

OPERATION MANUAL

Model: 98887

Portable multifunction WBGT meter with pressure measurement

The smart WBGT meter features six (6) measurements in one multi-function WBGT meter model. Easy operation, meter powered by four AAA batteries, receptacle device is built-in for tripod mountable enable to do long time monitoring purposes.

FEATURES:

- ✓ Measurement: Ambient temperature, humidity, Global temperature, WBGT, Heat index, Dew point, Wet bulb temperature and pressure calculation.
- ✓ Audible WBGT temperature alarm threshold setting.
- ✓ Data hold freezes reading function.
- ✓ Auto power off function (15 minutes).
- ✓ 4-tier simultaneously display air temp., humidity, WBGT, Pressure.
- ✓ Temperature and Humidity offset function.
- ✓ Warranty period is two years. Reliable temperature. Humidity sensors.

SUPPLIED:

1. Meter
2. Battery-AAA x 4pcs
3. Operation manual
4. White box



KEY PAD:

Button	Description
PWR	Turn on or off, bell icon activate.
HOLD	Freeze current readings. Forward review or Increase digit.
BKLT	Decrease digit and Back review. Change pressure unit. Backlight function.
MAX/MIN	Review Max. Min. AVG readings and select to right digit in alarm threshold setting.
MODE	Toggle Temperature: GT, WBGT, Heat index, DPT, WB display. Enter WBGT alarm value setting.
SET	Change pressure value, manually record 99 memory point in meter. Adjust High alarm threshold setting.
Unit	Toggle Temperature unit °C and °F.

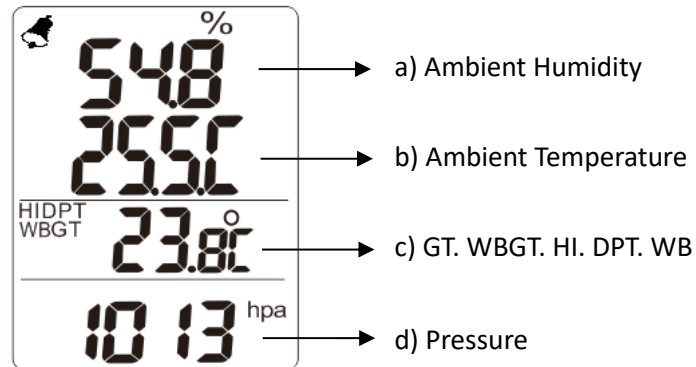
SPECIFICATION

Model	98887
Air temp. meas. range	0.0~50.0°C (32~122°F)
Temp. accuracy	±0.6 °C
Relative humidity	0.0~99.9%
RH accuracy	±3% (AT 25°C, 10~70%RH) , others ±5%
Globe temp. meas. range	0~80°C (32~176°F)
Globe temp. accuracy	±0.6°C (20~50°C), others ±1°C
WBGT indoor meas. range	15~59°C (Accuracy: ±1°C, others ±1.5°C)
WBGT outdoor meas. range	15~56°C (Accuracy: ±1.5°C, others ±2°C)
Barometric pressure range	300~1100hpa (Unit : hpa, inHg , mmHg is switchable)
Pressure accuracy	±9.9hpa
Pressure resolution	Hpa (0.1: 300.0~999.9 hpa; 1:1000~1100hpa) inHg (0.1) , mmHg (0.1)
Dew Point / Wet bulb calculation	YES
Backlight function	YES
Operating temp.	0~50°C (32~122°F)

Operating RH%	<80% (non-condensing)
Storage Temp.	-20~50°C (-4~122°F)
Storage RH%	<90% (non-condensing)
Meter dimension	162x58x32mm Globe ball:50mm LCD size: 48x33mm
Power supply	AAA batteries x 4pcs / 9V AC/DC (Option)

LCD DISPLAY

- a) Ambient Humidity
- b) Ambient Temperature
- c) GT: Black globe temp. (Remote probe)
WBGT: Wet bulb global temp.
HI: Heat index
DPT: Dew point temp.
WB: Wet bulb temp.
- d) Pressure



OPERATION

1. POWER ON/OFF:

When power ON the meter, LCD shows WBGT “In door or Out door” measurement mode (user saved the mode in previous action)” in few seconds with a beep sound then enter the normal measurement mode.

Short press “**PWR**” button to turn on the meter, press and hold for 2 seconds to turn off the meter.



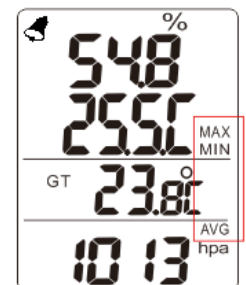
NOTE: When it is under low battery, LCD will show “**bAt**”. Use brand new batteries is required.

2. MAX/MIN/AVG:

NOTE: When re-plugging in remote probe, the MAX/MIN reading of GT (black globe temp.) will be recalculated.

Short press **MAX/MIN** button to cycle display Maximum, Minimum, Average Temperature, GT temp. and RH since powered on. Once gas reading exceeds current max values or lower than current Min values, readings will be updated.

Long press **MAX/MIN** button to clear all maximum, minimum values during Max, Min mode, now all parameters show current readings and “**CLr**” appears on the bottom of LCD and automatically return to normal measurement mode. Now meter restarts to memory maximum or minimum reading since last clear action is done.



3. INDOOR/ OUTDOOR Temperature MODE SELECTION

UNDER **WBGT** MODE, long press **UNIT** button to select indoor/ outdoor temperature.

There are two formula of WBGT: Indoor WBGT / Outdoor WBGT, select correct WBGT mode may get more accurate readings. Indoor WBGT stands for solar radiation indoors, no sun or when solar radiation is negligible.

a) Outdoor formula WBGT = 0.7Tw (wet bulb temp) + 0.2Tg (globe temp) + 0.1Td (air temp.)

Ex. It is used by industrial hygienists, athletes, and the military to determine approx. exposure levels to high temperature.

b) Indoor formula WBGT = 0.7Tw (wet bulb temp) + 0.3Tg (globe temp)

Ex. In buildings with low thermal inertia and maybe heat providing industrial processes, hot conditions could be even more extreme indoors.

4. CHANGE DEGREE °C/°F:

Short press **UNIT** button to switch °C and °F.

5. SWITCH UNIT OF PRESSURE:

Short press **BKLT** button to change the measuring unit of pressure. (hpa→inHg→mmHg).

6. GT/WBGT/HI/DPT/WB DISPLAY MODE:

Default display mode: GT Mode

Short press **MODE** button to toggle current **GT** (Globe temperature) ➡ **WBGT** temperature ➡ **HI** (Heat index) ➡ **DPT** (Dew point) ➡ **WB** (Wet bulb temperate).

NOTE: Make sure the meter is exit MAX/MIN/AVG mode (Press MAX/MIN button until the icon is disappear). Otherwise, the MODE function is invalid.

7. FREEZE READING:

Short press "**HOLD**" button under normal measurement, "**HLD**" icon shows on screen to freeze current readings. Under this function, only "**switch unit of pressure and temperature**", "**GT/WBGT/HI/DPT/WB DISPLAY MODE**" is available.

8. DISABLE AUTO-POWER OFF:

Meter will turn off automatically in **15** minutes when no use, to disable auto power off function by press **HOLD+PWR** button, "**n**" momentarily shows on screen, now meter is at non-sleep mode, then turns to normal measurement. Meter default auto power OFF.

9. BACKLIGHT FUNCTION:

Long press **BKLT** button to activate or inactivate backlight function.

10. Pressure Offset function:

- a) Long press **SET** button, LCD shows "**0.0 hpa**",
to increase the value by short pressing **HOLD** button,
- b) To decrease the value by short pressing **BKLT** button.
- c) Long press **POWER** button to save the value, LCD shows "**SAUE**" and return to normal measurement mode.



NOTE: The compensation range is ±9.9 hpa.

11. TURN ON/OFF ALARM FUNCTION:

After setting up the threshold, short press **PWR** button, the bell icon  shows on screen for alarm is activated. Short press **PWR** button again to disable alarm function.

12. MANUALLY RECORD 99 points:

- a) Short press "**SET**" button to save current readings (Temp. RH), **REC** icon shows next to temperature reading and recorded number shows on the bottom of LCD about 2 seconds then disappear.



NOTE: Meter stores up to 99 points.

- b) **Recall recorded data:**

Long press "**MODE**" button to review memory Temp. RH and recorded number.

Keep pressing "**HOLD**" button to review next data, press **BKLT** button to review back the last data.

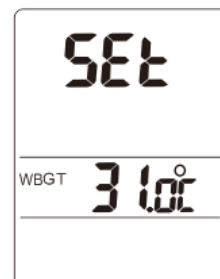
Long press "**MODE**" button twice, to escape memory function.

- c) Under data recall mode, long press **SET** button to clear the memory. LCD will show "---".

13. WBGT AUDIBLE ALARM THRESHOLD SETTING

(Default WBGT temperature alarm value as 31°C)

- a) Long press **MODE** button for 2 seconds, enter recall 99 points mode, then long press **MODE** button again to enter WBGT alarm mode.
- b) Short press **HOLD** button to increase the value, short press **UNIT** button to move digit.
- c) Short **BKLT** button to decrease the value; short press **UNIT** button to move digit.



- d) Indoor temperature adjustable range is 15.0°C to 59.0°C. Outdoor temperature adjustable range is 15.0°C to 56.0°C. After setting completed, long press **MODE** button to save the value and return to normal measurement mode.

14. GLOBAL TEMPERATURE/AMBIENT TEMPERATURE/HUMIDITY OFFSET FUNCTION:

The meter is designed with precision and free maintenance capacitor humidity sensor and thermistor temperature sensor. For long time usage drift, or special accurate purpose, user may do the offset function to adjust Temperature and Humidity per standard values.

- Power OFF the meter, hold and press **MODE+BKLT** and short press **POWER** button until
- the screen shows all 3 parameters in "0.0" then release the **MODE+BKLT** buttons.

NOTE: To offset temperature in °F, Hold **MAX/MIN** and short press **POWER** to select °C or °F.



1. Globe temperature offset:

Hold **UNIT** button and short press **HOLD** button at the same time to increase the value;
 Hold **UNIT** button and short press **BKLT** button at the same time to decrease the value.
 Press **MODE+POWER** to save the value, "SAUE" shows at the button of display.
 Repower the meter or re-plug in the adaptor to return normal measurement mode.

2. Ambient temperature offset:

Hold **SET** button and short press **HOLD** button at the same time to increase the value;
 Hold **SET** button and short press **BKLT** button at the same time to decrease the value.
 Press **MODE+POWER** to save the value, "SAUE" shows at the button of display.
 Repower the meter or re-plug in the adaptor to return normal measurement mode.

3. Relative Humidity offset:

Hold **MAX/MIN** button and short press **HOLD** button at the same time to increase the value;
 Hold **MAX/MIN** button and short press **BKLT** button at the same time to decrease the value.
 Press **MODE+POWER** to save the value, "SAUE" shows at the button of display.
 Repower the meter or re-plug in the adaptor to return normal measurement mode.

NOTE: Only ±9.9°C, ±9.9F, ±9.9% are the available values to be adjusted.

ERROR CODE:

Code	Description
Er1 :	Sensor failed.
Er2:	Out of measured range.

16. WARRANTY

This instrument is warranted for two years from the date of purchase (One year limited warranty applies to cables). A Return Authorization letter must be issued before returning for any reason. This warranty does not apply to defects resulting from action of the user such as misuse, abuse, alteration neglect, improper wiring, improper maintenance or repair, or unauthorized modification, damage resulting from leaking batteries, operation outside of specification. During the warranty period the manufacturer reserved the right to decide either to repair or replace the product. The meters are to be returned along with good packing to prevent any damage in shipment and insured against possible damage or loss.

The two year's warranty doesn't apply to:

- Accessories and batteries (not covered by warranty)
- Claim is not acceptable for improper use (including adaptation to particular applications not foreseen in the instructions manual) or improper combination with incompatible accessories or equipment or by previous attempts for repair carried out by none skilled or unauthorized personnel.
- Sensor damaged by user improper use; watering, burning, condensation....