

DIGITAL ANEMOMETER

User Manual



English and Deutsche
Language



INTRODUCTION

Thank you for purchasing our Air Flow Anemometer! Carefully unpack your kit and ensure that you have the following items. In case that any item is missing or if you find any mismatch or damage, promptly contact your local dealer

• Digital Anemometer	1 pc
• Auxiliary Fan	1 pc
• USB Computer connecting cable	1 pc
• 1.5V AAA alkaline battery	4 pcs
• English Instruction Manual	1 pc
• Packing box	1 pc

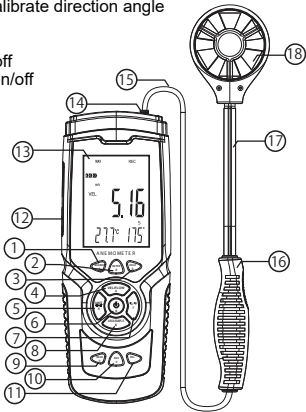
This digital multifunctional anemometer is a professional instrument for measuring the wind speed, temperature, and humidity. It is designed for wind speed measurement in various environments, such as wind speed measurement engineering, quality control, and health control. It is applied in wind speed measurement for various occasions like factories, schools, offices, transportation routes, families, etc.

FUNCTIONS

- Measure wind speed, temperature and humidity
- Measure air volume, temperature and humidity
- Measure wind speed and maximum/minimum wind flow
- 2/3 wind flow value/average value
- Wind speed/flow units and temperature unit selection
- Measure wind direction angle
- Real-time measurement when connected to computer via USB
- Backlight/data holding function
- Low battery indication
- Automatic shutdown setting (automatic shutdown after 5min of no button operation)

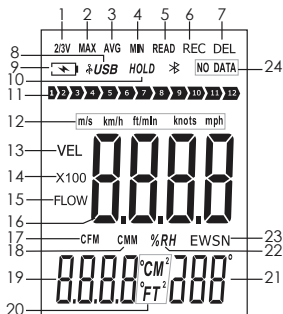
PARTS AND LCD DISPLAY

1. MAX / AVG / MIN
2. Enter/confirm, 2/3 VMAX wind flow, long press: calibrate direction angle
3. Data holding
4. Wind velocity/wind flow
5. Short press: switch unit, Long press: keytone on/off
6. Short press: backlight on/off, Long press: power on/off
7. Short press: set temperature unit, Long press: display temperature/ humidity
8. Area setting, record time interval, read recording number
9. Enter read / save / record interface
10. Save data one time / enter data recording interface
11. Save piece of datum/enter into data recording interface
12. USB interface
13. LCD display
14. Connector
15. Connection Line
16. Slip-resistant handle
17. Retractable drag rod
18. Six wind wheels



Note: In the setting interface for area, time interval of recording and reading serial number of record, buttons can be used as number button, you can complete the input by long pressing ENTER button to confirm the set value. During input, You can also press "SAMPLE/AREA" button to cancel the current setting operation.

1. 2/3 of max wind flow
2. Maximum value
3. Average wind velocity/ wind flow
4. Minimum value
5. Read recorded data
6. Record data
7. Delete recorded data
8. USB connection
9. Low battery indicator
10. Data holding
11. Wind level
12. Wind velocity unit: m/s, km/h, ft/min, knots, mph
13. Wind velocity
14. Wind flow multiplier
15. Wind flow measurement
16. Wind velocity/flow value
17. Wind flow unit (cubic feet/minute)
18. Wind flow unit (cubic meter/minute)
19. Wind temperature value/vent area value
20. °CM² - duct area in square meter in flow function, °C - wind temperature in metric
- °FT² - duct area in square meter in flow function, °F - wind temperature in metric
21. Wind direction angle
22. Humidity unit
23. Wind direction: **E (East), W (West), S (South), N (North), S (South East), EN (North East), WS (South West), WN (North West)**
24. No recorded data



SPECIFICATIONS

WIND VELOCITY RANGE

Unit	Measurement Range	Resolution	Lowest Point of Start Value	Accuracy
m/s	0 ~ 45	0.01	0.3	±3% ±0.1
ft/min	0 ~ 8800	0.01/0.1/1	60	±3% ±20
knots	0 ~ 88	0.01	0.6	±3% ±0.2
km/h	0 ~ 140	0.01	1	±3% ±0.4
mph	0 ~ 100	0.01	0.7	±% ±0.2

WIND FLOW RANGE

CFM: 0 ~ 999900 ft³/min

CMM: 0 ~ 999900m³/min

Unit	Measurement Range	Resolution	Area
CFM(ft ³ /min)	0 ~ 999900	0.001 ~ 100	0.001 ~ 9999ft ²
CMM(m ³ /min)	0 ~ 999900	0.001 ~ 100	0.001 ~ 9999m ²

UNIT CONVERSION

	m/s	Ft/min	Knots	Km/h	Mph
1m/s	1	196.87	1.944	3.60	2.24
1ft/min	0.00508	1	0.00987	0.01829	0.01138
1knots	0.5144	101.27	1	1.8519	1.1523
1km/h	0.2778	54.69	0.54	1	0.6222
1mph	0.4464	87.89	0.8679	1.6071	1

WIND TEMPERATURE

Temperature Range

Unit	Scale	Resolution	Accuracy
°C	0 ~ 45	0.1	±1.0°C
°F	32 ~ 113	0.18	±1.8°F

Humidity Range

Unit	MIN/MAX	Resolution	Accuracy	Test Conditions
%RH	10 ~ 90	0.1	±5%	90% RH (non-condensing)

OPERATING CURRENT

Unit	Description	Min/Max	TYP	Test Conditions
mA	Operating Current1	15~20	18	The backlight is off
mA	Operating Current2	20~25	23	Backlight is on
V	Low battery indicating	3.5~4.5	4	
uA	Stand by current	0~8	5	

Operating Conditions:

Temperature: 0 ~ 50°C (32 ~ 122°F)

Humidity: 40 ~ 80%RH

Power supply: 4 x AAA 1.5V Alkaline batteries

Dimension

Meter: 73 x 38 x 194 mm

Vane: 74 x 35 x 2100 mm (after lengthening)

Product Weight: 212.9g (without battery)

Storage Conditions:

Temperature: -40 ~ 60°C (-40 ~ 140°F)

Humidity: ≤ 80%RH

OPERATION MANUAL

MEASUREMENT OF WIND SPEED, TEMPERATURE AND HUMIDITY

• Before measurement: make sure to insert the connector plug of fan auxiliary unit with ↓ mark downwards into host socket. If the direction is wrong, the plug may be damaged.

• Press ON button to turn on the instrument. After 1s of LCD full screen, wind speed and wind temperature are displayed, and VEL shows up on the screen.

• Press the "UNIT" key, the wind flow unit changes among m/s, km/h, ft/min, knots, mph, (default unit is m/s);

• Press the "°C/°F", the temperature changes between "°C/°F" mode (default is °C).

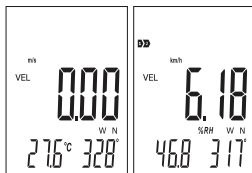
• Long press °C/°F button to switch to display of humidity.

• Hold the Anemometer with your hand, place the vane in the air flow with the air direction matching the direction of the arrows printed on the inner walls of the vane (please do not extrude the fan leaf, which may cause the inaccuracy measurement).

a. Wait for 2 seconds with the unit is ready for use.

b. Place the vane in the same direction of the wind to capture the accurate data, temperature within 20°C

c. The dynamic indicator bar of wind speed will increase gradually as wind speed increases.



WIND VOLUME MEASUREMENT

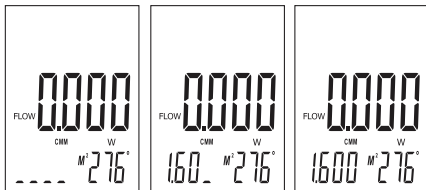
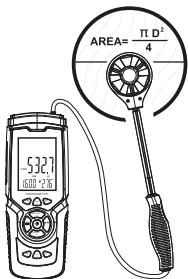
• Press VEL/FLOW button to switch to FLOW mode and display wind volume.

• Press UNIT button to switch wind volume unit, and area unit will also change with wind volume unit as CMM---M², CFM---FT².

• Press AREA button to enter into area setting interface. ___ is displayed at the bottom left of the screen, and the spot for input flashes. At this time, the area of the tuyere can be input. You can complete the input by pressing ENTER button; for example, input 1.2, then long press ENTER

button and the area value is set as 1.2. In the process of inputting area value, long press AREA button to cancel the current area setting.

• Place the vane in the duct area to measure current wind flow value right away. As shown in following figure:



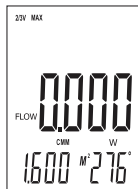
- Wind Flow Calculate Formula : Flow =velocity *(Free Area)
- Testing Wind velocity : The bar icon (showing on the middle of LCD) changes accordingly with wind Flow/Velocity.

Note:

- failing to enter the duct area leads to failure of measurement of the wind flow.
- If wind flow is larger than 9999, the LCD screen will show x10 or x100, indicating the measured value multiplied by x10 or x100.

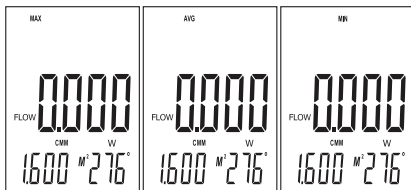
WIND VOLUME 2/3V MAX VALUE MEASUREMENT

- In wind volume measurement interface, short press ENTER button to display 2/3 times of maximum wind volume value. At the same time, the screen will display 2/3VMAX icon, short press ENTER to exit.
- Calculation formula of 2/3MAX wind volume:
FLOW = 2/3 x MAX wind speed x tuyere area.



MEASUREMENT OF MAXIMUM/AVERAGE/MINIMUM VALUE

- When measuring wind speed and volume, press the MAX/AVG/ MIN button to measure the maximum, average and minimum values of wind speed and volume. At the same time, the screen will display MAX, AVG and MIN.
- MAX: The displayed wind speed or volume value is the maximum value measured since the wind speed or volume value is set as MAX.
- AVG: The displayed wind speed or volume value is the average value in the last 10s.
- MIN: The displayed wind speed or volume value is the minimum value measured since the wind speed or volume value is set as MIN.

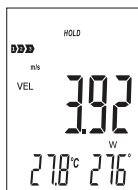
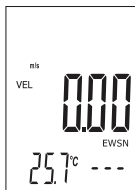


MEASUREMENT AND CALIBRATION OF WIND DIRECTION ANGLE

- A three-axis magnetic field sensor is installed under wind blade of the instrument to measure wind direction angle. When measuring wind direction, keep the handle vertical, and direct wind blade at the measured wind according to the wind direction arrow, and the corresponding wind direction and angle will be displayed at the bottom right of the screen. Wind directions are as follows: E—East wind, W—West Wind, S—South Wind, N—North Wind, ES—Southeast Wind, EN—Northeast Wind, WS—Southwest Wind, WN--Northwest Wind.

- Due to different magnetic field distribution in different regions, wind direction angle value can be self-calibrated when you feel reading error is big. Long press ENTER button to enter calibration interface of wind direction and "EWSN" and "--" flashes at the lower right side.

Then make the handle vertical, slowly rotating the handle for two rounds (about 8 seconds per round), then press ENTER button to save and complete calibration.



DATA HOLDING

- During measurement of wind speed and volume, press "HOLD" button to lock the data, and then press "HOLD" button to release.

DATA STORAGE (TB:960 DATA)

- Record single datum:

- a. Under "VEL" state, press the "SAMPLE" button, input "0", and press "ENTER" button to confirm.

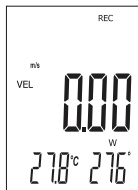
- b. Each time you press "REC" button, the data can be stored at a time. If data is full, the screen will display "FULL".

- Continuously record data:

- a. Under "VEL" state, press "SAMPLE" button, input recording interval (0~9999 seconds), and long press "ENTER" button to confirm.

- b. Press "REC" button to enter into recording interface and start recording a sum of data continuously at the set recording interval. At this time, each time "ENTER" button is pressed, the recording interval and measured data will be displayed at the lower left of the screen; if the data is full, the screen will display "FULL" and then return to the normal measurement interface.

- c. Long press "REC" button to exit recording interface and stop recording; "REC" is no longer displayed.



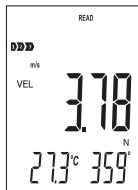
DATA READING

- Under normal measurement interface, press "READ" button to enter reading interface of recorded data. The bottom left side will display the serial number of recorded data first and then measured data. Every time you press "ENTER" button, the bottom left of the screen will display the serial number first and then the recorded value.

- Press "READ" button to view the record data of next serial number.

- Press "SAMPLE" button to input the serial number of recorded data to be viewed. After finishing input, long press "ENTER" to confirm, when the input serial number is bigger than the serial number of stored record, the recorded data with the largest serial number will be displayed.

- Long press "READ" button to exit data reading interface. The icon "READ" will no longer be displayed.



DATA CLEARING

After pressing "DEL" button for 2s, "DEL" will be displayed on the upper right corner of the screen. When "CLR" is displayed on the center of the screen, the data of the instrument will be cleared.

AUTOMATIC SHUTDOWN

- The instrument has automatic shutdown function, which will automatically shut down after 5 minutes of no button operation.

- No automatic shutdown can also be set. Long press "Enter" button to start, the screen displays "no", and the instrument will not automatically shut down, so you need to manually turn it down. No automatic shutdown is only for the current time, and the instrument will return to automatic shutdown in the next time.



HOST AND PC CONNECTION

SOFTWARE INSTALLATION INSTRUCTION

This product software is installed in English by default. After installation, you can switch among: **English, Simplified Chinese, Traditional Chinese.**

1. Computer configuration requirements:

- CPU: Pentium III 600MHz or above.
- A freely available USB connector.
- The screen resolution of screen should be at least 800 x 600 (or higher) with true color;
- At least 8MB of available memory space.
- At least 50MB of free disk space.
- Operating system: XP, Win7, Win10.

2. Install data acquisition software: enter the website www.downloadsupport.tech in the browser, Click the "Product Catalog >>" button to enter the "download center" page, as shown in figure 2. Find the software installation package "setup_Anemometer.Zip". Click the download button to unzip the "zip package" directly after downloading. Double-click "setup_Anemometer.exe" icon to enter into program installation interface; choose between "Chinese or English" according to software installation prompt; click "OK" to the next step, as shown in Figure 3 below.

3. Follow installation prompt : Click after prompt "Next" for 2 consecutive until "Create a desktop shortcut" and "Create a Quick Launch shortcut" appear on the screen. Tick and click "Next", choose "Install" in the next prompt (do not click "Cancel!"); wait for the progress bar to complete; click "Finish" directly to complete the installation, as shown in Figure 4 below.

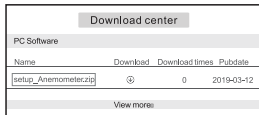


Figure 2

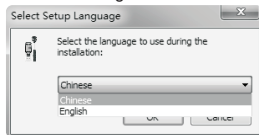


Figure 3



Remarks:

Launch shortcut on user's desktop: right click "Anemometer" in Start\Programs\Anemometer, and send shortcut icon to desktop.

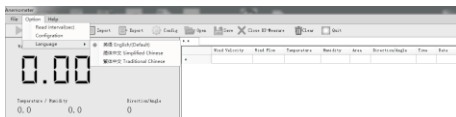
If you want to delete the software, you can also select Anemometer in Start\Programs\Select, then select Delete icon.

Figure 4

SOFTWARE INTERFACE INSTRUCTION

- Language switch step: Click real-time measurement icon "Real Time Measure" to enter into measurement interface, select "Option" in menu bar, click the right triangle in "Language" to select language. As shown in Figure 5 below:
- Toolbar: as shown in Figure 5 below (1) File, (2) Option, (3) Help.

Figure 5



- Start page: as shown in Figure 6 below:
 - a. Real-time measurement "Real Time Measure": Enter real-time measurement interface.
 - b. Read storage of instrument "Device Storage": Read history record of instrument.
 - c. Erase storage of instrument "Erase Storage".
- Note: As for Files, option, help, you can see details of corresponding multiple attributes by pointing cursor on the item.



Figure 6

- Button bar: as shown in Figure 6 below:
 - Start measurement
 - Pause
 - Import
 - Export
 - Configuration
 - Open
 - Save
 - Off - Real-time measurement
 - Empty
 - Exit
- Display area: switch wind speed and volume according to the instrument, the corresponding curve will be displayed in display area (line chart); as shown in Figure 7 below.
- Line chart: Figure 1 is wind speed / volume chart; Figure 2 is temperature and humidity chart; print button; measured data list.
- List: Record the data passed by the meter, you can import and export data (can have Two formats. save form in ane/xls).

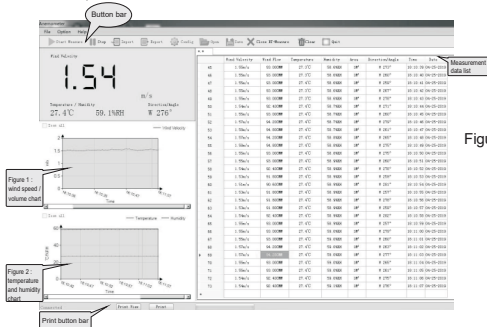


Figure 7

- Status bar: The status of operation process will be presented in the lowermost column.
- Print button: The current page can be printed out.

Remarks:

1. Real-time measurement operation cannot be performed after entering reading instrument storage interface, so you must press the "real-time measurement since file start page".
2. The lower left corner will inform the current connection status of the instrument.
3. The content in pop-up window of button bar will be displayed in the first line of the exported Excel.
4. After successful installation, the default language is English, which can be changed by the user.
5. Click on line chart to display the current X, Y axis labels, drag for enlarged image, double click to return to the pre-state.
6. Click on any cell in the list to display X and Y axis labels on the line graph.

OTHERS

TROUBLE SHOOTING


- The following is a list of actions to be taken if the unit is not working properly:
- Screen is blank: Check the battery is inserted correctly. Open the battery door on the bottom rear of the unit. The "+" "-" symbols on the battery should match the corresponding "+" "-" symbols on the inside of the battery compartment.
- If the unit can not connect to PC normally, please check the USB cable is OK, if the cable can not be used formally, please replace for a new one.
- If the unit can not read the wind flow value properly, please check if the vane is block or not.
- When the instrument cannot read the temperature or humidity data correctly, please check if the connection wire between blade handle and the instrument is loose.
- If the unit can not read data properly, please check if it is operated under the rule temperature and humidity situation.

NOTE:

When not connecting to PC, the unit will power off automatically after 5 minutes if no any operation after power on.

MAINTENANCE AND WARRANTY

Maintenance:

- Replacing the battery and product maintenance:
 - Remove the battery from the unit if it is not required for extended periods of time in order to avoid damage to the battery compartment and the electrode resulting from a leaking battery.
 - After power on, if a symbol "" appears on the LCD, indicating that you should replace the battery in order to avoid inaccurate measuring reading. Otherwise the battery is very possible leak that will seriously damage the unit life. The battery compartment is on the down rear of the unit, open the battery door, replace the old battery for new battery (notice the battery polarity), close the battery door.
- Cleaning the casing:
 - Never use alcohol or thinner to clean the unit casing, which will especially erode the LCD surface; just clean the unit lightly as needed with little clean water.
 - Never impact the unit or use on humidity condition. Do not store or use the unit in following locations where the unit may be subject to:
 - a. Splashes of water or high levels of dust.
 - b. Air with high salt or sulphur content.
 - c. Air with other gases or chemical materials.
 - d. High temperature or humidity or direct sunlight.

Warranty:

About relative warranties please read provided warranty card. We disclaim any liability due to: transportation damages; incorrect use or operation; manipulation, alterations or repair attempts; without warranty card, invoice.

Special Statement:

- a. Disposal of battery should be handled in accordance with local laws and regulations.
- b. Our company shall hold no any responsibility resulting from using output from this product as an direct or indirect evidence.
- c. This company reserves the right of changing the product design and contents of instruction if changed the separate notice isn't given.