
Ambient Weather WH31LA Leak Detector User Manual



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1. Introduction

Thank you for your purchase of the Ambient Weather WH31LA Leak Detector sensor. 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:

<https://ambientweather.com/faqs/question/tags/tag/WH31LA/>

-or-



The leak detection sensor is not a stand-alone device and requires a WS-2000, WS-5000 or

OBSERVERIP to view and upload the data to the Ambient Weather Network.

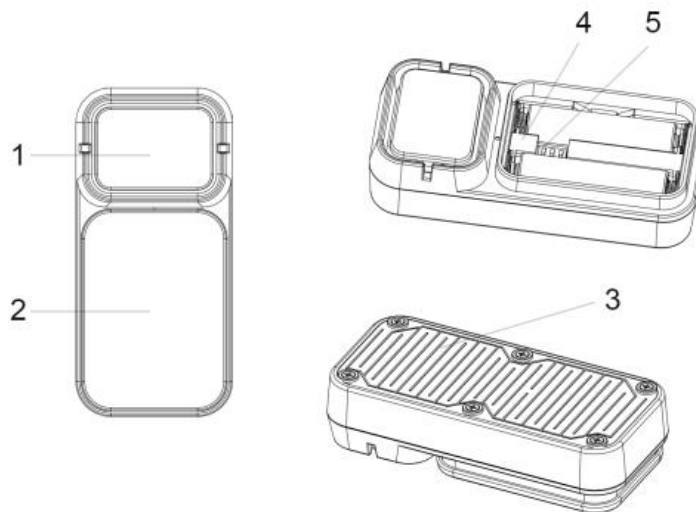
To see if your weather station is compatible, please visit:

<https://ambientweather.com/amwh311a.html>

The following WS-2000 and WS-5000 console firmware versions or greater support the leak detector:

- Firmware revision number: V1.6.0
- WiFi Firmware: AMBWeatherV4.2.0

For details on updating the firmware, consult your weather station user manual.



No	Item
1	Alarm (inside the device)
2	Battery cover
3	Sensing surface
4	LED indicator
5	Dip Switches for Multi-channel operation and sensitivity level

Figure 1

2. Features

- Detects water every 3 seconds.
- Emits a loud 90 db alarm when triggered.
- High or low sensor sensitivity selectable to meet different requirements.
- View live sensor data on the Ambient Weather Network - AmbientWeather.net or



Download the Ambient Weather Network App for free

- Trigger email alerts, text messages or trigger IFTTT actions.
- Each console supports up to 4 leak detectors.
- Battery level status displayed on AmbientWeather.net or in the app

3. Getting Started

The Ambient Weather WH31LA leak detection sensor includes the following:

QTY	Item
1	Leak Detector: 3.5 x 1.5 x 1" (95 x 45 x 22.8 mm)
1	User Manual

4. Setup Guide

4.1 Batteries and Dip Switches

The leak detector requires 2 x AAA batteries (not included). We recommend Energizer Lithium batteries for longer life and a wider operating temperature range.

- Remove the battery door as shown in Figure 2.

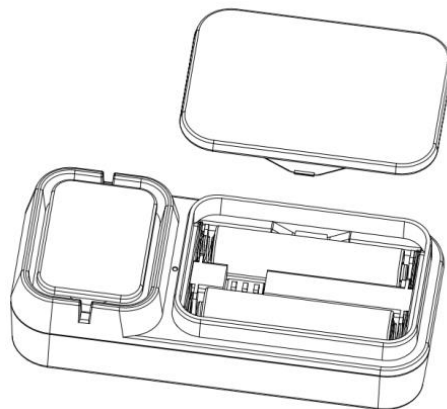


Figure 2

- Before inserting the batteries, find the dip switches instruction above the battery compartment and set the sensor sensitivity level and channel number:

Sensitivity Level: To change the sensor sensitivity of detection (High or Low), change Dip Switch 3, as referenced in Figure 3.

High sensitivity: The water leakage alarm will be triggered when the detected water leak capacitance value equals to or over 60PF and be muted when the value equals to or lower 50PF.

Low sensitivity: The water leakage alarm will be triggered when the detected water leak capacitance value equals to or over 90PF and be muted when the value equals to or lower 80PF.

Channel Number: This device supports up to four sensors. To set each channel number, change Dip Switches 1 and 2 , as referenced in in Figure 3.

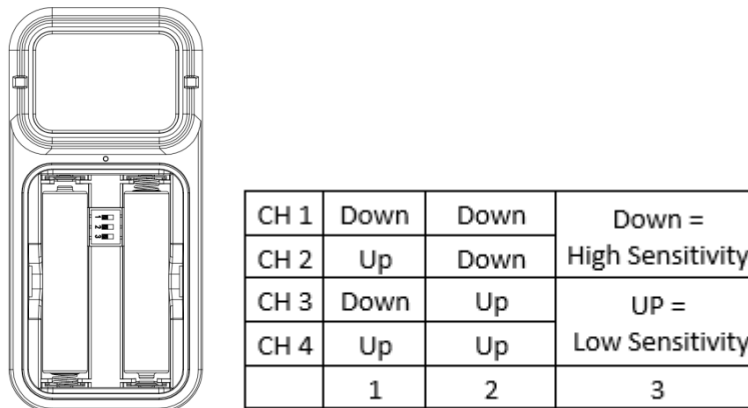


Figure 3

After setting the dip switches, insert the battery, and the sensor LED indicator will light for 4 seconds, and then flash once. If you change any of the dip switch settings, you must remove and re-insert the batteries again.

4.2 Pre-installation

Before placing the sensor into its permanent location, we recommend verifying proper operation.

- Place the sensor contact onto a damp towel. The alert should sound. To silence the alarm, remove the sensor batteries and re-insert them.

4.3 Sensor Placement

Place the sensor(s) in a kitchen cabinet, bathroom floor, near a water heater, in the basement, and near a sump pump,

This device can be placed at multi locations include under-the-sink cabinet in a kitchen or bathroom, near a water heater, in basements, below a sump pump, toilet, washing machine, refrigerator, or anywhere water leaks can occur.

The following is a table of reception loss vs. the transmission medium. Each “wall” or obstruction

decreases the transmission range by the factor shown below.

Medium	RF Signal Strength Reduction
Glass (untreated)	5-15%
Plastics	10-15%
Wood	10-40%
Brick	10-40%
Concrete	40-80%
Metal	90-100%

5. Wireless Monitoring

The leak detector is currently supported by the following models:

- WS-2000
- WS-5000
- OBSERVERIP2
- WS-1938/WS-1965

5.1 WS-2000 / WS-5000 Display and Sensor Registration

The console displays the status of the leak detector sensor below, where:

- 1, 2, 3, 4 is the sensor channel number (based on the order they were powered up and connected to the console).
- Color coded status:
 - Green = Normal
 - Yellow = Low Battery
 - Orange = Loss of Communication for 10 minutes
 - Red = Flood Triggered. Take immediate action.

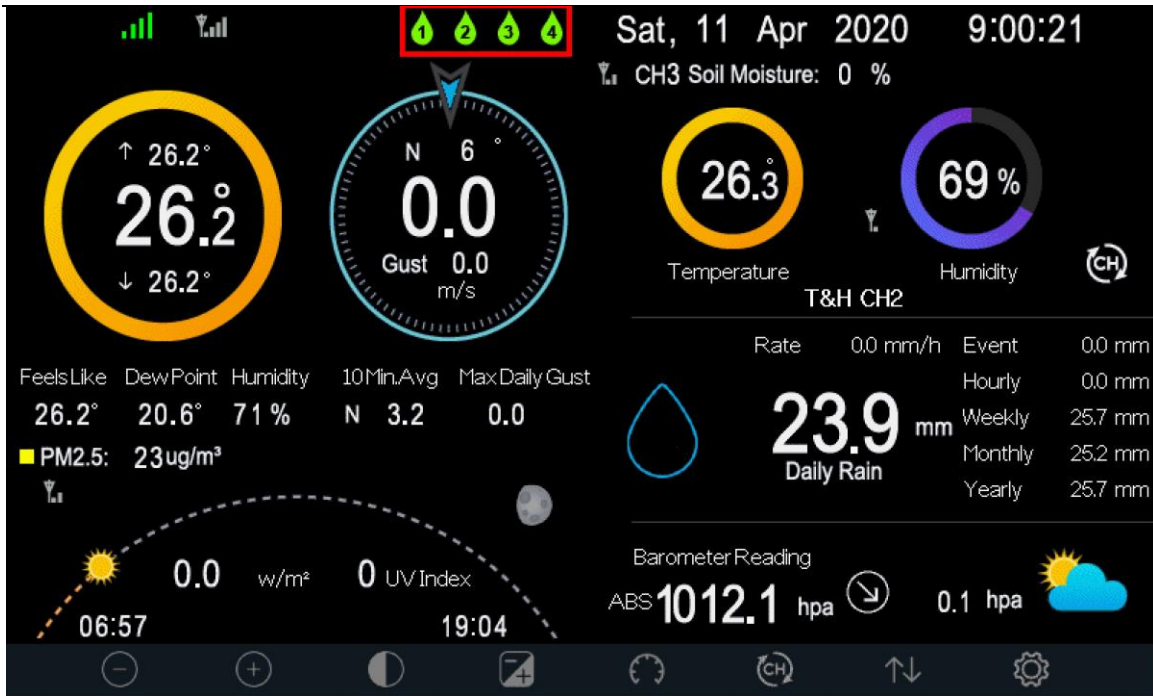



Figure 4

To confirm the leak detector sensors are communicating to the display console, select Settings from the display , and select **More | Setup | Sensors ID | Setup**. The sensors are labeled WH55, as shown in Figure 5.

Sensor	Signal	ID	CH	Sensor	Signal	ID	CH	Sensor	Signal	ID
WH65		2f	1	PM2.5		113c7	1	Soil		c4c6
T&HP		49	2	PM2.5		1b	2	Soil		c690
T&H		Disable	3	PM2.5		----	3	Soil		c68f
WS80		----	4	PM2.5		----	4	Soil		c4c5
WH40		0	1	T&H		18	5	Soil		c568
WS68		334	2	T&H		8a	6	Soil		c4ac
WH57		d4db	3	T&H		9c	7	Soil		c4b5
			4	T&H		cd	8	Soil		c4bc
			5	T&H		66	1	WH55		----
			6	T&H		8e	2	WH55		d4a1
			7	T&H		19	3	WH55		----
			8	T&H		17	4	WH55		d4a7

Figure 5

6. Introduction to Ambient Weather Network

Once the sensor(s) are reporting to the display console, a tile will appear on your dashboard automatically.

When the leak detector(s) is connected to AmbientWeather.net, the alerts are automatically created turned on and default to the notification method you setup (email or SMS). When an alert is triggered, banners also appear in the smart phone app as well as on your AmbientWeather.net dashboard. The alerts include low battery, loss of communication and liquid detection. You can also connect to external devices using IFTTT as well as connect to Amazon Alexa and Google Home.

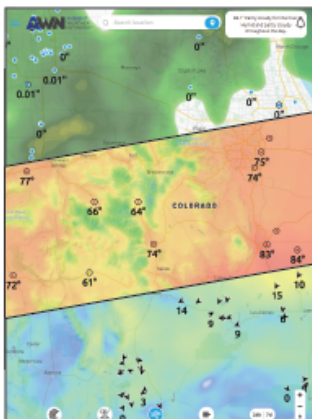


Enhanced by a powerful network of weather stations, the Ambient Weather Network provides the most accurate hyperlocal conditions for your neighborhood, activity, or business. Connect your compatible Ambient Weather Station to access your data remotely and join one of the fastest-growing weather communities. Personalize your data tiles, set alerts, and share your weather updates with other weather enthusiasts on our platform, which is always ad-free and free of charge!



Multiple Map Layers

Select the radar, wind, or temperature layers or drill down to view your neighborhood's weather stations.



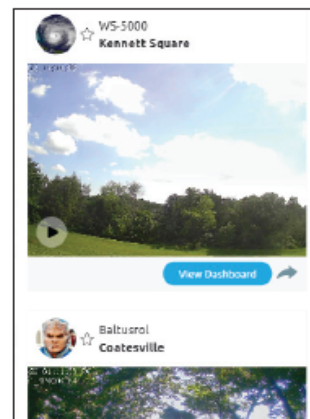
Customizable Forecast

Add your personal weather station to the map and create your own forecast for the community.



Local Weather Cameras

Watch timelapse videos of weather conditions from local weather cameras or add your own.



Scan the QR Code below to download the Ambient Weather Network App for free on the iOS App Store or Android Google Play Store.



7. Specifications

7.1 Sensor Specifications

- Alarm: 90 db

7.2 Wireless Specifications

- Line of sight wireless sensor array RF transmission (in open air): 330 feet, 100 feet under most conditions
- Sensor detecting interval: 3 seconds
- Sensor reporting interval: 60 seconds
- RF Frequency: 915 MHz

7.3 Power Consumption

- 2 x AAA batteries (not included). Alkaline or Lithium recommended.
- Battery life: one to two years (unless the alarm sounds).

8. Troubleshooting

- Email Support: support@ambientweather.com
- Technical Support: 480-346-3380 (M-F 8am to 4pm Arizona Time)
- Online Help: <https://ambientweather.com/faqs/question/tags/tag/WH31LA/>

-or-



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 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.

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); (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 natural 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.

12. 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>

