Ambient Weather
HP-816A User Manual

1. Introduction

Thank you for your purchase of the Ambient Weather HOLDPEAK HP-816A wind meter. 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/hp816a

2. Functions

The HP-816A wind meter measures and displays the following parameters:

- Wind speed (current, maximum and average)
- Temperature
- Wind Chill Indicator

The HP-816A also features:

- Low battery warning
- LCD back light
- Auto and manual power off

3. Operation

3.1 Power On

To turn on the unit, press and hold the **MODE** button for 2 seconds. The wind speed and temperature will be displayed and the back light will turn on.

3.2 Wind Speed Units

Press and hold the **MODE** button for 3 seconds. The current units will flash. Press the **SET** button to switch between the units mph, m/s, km/h, ft/min and knots. Press the **MODE** button to confirm.

3.3 Wind Speed Mode (current, maximum and average)

Press and hold the **MODE** button for 3 seconds. Press the **SET** button to advance past the wind speed units as described in the previous section until **Cu** (current wind speed) is displayed. Press the **SET** button to switch between the modes **Cu** (current wind speed), **MAX** (maximum wind speed since power up) and **AVG** (average wind speed).

3.4 Wind Chill

When the temperature is less than 32 °F (0 °C), the **WIND CHILL** icon is displayed (the unit does not display the actual wind chill value).

3.5 Temperature Units

Press the **°C/°F** button to switch between °C and °F units.

3.6 LCD Backlight

To turn on the LCD backlight, press any key, and the backlight will stay on for 12 seconds.

3.7 Power Off

To turn off the unit, press and hold the **SET** button for 2 seconds.

4. Maintenance

4.1 Replacing the Battery

When your display becomes dim or disappears, replace the battery. With your finger, open the battery compartment by turning the battery cover to the left. Use only new CR2032 coin cell batteries (available where watch batteries are sold or AmbientWeather.com). Wipe the battery clean of any fingerprints and insert the positive (+) pole into the battery cover cradle. Replace and turn the battery cover to the right until firmly in place.

4.2 Installing the Lanyard

Disconnect the lanyard from the cord pop lock. Feed the cord end through the opening in the bottom of the unit and through the cord. Pull tight. Connect the lanyard.

5. Specifications

Wind Speed

Unit	Range	Resolution	Threshold	Accuracy
m/s (meters/second)	0-30	0.1	0.1	±5%
ft/min (feet/minute)	0-5860	19	39	
knots	0-55	0.2	0.1	
km/hr (kilometers/hour)	0-90	0.3	0.3	
mph	0-65	0.2	0.2	

Temperature

Unit	Range	Resolution	Accuracy
°C	-10 to 45 °C	0.2 °C	± 2 °C
°F	14 to 113 °F	0.35 °F	±3.6 °F

Other Specifications

Battery	CR2032 3.0V
Thermometer	NTC Thermometer
Operating Temperature	-10 to 45 °C (14 to 113 °F)
Operating Humidity	≤90% RH
Storage Temperature	-40 to 60 °C (-40 to 140 °F)
Current consumption	3mA
Battery life (typical capacity is 220 mAh)	73 hours continuous operation
Weight	53 grams (with lanyard)

6. 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.

Term	Definition		
Beaufort Scale	An empirical measure for describing wind speed based mainly on observed sea conditions, defined as follows:		
	Force	**Description**	**Knots**
	0	Calm	0-3
	1	Light Air	1-3
	2	Light Breeze	4-6
	3	Gentle Breeze	7-10
	4	Moderate Breeze	11-16
	5	Fresh Breeze	17-21
	6	Strong Breeze	22-27
	7	Near Gale	28-33
	8	Gale	34-40
	9	Strong Gale	41-47
	10	Storm	48-55
	11	Violent Storm	56-63
	12+	Hurricane	64+
Range	Range is defined as the amount or extent a value can be measured.		
Resolution	Resolution is defined as the number of significant digits (decimal places) to which a value is being reliably measured.		
Wind Speed, Average	Average wind speed is the current wind speed averaged over the last 8 sample periods (or a four second running average).		
Wind Speed, Current	Current wind speed is the measured wind speed, which is sampled every 0.5 seconds.		

7. Troubleshooting Guide

If your question is not answered here, you can contact us as follows:
1. Email Support: support@ambientweather.com
2. Live Chat Support: 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
Displays wind speed when there is no wind.	The unit contains a magnet and is susceptible to electro-magnetic fields. Move the wind meter away from computers and electric motors.
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 readings and only appears when breaking or accelerating.
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.
Vane is noisy at high speed.	This is normal for the vane to vibrate at high speed. Do not operate above 65 mph. Above 65 mph, the unit will display ---.
Unit does not measure Wind Chill.	The unit does not provide the actual wind chill value, but simply provides the WIND CHILL icon when temperature is below freezing.

8. Accessories

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

Accessory	Image	Description
Silva Polaris Handheld Compass for Anemometer Calibration		Handheld compass for wind direction.
Ambient Outdoors CR2032 3 Volt Lithium Button Cell Battery		Standard CR2032 3 Volt Lithium Battery (1 battery)

9 Liability Disclaimer

- 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 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.
- The product is not waterproof. Do not submerse in water.
- Do not operate the unit above 65 mph (the maximum range).
- 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. THIS PRODUCT.

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.

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.