REED

Model R6200
WBGT Heat Stress Meter

Instruction Manual

Table of Contents

Features

- Measures ambient temperature, humidity, wet bulb temperature, black globe temperature, WBGT (wet bulb global temperature), heat stress index, dew point and pressure
- Heat Stress Index measures how hot it feels when humidity is combined with temperature, air movement and radiant heat
- Black Globe Temperature (GT) monitors the effects of direct solar radiation on an exposed surface
- In/Out function displays the WBGT value with or without direct sun exposure
- Multi-line backlit LCD display simultaneously displays 4 measurements
- Maximum, Minimum, Average and Data Hold functions
- Internal memory stores up to 99 measurements
- User selectable unit of measure (°F or °C)
- User adjustable WBGT threshold alarm (audible)
- Tripod mount for long-term monitoring
- Low battery indicator and auto shut off
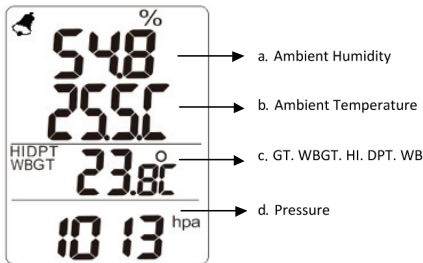- Includes batteries

Specifications

Temperature

Measuring Ranges	Air Temperature: 32 to 122°F (0 to 50°C)
	Black Globe: 32 to 176°F (0 to 80°C)
	WBGT (Indoor): 59 to 138.2°F (15 to 59°C)
	WBGT (Outdoor): 59 to 132.8°F (15 to 56°C)
Accuracy	Air Temperature: ±1.1°F (±0.6°C)
	Black Globe: ±0.6°C (20~50°C), other ±1°C
	WBGT (Indoor): ±2.7°F (±1.5°C)
	WBGT (Outdoor): ±3.6°F (±2°C)
Resolution	0.1°F/°C

Humidity

Measuring Ranges	0 - 99.9% RH
Accuracy (@ 25°C)	10% to 70% RH: ±3%
	Rest of Range: ±5%
Resolution	0.1% RH

Barometric Pressure

Measuring Range	300-1100 hPa (inHg, mmHg switchable)
Accuracy	±1.5hPa
Resolution	1 hPa, 0.1 inHg, 0.1 mmHg

General Specifications

Dew Point/ Wet Bulb Calculation	Yes
Response Time	1 sec
Display	LCD
Backlight	Yes (non-condensing)
Data Hold	Yes
Min	Yes
Max	Yes
Average	Yes
Internal Memory	Yes, up to 99 measurements

Auto Shut-Off	Yes (after 15 mins/off)
User Adjustable	
WBGT Alarm	Yes (audible)
Tripod Mountable	Yes
Low Battery Indicator	Yes
Power Supply	4 x AAA batteries, Optional AC Adapter
Product Certifications	CE, RoHS
Operating Temperature	32 to 122°F (0 to 50°C)
Operating Humidity	<80% (non-condensing)
Storage Temperature	-4 to 122°F (-20 to 50°C)
Storage Humidity	<90% (non-condensing)
Dimensions	Instrument: 6.4 x 2.3 x 1.3"
	(162 x 58 x 32 mm)
	Black Brass Ball Diameter: 2.0" (50 mm)
Weight	4.8oz (136g)

Product Description

LCD Display

a. Relative Humidity
b. Ambient Temperature
c. GT: Black globe temp. (Brass Ball)
   WBGT: Wet bulb global temp.
   HI: Heat index
   DPT: Dew point temp.
   WB: Wet bulb temp.
d. Barometric Pressure

a. Ambient Humidity
b. Ambient Temperature
c. GT. WBGT. HI. DPT. WB
d. Pressure

Key Pad

Button	Description
PWR	Power instrument on or off / Activate or inactivate audible beeping
HOLD	Freeze current measurements on display / Increase digit / Scroll forward
BKLT	Turn backlight on or off / Decrease digit / Scroll backwards / Change pressure unit
MAX/MIN	Review Max, Min, and Average readings
MODE	Enter WBGT alarm value setting / Toggle between temperature modes: Global Temperature (GT) Wet Bulb Global Temperature (WBGT) Heat index (HI) Dew Point (DP) Wet Bulb Temperature (WB)
SET	Change pressure value / Record measurements to memory
UNIT	Toggle Temperature unit between °C and °F / Select desired digit when setting alarm threshold

Operating Instructions

POWER ON/OFF

Press the "PWR" button to turn the meter on, press and hold for 2 seconds to turn the meter off.

When the meter is powered on, the LCD displays the WBGT mode and the previously selected "In door or Out door" WBGT measurement mode. Shortly after, a beep will sound and the instrument will begin taking measurements.

MAX/MIN/AVG

Press the **MAX/MIN** button to cycle the display through the Maximum, Minimum, Average measurements of Ambient Temperature, Global Temperature and Relative Humidity since the instrument was powered on.

Press and hold the **MAX/MIN** button until **"CLr"** appears on the bottom of LCD. The instrument will automatically return to normal measurement mode once the readings have cleared.

INDOOR/OUTDOOR Temperature MODE SELECTION

When in the **WBGT** mode, press and hold the **UNIT** button to toggle between indoor or outdoor temperature. The instrument automatically calculates the measurement using the following parameters:

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

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

SWITCH UNIT OF TEMPERATURE °C/°F

Press the **UNIT** button to switch between °C and °F.

SWITCH UNIT OF PRESSURE

Press the **BKLT** button to change the pressure measuring unit. (hpa--> inHg--> mmHg).

TEMPERATURE DISPLAY MODES

Press the **MODE** button to toggle through the **GT** (Globe temperature) --> **WBGT** temperature --> **HI** (Heat index) --> **DPT** (Dew point) --> **WB** (Wet bulb temperature measurements).

NOTE: Verify the meter is not displaying the MAX/MIN/AVG. If so, press the MAX/MIN button until the icons have disappeared.

FREEZE READING

Press the **HOLD** button under normal measurement and a **"HLD"** icon appears on the display to indicate that the meter is in Data Hold. When this feature is turned on, the only functionality available is the ability to **switch between units of pressure, temperature and scrolling through the temperature display modes"GT/WBGT/HI/DPT/WB"**.

AUTO-POWER OFF

The meter will automatically turn off when not in use for a period of 15 minutes. To disable the auto power off function press the **HOLD** and **PWR** buttons at the same time. The LCD will momentarily display **"n"** indicating the auto-power off feature is disabled.

BACKLIGHT FUNCTION

Press and hold the **"BKLT"** button to activate or inactivate backlight function.

INTERNAL MEMORY

The R6200 has the ability to record up to 99 points internally.

a. Press the **SET** button to save a reading (Temp. RH).
b. The **REC** icon shows will display next to the temperature reading and record number shows on the bottom of LCD for 2 seconds.

To recall recorded data:

a. Press and hold the **MODE** button to review memory Temperature, RH and recorded number.
b. Keep pressing the **HOLD** button to review next data or press and hold the **BKLT** button to review the last stored data entry.
c. Press the **MODE** button twice, to escape memory function.
d. Under data recall mode, press and hold the **SET** button to clear the memory. LCD will show "---".

WBGT AUDIBLE ALARM THRESHOLD SETTING

(The default WBGT temperature alarm value is set at 31°)

a. Press and hold the **MODE** button for 2 seconds and the meter will enter memory recall mode.
b. Press and hold **MODE** button again to enter **WBGT** alarm mode.
c. Press the **HOLD** button to increase the value, press the **UNIT** button to select the next digit.
d. Press the **BKLT** button to decrease the value, press the **UNIT** button to select the next digit.
e. Once the alarm is selected, press and hold the **MODE** button to save the value and return to normal measurement mode.

TURN ON/OFF ALARM FUNCTION

After setting up the threshold, press the **PWR** button and the bell icon will display on the screen indicating the alarm is activated. Press the **PWR** button again to disable alarm function.

GLOBAL TEMPERATURE/AMBIENT TEMPERATURE/ HUMIDITY OFFSET FUNCTION

It is recommended that this unit be calibrated once a year to ensure measurements stay within manufacturer's specifications. In the case that a user would like to perform self-verification with a trusted calibration source the following offset procedures have been provided.

To enter the offset mode:

    a. Power **OFF** the meter.

    b. Press and hold the **MODE** and **BKLT** buttons.

    c. Press the **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 press the POWER button to select °C or °F.

Globe temperature offset

- Hold the **UNIT** button and press the **HOLD** button at the same time to increase the value.
- Hold the **UNIT** button and press the **BKLT** button at the same time to decrease the value.
- Press the **MODE** and **POWER** buttons to save the value.
- Repower the meter to return normal measurement mode.

Ambient temperature offset

- Hold the **SET** button and press the **HOLD** button at the same time to increase the value.
- Hold the **SET** button and press the **BKLT** button at the same time to

decrease the value.

- Press the **MODE** and **POWER** buttons to save the value.
- Repower the meter to return normal measurement mode.

Relative Humidity Offset

- Hold the **MAX/MIN** button and press the **HOLD** button at the same time to increase the value.
- Hold the **MAX/MIN** button and press the **BKLT** button at the same time to decrease the value.
- Press the **MODE and POWER** buttons to save the value.
- Repower the meter to return normal measurement mode.

Pressure Offset Function

a. Press and hold the **SET** button until the **LCD** shows **"0.0 hpa".**

b. To increase the value press the **HOLD** button.

c. To decrease the value press the **BKLT** button.

d. Press and hold the **POWER** button to save the set value.

e. The LCD will display **"SAVE"** and return to normal measurement mode.

NOTE: The compensation range is ±3 hpa.

ERROR CODE

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

Low Battery Indicator

When the battery is low the LCD will display **"bAt"**. It is recommended to stop use immediately and replace the batteries.

For service and/or information on this or any other REED product, contact REED Instruments at info@reedinstruments.com.

Notes _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____