

Introduction

The handheld weather station is a portable weather observation instrument that is convenient to carry, simple to operate, and integrates multiple meteorological elements. The system uses precision sensors and smart chips to accurately measure the five meteorological elements of wind direction, wind speed, atmospheric pressure, temperature and humidity at the same time. The built-in large-capacity FLASH memory chip can store meteorological data for at least one year; the universal USB communication interface, the data can be downloaded to the computer using the supporting USB cable, which is convenient for users to further process and analyze the meteorological data.

This instrument can be widely used in meteorology, environmental protection, airports, agriculture and forestry, hydrology, military, storage, scientific research and other fields.

Feature:

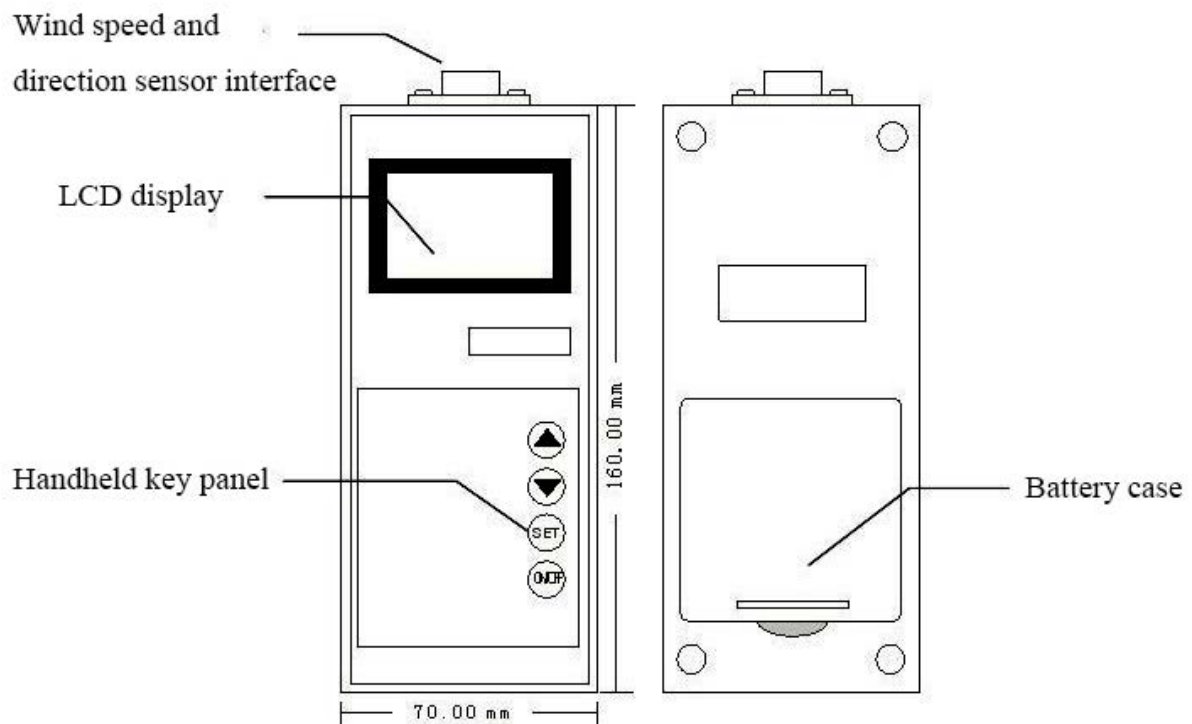
- 1) 2.1-inch screen LCD display of temperature, humidity, wind speed and barometric pressure values.
- 2) Specialized wind direction dial (16 directions) and pointer are used to indicate real-time wind direction.
- 3) Large-capacity data storage, up to 40,000 meteorological data (data recording interval can be set between 1~60 minutes).
- 4) Universal USB communication interface, convenient for usb data download.
- 5) Only need three No.5 dry batteries for power supply; low power consumption design, long time standby.
- 6) Structural design is scientific and reasonable, easy to carry.

Specification

	Measurement element	Measurement range	Precision	Resolution	Unit
Meteorological parameter	Wind speed	0~60	± 0.3	0.01	m/s
	Wind direction	16 directions	± 1 dierction	1dierction	direction
	Atmospheric temperature	-50~85	± 0.3	0.01	°C
	Relative humidity	0~100%	$\pm 3\%$	0.1	%RH

	Atmospheric pressure	0~110	± 0.002	0.001	KPa
Power supply	No. 5 dry battery (4 pcs)				
Communication	USB				
Storage	40,000 pieces of data				
Host size	160mm×70mm×28mm				
Whole size	405mm×100mm×100mm				
Weight	≈0.5Kg				
Working environment	-20℃~80℃; 5%RH~95%RH				

Installation and use method







4.1 Installation of sensor

Open the battery compartment cover on the back of the instrument and install the 3 batteries in the battery compartment in the correct orientation; when installation is complete, close the battery compartment cover.

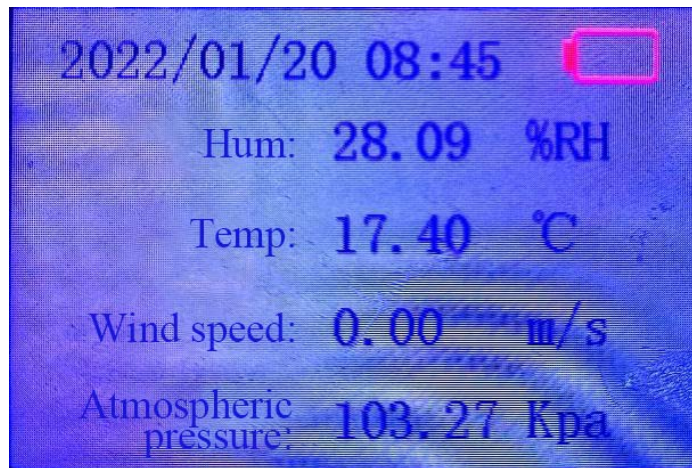
The wind vane is connected to the top of the wind speed.

4.2 Key function description

Key	Function description
	Modify parameter key: Add 1 to the preset parameter value.
	Modify parameter key: Subtract 1 from the preset parameter value.
	Function switching key: This key can be used to enter “Time Setting”, “Store Time Setting”, “Clear Store”, “Exit” setting interface; next page. “Setting interface; next page. It is also used to switch the current operable parameters. Note: After all parameters are modified, the modified parameters take effect when switching to the main interface.
	Power switch

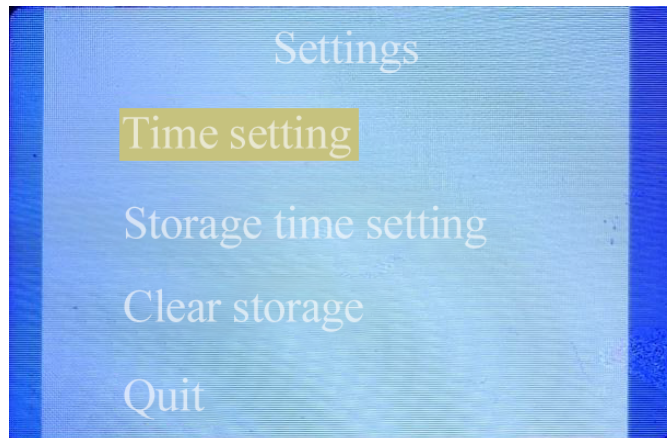
5. Display and Parameter Modification


5.1 Temperature, humidity, wind speed, time, and battery power display



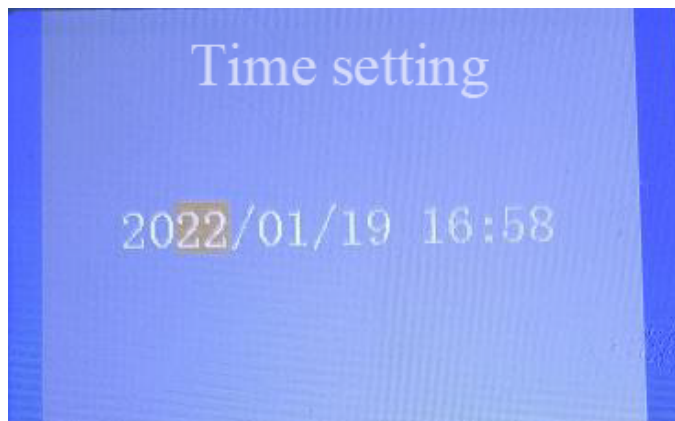
After the handheld weather station is turned on (click “on”), the main interface of the system will be displayed as shown in the figure above. The interface displays the current time and the real-time weather values collected by each sensor. The battery symbol shows the remaining power of the system.

5.2 Parameter Modification




Click the  button in the main interface of the system to enter the setting page as shown in the above picture, which includes setting the time, setting the storage time, clearing the storage and exiting the setting page respectively.

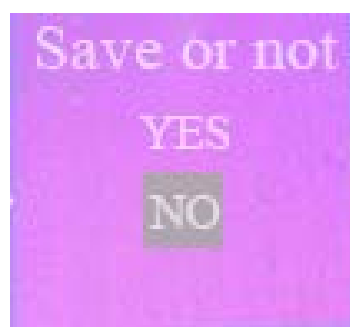
5.2.1 Time Setting



After entering the time setting interface, the time setting page as shown in the above picture will




be displayed. Press , Value -1, press  value +1. Pressing  will advance to the next value setting.

The order of setting content is XX month XX day XX hour XX minute of 20XX, after setting the minutes, clicking set will pop up whether to save the page, clicking yes to save the settings and then automatically exit to the main interface, and vice versa, do not save and exit to the main interface. Whether to save the page is shown in the following figure.



5.2.2 Setting the Storage Time

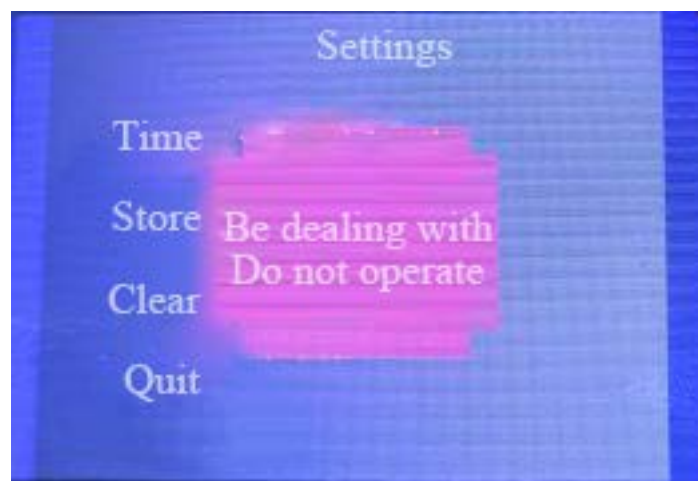



After entering the storage time setting interface, the time setting page as shown in the above picture will be displayed. Press , Value -1, press  value +1. Pressing  will advance to the next value setting. Clicking yes to save the settings and then automatically exit to the main interface, and vice versa, do not save and exit to the main interface. Whether to save the page is shown in the following figure.




If the value is set to 03, data is stored and recorded every 3 minutes

5.2.3 Clear the Storage




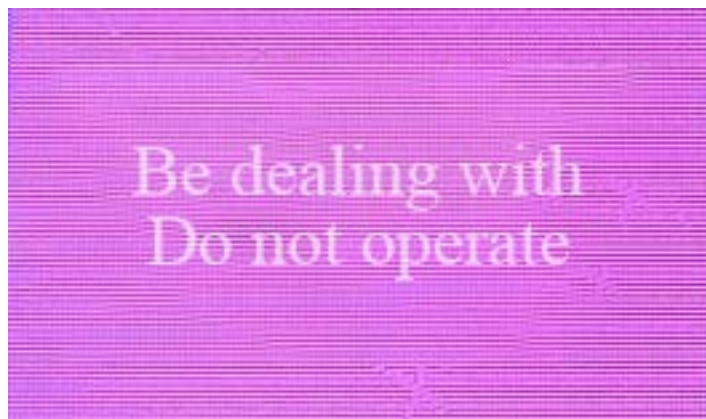
In the clear storage settings page, press  to perform the clear operation, it will pop up whether to save the page, click yes to clear the data as shown in the above figure, after the clearing is completed, it will automatically exit into the main interface, and vice versa, it will not be cleared and exit into the main interface.

5.2.4 Exiting

Pressing the  on the exit page will only take you to the main screen.

6.Data export





Insert U disk in the main interface, pop up the following interface, click 'Yes' and press the  to export all the data stored in the handheld weather station before.



When the data is exported, the contents in the above figure will be displayed. Please keep the power on and the battery sufficient (if the USB flash drive is abnormal, format the USB flash drive to FAT32 format) until the operation is complete (Do not export data when the battery is red).

7.U disk data display

The exported data is in csv format. Please open it using Microsoft office (wps cannot open it). After the USB flash drive is opened, the following interface is displayed.

 01051153.CSV	2004/1/1 0:00	Microsoft Excel ...	1 KB
 01201047.CSV	2004/1/1 0:00	Microsoft Excel ...	1 KB
 01201100.CSV	2004/1/1 0:00	Microsoft Excel ...	1 KB
 10100757.CSV	2004/1/1 0:00	Microsoft Excel ...	1 KB

The file name indicates the time when the file is exported. Example:

01201100.CSV indicates the data exported at 11:00 on January 20. If you open the file, you will see the following information

	temperature	humidity	pressure	windspeed
22.01.20.10:57	22.29	26.86	103.32	0
22.01.20.10:58	22.73	26.01	103.32	0
22.01.20.10:59	23.08	25.34	103.31	0

Where temperature denotes temperature, humidity denotes humidity, pressure denotes atmospheric pressure, windspeed denotes wind speed, and 22.01.20.10.57 denotes the time the data was recorded.

8.Use precautions

1. It is recommended to clean up the data storage once every time you turn on the power when you need to record the time, to prevent the large amount of data when exporting the data you need at present, which will lead to a long time.
2. It is recommended to export the data content in the weather station in time after use.
3. Before use, please read this manual carefully to ensure that the sensor should be inserted into the corresponding sensor interface and the battery direction is correct.
4. When the instrument shows that the battery is low, please replace the battery in time to prevent the battery from leaking and damaging the instrument.
5. Prevent chemical reagents, oil, dust and other direct infringement of the sensor, do not condensation, extreme temperature environment for long-term use, do not carry out cold, thermal shock.
6. The instrument is a precision device, the user should not disassemble to avoid damage to the product.
7. Please keep the calibration certificate and certificate of conformity, and return with the product when repairing.

Annexed table: Wind scale

Hierarchy	Name	Characteristics of terrestrial surface objects	Wind speed (m/s)
0	Windless	Quiet. Smoke goes straight up	0~0.2
1	Soft wind	The smoke indicates the direction of the wind, and the leaves are slightly shaken	0.3~1.5
2	Light wind	The human face feels windy, the leaves move slightly	1.6~3.3
3	Breezes	Leaves and twigs waved incessantly, flags were unfurled, and the tall grass shook incessantly	3.4~5.4
4	Breeze	It blows dust and paper off the ground. Paper, tree branches shake, tall grass undulates.	5.5~7.9
5	Fresh breeze	Small trees with leaves sway, inland water has small waves, tall grass waves undulate noticeably	8.0~10.7
6	Strong breeze	The branches of the trees swayed, the wires whirred, the umbrellas were difficult to hold, and the tall grass tumbled to the ground from time to time.	10.8~13.8
7	Flurry	The whole tree shakes, the big branches bend down, and it feels inconvenient to walk against the wind.	13.9~17.1
8	Gale	Small branches can be broken, and people feel resistance to travelling against the wind.	17.2~20.7