R6210

REED INSTRUMENTS

Heat Stress WBGT Meter

WARRANTY 1 YEAR WARRANTY

Instruction Manual

REED Instruments
1-877-849-2127 | info@reedinstruments.com | www.reedinstruments.com

원문: REED Instruments R6210 매뉴얼 · 제조사 원문 자료입니다. 사양은 제조사 사정에 따라 변경될 수 있습니다.

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Introduction

Thank you for purchasing your REED R6210 Heat Stress WBGT Meter. Please read the following instructions carefully before using your instrument. By following the steps outlined in this manual your meter will provide years of reliable service.

Product Quality

This product has been manufactured in an ISO9001 facility and has been calibrated during the manufacturing process to meet the stated product specifications. If a certificate of calibration is required please contact the nearest authorized REED distributor or authorized Service Center. Please note an additional fee for this service will apply.

Safety

- Never attempt to repair or modify your instrument. Dismantling your product, other than for the purpose of replacing batteries, may cause damage that will not be covered under the manufacturer's warranty. Servicing should only be provided by an authorized service center.
- Avoid electromagnetic interference which may cause erratic readings.
- Do not touch the black ball during a test as the results may be inaccurate.
- If the black ball is damaged or deformed, it will provide inaccurate measurement values.

CAUTION	Please place the meter in a warm temperature and low humidity environment for 24 hours after the meter has been exposed to an overly humid environment.

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⚠ WARNING ⚠

- Remove and immediately recycle or dispose of used batteries according to local regulations and keep away from children. Do NOT dispose of batteries in household trash or incinerate.
- Even used batteries may cause severe injury or death.
- Call a local poison control center for treatment information.
- Identification of compatible battery type: CR2032
- Nominal battery voltage: 3V
- Non-rechargeable batteries are not to be recharged.
- Do not force discharge, recharge, disassemble, heat above 140°F (60°C) or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.
- Ensure the batteries are installed correctly according to polarity (+ and -).
- Do not mix old and new batteries, different brands or types of batteries, such as alkaline, carbon-zinc, or rechargeable batteries.
- Remove and immediately recycle or dispose of batteries from equipment not used for an extended period of time according to local regulations.
- Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the product, remove the batteries, and keep them away from children.

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Features

- Measures ambient temperature, humidity, wet bulb temperature, black globe temperature, WBGT (wet bulb global temperature)
- Black Globe Temperature (TG) 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 3 measurements
- User selectable unit of measure (°F or °C)
- User adjustable WBGT threshold alarm (audible)
- Flexible armband and tripod mount for long-term monitoring
- Low battery indicator

Includes

- Heat Stress WBGT Meter
- Flexible Armband
- Fastener for Armband with Screws
- Keyring
- Carabiner
- Silicone Elbow for Anti-Skid
- Screw for Silicone Elbow
- Battery

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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: 32 to 122°F (0 to 50°C)
Accuracy:	Air Temperature: ±1.1°F (±0.6°C) Black Globe: ±1.1°F (±0.6°C) WBGT: ±3.6°F (±2.0°C)
Resolution:	0.1°F/°C

Humidity

Measuring Ranges:	5 to 90% RH
Accuracy (@ 25°C):	30 to 90% RH: ±5% Rest of Range: ±7%
Resolution:	0.1% RH

General Specifications

Sampling Interval:	20 seconds
Display:	LCD
WBGT Alarm:	Yes (audible)
Tripod Mountable:	Yes
Low Battery Indicator:	Yes
Battery Life:	Approx. 500 hours
Power Supply:	CR2032 Battery
Product Certifications:	CE, RoHS
Operating Temperature:	32 to 122°F (0 to 50°C)
Operating Humidity:	<80% (non-condensing)
Storage Temperature:	32 to 140°F (0 to 60°C)
Storage Humidity:	<70% (non-condensing)
Maximum Operating Altitude:	6561' (2000m)
Dimensions:	4.6 x 2.4 x 1.9" (116 x 60 x 50mm)
Weight:	2.8oz (80g)

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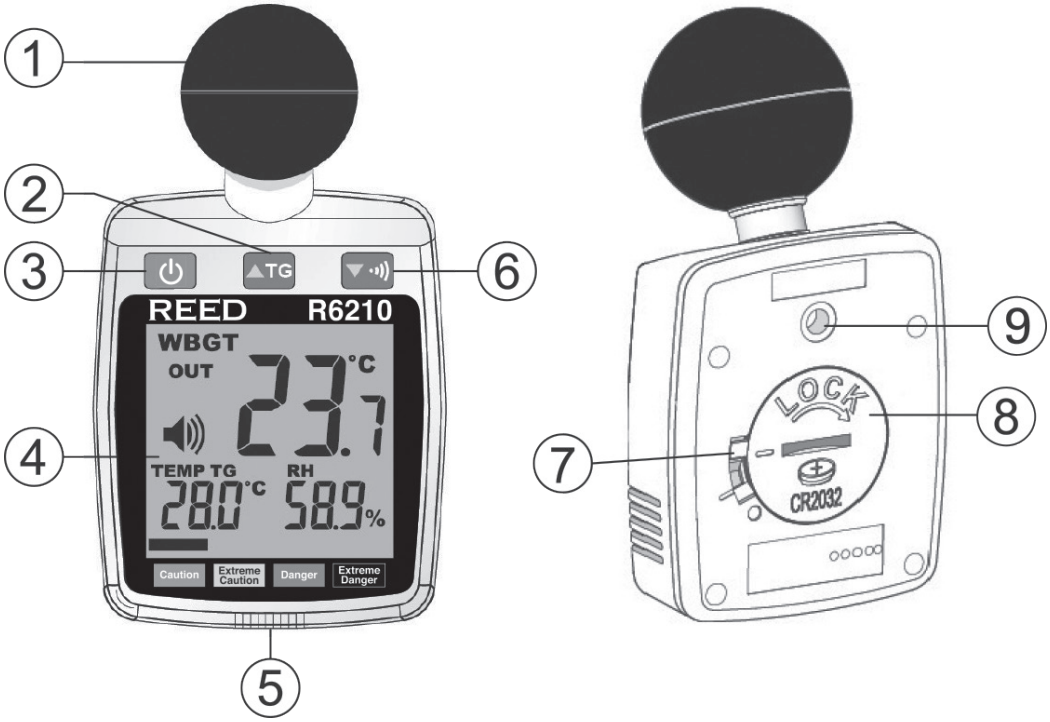
Instrument Description



1. Black Globe Sensor
2. Globe Temperature (TG)/ UP Button
3. POWER Button
4. LCD Display
5. Temperature/Humidity Sensor
6. Audible Alarm/DOWN Button
7. Locking Tab
8. Battery Cover
9. Tripod Mounting Screw

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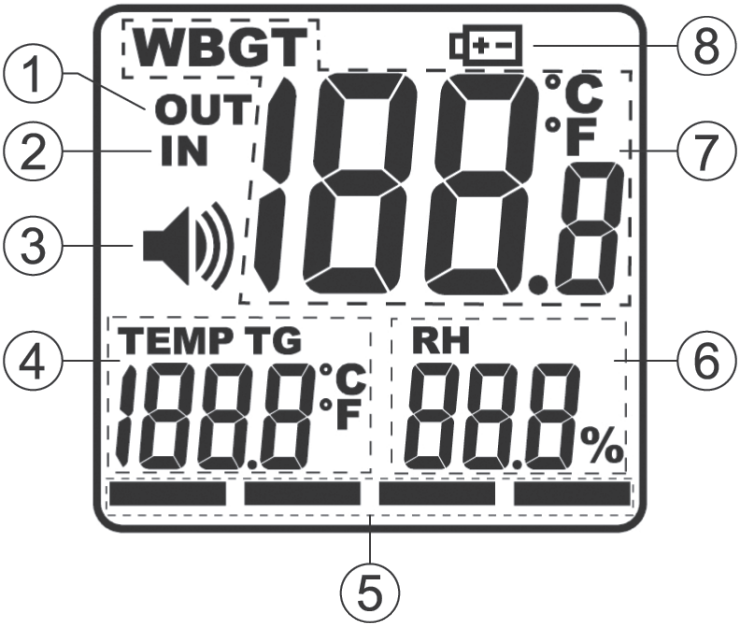
Display Description



1. Outdoor Index Indicator
2. Indoor Index Indicator
3. Alarm Indicator
4. Air Temperature (TEMP)/ Black Globe Temperature (TG) Measurement Values
5. Heat Stress Level Indicator
6. Humidity Measurement Value
7. WBGT Measurement Value
8. Low Battery Indicator

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Operating Instructions

Application Types

The R6210 can be mounted several ways to meet application requirements.

To wear the R6210 on your arm, assemble the kit as shown in Figure 1 and place around the arm as shown in Figure 2.

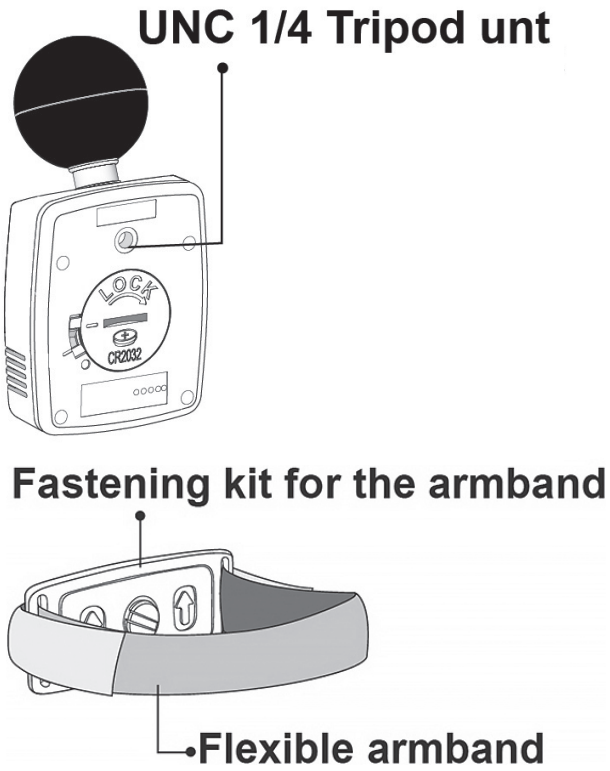

Figure 1

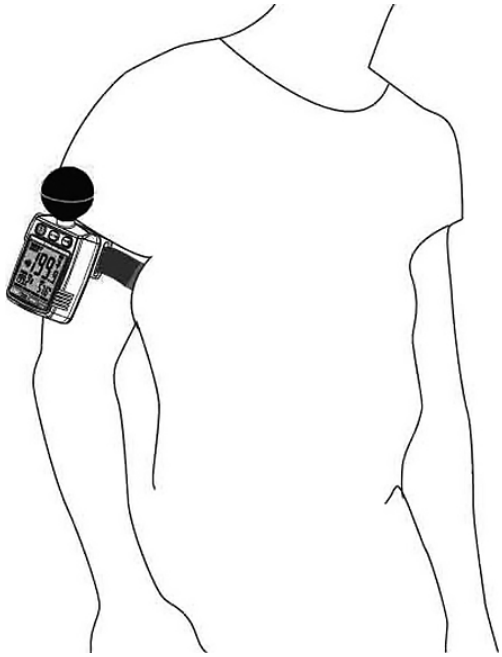

Figure 2

continued…

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To hang the R6210, start by attaching the silicone elbow to the meter with the included fastening screw into the mount located on the back of the meter as shown in Figure 3. When attached, the meter can now be fastened to the user's waist or backpack as shown in Figure 4 and 5.

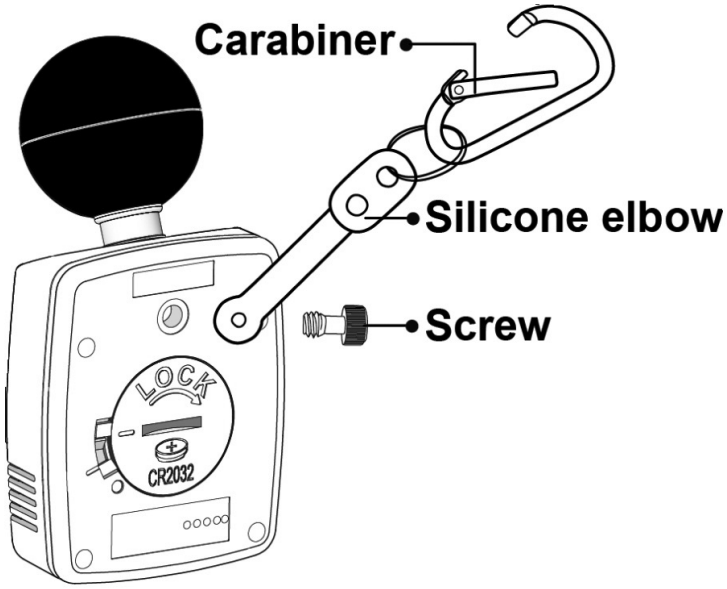

Figure 3

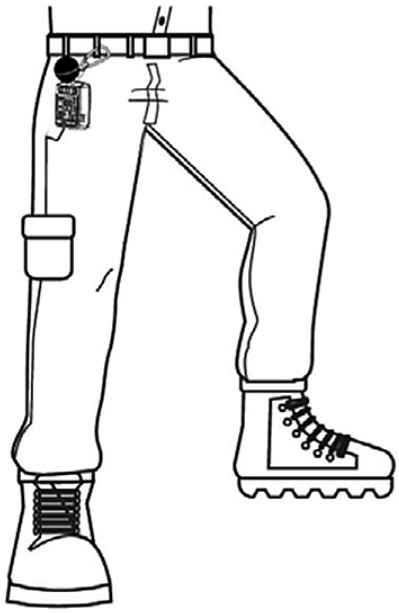

Figure 4

Figure 5

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For Tripod applications, the meter can be mounted using the 1/4 inch tripod mount located on the back of the meter as shown in Figure 6.

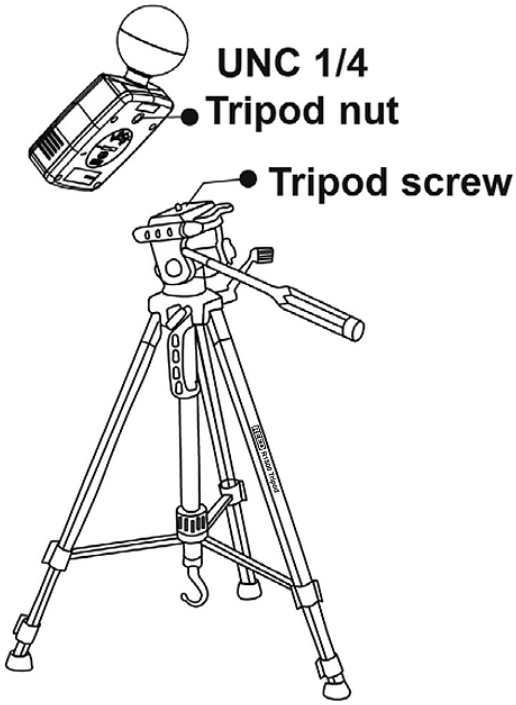

Figure 6

Power ON/OFF

1. Press the ⏻ button to turn the meter ON or OFF.
2. When the meter is powered on, the LCD displays the previously selected "Indoor (IN) or Outdoor (OUT)" WBGT measurement mode.

Indoor/Outdoor Temperature Mode Selection

1. When the meter is powered on, press and hold the ▲TG and ▼ buttons to enter the setup mode as indicated by "SET1".
2. Press the ▲TG or ▼ button to toggle between indoor (IN) or outdoor (OUT) temperature.
3. Press ⏻ to save the selection and skip to the next parameter.

When the temperature mode is selected, the instrument automatically calculates the measurement using the following parameters:

1. For outdoors with direct sun exposure:
   WBGT = 0.7 x Temp wet bulb + 0.2 x Temp globe + 0.1 x Temp air

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2. For indoors or outdoors without direct sun exposure:
   WBGT = 0.7 x Temp wet bulb + 0.3 x Temp globe

Note: The meter will automatically exit out of Setup mode and resume normal operation if no key is pressed within 15 seconds.

Turn Alarm Function ON/OFF

1. Press the (▲TG) or (▼·))) button to turn the alarm function ON (Flashing 🔊) or OFF when "SET2" appears on the LCD display.
2. Press the (⏻) button to save the selection and skip to the next parameter (SET3) or resume normal operation if alarm function is disabled.

Note: The meter will automatically exit out of Setup mode and resume normal operation if no key is pressed within 15 seconds.

Setting WBGT Alarm Value

Note: This feature is only available if the meter's alarm function is enabled.

1. Press the (▲TG) and (▼·))) buttons to adjust the WBGT alarm value when "SET3" appears on the LCD display.

Note: When the alarm threshold is exceeded, the meter will beep for 15 seconds and repeatedly activate if the temperature continuously exceeds the set value.

2. Press the (⏻) button to save the selection and exit setup mode to resume normal operation.

Note: The meter will automatically exit out of Setup mode and resume normal operation if no key is pressed within 15 seconds.

Default Alarm Setting (Alarm Function is set to OFF)

Heat Stress Levels	Temperature Baseline	Default Alarm
Caution	69.8 to 77°F (21 to 25°C)	Mute, LCD Caution Indicator
Extreme Caution	77 to 82.4°F (25 to 28°C)	Beep for 4 seconds, LCD Extreme Caution Indicator
Danger	82.4 to 87.8°F (28°C to 31°C)	Beep for 15 seconds, LCD Danger Indicator
Extreme Danger	>87.8°F (31°C)	Beep for 3 seconds and pause for 2 seconds. Repeats for 15 seconds, LCD Extreme Danger Indicator

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Switching the Temperature Unit of Measure

Press and hold the button while powering on the meter to switch between °F and °C.

Viewing Black Globe Temperature Measurements

While the meter is powered on, the default display modes are WBGT temperature, air temperature (AT) and relative humidity (RH).

1. Press the button to view the black globe temperature (TG) measurement.
2. The meter will automatically revert back to displaying the air temperature (AT) measurement after approximately 5 seconds.

Adjusting Alarm Volume

While the meter is powered on, press the button to adjust the alarm volume between High ( ), Low ( ) and Mute (no icon appears on LCD).

Reset to Factory Settings

While the meter is off, press and hold the , and buttons for approximately 5 seconds to reset to factory settings.

Note: When factory reset is complete, all calibration and user settings are erased and restored to the original settings.

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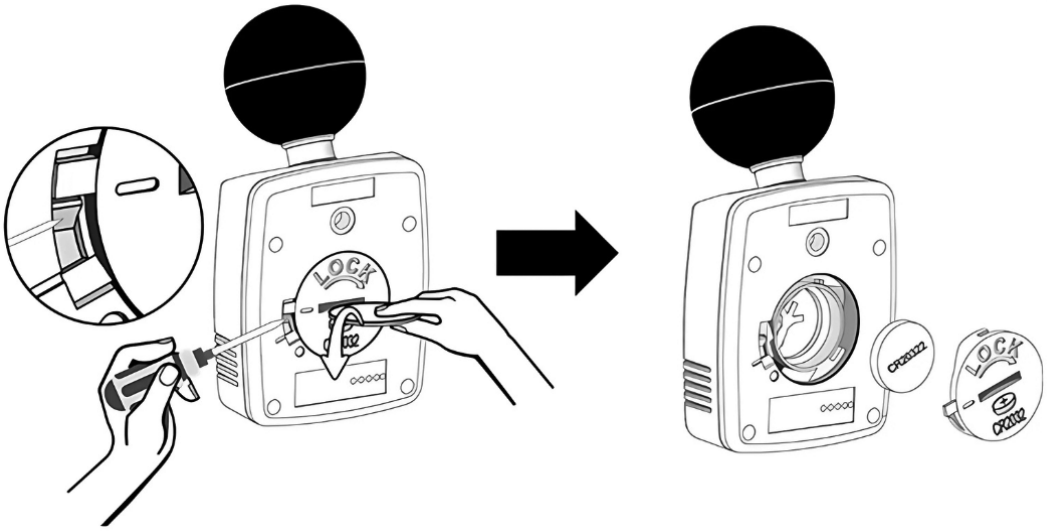
Battery Replacement

When the low battery icon [+−] appears on the LCD, the battery needs to be replaced.

1. Use a flathead screwdriver to gently unlock the locking tab.
2. Insert a coin into the slot and turn it counter clockwise to remove the cover.
3. Remove the old CR2032 battery and insert the new CR2032 battery, ensuring the + (positive) side faces up.
4. Align the cover and tighten it by turning the coin clockwise.
5. Lock the locking tab back in place using the flathead screwdriver.



⚠WARNING INGESTION HAZARD • DEATH or serious injury can occur

• A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours** • Keep new and used batteries **OUT OF REACH OF CHILDREN** • **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body

• For treatment information call: 1-800-498-8666.

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Applications

- Sports (leisure, organized, and professional)
- Monitor seasonal conditions to ensure safe environment at school or daycare
- Ensuring safe work environments

Accessories and Replacement Parts

- **CA-05A** Soft Carrying Case

Don't see your part listed here? For a complete list of all accessories and replacement parts visit your product page on www.REEDInstruments.com.

Product Warranty

REED Instruments guarantees this instrument to be free of defects in material or workmanship for a period of one (1) year from date of shipment. During the warranty period, REED Instruments will repair or replace, at no charge, products or parts of a product that proves to be defective because of improper material or workmanship, under normal use and maintenance. REED Instruments total liability is limited to repair or replacement of the product. REED Instruments shall not be liable for damages to goods, property, or persons due to improper use or through attempts to utilize the instrument under conditions which exceed the designed capabilities. In order to begin the warranty service process, please contact us by phone at 1-877-849-2127 or by email at info@REEDInstruments.com to discuss the claim and determine the appropriate steps to process the warranty.

Product Disposal and Recycling

	Please follow local laws and regulations when disposing or recycling your instrument. Your product contains electronic components and must be disposed of separately from standard waste products.

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Product Support

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Please visit **www.REEDInstruments.com** for the most up-to-date manuals, datasheets, product guides and software.

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TEST & MEASURE WITH CONFIDENCE

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