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## BTMETER BT846A

# BTMETER BT-846A Pro HVAC Anemometer Instruction Manual

Model: BT-846A

## 1. PRODUCT OVERVIEW

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The BTMETER BT-846A is a professional HVAC anemometer designed for accurate measurement of wind velocity, air flow (CFM/CMM), and temperature. It features a separated, extendable wind sensor for flexible measurements and a large backlit LCD display for clear readings. This device is suitable for HVAC troubleshooting, air flow balancing, and various industrial or educational applications requiring precise air movement data.



Figure 1: BTMETER BT-846A Anemometer with its detachable vane sensor.

## 2. PACKAGE CONTENTS

Before use, please verify that all items are present and in good condition. If any items are missing or damaged, contact customer support.

- 1 x BTMETER BT-846A Anemometer Main Unit
- 1 x Detachable Vane Sensor
- 1 x USB Cable (for sensor connection)
- 1 x 9V Battery
- 1 x Small Screwdriver
- 1 x Instruction Manual
- 1 x Carrying Storage Case

# Multiple Design

Sample operation with humanize design



9V battery included



Tripod mounting hole  
(Back of the wand)



79in. Extensible  
(USB Cable)



Telescopic rod



Figure 2: Contents of the BTMETER BT-846A package.

## 3. SETUP

### 3.1 Battery Installation

1. Locate the battery compartment cover on the back of the main unit.
2. Use the provided small screwdriver to unscrew the two screws securing the battery cover.
3. Remove the battery cover.
4. Connect the included 9V battery to the battery clips, ensuring correct polarity.
5. Carefully place the battery into the compartment, ensuring the wires are not pinched.
6. Replace the battery cover and secure it with the two screws.



## Key Function

<b>1.</b>	1.69" x2.36" LCD Screen
<b>2.</b>	MAX / MIN Value
<b>3.</b>	Wind Velocity/ Wind Flow
<b>4.</b>	Data Hold
<b>5.</b>	m/s, Ft/min, Knots,Km/h,Mph
<b>6.</b>	°C / F Switch
<b>7.</b>	Record 600 readings
<b>8.</b>	Set the Sampling Area
<b>9.</b>	Clear the recorded readings
<b>10.</b>	Backlight ON/OFF
<b>11.</b>	2/3 max / average wind flow
<b>12.</b>	Beaufort scale

Figure 3: Rear view of the anemometer, showing the battery compartment and tripod mounting hole.

### 3.2 Connecting the Vane Sensor

1. Locate the USB port on the side of the main unit, protected by a rubber cover.
2. Carefully open the rubber cover.
3. Connect the USB plug of the vane sensor cable into the USB port of the main unit.
4. Ensure a secure connection.



Figure 4: Connecting the vane sensor to the main unit via the USB cable.

## 4. OPERATING INSTRUCTIONS

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### 4.1 Power On/Off

Press and hold the **POWER** button (labeled with a circle and vertical line) to turn the device on or off. The device will automatically power off after 5 minutes of inactivity to conserve battery life.

### 4.2 Measuring Wind Velocity and Temperature

1. Ensure the vane sensor is connected.
2. Point the vane sensor into the air flow you wish to measure. The display will show real-time wind velocity and temperature readings.
3. To change wind velocity units (m/s, km/h, ft/min, knots, mph), press the **UNIT** button.
4. To switch temperature units between Celsius (°C) and Fahrenheit (°F), press the **°C/°F** button.

Unit	Resolution	Wind speed range	Precision
m / s	0.001	0.0~45.0	±3%+0.1
Ft / min	0.01 / 0.1 / 1	0.0~5500	±3%+20
Knots	0.001 / 0.01	0.0~88.0	±3%+0.2
Km / h	0.001	0.0~140.0	±3%+0.4
Mph	0.001 / 0.01	0.0~100	±3%+0.2



## 0.001 HIGH ACCURACY

Accurately measures wind speed wind temp, wind flow



Figure 5: Measuring wind velocity and temperature with the anemometer.

### 4.3 Measuring Air Flow (CFM/CMM)

To measure air flow, you need to input the cross-sectional area of the duct or vent.

1. Press the **VEL/FLOW** button to enter CFM/CMM mode.
2. Press the **UNIT** button to select between FT<sup>2</sup> (for CFM) or M<sup>2</sup> (for CMM).
3. Press the **SAMPLE AREA** button to input the cross-sectional area. Use the arrow keys to adjust the value and **OPTION ENTER** to confirm.
4. Once the area is set, the device will display the air volume in CFM or CMM.

Your browser does not support the video tag.

Video 1: Demonstration of how to measure CFM on the BTMETER BT-846A.

### 4.4 Data Hold, Max/Min/Avg Readings

- Press the **HOLD** button to freeze the current reading on the display. Press again to release.
- Press the **MAX/MIN** button to cycle through Maximum, Minimum, and Average wind velocity/flow readings.

## 4.5 Backlight

Press the **LIGHT** button to turn the display backlight on or off. The backlight will automatically turn off after a short period to save battery life.

## 4.6 Data Recording and PC Connection

The device can record up to 600 groups of wind data. To utilize this feature and connect to a PC for real-time measurement or data download, use the provided USB cable and software (available via CD or download link).

- Press **REC** to start/stop data recording.
- Press **READ** to view recorded data.
- Connect the main unit to your PC using the USB cable. Install the provided software to access recorded data and real-time measurements.

## 5. MAINTENANCE

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- **Cleaning:** Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the anemometer in its carrying case in a dry, cool environment when not in use for extended periods. Remove the battery if storing for a long time to prevent leakage.
- **Sensor Replacement:** The separated wind speed sensor can be replaced if it becomes damaged, extending the service life of the main unit. Contact customer support for replacement parts.

## 6. TROUBLESHOOTING

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- **Device does not power on:** Check if the 9V battery is correctly installed and has sufficient charge. Replace if necessary.
- **Inaccurate readings:** Ensure the vane sensor is clean and free from obstructions. Verify that the correct measurement units and cross-sectional area (for CFM/CMM) are selected.
- **Display issues:** If the display is blank or shows erratic readings, try replacing the battery. Ensure the sensor cable is securely connected.
- **Backlight turns off too quickly:** This is a design feature to conserve battery. Press the **LIGHT** button to reactivate the backlight.
- **PC connection issues:** Ensure the USB cable is properly connected to both the anemometer and the computer. Verify that the software is correctly installed.

## 7. SPECIFICATIONS

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Feature	Specification
Brand	BTMETER
Model Number	BT-846A
Wind Velocity Range	0.001~100 mph (0.3~45 m/s)
Wind Velocity Accuracy	±3% ±0.2 reading
Wind Velocity Resolution	0.001 m/s

Feature	Specification
Wind Flow Range (CFM)	0-999900 ft <sup>3</sup> /min
Wind Flow Range (CMM)	0-999900 m <sup>3</sup> /min
Air Flow Area	0.001-9999 ft <sup>2</sup>
Temperature Range	32.0-113.0 °F (0-45 °C)
Temperature Accuracy	±1 °C (±1.8 °F)
Temperature Resolution	0.1 °C/°F
Data Record Capacity	600 groups
Power Source	1 x 9V Battery (included)
Auto Power Off	After 5 minutes of inactivity
Dimensions (L x W x H)	3.4 x 1.5 x 6.5 inches
Item Weight	1.65 pounds
Material	Acrylonitrile Butadiene Styrene (ABS)

## 8. WARRANTY AND SUPPORT

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The BTMETER BT-846A Anemometer comes with a **12-month warranty** for any quality problems. For technical support, warranty claims, or replacement parts, please contact BTMETER customer service through their official website or the retailer where the product was purchased.