

**3 in 1**

*Humidity/Temp., Dew point Temp., Wet bulbTemp.*

# HUMIDITY/TEMP. METER


Model : SP-82RH



Your purchase of this Humidity/Temp. meter marks a step forward for you into the field of precision measurement. Although this METER is a complex and delicate instrument, its durable structure will allow many years of use if proper operating techniques are developed. Please read the following instructions carefully and always keep this manual within easy reach.

## OPERATION MANUAL

# TABLE OF CONTENTS

1. FEATURES.....	1
2. SPECIFICATIONS.....	1
3. FRONT PANEL DESCRIPTION.....	3
3-1 Hold button.....	3
3-2  button ( Power button ).....	3
3-3 REC button.....	3
3-4 LCD display.....	3
3-5 Wristlet.....	3
3-6 Humidity/Temp. sensor.....	3
3-7 Battery Compartment / Cover.....	3
3-8 Buttons operation label.....	3
4. MEASURING PROCEDURES.....	4
4-1 Power on/off.....	4
4-2 LCD backlight on/off.....	4
4-3 Function selection.....	4
4-4 Unit selection.....	5
4-5 Special attention for the Humidity measurement...	6
4-6 Hold Function.....	6
4-7 REC ( Record ) function .....	6
4-8 Auto power off disable.....	7
5. BATTERY REPLACEMENT.....	7

## 1. FEATURES

- \* 3 in 1 professional environment instruments:  
1. Humidity/Temp., 2. Dew point, 3. Wet bulb.
- \* Tiny bone shape with lightweight and small size case design are suitable for handling with one hand.
- \* Wristlet design provides extra protection to the instrument especially for user one hand operation.
- \* High precision humidity sensor with fast response time.
- \* Built- in microprocessor circuit assures excellent performance and accuracy.
- \* Concise and compact buttons arrangement, easy operation.
- \* Memorize the maximum and minimum value with recall.
- \* °C/°F detection by pressing button on the front panel.
- \* Hold function to freeze the current reading value.

## 2. SPECIFICATIONS

### *2-1 General Specifications*

Display	8 mm LCD display
Measurement	1. Humidity/Temp. 2. Dew point 3. Wet bulb
Operating Humidity	Max. 80% RH.
Operating Temperature	0 to 50° C (32 to 122° F)
Over Input Display	Indication of "- - - -"
Power Supply	CR 2032 DC 3V battery
Power Consumption	Approx. DC 5 mA

Weight	160g (battery included)
Dimension	HWD 120 x 45 x 20 mm (4.7 x 1.8 x 1.2 inch).
Standard Accessory	Instruction Manual

## ***2-2 Electrical Specification ( 23 ± 5°C )***

### **Humidity/Temp.**

<i>Unit</i>	<i>Range</i>	<i>Resolution</i>	<i>Accuracy</i>
% RH	10 to 95 %RH	0.1 %RH	$< 70\% RH :$ $\pm 4 \%RH$ $\geq 70\% RH :$ $\pm ( 4 \%rdg + 1.2 \%RH)$
Temp.	0 to 50 °C	0.1 °C	$\pm 1.2 ^\circ C$
	32 to 122 °F	0.1 °F	$\pm 2.5 ^\circ F$

### **Dew point Temp.**

<i>Unit</i>	<i>Range</i>	<i>Resolution</i>	<i>Remark</i>
°C	-25.3 to 49.0 °C	0.1 °C	* Calculate from the humidity/Temp. value
°F	-13.5 to 120.0 °F	0.1 °F	

*Please refer to [http://en.wikipedia.org/wiki/Dew\\_point](http://en.wikipedia.org/wiki/Dew_point)*

### **Wet bulb Temp.**

<i>Unit</i>	<i>Range</i>	<i>Resolution</i>	<i>Remark</i>
°C	-5.4 to 49.0 °C	0.1 °C	* Calculate from the humidity/Temp. value
°F	22.2 to 120 °F	0.1 °F	

*Please refer to [http://en.wikipedia.org/wiki/Wet-bulb\\_temperature](http://en.wikipedia.org/wiki/Wet-bulb_temperature)*

### 3. FRONT PANEL DESCRIPTION

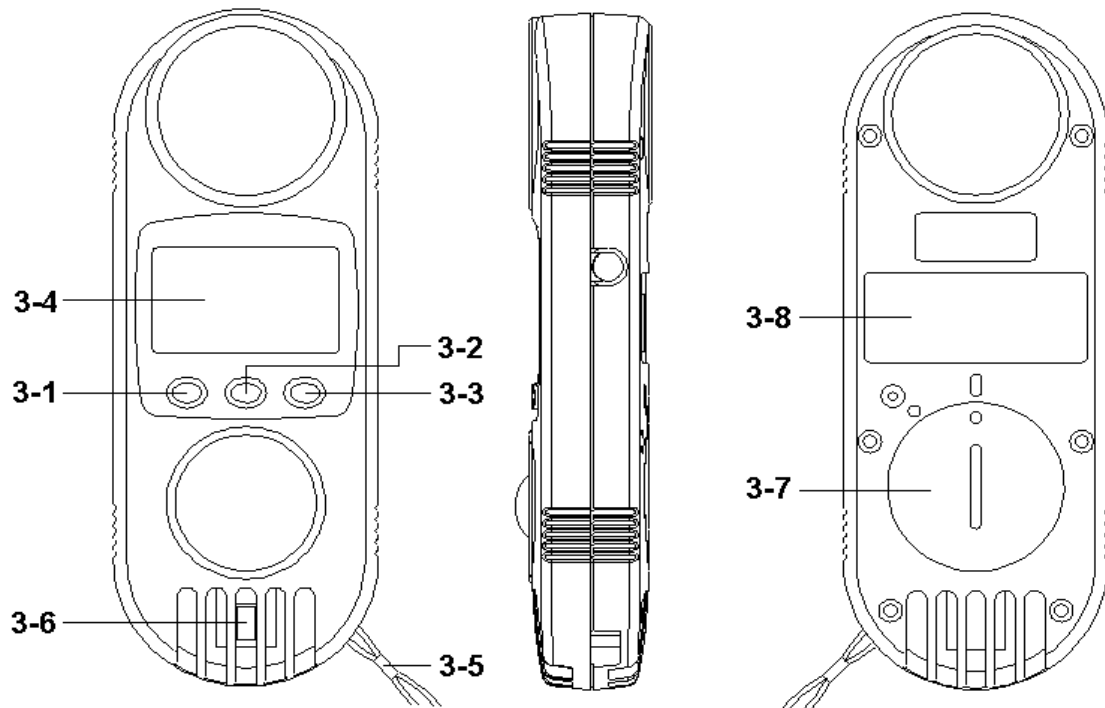



Fig. 1

3-1 Hold button

3-2  Button ( Power button )

3-3 REC nutton

3-4 LCD display

3-5 Wristlet


3-6 Humdity/Temp. sensor

3-7 Battery Compartment / Cover

3-8 Buttons operation label

## 4. MEASURING PROCEDURE

### 4-1 Power on/off

 Button = Power Button

1) *Power on* :

Press " Power Button " once.

2) *Power off* :

During power on, press " Power Button " > 3 seconds.  
will power off.

### 4-2 LCD backlight on/off

During power on, press " Power Button " once, then the LCD backlight will be on 5 seconds then off automatically,

### 4-3 Function selection

The meter can select 3 kind function as :


- a. Humidity/Temp.
- b. Dew point Temp.
- c. Wet bulb Temp.

During power on, press the " Hold button " continuously ( not release the button ), the Display will show the following text in sequence :

<i><b>Display text</b></i>	<i><b>Function</b></i>
<b>rH</b>	Humidity/Temp.
<b>dP</b>	Dew point
<b>_Et</b>	Wet bulb Temp.

Until the Display show the desired function, just release the " Hold button " , the meter will execute this function with default.

#### ***4-4 Unit selection***

During power on, press the " REC button " continuously > 3 seconds, the Display will show the text " Unit " release the " REC button ", then press "  button " to select the desired Temp. unit ( °C , °F ), after the desired unit is selected, press the " REC button " to save the unit with default.

REC button = Enter button
---------------------------

**The selection unit for all function are :**

<b><i>Measurement</i></b>	<b>Unit</b>
Temp. ( Humidity )	°C , °F
Dew point	°C , °F
Wet bulb Temp.	°C , °F

#### ***4-5 Special attention for the Humidity measurement***



**Attention :**  
Intend to get the precision reading, for the Humidity / Temp. , Dew point Temp., Wet bulb Temp., Heat index measurement, the hand or fingers do not touch ( or stay away ) the Humidity sensor (3-6, Fig. 1 ).

#### ***4-6 Hold Function***

Whenever press the " Hold Button " will freeze the current reading value with a "HOLD" symbol on the display.  
To release the Hold function, just press the " Hold button " once again, the " HOLD " indicator will be disappeared.

*\* During execute the " REC function ", the Hold function is disable.*

#### ***4-7 REC ( Record ) function***

- 1) The REC ( Record ) function can record and display the maximum and minimum reading values. Start the Record function by pressing the " REC Button " once. There will be a " REC " symbol on the display.
- 2) With the REC symbol on the display :
  - (a) Press the " REC button " once and the " Max " symbol along with the maximum value will appear on the display.
  - (b) Press the " REC button " again, the " MIN " symbol along with the minimum value will appear on the display.
  - (c) To exit the memory record function, press the " REC button " continuously for at least 2 seconds. The display will revert to the current reading.




(d) Clear the recorded MAX or MIN value by pressing the " Hold button " once. Previous recorded MAX/MIN value will be given up and then revert to the REC. function keep on recording.

#### ***4-8 Auto power off disable***

In order to prolong the battery life, the instrument has "Auto Power Off " function. The meter will switch off automatically if no buttons are pressed for around 10 minutes.

However if intend disable the " Auto power off " function, just execute the " REC " function ( above chapter 4-7 ), then the Auto power off function will be canceled.

## **5. BATTERY REPLACEMENT**

- 1) When the LCD display shows " " symbol, it is necessary to replace the battery. However measurement may still be made for several hours after the low battery indicator appears.
- 2) Open the " Battery Compartment / Cover " ( 3-7, Fig. 1 ) and remove the battery.
- 3) Install the battery ( CR2032 ) and then reinstate the cover.