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# Ambient Weather WS-GA11441305 13" Galileo Thermometer with 5 Glass Balls and Gold Tags



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## 1. Introduction

Thank you for your purchase of the Ambient Weather WS-GA11441305 13" Galileo Thermometer with 5 Glass Balls and Gold Tags. The following is a guide for preparation, care and operation of your traditional barometer and thermometer.

## 2. Galileo Thermometer

### 2.1 How the Galileo thermometer works

The Galileo thermometer consists of a sealed glass tube that is filled with water and several floating bubbles. The bubbles are glass spheres filled with a colored liquid mixture.

Attached to each bubble is a little metal tag that indicates a temperature. These metal tags are calibrated counterweights. The weight of each tag is slightly different from the others. Since the bubbles are all hand-blown glass, they aren't exactly the same size and shape.

The bubbles are calibrated by adding a certain amount of fluid to them so that they have the exact same density. So, after the weighted tags are attached to the bubbles, each differs very slightly in density (the ratio of mass to volume) from the other bubbles, and the density of all of them is very close to the density of the surrounding water.

As the temperature of the air outside the thermometer changes, so does the temperature of the water surrounding the bubbles. As the temperature of the water changes, it either expands or contracts, thereby changing its density. So, at any given density, some of the bubbles will float and others will sink. The bubble that sinks the most indicates the approximate current temperature.

### 2.2 How to read the Galileo thermometer

Make certain the weather station is installed on a flat surface. The lowest temperature bubble within the group at the top of the cylinder displays the current temperature.

- The lowest floating ball indicates the current temperature.
- If all of the balls float to the top, the temperature is below the lowest floating ball.
- If all of the balls sink, the temperature is above the highest ball.

### 2.3 Galileo thermometer warnings

- This product is not a toy; keep away from children
- Contains paraffin oil. In case of breakage and contact with liquid contents, wash hands with soap and water.
- Do not ingest liquid. In case of ingestion, wash mouth with water and call a physician or your local poison control center.
- Use protective gloves to clean up spilled liquid and broken glass.

## 3. 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, such as outdoor use.

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.