
Ambient Weather WM-3 Handheld Wind Meter with Temperature and Humidity User Manual



Table of Contents

1. Introduction.....	2
1.1 Parts List.....	2
2. Warnings and Cautions	2
3. Getting Started	2
4. General Description	3
5. Display	4
6. Operation.....	4
6.1 Powering On and Off	4
6.2 Selecting Wind Speed and Temperature Units of Measure	4
6.3 Backlight Feature	5
6.4 Low Battery Indicator	5
7. Glossary of Terms	5
8. Specifications.....	6
8.1 General Specifications.....	6
8.2 Measurement Specifications.....	6
9. Troubleshooting Guide.....	6
10. Accessories.....	7
11. Liability Disclaimer.....	7
12. Warranty Information	7
Battery Recycle Statement	8

1. Introduction

Thank you for your purchase of the Ambient Weather WM-3 Wind Meter with Wind Speed, Temperature and Wind Chill. 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/wm3>

The WM-3 wind meter features:

- Wind speed in mph, Km/h, m/s, ft/min or Knots
- Beaufort wind scale bar graph
- Wind Speed min/max/average selection
- “Open Air” temperature and humidity sensors for fast response
- Temperature display in degrees Fahrenheit or Celsius
- LED backlight
- Wind Speed HOLD feature
- Low battery display
- Lanyard included
- Soft case included
- Auto power off with override feature
- CE Certified & RoHS Compliant

1.1 Parts List

QTY	Item
1	Wind Meter
1	CR2032 3 Volt Lithium Battery
1	Lanyard
1	Soft Carrying Case
1	User Manual

2. Warnings and Cautions



Warnings:

- This meter is accurate at low and mid-range air speeds. Consistent use at very high speeds (example, from the window of a fast moving car) will damage the impeller’s bearing and reduce accuracy.
- This meter is not a personal safety device

3. Getting Started

1. Open the battery cover, as shown in Figure 1. Turn counter clockwise to open.
2. Inset the included 3V CR2032 lithium cell battery, with the (+) terminal up.
3. Replace the cover by turning clockwise. All of the LED segments will briefly light up.

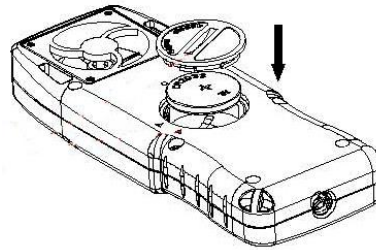


Figure 1

4. General Description

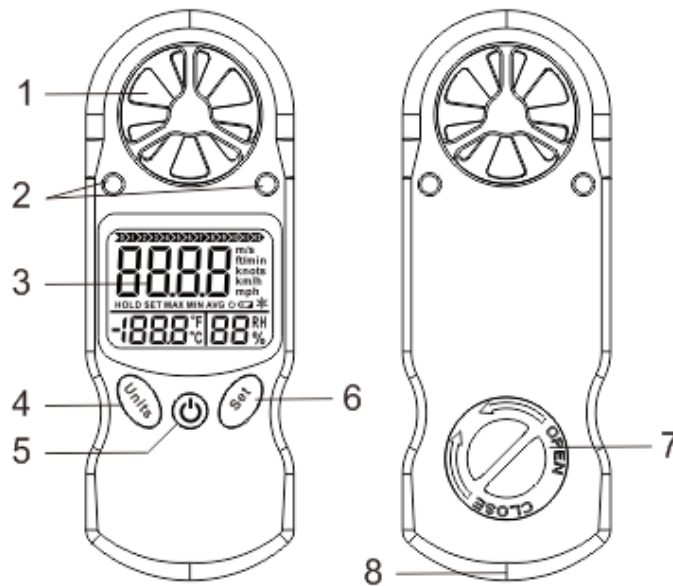


Figure 2

No	Description
1	Vane Impeller (wind speed)
2	Temperature and humidity sensors
3	LCD with backlight
4	Wind Speed Units and temperature selection button
5	Power button
6	Set button
7	Battery cover
8	Lanyard attachment point

5. Display

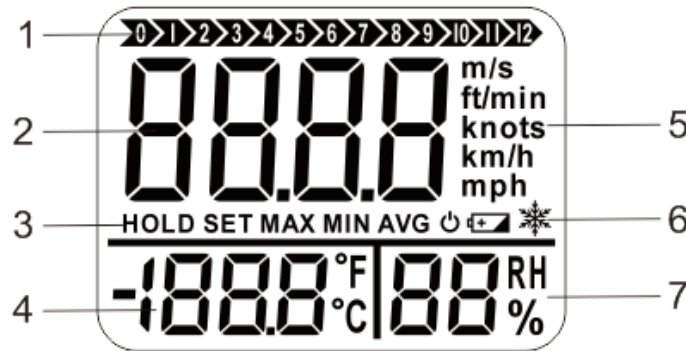








Figure 3


No	Description
1	Beaufort Scale
2	Primary Display for Air Velocity (wind speed)
3	HOLD: Displayed when meter is on hold mode MAX: Maximum wind speed recorded while in this mode MIN: Minimum wind speed recorded while in this mode AVG: Average wind speed recorded while in this mode
4	Temperature Display (°C/°F switchable)
5	Air Velocity measurement options: m/s: Meters per Second ft/min: Feet per Minute knots: Knots km/h: Kilometers per Hour mph: Miles per Hour
6	 Auto Power Off Function is overridden  Low battery indicator  Temperature is below 32 °F (0 °C)
7	Relative Humidity Display (%RH)

6. Operation

6.1 Powering On and Off

To power ON the meter, press the  button. To save power, the meter will power off automatically after 10 minutes.

To override the Auto Power Off, with the meter powered off, hold down the **Set** button and then press the  button at the same time. The power icon  will remain on the display until the batteries run down or the unit is turned off.


To power OFF the meter, press and hold the  button.

6.2 Selecting Wind Speed and Temperature Units of Measure

Press the **Units** button to change the wind speed units of measure.

Press and Hold the **Units** button to change the temperature units of measure.

6.3 Backlight Feature

The backlight will automatically turn off after 10 seconds of inactivity. To override this feature, hold down the **Units** button and then press the  button at the same time. The backlight will stay on.

6.4 Low Battery Indicator

If the low battery indicator is present, or there is no LCD display, it is time to change the battery.

7. 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.
Beaufort Scale	The Beaufort Scale is an empirical measure for describing wind speed based mainly on observed sea conditions (on land it is categorized by the physical effects it has on vegetation and structures). Its full name is the Beaufort Wind Force Scale.
Range	Range is defined as the amount or extent a value can be measured.

The Beaufort Scale is displayed on the top and left side of the display, and is defined as follows:

No	Description	m/s	kts	mph	km/h	ft/min
0	Calm	0-0.2	0-1	0-1	0-1	0-58
1	Light air	0.3-1.5	1-3	1-3	1-5	59-314
2	Light breeze	1.6-3.3	4-6	4-7	6-11	315-668
3	Gentle breeze	3.4-5.4	7-10	8-12	12-19	669-1082
4	Moderate breeze	5.5-7.9	11-16	13-18	20-28	1083-1574
5	Fresh breeze	8.0-10.7	17-21	19-24	29-38	1575-2125
6	Strong breeze	10.8-13.8	22-27	25-31	39-49	2126-2735
7	Near gale	13.9-17.1	28-33	32-38	50-61	2736-3385
8	Gale	17.2-20.7	34-40	39-46	62-74	3386-4093
9	Strong gale	20.8-24.4	41-47	47-54	75-88	4094-4822
10	Storm	24.5-28.4	48-55	55-63	89-102	4823-5609
11	Violent storm	28.5-32.6	56-63	64-72	103-117	5610-6417
12	Hurricane force	> 32.6	>63	>72	>117	>6417

8. Specifications

8.1 General Specifications

- Wind Speed Update Interval: 0.5 seconds
- Temperature Update Interval: 0.1 seconds
- Humidity Update Interval: 1 second
- Power Source: 1 x 3V lithium cell (CR2032)
- Battery Life: About 1 year
- Dimensions (L x W x H): 1.6" x 0.75" x 4.5" (40 x 19 x 115 mm)

8.2 Measurement Specifications

The following table provides specifications for the measured parameters.

Wind speed range:				
Unit	Range	Resolution	Threshold	Accuracy
M/s	0 ~ 30	0.1	0.1	±5%
Ft/min	0 ~ 5860	19	39	
Knots	0 ~ 55	0.2	0.1	
Km/hr	0 ~ 55	0.2	0.3	
Mph	0 ~ 65	0.2	0.2	

Temperature and Humidity range:			
Unit	Range	Resolution	Accuracy
°C	-10 ~ 50	0.1	±1
°F	14 ~ 122	0.1	±2
%RH	20 ~ 90%	1	±5%

Other specifications:	
Battery	CR2032 2.0V
Operating temperature	-10 ~ 50°C (14 ~ 122°F)
Operating humidity	≤ 90%
Current consumption	About 2.5mA
Weight	60g

9. Troubleshooting Guide

To download the latest manual and additional troubleshooting tips, please visit:

<http://ambientweather.wikispaces.com/wm3>

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

1. Email Support: support@ambientweather.com
2. Technical Support: 480-346-3398 (M-F 8am to 4pm Arizona Time)

Problem	Solution
Impeller appears imbalanced.	It is normal for the impeller to oscillate as it comes to a stop, and it is not imbalanced. The unit contains a very small magnet that responds to the earth's magnetic fields. This does not affect the accuracy of the wind speed

Problem	Solution
	readings and only appears when breaking or accelerating.
Vane is noisy at high speed.	This is normal for the vane to vibrate at high speed. Do not operate above 67 mph. Above 67 mph, the unit will display ---.
Display is dim or disappears.	The LCD display will not operate below approximately 14 °F. Use the warmth of your body or environment for use in cold weather conditions, or Battery is dead. Replace the battery.

10. Accessories

The following software and hardware accessories are available for this weather station at www.AmbientWeather.com.

Accessory	Description
Ambient Outdoors CR2032 3 Volt Lithium Button Cell Battery	Standard CR2032 3 Volt Lithium Battery (1 battery)

11. 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.

12. 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 hobbyist use (5) applications and uses that this product was not intended and (6) 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.



Battery Recycle Statement



Recycle Rechargeable Batteries

Recycle your old rechargeable batteries at one of the many collection sites in the U.S. and Canada. To find the site nearest you, visit www.call2recycle.org or call toll-free 1-877-2-RECYCLE.