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› DANOPPLUS WBGT + HI Heat Stress Meter KB0296 Instruction Manual

## DANOPLUS KB0296

# DANOPLUS WBGT + HI Heat Stress Meter KB0296 Instruction Manual

## 1. INTRODUCTION

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The DANOPPLUS WBGT + HI Heat Stress Meter (Model KB0296) is a portable device designed to measure and monitor heat stress levels in various environments. It provides simultaneous readings for Wet Bulb Globe Temperature (WBGT), Heat Index (HI), Air Temperature, and Relative Humidity (RH). This manual provides essential information for the proper setup, operation, and maintenance of your device.

# 2-IN-1 WBGT / HI (HEAT INDEX) METER

for using in control of physical activity in hot environment to limit the danger of heat-related injuries



Image 1: The DANOPPLUS WBGT + HI Heat Stress Meter, a 2-in-1 device for measuring heat stress.

## Key Features:

- Simultaneous display of WBGT, HI, Air Temperature, and Relative Humidity.
- Switchable IN/OUT mode for indoor and outdoor measurements.
- Programmable buzzer and red LED danger zone warning.
- Adjustable audible alarm volume (75dB / 60dB / mute).
- Adjustable alarm threshold.
- Low battery indicator.
- Direct radiation effect measurement with ABS black globe.
- Wearable design with included arm strap and tripod mountable option.

## 2. PACKAGE CONTENTS

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Please check the package contents upon receipt to ensure all items are present and undamaged:

- 1 x DANOPLUS WBGT + HI Heat Stress Meter (Model KB0296)
- 2 x Buckles
- 1 x Arm Strap
- 2 x AAA Batteries
- 1 x English Instruction Manual



Image 2: The DANOPLUS WBGT + HI Heat Stress Meter with its packaging and included accessories.

### 3. SAFETY INFORMATION

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- Read this manual thoroughly before operating the device.
- Do not expose the device to extreme temperatures, direct sunlight for prolonged periods, or high humidity.
- Avoid dropping the device or subjecting it to strong impacts.
- Do not attempt to disassemble or modify the device. This will void the warranty.
- Keep the device out of reach of children.
- Dispose of used batteries according to local regulations.

## 4. SETUP

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### 4.1 Battery Installation

1. Locate the battery compartment cover on the back of the device.
2. Slide or unclip the cover to open the compartment.
3. Insert the two AAA batteries, ensuring correct polarity (+/-).
4. Replace the battery compartment cover securely.

### 4.2 Initial Power On

Press and hold the **POWER/SET** button to turn on the device. The display will illuminate and show the current readings.

### 4.3 Mounting Options

The device offers flexible mounting for various applications:

- **Wearable Strap:** Attach the arm strap using the provided buckles to wear the device on your arm for personal monitoring.
- **Tripod Mounting:** The device has a standard tripod screw hole for mounting on a tripod (tripod not included).
- **Wall Mount:** Use the integrated slots on the back of the device to hang it on a wall or other vertical surface.

# 3 WAYS TO USE



\*Note: Tripod is not included in the set\*

Image 3: The DANOPPLUS WBGT + HI Heat Stress Meter demonstrating its three usage modes: wearable, tripod-mounted, and wall-mounted.

## 5. OPERATION

### 5.1 Understanding the Display

The digital display shows the following measurements:

- **WBGT:** Wet Bulb Globe Temperature.
- **HI:** Heat Index.
- **TEMP:** Air Temperature.
- **HUMIDITY:** Relative Humidity.

The display also indicates the current mode (IN/OUT) and alarm status.

### 5.2 Switching IN/OUT Mode

Press the **MODE** button (usually indicated by an arrow or 'IN/OUT' symbol) to toggle between indoor (IN) and outdoor (OUT) measurement modes. The appropriate icon will appear on the display.

### 5.3 Setting Alarm Thresholds

1. Press and hold the **SET** button until the alarm threshold value starts flashing.
2. Use the **UP** and **DOWN** arrow buttons to adjust the desired WBGT or HI alarm threshold.
3. Press **SET** again to confirm and move to the next setting, or wait for the display to return to normal operation.

### 5.4 Adjusting Alarm Volume

The device features an adjustable audible alarm. Press the **VOLUME** button (if available, or cycle through settings with **SET**) to switch between 75dB, 60dB, or mute. A visual indicator on the display will confirm the selected volume level.



Image 4: The device offers adjustable alarm volume settings for 75dB, 60dB, or mute.

### 5.5 Interpreting Danger Zone Indicators

The meter provides visual and audible warnings when heat stress levels exceed predefined thresholds. A red LED will flash, and the buzzer will sound when the measured value is over the alarm threshold. The display also shows specific danger level indicators:

- **Caution:** WBGT: 26.7 ~ 29.4 °C (80 ~ 84.9 °F) / HI: 27 ~ 31.9 °C (80.6 ~ 89.4 °F)
- **Extreme Caution:** WBGT: 29.4 ~ 31 °C (85 ~ 87.9 °F) / HI: 32 ~ 40.9 °C (89 ~ 105.6 °F)
- **Danger:** WBGT: 31 ~ 32.2 °C (88 ~ 89.9 °F) / HI: 41 ~ 53.9 °C (105.7 ~ 129 °F)
- **Extreme Danger:** WBGT: > 32.2 °C (> 90 °F) / HI: ≥ 54 °C (> 129 °F)

## **ZONE INDICATOR (WBGT/HEAT INDEX)**

Easy to know the dangerous zone

Danger Zone	WBGT (°F)	Heat Index (°F)
CAUTION	80~84.9	80.6~89.4
EXTREME CAUTION	85~87.9	89~105.6
DANGER	88~89.9	105.7~129
EXTREME DANGER	>90	>129

Image 5: Examples of the danger zone indicators on the display, showing WBGT and Heat Index thresholds.

# AUDIBLE AND LED ALARM

When the measured heat stress value is over alarm threshold, red led, buzzer, and measured value will all every second.



Image 6: The red LED alarm light indicates when measured heat stress values exceed the set threshold.

## 6. MAINTENANCE

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### 6.1 Cleaning

Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure no liquid enters the device openings.

### 6.2 Battery Replacement

When the low battery indicator appears on the display, replace the AAA batteries as described in Section 4.1. Remove batteries if the device will not be used for an extended period.

### 6.3 Storage

Store the device in a cool, dry place away from direct sunlight and extreme temperatures. Keep it in its original packaging or a protective case when not in use.

## 7. TROUBLESHOOTING

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Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed batteries.	Check battery polarity or replace with new AAA batteries.
Inaccurate readings.	Sensor obstruction or device not stabilized.	Ensure sensors are clean and unobstructed. Allow 15-25 minutes for stabilization in a new environment.
Alarm not sounding.	Alarm volume muted or threshold not met.	Check alarm volume settings. Verify alarm threshold is set correctly and current readings exceed it.
Display is dim or flickering.	Low battery power.	Replace batteries.

## 8. SPECIFICATIONS

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Parameter	Value
Model Number	KB0296
Air Temperature Range	0 ~ 50 °C (32 ~ 122 °F)
WBGT Temperature Range	0 ~ 50 °C (32 ~ 122 °F)
HI Temperature Range	0 ~ 60 °C (32 ~ 140 °F)
Humidity Range	0.1 ~ 99.9% RH
Air Temperature Accuracy	± 0.6 °C
Humidity Accuracy	10 ~ 90% RH @ 25 °C: typical 5%, others 7%
Resolution	0.1 °C / °F, 0.1% RH
Stabilization Time	15 ~ 25 minutes (typical)
Battery Life	Approx. 300 hours
Power Source	2 x AAA Batteries
Dimensions (H x W x L)	70 x 60 x 22 mm
Weight	Approx. 90g
Display Type	Digital LCD
Response Time	20 Seconds

## 9. WARRANTY AND SUPPORT

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DANOPLUS products are manufactured to high-quality standards. For warranty information or technical support, please refer to the contact details provided with your purchase documentation or visit the official DANOPLUS website. Please retain your proof of purchase for any warranty claims.