

# Ambient Weather WS-HT12 Thermometer-Hygrometer Pen User Manual



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## 1. Introduction

Thank you for your purchase of the Ambient Weather WS-HT12 Fast Response Thermo-Hygrometer Pen. The following user guide provides step by step instructions for, operation and troubleshooting. To download the latest manual and additional troubleshooting tips, please visit:

<http://ambientweather.wikispaces.com/wsht12>

## 2. Getting Started

Reference Figure 1. Remove the battery door on the back of the display [1]. Insert the AAA battery (included) into the battery compartment [2] and replace the battery door.

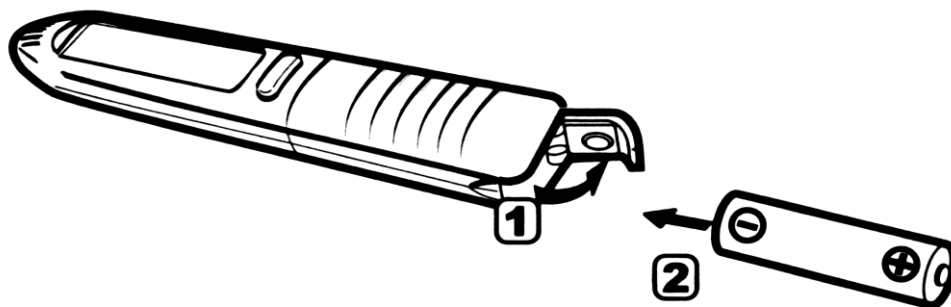
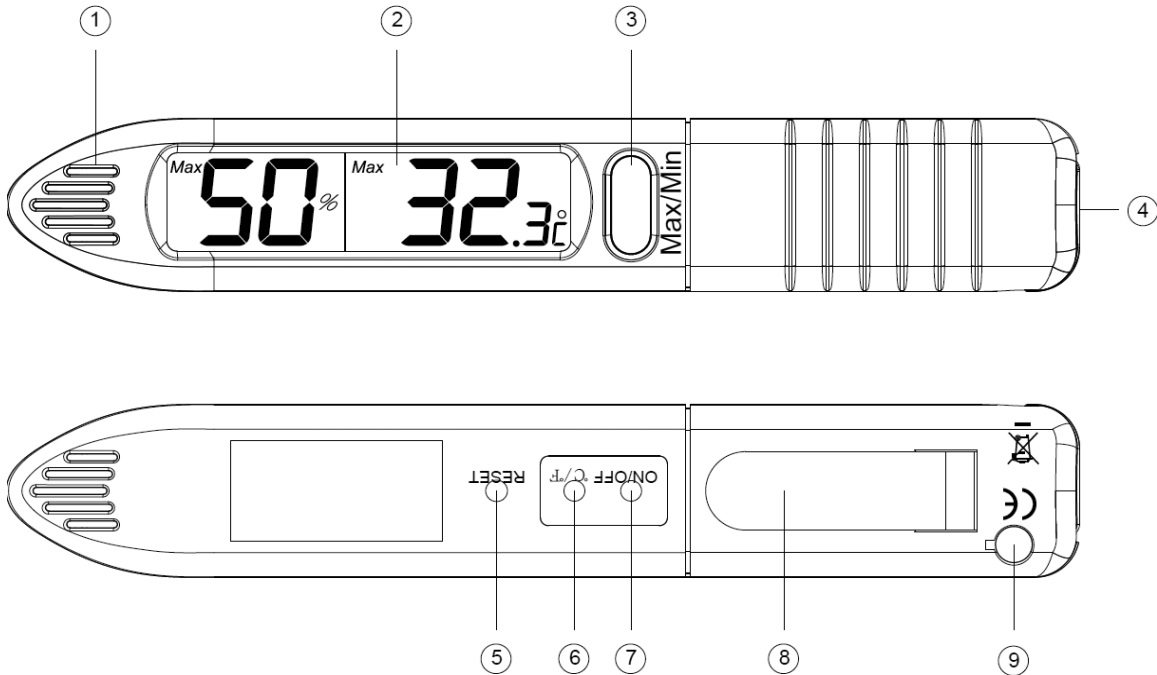


Figure 1

**Important Note:** This is an air temperature probe only. **DO NOT SUBMERSE IN LIQUID. DO NOT PLACE IN OPEN FLAME.** This will damage the sensor board and void the warranty. Do not use in extreme cold or extreme hot temperatures (such as an oven or non-ambient environment such as carbon dioxide gas). Only use within the recommended ambient temperature range specified..

### 3. Layout



**Figure 2**

1. Sensor probe. The temperature and humidity sensors are located inside this pen tip. **DO NOT SUBMERSE IN LIQUID.**
2. LCD Display
3. MIN / MAX Button
4. Battery compartment door
5. Reset button
6. °F, °C Temperature Selection Button
7. ON / OFF Button
8. Pen Clasp / Serial Number
9. QC Sticker

#### 3.1 Display Layout

The LCD display shows the relative humidity in the left portion of the display, and the air temperature in the right portion of the display.

#### 3.2 ON / OFF

To turn on the display, press the **ON/OFF** button. To turn off the display, press the **ON/OFF** button again.

### 3.3 Min and Max Mode

Press the **MAX / MIN** button once to enter the Min and Max Mode. The maximum humidity and temperature values will be shown since the last reset. The **MAX** icon will be displayed at the top of the display. To reset the maximum to the current measured values, press and hold the **MAX / MIN** button for two seconds.

Press the **MAX / MIN** button again to enter the min mode. The minimum humidity and temperature values will be shown since the last reset. The **MIN** icon will be displayed at the top of the display. To reset the minimum to the current measured values, press and hold the **MAX / MIN** button for two seconds.

To exit the Min and Max Mode, press the **MAX / MIN** button again.

### 3.4 °F, °C Mode

Press the **°C/°F** button to switch between temperature (°C), and temperature (°F).

## 4. 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.  |
| 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. |
| Range      | Range is defined as the amount or extent a value can be measured.  |

## 5. Specifications

### 5.1 Measurement Specifications

The following table provides specifications for the measured parameters.

| Measurement | Range                        | Accuracy                              | Resolution  |
|-------------|------------------------------|---------------------------------------|-------------|
| Temperature | 32 to 122 °F<br>(0 to 50 °C) | ± 2.0 °F<br>(± 1.0 °C)                | 0.1 °F / °C |
| Humidity    | 20-95%                       | ± 3% from 30 to 90%<br>± 5% otherwise | 1%          |

### 5.2 Other Specifications and Features

- **Display:** Large 4-1/2 dual digital LCD display with backlight  
**Display Dimensions:** 2" x 0.5" (52 mm x 13 mm)
- **Sensor Type:** Relative humidity and temperature multi sensor module located at the pen tip
- **Sampling Rate:** 6 seconds
- **Operating Conditions:** 32 °F to 122°F (0 °C to 50°C); < 80% RH non-condensing
- **Storage Conditions:** 14 °F to 140 °F (-10 °C to 60°C); <80% RH non-condensing
- **Power:** One standard 1.5C AAA battery.
- **Dimensions:** 5.4 (W) x 0.9 (H) x 0.8 (D) or 138 (W) x 23 (H) x 20 (D) mm

## 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. Live Chat Support: [www.ambientweather.com/chat.html](http://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  |
|----------------------------------|---|
| Display console contrast is weak | Replace console batteries with a fresh set of batteries.                        |
| Display locks up                 | Press the reset button on the back of the display to return to factory settings |

## 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.

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.

This is not a personal safety device. Do not use for medical related purposes.

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.

## 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.

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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) applications and uses that this product was not intended.

This warranty covers only actual defects within the product itself, and does not cover claims based on misrepresentation by the seller or performance variations.

