
Ambient Weather BA212 Wall Mounted Weather Station with Thermometer, Hygrometer, and Barometer - Cherry Finish User Manual



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1. Introduction

Thank you for your purchase of the Ambient Weather BA212 Wall Mounted Weather Station with Thermometer, Hygrometer, and Barometer - Cherry Finish. The following is a guide for preparation, care and operation of your traditional weather station.

2. Preparation

You will need food coloring to color the water in the storm glass. Any color is fine, based on personal taste.

3. Care and Cleaning

The solid wood case is finished with a clear, satin lacquer to protect and preserve the appearance. Although occasional use of a good furniture polish is acceptable, we recommend periodic cleaning with a very lightly water dampened soft cloth. Be sure to wipe the wood dry with a soft cloth before cleaning.

Avoid use of harsh household cleaners and coarse paper towels, which can damage the lacquer coating. Carefully remove the storm glass to clean.

Do not install the storm glass outside. The storm glass is intended for indoor use only.

4. Storm Glass Barometer

4.1 How the storm glass works

The concept that 'decreasing atmospheric pressure predicts stormy weather' was postulated by Lucien Vidie - and it is the basis for a weather prediction device called a storm glass or liquid barometer. It consists of a glass container with a sealed body, half filled with water.

A narrow spout connects to the body below the water level and rises above the water level, where it is open to the atmosphere. When the air pressure is lower than it was at the time the body was sealed, the water level in the spout will rise above the water level in the body and when the air pressure is higher, the water level in the spout will drop below the water level in the body.

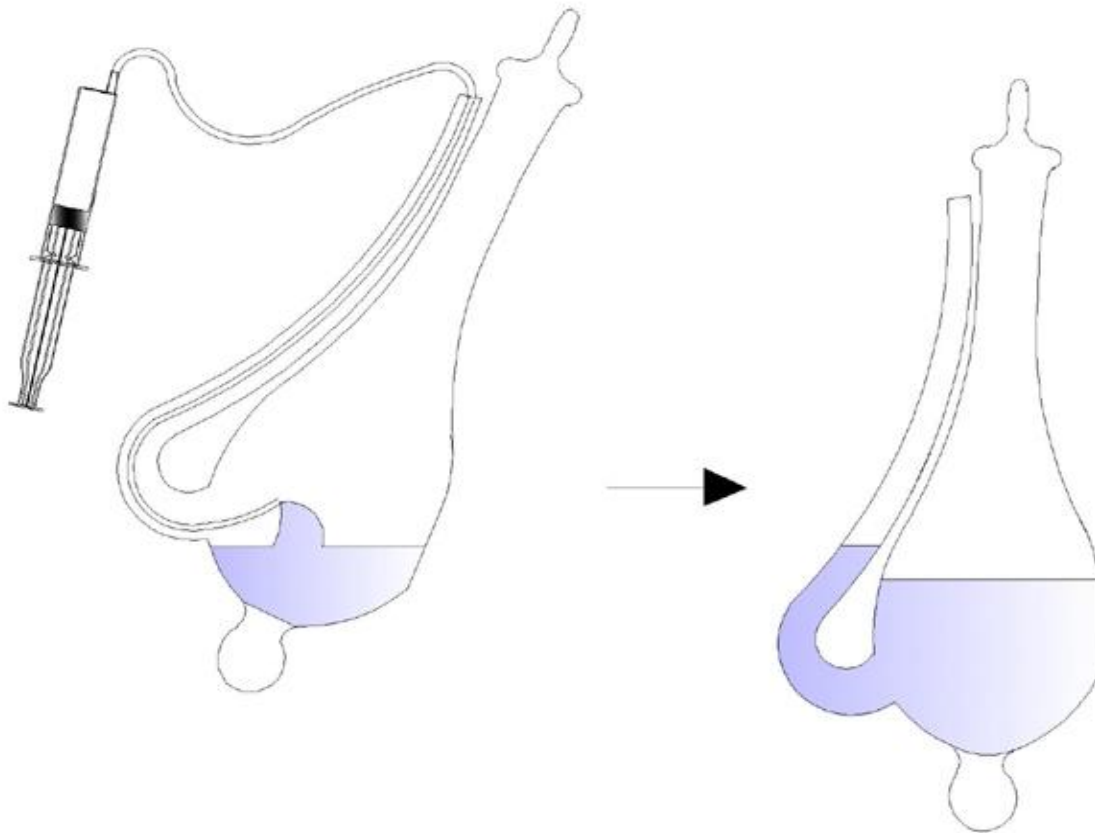


Figure 1

4.2 Filling the storm glass

1. Fill the syringe (included in the package) the colored water (use food coloring).
2. Attach the syringe to the inlet of plastic tube (included in the package).
3. Turn the storm glass **upside down**. This is to ensure the liquid does not flow out.
4. Gently push the tube into the storm glass through the inlet of the spout until the end of the tube has reached the bottom of the storm glasses bulb.
5. Slowly inject the liquid into the storm glass until half of the bulb is filled, as shown in Figure 1.
6. Turn the storm glass over to its proper position (**do not** remove the syringe).
7. Use more liquid to fill the glass tube until the colored liquid has reached half way up the spout.
8. You may have to add or remove liquid after observing the storm glass for several days and comparing to current and predicted weather conditions.
9. Note that evaporation is normal over time and the storm glass must be topped off occasionally.

Q: I Cannot Insert the Syringe tubing into the Storm Glass

A: It helps to freeze the syringe tubing to make it stiffer. Make sure the syringe is empty. When the syringe begins to thaw, insert the tubing into the storm glass.

4.3 Emptying the storm glass

1. Attach the syringe to the long plastic tube.

2. Put the storm glass in an upright position.
3. Insert the tube into the storm glass until it reaches the bottom of the bulb.
4. Slowly pump the liquid out until all of the liquid is gone.

5. Comfortmeter

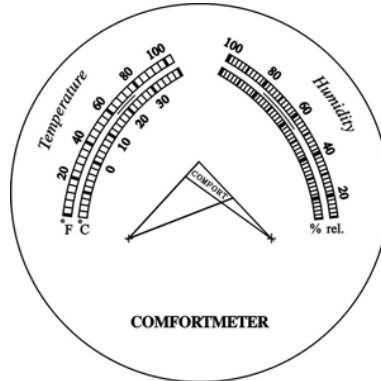


Figure 2

The calibration and positioning of the hands are designed to indicate perfect comfort conditions in room atmosphere: when both hands cross in a limited area of the dial, or the “COMFORT zone”.

5.1 How the hygrometer works

The hygrometer measures the indoor relative humidity. The sensor measures the air moisture by a sensitive mechanical coil spring that is bonded with a moisture absorbent material.

Hygrometers register the percentage of water vapor present in the air, compared to the maximum amount that can be present at a given temperature.

The coils in hygrometers respond slowly and while humidity levels change abruptly, it can take an hour or more for the meter to reach an accurate reading. Remember that the hygrometer is reading indoor humidity, and is vastly different than outdoor humidity, as reported by the National Weather Service.

It is not uncommon to have low humidity reading during cold weather when indoor air is heater. Air conditioning also removes moisture from the air. The optimum levels are 45% to 50% during heating and cooling seasons. Low humidity can cause health problems and can be hard on wood furnishings. High humidity can cause mold or mildew to grow.

5.2 Hygrometer Accuracy

Humidity measurement is among the more difficult problems in basic meteorology. Accuracy is difficult to achieve and are subject to drift, so need regular recalibration.

A further difficulty is that most hygrometers sense relative humidity rather than the absolute amount of water present, but relative humidity is a function of both temperature and absolute moisture content, so small temperature variations within the air in a test chamber will translate into relative humidity variations.

5.3 Dial Thermometer

The dial thermometer uses a bimetallic strip wrapped into a coil. One end of the coil is fixed to the housing of the device and the other drives an indicating needle. The principle behind a bimetallic strip thermometer relies on the fact that different metals expand at different rates as they warm up. By bonding two different metals together, the coil bends, causing the needle to move. Bimetallic thermometers are not as accurate as bulb (mercury or red spirit) thermometers. The dial thermometer should require no calibration.

6. AWN – Ambient Weather Network

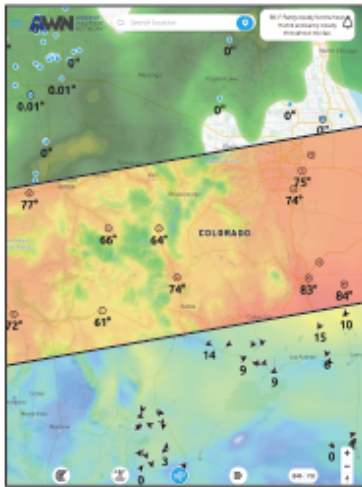


Enhanced by a powerful network of weather stations, the Ambient Weather Network provides the most accurate hyperlocal conditions for your neighborhood, activity, or business. Connect your compatible Ambient Weather Station to access your data remotely and join one of the fastest-growing weather communities. 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.



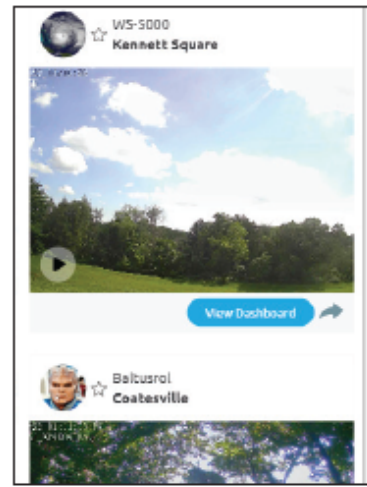
Customizable Forecast

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. 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.

8. California Proposition 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>