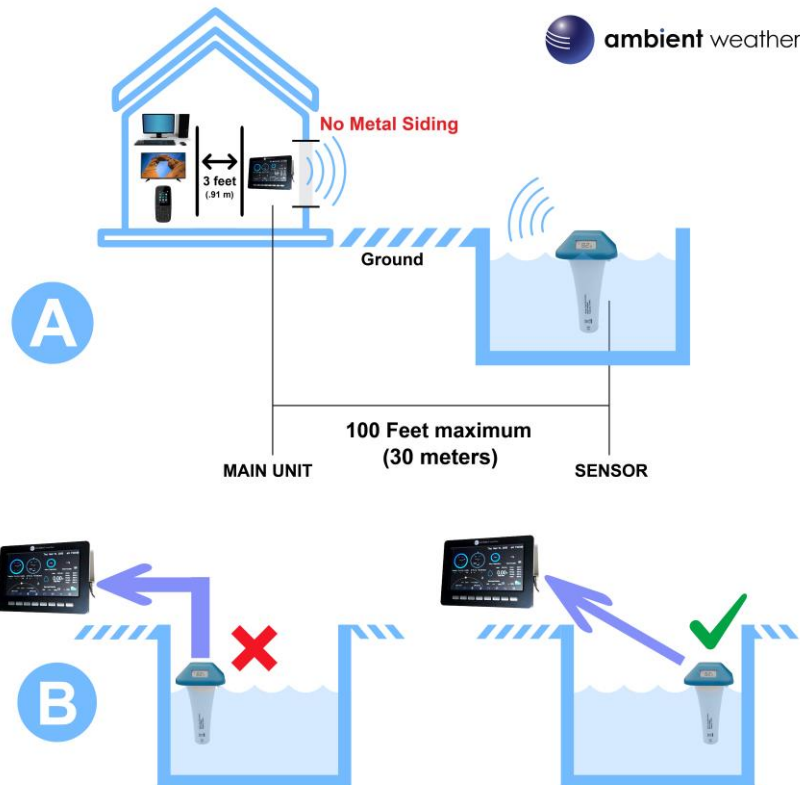


Figure 1

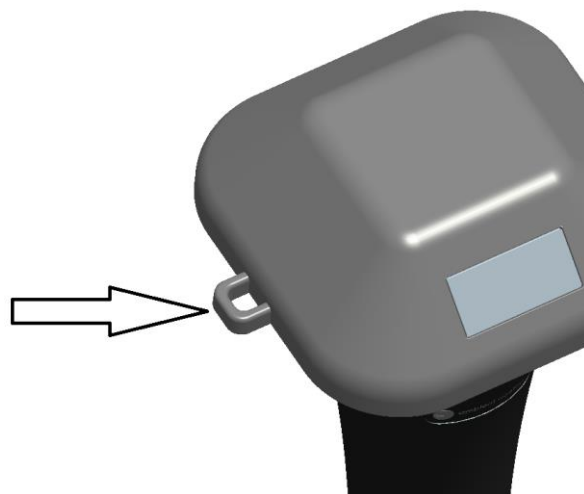


Figure 2

3.3 Button function

When the device is in Sleep mode, press and hold (3-5 seconds) to turn on the device.
 When in the normal display mode, press and hold (10 seconds) to turn on Sleep mode. There will be no display and the system enter the low-power mode.
 Press to switch °C and °F
 Press and hold (2 seconds) to enter Setup mode, short press to switch channel (it can support 8 channels)

4. Pairing sensor with Weather Station.

4.1 WS-2000/WS-5000

Enter setup mode as in the picture below.



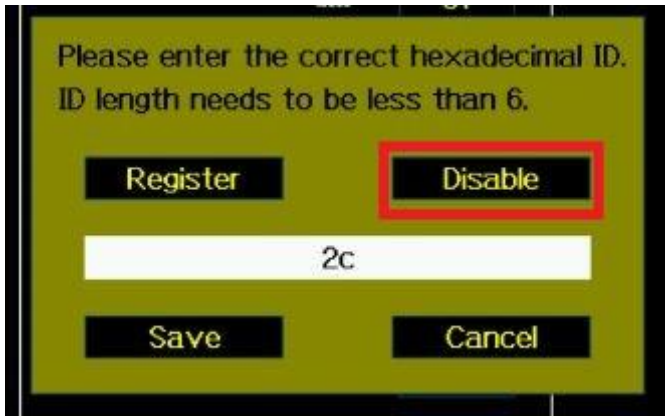
Select "Setup" next to More to access the More screen.



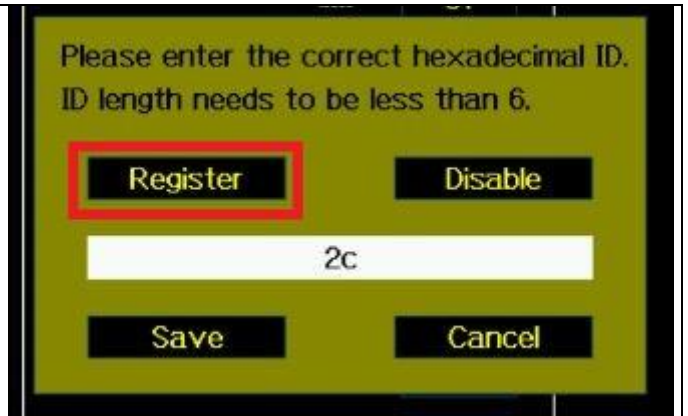
Select "Setup" next Sensors ID to access the Sensors ID screen.

Select the Sensor ID next to the sensor you want to register. Float will be T&H

CH	Sensor	Signal	ID
OUT	PM2.5	Y _{al}	59
IN	PM2.5		----
1	T&H	Y _{ca}	ca
2	T&H	Y _{ld}	ld
3	T&H	Y _{lc}	9c



Select 'Disable' to turn the sensor off



Select 'REGISTER' to re-register the sensor to the console

Return to the Home Screen to view the WH31PF Pool Float Data.

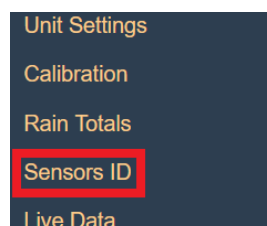


4.2 WS-2902

The WS-2902C and D support the WH31PF, and the console receives and sends this data directly to AmbientWeather.net. The data is not displayed on the console (pass through only) and cannot be calibrated.

4.3 WS-1965

Login to the WS-1965 web GUI and access Sensors ID tab.



On the Sensors ID screen, you can register or re-register an additional sensor by clicking the Re-register button.



Note: the console receives and sends this data directly to AmbientWeather.net. The data is not displayed on the console (pass through only) and cannot be calibrated.

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 Measurement Specifications

Measurement	Range	Accuracy	Resolution
Channel 1-8 Temperature	-40 to 140 °F	± 1 °F	0.1 °F

5.2 Wireless Specifications

- Line of sight wireless transmission (in open air): 150 feet, 100 feet under most conditions.
- Frequency: 915 MHz
- Update Rate:
Temperature update interval: based on channel selection

Channel 1: 61s	Channel 5: 65s
Channel 2: 62s	Channel 6: 66s
Channel 3: 63s	Channel 7: 67s
Channel 4: 69s	Channel 8: 68s

5.3 Power Consumption

- Sensor: Internal AA, sealed alkaline battery (non-replaceable)
- Battery life: 24-36 months with regular use (extended the battery life by turning unit off when not in use)
- Extend battery life by turning off the sensor when not in use by pressing and holding the button on the bottom of the unit for 10 seconds. Power the sensor up again by pressing and holding the button for 3-5 seconds.
- When the WH31PF battery finally dies you can purchase a replacement floating pool/spa sensor here: <https://ambientweather.com/wh31pf-wireless-waterproof-floating-thermometer>

7. Troubleshooting Guide

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

- Email Support: support@ambientweather.com Technical Support: 480-346-3380 (M-F 8am to 3pm Arizona Time)

Problem	Solution
Wireless remote (floating thermometer) not reporting into console.	The maximum line of sight communication range is 150' and 100' under most conditions. Move the sensor closer to the display console.

Problem	Solution
There are dashes (---) on the display console.	<p>If the sensor assembly is too close (less than 5'), move the sensor assembly away from the display console.</p> <p>Make sure the remote sensor LCD display is working and the transmitter light is flashing once per 60 seconds.</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>Use the tether to fix the sensor as close as possible to the console.</p>

7 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 safety 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.

8 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.

9 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); (3) damage resulting from failure to follow instructions contained in your owner's manual; (4) damage resulting from the performance of repairs or alterations by someone other than an authorized Ambient, LLC authorized service center; (5) units used for other than personal use (6) applications and uses that this product was not intended (7) the products inability to receive a signal due to any source of interference or metal obstructions and (8) 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.

10 California Prop 65

WARNING: Use of the Ambient Weather Products can expose you to chemicals, including lead and lead compounds, which are known to the State of California to cause cancer and bisphenol A (BPA), and phthalates DINP and/or DEHP, which are known to the State of California to cause birth defects or other reproductive harm.

Can I Trust that Ambient Weather Products are Safe Despite this Warning?

In 1986, California voters approved the Safe Drinking Water and Toxic Enforcement Act known as Proposition 65 or Prop 65. The purpose of Proposition 65 is to ensure that people are informed about exposure to chemicals known by the State of California to cause cancer, birth defects and/or other reproductive harm. A company with ten or more employees that operates within the State of California (or sells products in California) must comply with the requirements of Proposition 65. To comply, businesses are: (1) prohibited from knowingly discharging listed chemicals into sources of drinking water; and (2) required to provide a "clear and reasonable" warning before knowingly and intentionally exposing anyone to a listed chemical. Proposition 65 mandates that the Governor of California maintain and publish a list of chemicals that are known to cause cancer, birth defects and/or other reproductive harm. The [Prop 65 list](#), which must be updated annually, includes over 1,000 chemicals, including many that are commonly used in the electronics industry.

Although our manufacturing process is "lead-free" and RoHS compliant, it remains possible that trace amounts of lead could be found in components or subassemblies of Ambient Weather Products. Bisphenol A (BPSA) could conceivably be present in minute amounts in our plastic housings, lenses, labels or adhesives, and DEHP & DINP (phthalates) could possibly be found in PVC wire coatings of our cables, housings, and power cords. Unlike RoHS, Prop 65 does not establish a specific threshold for reporting on the substances of concern and instead sets forth a much less definitive standard requiring that the business demonstrate with certainty that there is "no significant risk" resulting from exposure. With respect to carcinogens, the "no significant risk" level is defined as the level which is calculated to result in not more than one excess case of cancer in

100,000 individuals exposed over a 70-year lifetime. In other words, if you are exposed to the chemical in question at this level every day for 70 years, theoretically, it will increase your chances of getting cancer by no more than 1 case in 100,000 individuals so exposed. With respect to reproductive toxicants, the "no significant risk" level is defined as the level of exposure which, even if multiplied by 1,000, will not produce birth defects or other reproductive harm. In other words, the level of exposure is below the "no observable effect level," divided by 1,000. (The "no observable effect level" is the highest dose level which has not been associated with observable reproductive harm in humans or test animals.) Proposition 65 does not clarify whether exposure is to be measured only in normal operation, or in the event of misuse such as intentionally damaging, incinerating or consuming an Ambient Weather Product or component and Ambient Weather has not attempted to evaluate the level of exposure.

A Proposition 65 warning means one of two things: (1) the business has evaluated the exposure and has concluded that it exceeds the "no significant risk level"; or (2) the business has chosen to provide a warning simply based on its knowledge about the presence of a listed chemical without attempting to evaluate the exposure. The California government has itself clarified that "The fact that a product bears a Proposition 65 warning does not mean by itself that the product is unsafe." The government has also explained, "You could think of Proposition 65 more as a 'right to know' law than a pure product safety law."

While using Ambient Weather Products as intended, we believe any potential exposure would be negligible or well within the "no significant risk" range. However, to ensure compliance with California law and our customers' right to know, we have elected to place the Proposition 65 warning signs on Ambient Weather Products.

For further information about California's Proposition 65, please visit <https://oehha.ca.gov/prop65/background/p65plain.html>

