

# Ambient Weather WS-03 Thermo-Hygrometer



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## 1. Introduction


Thank you for your purchase of the Ambient Weather WS-03 thermo-hygrometer. 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/ws03>

## 2. Parts List

QTY	Item
1	Display Console Frame Dimensions (LxWxH): 3.5 x 2.5 x 0.75 in LCD Dimensions (LxW): 1.5 x 1.25"

### 2.1 Display Console 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 display. Insert two AAA (alkaline or lithium) batteries in the back of the display console, as shown in 1.

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

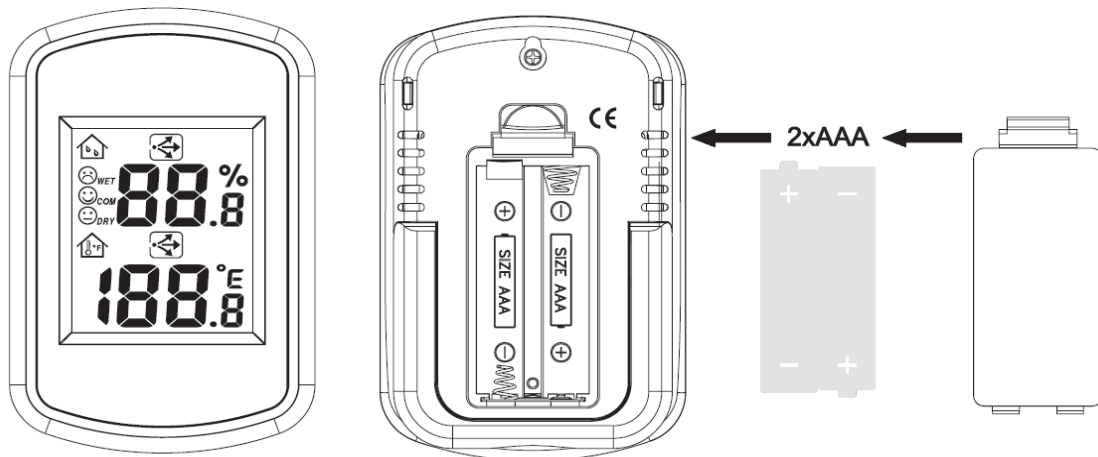


Figure 1


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




Figure 2

## 2.2 Sensor Operation Verification

If you have more than one WS-03, you can verify sensor accuracy. The temperature sensors should be within 4°F (the accuracy is  $\pm 2^\circ\text{F}$ ) and the humidity sensors should be within 10% (the accuracy is  $\pm 5\%$ ). Allow a few minutes to stabilize.

 **Discussion:** Temperature errors can occur when a sensor is placed too close to a heat source..

To verify temperature accuracy, we recommend a mercury or red spirit (fluid) thermometer. Bi-metal (dial thermometers or thermostats) and other digital thermometers are not a good source and have their own margin of error.

 **Discussion:** Humidity is a difficult parameter to measure electronically and drifts over time due to contamination. In addition, location has an adverse affect on humidity readings. Note that indoor and outdoor humidity varies greatly so you cannot accurately compare your humidity to official weather station sources, such as the news or National Weather Service.

Due to manufacturing tolerances, the humidity is accurate to  $\pm 5\%$ .

## 2.3 Display Features

### 2.3.1 Indoor Comfort Icon

An indoor comfort icon indicates the comfort zone based on indoor humidity, as shown in Figure 3.




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

Figure 3

### 2.3.2 Rate of Change Icon

The temperature rate of change icon indicates if the temperature and humidity are increasing, decreasing or steady, as shown in **Error! Reference source not found.** If the arrow points upward, the temperature is increasing at a rate of +2°F per 30 minutes (or greater), or humidity is increasing at a rate of +5% per 30 minutes (or greater). If the arrow points downward, the temperature is decreasing at a rate of -2°F per 30 minutes (or less), or humidity is decreasing at a rate of -5% per 30 minutes (or less).



Figure 4

## 3. 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.

## 4. Specifications

The following table provides specifications for the measured parameters.

Measurement	Range	Accuracy	Resolution
Temperature	32 to 140 °F	± 2 °F	0.1 °F
Humidity	1 to 99%	± 5%	0.1 °F

## 5. Power Consumption

- 2 x AAA 1.5V Alkaline batteries
- Battery life: Minimum 24 months for base station

## 6. Troubleshooting Guide

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

1. Email Support: [support@ambientweather.com](mailto:support@ambientweather.com)
2. Technical Support: 480-283-1644 (M-F 8am to 4pm Arizona Time)

<b>Problem</b>	<b>Solution</b>
Display console contrast is weak	Replace console batteries with a fresh set of batteries.

## 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 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. 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.

