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1. Before Use Notice

   Check up

   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.

   - Air Flow Anemometer unit----------------------- 1pcs
   - Yellow sticker pocht --------------------------- 1pcs
   - Auxiliary Fan --------------------------------- 1pcs
   - Software Disc For Anemometer ----------------- 1pcs
   - USB Computer connecting cable ----------------- 1pcs
   - 1.5V AAA alkaline battery ---------------------- 4pcs
   - English Instruction Manual -------------------- 1pcs
   - PP Packing box ------------------------------- 1pcs
Features

- Measurement of wind velocity, temperature and flow
- Unit conversion of wind velocity, temperature and flow
- Measurement of maximum and minimum wind velocity
- Measurement of 2/3 Vmax and average wind flow
- Data holding, storing and deleting function
- Low battery indicating function
- Auto power off function (power off automatically if no further operation for 10 minutes)
- Memory of 500 records
- Backlight
- Connecting to PC with USB cable
- Audio key pressing alert
- Large LCD display

Diagram of the unit
1. USB interface
2. LCD display
3.  ON/OFF key
4.  Data holding key
5.  Unit transform key
6.  Backlight on/off key
7.  Data read key
8.  Measuring key for average value of wind flow
9.  Reset key in READ mode/clear recorded
10. Duct area input and sampling time setting key
11. Wind flow AVG 2/3 MAX and figure input
12. Data record key
13. Temperature unit switch
14. Wind velocity/flow transform key
15. Max/Min value switch
16. Connecting wire
17. Fan

**NOTE:**
Aforesaid key function descriptions is brief introduction.
pls read operation instructions parts for details.

---

**LCD Display**

1. **FLOW**: Air flow symbol
2. **NO DATA**: No data store symbol
3. Dynamic indicator bar of velocity or air flow
4. **KEYN**: Enter duct area values symbol
5. **X100**: Air multiplier
6. Wind velocity and air flow display area
7. Duct area display area/Wind temperature display
8. **BA**: Low battery icon
9. **FT**$: Indicating duct area in square feet when in flow function; "F" is used to indicate wind temperature in metric;
10. **CM** : Indicating duct area in square meter in flow function, ‘°C’ is used to indicate wind temperature in metric.

11. **CMM** : Wind flow unit (cube meter / minute)

12. **CFM** : Wind flow unit (cube foot / minute)

13. **m/s** : Wind velocity unit (mile / hour)

14. **knots** : Wind velocity unit (sea mile / hour)

15. **ft/min** : Wind velocity unit (foot / minute)

16. **km/h** : Wind velocity unit (kilometer / hour)

17. **m/s** : Wind velocity unit (meter / second)

18. **HOLD** : Data hold

19. **WINDCHILL** : Wind chill symbol

20. **USB** : Velocity sampling rate; Sequential number display area of average wind flow

21. **VEL** : Wind velocity symbol

22. **REC NO** : Recording the using number and signals

23. **READ** : Read stored data symbol

24. **MAX** : 2/3 of maximum value measurement (one of the wind flow measuring method)

25. **MIN** : Showing minimum values

26. **AVG** : When measuring average values ( one of the wind flow measuring Method ) this symbol appears.

---

**Specifications**

1. **Wind Velocity Range**:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Wind Velocity</th>
<th>Resolution</th>
<th>Lowest Point of start value</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>m/s</td>
<td>0.0-45.0</td>
<td>0.001</td>
<td>0.3</td>
<td>±3%±0.1</td>
</tr>
<tr>
<td>ft/min</td>
<td>0.0-8800</td>
<td>0.01/0.1</td>
<td>60</td>
<td>±3%±20</td>
</tr>
<tr>
<td>Knots</td>
<td>0.0-88.0</td>
<td>0.01/0.01</td>
<td>0.6</td>
<td>±3%±0.2</td>
</tr>
<tr>
<td>Km/h</td>
<td>0.0-140.0</td>
<td>0.001</td>
<td>1.0</td>
<td>±3%±0.4</td>
</tr>
<tr>
<td>Mph</td>
<td>0.0-100</td>
<td>0.001/0.01</td>
<td>0.7</td>
<td>±3%±0.2</td>
</tr>
</tbody>
</table>

2. **Wind flow range**:

- CMM: 0-999900 m³/min
- CFM: 0-999900 ft³/min

<table>
<thead>
<tr>
<th>Unit</th>
<th>Range</th>
<th>Resolution</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFM(Ft/Min)</td>
<td>0-999900</td>
<td>0.001-100</td>
<td>0.001-9999</td>
</tr>
<tr>
<td>CMM(M/Min)</td>
<td>0-999900</td>
<td>0.001-100</td>
<td>0.001-9999</td>
</tr>
</tbody>
</table>

3. **Unit Conversatin**:

<table>
<thead>
<tr>
<th>Unit</th>
<th>m/s</th>
<th>Ft/min</th>
<th>Knots</th>
<th>Km/h</th>
<th>Mph</th>
</tr>
</thead>
<tbody>
<tr>
<td>1m/s</td>
<td>1</td>
<td>196.87</td>
<td>1.044</td>
<td>3.60</td>
<td>2.24</td>
</tr>
<tr>
<td>1Ft/min</td>
<td>0.00508</td>
<td>1</td>
<td>0.00987</td>
<td>0.01829</td>
<td>0.01138</td>
</tr>
<tr>
<td>1Knots</td>
<td>0.5144</td>
<td>101.27</td>
<td>1.852</td>
<td>1.879</td>
<td>1.1523</td>
</tr>
<tr>
<td>1Km/h</td>
<td>0.2778</td>
<td>54.69</td>
<td>0.54</td>
<td>1</td>
<td>0.6222</td>
</tr>
<tr>
<td>1Mph</td>
<td>0.4464</td>
<td>87.89</td>
<td>0.8679</td>
<td>1.6071</td>
<td>1</td>
</tr>
</tbody>
</table>

4. **Air Temperature Range**:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Scale</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>°C</td>
<td>0.0-45.0</td>
<td>0.1</td>
<td>±1.0°C</td>
</tr>
<tr>
<td>°F</td>
<td>32.0-113.0</td>
<td>0.1</td>
<td>±1.8°F</td>
</tr>
</tbody>
</table>
5. Operation Conditions:

<table>
<thead>
<tr>
<th></th>
<th>Temperature</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host</td>
<td>0-50°C (32°F~122°F)</td>
<td>≤80% RH</td>
</tr>
<tr>
<td>Fan</td>
<td>0-60°C (32°F~140°F)</td>
<td>≤80% RH</td>
</tr>
</tbody>
</table>

6. Storage Conditions:

<table>
<thead>
<tr>
<th>Temperature</th>
<th>-40°C<del>60°C (-40°F</del>140°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humidity</td>
<td>≤80% RH</td>
</tr>
</tbody>
</table>

7. Power supply: AAA 1.5V Alkaline battery *4
8. Low battery indicating: 4.4V ± 0.2V
9. Stand by current: ≤2uA
10. Operating Current: ≤18mA
11. Battery use life: 20H (Continuous Use)
12. Dimensions:
    - Meter: 77x36x164mm
    - Vane: 65x29x172mm
13. Net Weight: 330G (Not Included Battery)

2° Operation Instruction

Measurement of Wind Velocity and Temperature

- 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 as shown in following figure:

- Select your desired wind velocity and temperature unit:
  1. Press the "UNIT" key, the wind flow unit changes among m/s, km/h, ft/min, knots, mph,(default unit is m/s);
  2. Press the "℃/℉" key, the temperature changes between ℃/℉ mode(defaulted as ℃).
Hold the Anemometer with your hand, place the vane in the airflow 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).

1. Wait for 2 seconds with the unit is ready for use.
2. Place the vane in the same direction of the wind to capture the accurate data, temperature within 20℃.
3. Press light key to open or close the backlight. Backlight will turn on if the vane is rotating or within 7 seconds after a key is pressed. Backlight will turn off if there is no further operation of key for 7 seconds.

Wind/Air Temperature Measurement:
1. Small Vanes pattern will showing along with the display of "TEMP" symbol.
2. Press button °C/°F (or number 6 key) to Switch °C/°F.

Measurement of Windflow
Press the "VEL/FLOW" key to get into "FLOW" mode, the LCD screen as shown in following figure:

(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 (the defaulted unit is CMM)
b. Press the "UNIT" key, the area unit will convert between M² and FT² (the defaulted unit is M²)
c. Area unit: M² and FT² will convert accordingly with the conversion of the wind flow unit.

If wind flow unit is CMM, the area unit will be M².
If wind flow unit is CFM, the area unit will be FT².

Press the "AREA" key, the 4 digitals on the upper LCD disappears at this time press numeric keys to input a new duct area, such as 1.6, then press the "ENTER" key to confirm. At this time the LCD screen as shown in following figure:
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 Flow Calculate Formula: \( \text{Flow} = \text{velocity} \times (\text{Free Area}) \)

Testing Wind velocity: The bar icon (showing on the middle of LCD) changes accordingly with wind Flow/Velocity

Measurement of 2/3 Vmax Wind Flow

- Press the "VEL/FLOW" key to enter into "FLOW" mode;
- Select your desired unit by pressing the UNIT key, for example, select CMM for wind flow unit, M² for area unit;
- Press the "AREA" key, letter on the LCD will disappear at this time you can input duct area, such as 1.6, press "ENTER" key to confirm;
- Press again the "OPTION" key to select "2/3 Vmax", here the LCD screen as shown in following figure:

- 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 max wind flow.

2/3 Max Wind flow calculate formula:

\( \text{FLOW} = \frac{2}{3} \times \text{Max wind Velocity} \times \text{duct Area} \)
Measurement Of Average Wind Flow

- Press the "VEL/FLOW" key to get into "FLOW" mode;
- Select your desired unit by pressing the UNIT key, for example: select CMM for wind flow unit, M² for area unit;
- Press the "AREA" key, letter on the LCD will disappear at this time you can input duct area, such as 1.6, press "ENTER" key confirm;
- Press again the "OPTION" key to select "AVG", here the LCD screen as shown in following figure:

Note

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

Aim the vane at certain point of duct area properly, press the "NEXT" key, on the right bottom of the LCD will show serial number, in the meantime you can take measurement of the first group wind flow values. As shown in following figure:

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 of average wind flow values. As shown in following figure:

Average Wind flow calculate formula
Flow = \frac{1}{N} \sum \left(\text{Velocity}\right) \times \left(\text{free Area}\right)

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

1). When measuring maximum value of wind velocity, a "MAX" will be shown on the upper LCD screen, as shown in following figure:

2). When measuring minimum value of wind velocity, a "MIN" will be shown on the upper LCD screen, as shown in following figure:

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

Data holding /Storage/Reading and clearing

Data holding:
When taking measurement of wind velocity and flow, 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: under "VEL" state, set the sampling rate=0 by pressing "SAMPLE" key and input a "0" sampling time and then press "ENTER". Now, each time "REC" is pressed, the present reading will be stored.
2). Automatic data storage: under "VEL" 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 indicating the data storage function being activated. Press again the "REC" key to finish data storage.
3). Press "REC" Key to stop recording.

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.
2). Press "RST" key to return normal operation.
As shown in following figure:
Reading Data stored In memory Randomly:
On read Status ,Press the "SAMPLE" Key and enter the number of the record in questions and press "ENTER" Key then the desired data will be displayed Press "RESET" Key to exit As shown in following figure:

Clearing the Stored data:
Press down the "CLEAR" Key for 5 seconds then CRL appears on the LCD indicating all the stored data being Cleared. As shown in following figure:

Connection With Pc
1). Requirement of computer configuration:
- CPU : Pentium 600MHZ Or above :
- One free available USB Connecting Interface:
- The lowest screen resolution of monitor is 800*600 (or much higher ), color mode:
- At least 8MB available memory:
- At least 50MB available disk memory:
- Operation system : MICROSOFT WINDOWS 98/ME/2000/XP HOME/XP PROFESSIONAL 32BIT

2). Install the software from the disc:
Place the attached Disc in your disc driver open the disc driver plate symbol , double click the *Anemometer setup .exe*. To enter into Program installation window, click "NEXT", as show in following figure:

Note:
a. In instantaneous data storage mode, you should first press "SAMPLE" key and input "0" second, then press "ENTER" to finish the rate set up.
b. Press the "REC" Key to finish the recording, otherwise the recording will be invalid.
c. The maximum number of readings can be stored 500.
d. If your reading number is bigger than the total quantity of data stored in memory, the LCD will shows the last stored.
Please follow the installation wizard and click on "NEXT", and select "Create a desktop icon".

Until "Finish" is shown, select "Run Anemometer" to complete software installation, as shown below:

**NOTE:**
1. Double-click the software shortcut on the desktop (to start from menu, the route is Start/Programme/Anemometer);
2. If you want to delete this software, please open "Controlling Panel" then double-click "add/delete program" Choose "Anemometer" on the list then click the "delete" button.

3. Software interface:
   - Menu bar
   - Option menu bar
   - Help menu bar

   **Tool bar**
Remark:
Language in: English / Traditional Chinese/ Simplified Chinese. The default setting is in English, from English into Simplified Chinese or Traditional Chinese can be setting directly; If change Simplified Chinese or Traditional Chinese into English, you need to re-start running the software.

<table>
<thead>
<tr>
<th>Order</th>
<th>Order function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real time measure</td>
<td>Real time data measurement, the measured data will be real time as shown on the computer.</td>
</tr>
<tr>
<td>Open</td>
<td>Open measurement data file that is saved as the LAB format</td>
</tr>
<tr>
<td>Save</td>
<td>Save real time measurement data</td>
</tr>
<tr>
<td>Import</td>
<td>Import data stored in the anemometer to computer</td>
</tr>
<tr>
<td>Export</td>
<td>Export the saved data to Excel</td>
</tr>
<tr>
<td>Print</td>
<td>Printer setup</td>
</tr>
<tr>
<td>Print Setup</td>
<td>Print data sheet</td>
</tr>
</tbody>
</table>

Tool bar introduction as shown in following figure:

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Real time data measurement, the measured data will be real time as shown on the computer.</td>
</tr>
<tr>
<td></td>
<td>Import data stored in the anemometer to computer</td>
</tr>
<tr>
<td></td>
<td>Open measurement data file that is saved as the LAB format</td>
</tr>
<tr>
<td></td>
<td>Save real time measurement data</td>
</tr>
<tr>
<td></td>
<td>Export the saved data to Excel</td>
</tr>
<tr>
<td></td>
<td>Print the recorded data</td>
</tr>
<tr>
<td></td>
<td>System setup</td>
</tr>
<tr>
<td></td>
<td>System information</td>
</tr>
<tr>
<td></td>
<td>Close the software</td>
</tr>
</tbody>
</table>
4). Insert one end of the connecting cable into the USB interface of the top anemometer host; Insert other end of the connecting cable into free interface port of on the computer back,

- If the unit connect with PC: LCD will display \( \text{USB} \) symbol;
- If the unit dis-connect with PC: \( \text{USB} \) symbol will not shown.

5). Real time measurement:

- Click on "File/Real Time Measure" or tool bar button to entre real time measurement mode; Press "Start to Measure" button to start measurement and record data, shown as follow figure:

- To stop real time measurement, click on "Stop Measure".

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Start to Measure]</td>
<td>Click to start real time measurement</td>
</tr>
<tr>
<td>![Stop Measure]</td>
<td>Click to stop real time measurement</td>
</tr>
<tr>
<td>![Clear]</td>
<td>Click to clear out real time measured data</td>
</tr>
<tr>
<td>![Save]</td>
<td>Click to store real time measured data, input file name in pop-up window, click to save, then also may click FILE\SAVE. (Saved as LAB format)</td>
</tr>
<tr>
<td>![Zoom ALL]</td>
<td>Click to display all wind velocity and temperature wave graphic</td>
</tr>
<tr>
<td>![Move left]</td>
<td>Click to move Wind Velocity and Temperature left side</td>
</tr>
<tr>
<td>![Move right]</td>
<td>Click to move Wind Velocity and Temperature right side</td>
</tr>
<tr>
<td>![Print Graph]</td>
<td>Click it to print right wind velocity and temperature wave graphic</td>
</tr>
</tbody>
</table>
6). Download of measurement data:
   Click the “Import Data” in “File” menu bar or Import Data button on tool bar will enter download contact interface of measured data, click the start to Import button on bottom to import the stored data into computer, as shown in following figure:

   ![Import Data Interface](image)

   Button introduction:

<table>
<thead>
<tr>
<th>BUTTON</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import</td>
<td>Click to download data from anemometer. In download process, please don’t switch over the picture in order to avoid appearing over time mistake “Over Time”.</td>
</tr>
<tr>
<td>Save</td>
<td>Click to save the downloaded data, input file name in pop-up window, click to save then. (Saved as LAB format)</td>
</tr>
</tbody>
</table>

3. Other Items

   **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 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.

3). If the unit can not read the wind flow value properly, please check if the vane is block or not.

4). If the unit can not read the wind temperature value properly, please check if the heat resistor is fall off or damaged by manual.

5). If the unit can not read data properly, please check it is operated under the rule temperature and humidity situation.

   **Note:**

   When not connecting to PC, the unit will power off automatically after 10 minutes if no any operation after power on.
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 “☆” 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.

- 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 (above 50℃, 90%) or direct sunlight.

2). 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.

3). Specific Declarations:

- a. The product design and the manual updating, repairing by technician authorized by us, do not try any alternations or repair attempts.
- b. Disposal of battery should in accordance with local laws and regulations.