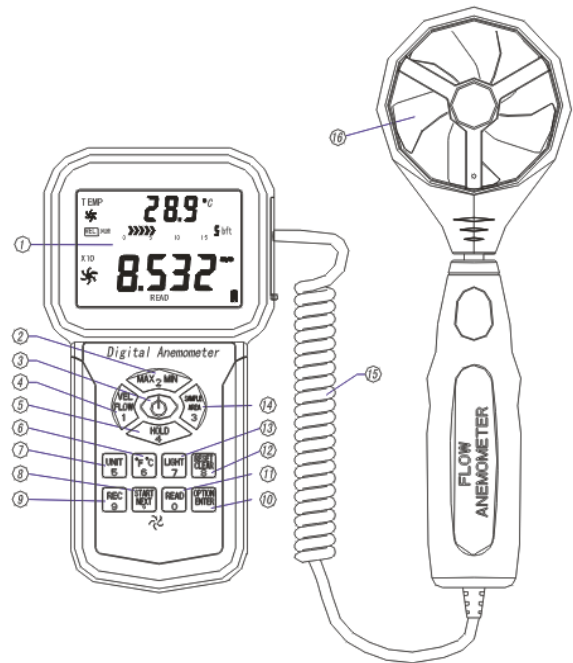


# AIR FLOW ANEMOMETER INSTRUCTION MANUAL

- ✧ Thank you for purchasing our company Air Flow Anemometer.
- ✧ This manual provides relative information on how to use the Air Anemometer and warning in operation Please make some simple test measurement to ensure proper performance of the unit.
- ✧ To make the best use of this Anemometer, read this Manual thoroughly before use it. Please Keep this Manual Handy for reference.



## 1. Before Use Notice

### Check up

Carefully unpack your kit and ensure that you have the following items. In case that any items is missing or if you find any mismatch or damage .promptly contact your local dealer.

- ✧ Air Flow Anemometer unit----- 1pcs
- ✧ wind velocity sensors ----- 1pcs
- ✧ 6F22 or NEDA 1604 9V battery -----1pcs
- ✧ English/Chinese Instruction Manual -----1pcs
- ✧ Warranty Card ----- 1pcs
- ✧ PP Packing box ----- 1pcs

### Features

- ✧ Measurement of wind velocity, temperature and wind flow
- ✧ Unit conversion of wind velocity, temperature and flow
- ✧ Measurement of maximum and minimum wind velocity
- ✧ Measurement of 2/3V max and average wind flow
- ✧ Data holding, storing and deleting function
- ✧ Low battery indicating function
- ✧ Auto power off function (Button without any operation and the fan static after 5 minutes will be turned off)
- ✧ Memory of 300 records
- ✧ Backlight function
- ✧ Pressing key audio alert
- ✧ Large LCD display
- ✧ Wind Handle Can Elongate

### DIAGRAM OF THE UNIT

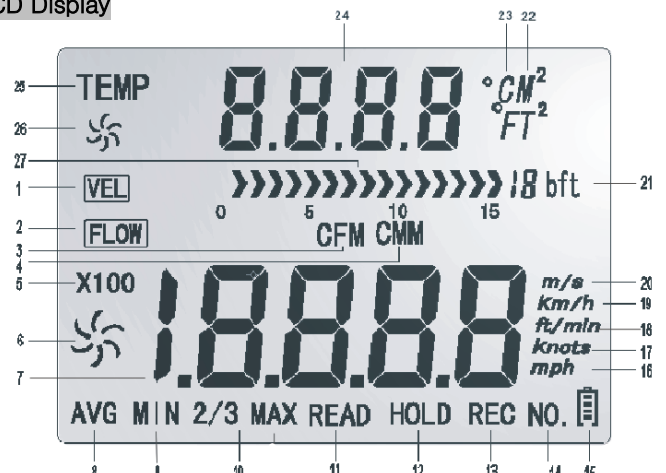
- 1). LCD display
- 2). Max/Min value switch
- 3). Power key: press once to power on, again for two seconds to power off
- 4). Wind velocity/flow transform key
- 5). Data holding key
- 6). Temperature unit switch
- 7). Unit transform key
- 8). Measuring key for average value of wind flow.
- 9). Record the measurement data
- 10). Wind flow AVG 2/3 MAX and figure input
- 11). Read out recorded data key
- 12). Reset key in "READ" mode/clear recorded
- 13). Backlight on/off key, press down to start the backlight function, again to cancel.
- 14). Duct area input and sampling time setting key
- 15). Connecting wire
- 16). wind velocity sensors

### NOTE:

Aforesaid key function descriptions are simple introduction.





Plas read operation instructions parts for details.

### LCD Display



- 1) **VEL** : When measuring wind velocity, this symbol will appears
- 2) **FLOW** : When measuring wind flow, this symbol

appears

- 3) **CFM** : Wind flow unit (cube foot/minute)
- 4) **CMM** : Wind flow unit (cube meter/minute)
- 5) **X100** : If measured value is over 9999, the symbol "X10 " or "X100" will appear.
- 6)  : Big fans : indicate wind velocity /flow status, which was subject to Wind Velocity and revolving.
- 7) **8888** : Wind velocity and flow display area.
- 8) **AVG** : When measuring average values (one of the wind flow measuring Method) this symbol appears.
- 9) **MIN** : Showing minimum values.
- 10) **2/3MAX** : MAX2/3 of maximum value measurement (one of the wind flow measuring method)
- 11) **READ** : This symbol will appear. While Read stored record data.
- 12) **HOLD** : Data holding
- 13) **REC** : Data record by using the signal
- 14) **NO.** : This symbol and serial number of stored record data will appear. While Read stored record data.
- 15)  : Low battery indicating symbol, please replace battery if this symbol empty.
- 16) **Mph** : Wind velocity unit (mile/hour)
- 17) **knots** : Wind velocity unit (sea mile/hour)
- 18) **ft/min** : Wind velocity unit (foot /minute)
- 19) **km/h**: Wind velocity unit (kilometer/hour)
- 20) **m/s** : Wind velocity unit (mete r/second)
- 21) **18 bft** : Beaufort scale
- 22) **M<sup>2</sup>** : M<sup>2</sup> is used to indicate duct area in square meter when in flow function
- T<sup>2</sup>** : "T<sup>2</sup>" Is used to indicate duct area in square feet when in flow function
- 23) **°C** : Wind temperature Celsius unit
- °F** : Wind temperature Fahrenheit unit
- 24) **8888** : Temperature value display or Duct area display area
- 25) **TEMP** : Wind temperature signal.
- 26)  : small fan signal: indicate the Wind Temperature status
- 27)  : Bar graph display of Beaufort scale

**SPECIFICATIONS**

Wind Velocity Range:

Unit	Wind Velocity	Resolution	Lowest Point of start value	Accuracy
m/s	0.0-45.0	0.001	0.3	±3%±0.1
Ft/min	0.0-8800	0.01/0.1/1	60	±3%±20
Knots	0.0-88.0	0.001/0.01	0.6	±3%±0.2
Km/h	0.0-140.0	0.001	1.0	±3%±0.4
Mph	0.0-100	0.001/0.01	0.7	±3%±0.2

2. Wind flow range:

CMM: 0-999900m<sup>3</sup>/min  
CFM: 0-999900 ft<sup>3</sup>/min

Unit	Range	Resolution	Area
CMM(M <sup>3</sup> /MIN)	0-999900	0.001-100	0.001-9999
CFM(FT <sup>3</sup> /MIN)	0-999900	0.001-100	0.001-9999

2. Unit Conversation:

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

4. Air Temperature Range:

Unit	Scale	Resolution	Accuracy
°C	0.0-45.0	0.1	±1.0°C
°F	32.0-113.0	0.1	±1.8°F

5. Operation Conditions:

	Temperature	Humidity
Host	0-50°C(32-122°F)	≤80%RH
Fan	0-60°C(32-140°F)	

6. Storage Conditions:

Temperature	-10-60°C(14-140°F)
Humidity	≤80%RH

- 7. Power supply : 6F22 9V×1
- 8. Low battery indicating : 6.8V±0.2V
- 9. Stand by current ≤2μA
- 10. Operating Current Approx.18mA
- 11. Battery use life :20H (Continuous Use )
- 12. Dimensions:  
Meter:165×85×35 mm  
Vane: 251×72×30 mm
- 13. Net Weight :320g (Not Included Battery )

**2. Operation**

**Measurement of Wind Velocity and Temperature**

- ◇ Recover the battery door , and install the batteries properly as shown in figure 1 .

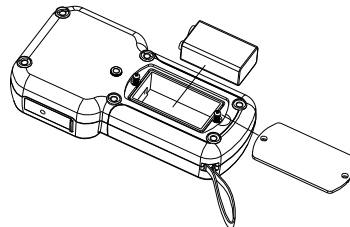


figure1:

- Press the "⏻" key, all the symbols will be shown on the screen for 1 second, then the unit goes into current wind velocity and temperature measuring mode, the LCD screen shows as following figure2:



figure2:

- ◇ Select your desired wind velocity and temperature unit
  - (1) Press the "UNIT" key, the wind velocity unit will be auto change from (m/s, km/h, ft/min, knots, mph).
  - (2) Press the "C/F" , The temperature will be change between °C/°F mode.
- ◇ 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 (Pleas do not extruded the fan leaf. Otherwise will cause the inaccuracy measurement)



Figure3

- (1) Wait for two Sec, to make the data stability
- (2) Place the vane in the same direction of the wind to capture the accurate data .
- (3) Press "LIGHT" Key to start the Backlight Function, then press "LIGHT" BUTTON the LED will cut off , the light function will turn off.
- ◇ Wind /Air Temperature Measurement
  - (1) Wind temperature will test out when testing Wind Velocity, Small Vanes pattern will showing along with the display of "TEMP" Symbol.

- (2) Press button °C/°F to Switch °C/°F or (number 6 key).

**Note:**

- a If current is in wind flow measuring mode (on the left top of the LCD will show "FLOW", you can turn it into wind velocity measuring mode by pressing the "VEL/FLOW" key, vice versa.
- b The defaulted model is last time you has setting

**Measurement of Wind flow**

- Press the "VEL/FLOW" key to get into "FLOW" mode at this time the LCD screen as shown in figure 4 :



Figure 4

(if the area value has been set before the last setting will be shown)

- Select your desired unit of wind flow and duct area:
  - a Press the "UNIT" key, the wind flow unit will convert between CMM and CFM
  - b Press the "UNIT" key, the area unit will convert between "M<sup>2</sup>" and "FT<sup>2</sup>"
  - c Area unit: "M<sup>2</sup>" and "FT<sup>2</sup>" will convert according with the conversion of the wind flow unit.
    - If wind flow unit is CMM, the area unit will be "M<sup>2</sup>";
    - If wind flow unit is CFM, the area unit will be "FT<sup>2</sup>".
- Press the "AREA" key, the numbers in the middle of the LCD will be disappeared at this time press numeric keys to enter a new duct area, such as 1.2, then press the "ENTER" key to confirm. At this time the LCD screen as shown in figure 5:



Figure 5

- Place the vane in the duct area, take measurement of current wind flow value right away. As shown in figure 6 :

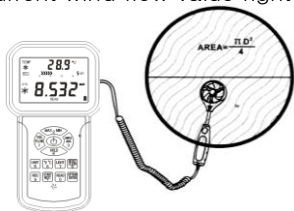


Figure 6

- Wind Flow Calculate Formula: Flow =velocity \*(Free Area)
- Testing Wind velocity : The Bar graphic (showing on the middle of LCD )was subject to the increasing wind Flow/ Velocity

Note: without enter the duct area will lead to failing in taking measurement of the wind flow.  
 If wind flow is larger than 9999, the LCD screen will show x10 or x100, and the measured value is also x10 or x100.

**Measurement of 2/3 V max Wind Flow**

- Press the "VEL/FLOW" key to entre "FLOW" mode, the LCD screen shows in figure 7:



Figure 7

- Select your desired unit by pressing the "UNIT" key, for example: select CMM for wind flow unit, "M<sup>2</sup>" for area unit at this time the LCD screen shows as above diagram.
- Press the "AREA " key, Letter on the LCD will disappeared at this time you can input duct area, such as 1.2, press "ENTER" key confirm press again the "OPTION" key to select "2/3 V max", the LCD screen as shown in figure 8



Figure 8

- Aim the vane of the attached unit at duct area properly, take measurement of 2/3 V max wind flow right away, press again the "OPTION" key exit to measurement of 2/3 V max wind flow.
- 2/3 Max Wind flow calculate formula: FLOW =2/3×Max wind Velocity×duct Area.

**MEASUREMENT OF AVERAGE WIND FLOW**

- Press the "VEL/FLOW" key to get into "FLOW" mode, the LCD screen shows as in figure 9:



Figure 9

- Select your desired unit by pressing the "UNIT" key, for example: select CMM for wind flow unit, "M<sup>2</sup>" for area unit, at this time the LCD screen shows as above diagram
- press the "OPTION" key to select "AVERAGE", the LCD shows as in figure 10:



Figure 10

Aim the vane at certain point of duct area properly, press the "NEXT" key, In the LCD of the upper part of the serial number, in the meantime you can take measurement of the first group wind flow values. As shown in figure 11:



Figure 11

Then select another test point, press the "NEXT" key to take measurement of the second group average wind flow values. Repeat above steps to measure as many as 12 groups average wind flow values. As shown in figure 12:



Figure 12

Once again press the "OPTION key exit to measurement of average wind flow.

- Average Wind flow calculate formula  
 Flow =1/N ∑(Velocity) ×(free Area)

**Note**

The average value only displays by pressing NEXT key, If there is wind in the duct area, then the LCD Screen will shows the measured Average Wind flow.

**Max and min measurement**

- In wind flow and velocity measuring process, press the "MAX/MIN" key to obtain the maximum and minimum values, press again to exit. For example:
  - When measuring maximum value of wind velocity, a "MAX" will be shown on the upper LCD screen, as shown in figure 13



Figure 13

- When measuring minimum value of wind velocity, a "MIN" will be shown on the upper LCD screen, as shown in figure 14:



Figure 14

**Note:**

Operation of Max/Min wind flow measurement is the same as wind velocity.

**Date holding /Storage/Reading and clearing**

- ◇ Data holding: on Measurement state, press the "HOLD" key to freeze the Data , press the "HOLD" key again return to normal operation.
- ◇ Data storage:
  - (1) instantaneous (one-shot) data storage: on Measurement state, set the sampling rate=0 by pressing "SAMPLE" key and in put a "0" sampling time and then press "ENTER". Now, each time "REC" is pressed, the present reading will be stored.
  - (2) Automatic data storage: on Measurement state, press the "SAMPLE" key and input sampling rate, (the sampling rate from 1-99 seconds using the numeric keys to enter your desire rate,) then press the "ENTER" key to confirm. Press the "REC" key to begin storing readings in every sampling rate. The "REC" icon will appear on the LCD indicated the data storage function is activated. Press again the "REC" key to finish data storage. (Press "REC" Key stop recording.)
  - (3) hold the "CLR" button two seconds, and the screen shows "CLR", all the records will be cleared
- ◇ Reading data stored sequentially:
  - (1) Press the "READ" key, you can read the stored data in memory sequentially, the LCD will first shows serial number then shows the data. Short Press "RESET" key to return normal operation. In data read, read to 10 if you need testing, once again return to read the state, the data will be then 10 to read ( This product can store 300 set of data. When the storage area full, the "full" appeared, Press the "RESET" button back to measurement state ) As shown in figure 15:
  - (2) read the value random  
In "READ" state, press the "SAMPLE" button to enter the data read serial number .Then press "ENTER" confirmed that can show, press the "RESET" button to exit



Figure 15

**Familiar trouble shooting**

The following is a list of actions to be taken if the unit is not working properly:

- (1) 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.
- (2) If the unit can not read the wind flow value properly, please check if the vane is block or not connected.
- (3) If the unit can not read the wind temperature value properly, please check if the heat resistor is fall off or damaged by manual.
- (4) If the unit can not read data properly, please check it

is operated under the rule temperature and humidity situation.

- (5) when Measure the wind velocity the temperature display line don't show the number for temperature overflow or probe fault; When measuring the wind flow , area set overflow will appear this situation too
- (6) When measuring wind velocity, the wind Velocity display line appear "OL", for value overflow, wind flow measurement situations as well.

**Maintenance & Warranty**

1). Maintenance

- ◇ Replacing the battery and product maintenance:
  - a 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.
  - b After power on, if a symbol "0" appears on the LCD, indicates 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, re place the old battery for a new 9V one (notice the battery polarity), close the battery door with a screw knife to lock up.
- ◇ Cleaning the casing:
  - ◇ Never use alcohol or thinner to clean the unit casing that will especially erode the LCD surface; just clean the unit lightly as needed with little clean water. Never impact the unit or used 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 (above 50 °C , 90%) or direct sunlight.

2). Warranty:

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

**Specific Declarations:**

- a Above picture and content just for your reference. Please be subject to the actual products if anything different or updated. Please pardon for not informing in advance.
- b Dispose of battery should in accordance with local laws and regulations.

