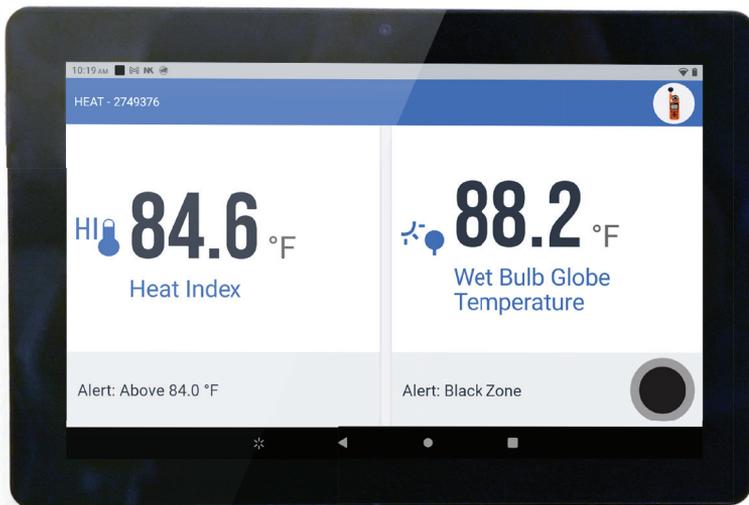




KESTREL® HEAT STRESS MONITORING SYSTEM SETUP GUIDE



Be Informed. Be Prepared.
Know Your Conditions.

www.kestrelinstruments.com



Nielsen-Kellerman (NK) Family of Weather Brands

Weather Monitoring Solutions For Your Profession or Passion

**The next generation of WBGT and environment monitoring
is here with the Kestrel 5400 Heat Stress Tracker.**

NK understands that you depend on accurate measurements to understand changing environmental conditions. The need for immediate and accurate weather data from monitoring devices that simply work is vital to taking action. Because knowing your conditions means making the right decision.



ambient weather



Kestrel[®]
Instruments



KestrelMet



AMBIENT
WEATHER
NETWORK™

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Introduction

You are minutes away from the ability to detect unsafe heat-related conditions. Welcome to your simple and highly accurate Kestrel 5400 Heat Stress WBGT meter paired with a continuous monitoring tablet.

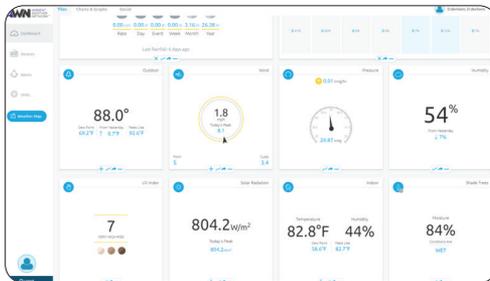
This system is perfect for monitoring heat stress safety. It delivers accurate, hyper-local weather information. It is lightweight, durable, easy to set up and quick to connect.

- » Receive instant alerts for changes in conditions.
- » Cloud + device-based records of onsite conditions for documentation and reporting.
- » Report tracking made easy to follow OSHA guidelines.
- » Avoid lost time and maximize work time.
- » Reduce hourly wage loss due to exertional heat related injury/sickness.

Your Heat Stress Monitoring System can transport your data to a personal dashboard where you can view and share data, view history and graphs, and build reports.

Set up your dashboard at
www.AmbientWeather.net.

Refer to page 17 of
this manual for further
instructions.



Remotely view your Kestrel 5400 Heat Stress Tracker data on www.AmbientWeather.net

Getting Started with the Kestrel Heat Stress Monitoring System



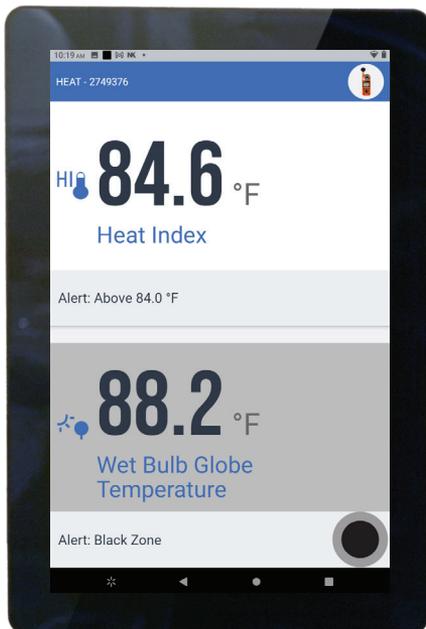
IMPORTANT: Read through these instructions once before starting, and do the steps in the order presented:

1. Plan your location and mounting.
2. Set up your Kestrel 5400 Heat Stress Tracker.
3. Turn on your Remote Monitoring Tablet.
4. Set up the Kestrel LiNK App on your tablet.
5. Create an *AmbientWeather.net* account for remote data monitoring.

1 Unboxing

What's included:

- » Kestrel 5400 HST Pro with Compass + LiNK
- » Kestrel Industrial Monitoring Tablet and Wall Mount
- » Certificate Of Conformity (Spec Sheet)
- » Heat Stress Reference Card (Waterproof)
- » Instructions
- » Battery - 1 × AA
- » Lanyard
- » K5 AC Adapter
- » K5 Wall Mount with Mounting Hardware
- » K5 Vane Mount
- » K5 Protective Soft Case
- » Free Kestrel LiNK companion app



2 Components & Hardware



Remote Monitoring Tablet



*Kestrel
5400 HST
Pro w/
Compass
+ LiNK*



Tablet Wall Mount and Hardware



K5 AC Adapter

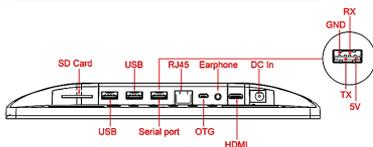
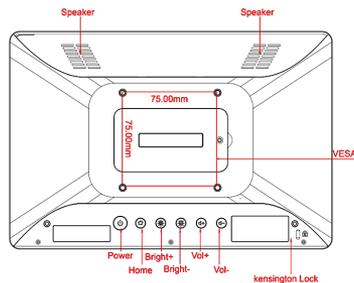
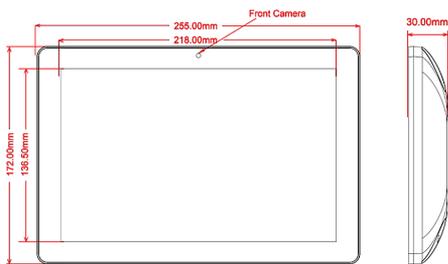
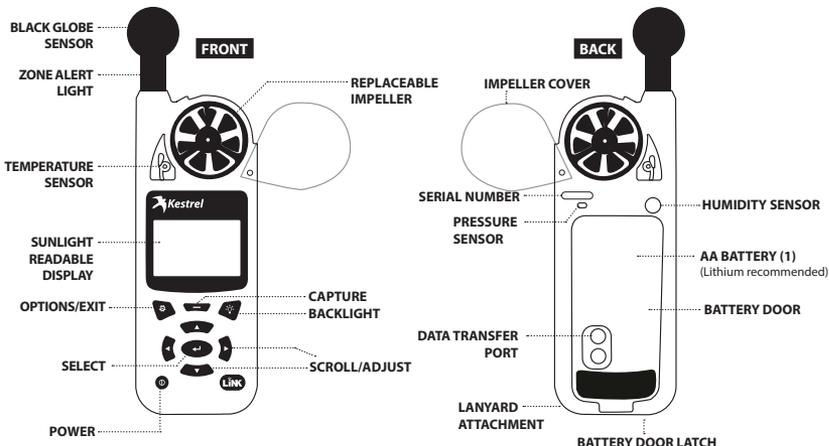


*Tablet back cover, AC adapter,
and PC connect cable.*



K5 Wall Mount and Hardware

Components & Hardware *(cont.)*



3 Siting & Setup

You should consider actual working conditions to determine potential mounting locations before installing the Kestrel unit.

Make sure the tablet can successfully connect to the Kestrel unit before mounting to a permanent location.

Location Considerations:

- » Take measurements at least 3 ft off the ground and no higher than 7 ft to match the conditions of the people you are monitoring.
- » Ensure the Kestrel is oriented into the source of wind in the environment.
- » Differences in the reflectivity of ground surfaces such as grass or asphalt will impact measurements.
- » Be sure to take measurements in the same solar/radiant heat environment as the people you are monitoring.
- » Pick a spot you can easily access, as you may have to adjust settings on the unit.
- » Data is transmitted wirelessly via Bluetooth® Low Energy within wireless range (100 ft line of sight—reduced by walls and obstructions). Kestrel 5400 must remain within range of the connected remote monitoring tablet to trigger alerts.
- » The tablet should be mounted in a location with good Wi-Fi signal strength.

Tablet & K5 Drywall Mount Instructions

It is recommended to mount the tablet in portrait orientation, as the LiNK app is optimized for portrait mode.

- » Use provided anchors for drywall.
- » Measure and mark the location for the anchors.
- » Drill a pilot hole.
- » Use a hammer to carefully tap the anchor into the hole until the collar of the anchor is flush with the wall surface. Don't drive the collar beneath the surface of the wall.
- » Insert the screw through the mounting hole of the wall mount you're installing and drive it into the anchor. The screw will cause the anchor to expand and secure itself against the back of the wallboard.



WARNING: This is intended for indoor use only. Disconnecting or loss of AC power will render your device inoperable.

4

Set Up Your Kestrel 5400 Unit

Please refer to the Kestrel 5400 User Manual for more detailed setup information.

- » Slide the battery door latch and open door. Replace with battery door attached to AC Adapter.
- » Make sure the battery door “clicks” fully into place.
- » Open or remove the impeller cover to allow air velocity measurements. If removed, keep in storage.
- » Plug into outlet for setup.
- » Long press the power button (Ⓟ) to turn on the Kestrel.
- » Press the gear button (⚙) to enter the “Options Menu”.
- » Make sure Bluetooth is set to “On”.
- » Scroll to “Display” and press the Enter/Select button (↵).
- » Scroll to “Auto Shtdwn” and choose “Off”. Subsequently, the Kestrel 5400 will only shutdown by holding down the power button.
- » Hit the gear button until you go back to the main dashboard.
- » Scroll to the WBGT Current Measurement Screen and press the Enter/Select button.
- » Set Type to “Indoor”.
- » To choose preprogrammed or configure custom WBGT settings, please see the 5400 User Manual.
- » To return to the main dashboard, select the gear button.
- » Connect the included K5 series clip to the wall mount and mount to your desired location. Pick a spot you can easily access, as you may have to adjust settings on the unit.



WARNING: In addition to monitoring WBGT values, please refer to your state or organization’s requirements for measuring WBGT, heat acclimatization guidelines, work/rest ratios and water consumption.

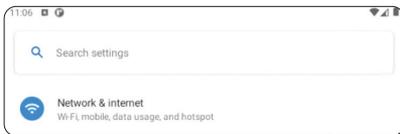
5 Set up the Kestrel LiNK App

Download the app on your tablet and connect to your Kestrel 5400.

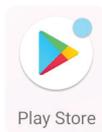
- » Plug in and power on the tablet.
- » Go to **Settings** > **Network & Internet**. Establish an internet connection.



Settings



- » Return to the main screen, swipe up, and select the Google Play Store app.
- » Set up or log into a Google account.
- » Download the Kestrel LiNK App (blue & white icon).



Play Store

- » Open the Kestrel LiNK app and connect to your Kestrel device. You may have to accept prompts to allow access to Bluetooth. Hit refresh to find available Bluetooth pairing devices.



by Nielsen-Kellerman

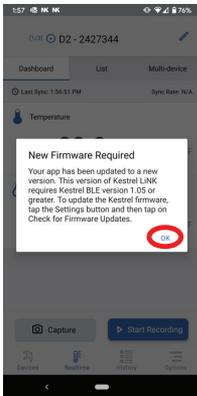


NOTE: It might take a couple of attempts to successfully connect to your device.

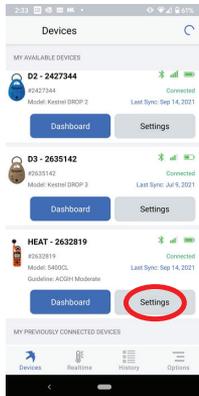


Set up the Kestrel LiNK App (cont.)

Once you connect your device, you might receive a prompt stating "New Firmware Required"



Click on "Settings" to check for new firmware.



Click "Check for Firmware Updates"



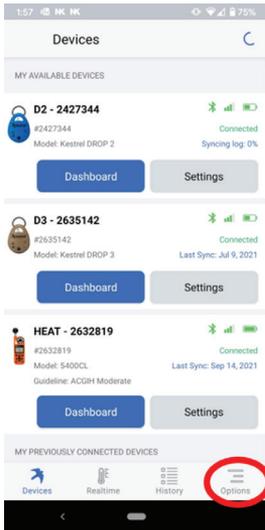
Click "Update" if a new Firmware update is available.



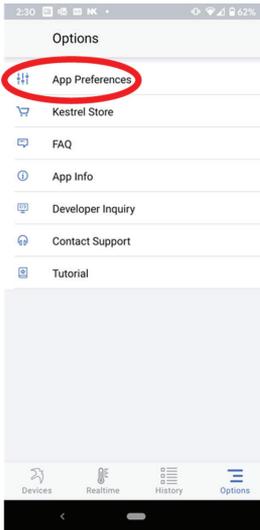
Set up the Kestrel LiNK App *(cont.)*

Enable continuous monitoring feature:

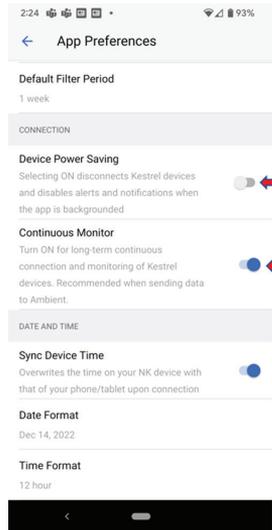
*Click on "Options"
in the LiNK app.*



Go to "App Preferences"

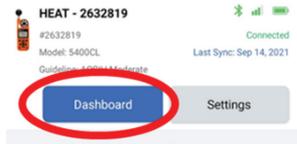


*Device power saving should
be "Off" and Continuous
Monitor should be "On"
as shown below.*

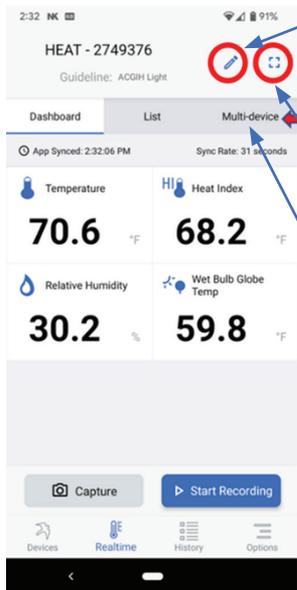


Set up the Kestrel LiNK App (cont.)

Configure your dashboard display:



Click on the "Devices" icon at the bottom left of your screen to return to your Kestrel synced devices. Then click on "Dashboard".



Use the "edit" button to select what measurements you want added and removed from the live dashboard.

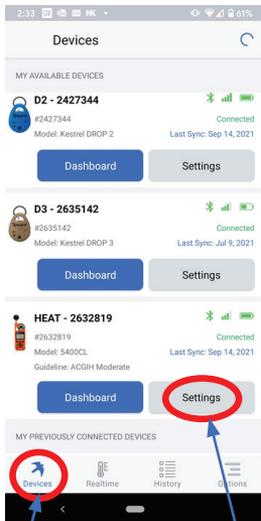
Press the "Full Screen" icon to display live measurements in full screen mode.

If connecting more than one Kestrel device, switch to the "Multi-device" dashboard.

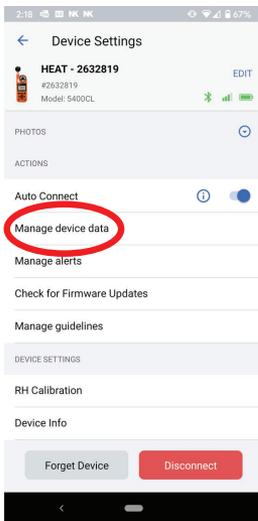
Full Screen example.
Full Screen can show up to six screens at one time. To exit full screen mode, press the back button at the bottom of the screen.



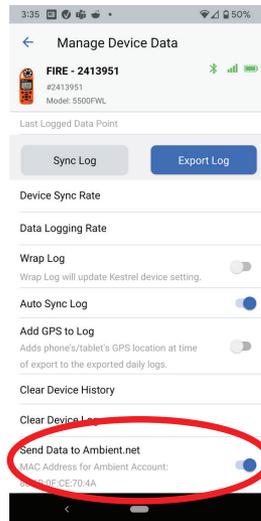
6 Send Kestrel Data to AmbientWeather.net for Remote Monitoring



In Kestrel LiNK, go to your "Devices" and click on "Settings"



Select "Manage Device Data"



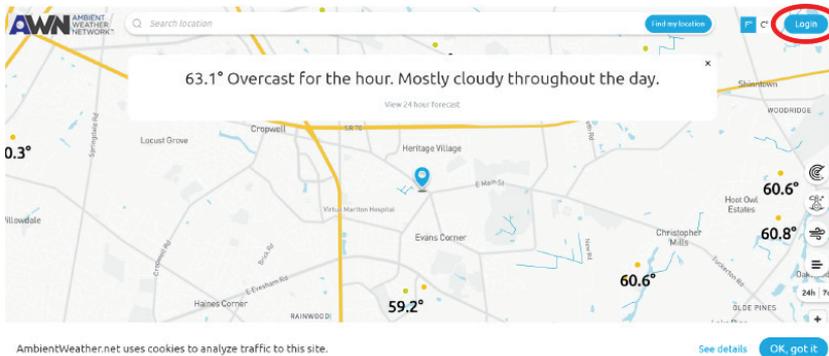
Slide toggle on to send data to AmbientWeather.net. This will also show your MAC Address.

7

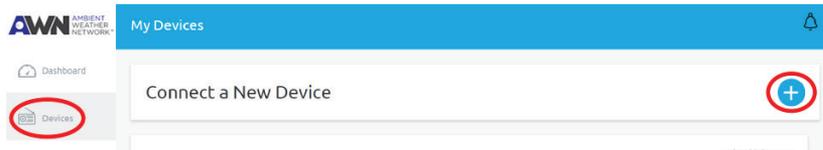
AWN AMBIENT WEATHER NETWORK™ Connect to AWN

NOTE: The Kestrel LiNK App **must be running in the foreground** on the remote monitoring tablet to transmit data to Ambient Weather Network continuously.

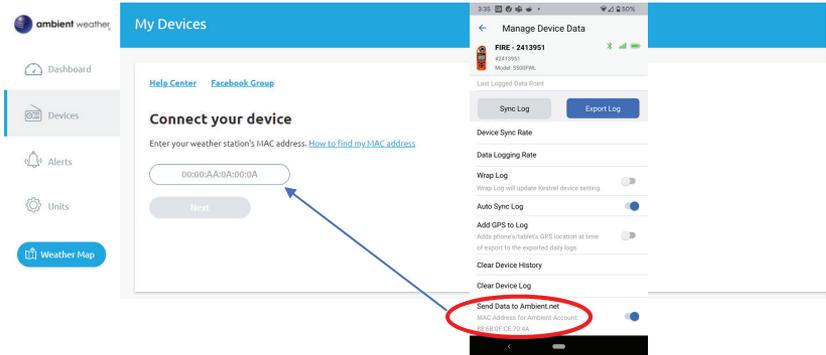
- » Using another internet-connected device such as a laptop or mobile phone, go to *AmbientWeather.net* to set up an account.
- » Click the “Login” button.
- » Log in to an existing account or create a new account.



- » Once you create or log in to your AWN account, select “Devices” on the top left and click the + icon to add a new device.



- » Enter the MAC Address displayed on the Kestrel LiNK app for the device you would like to use for remote viewing and click “Next”.



Now let's get some details:

Give your device a name

Ex: My Weather Station

Where is your device located?

Street Address or Region

[Select location from map view](#)

Timezone

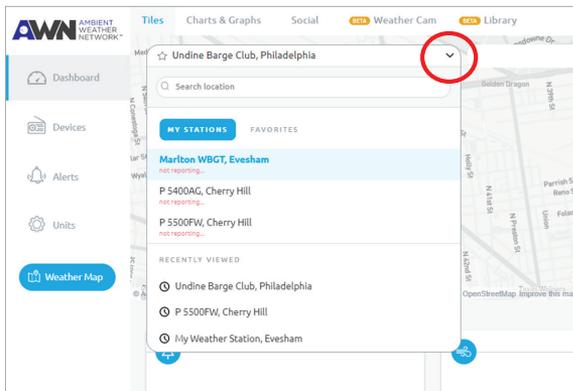
America/New_York

Community

Allow others to view my weather station data. Add a location to your device above so others can find it on the map.

Create

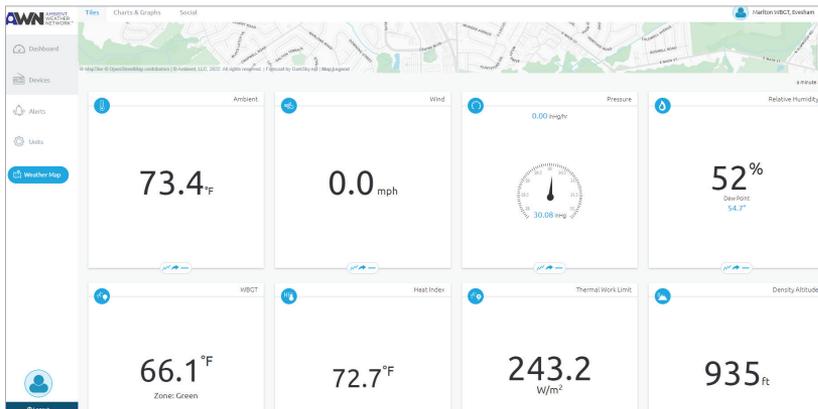
- » Enter a name for your Kestrel device.
- » Enter your device location.
- » The location will be displayed on the AWN map.
- » Select your time zone.
- » Check if you would like to make your device data viewable on the public map.
- » Select “Create” to finish set up.



- » Go to your dashboard to select which Kestrel device you would like to view from the dropdown.
- » Set up complete!

NOTE:
It may take up to five minutes for data to start reporting.

Dashboard View



Product & Safety Information



WARNING: Read and follow these guidelines to reduce the risk of injury or death.

- ✓ Fully read your Kestrel 5400 user manual to familiarize yourself with the product's features before operating.
- ✓ Failure to operate this product correctly can damage it or produce inaccurate readings.
- ✓ Use good judgement whenever you rely on readings to make decisions regarding safety, health or property protection.
- ✓ When changing environments (moving from an air-conditioned room to an unairconditioned room, moving to or from outdoors, or removing the unit from your pocket) the unit requires between 8-15 minutes to equilibrate to its surroundings before taking readings.

Be certain your weather unit's accuracy has not been compromised by improper installation, contamination, or damage. When in doubt, verify your Kestrel's accuracy against a known good standard for the measurement in question, and contact Kestrel Instruments Technical Support with any questions or concerns.

- ✦ **NOTICE:** All instructions and associated documents are subject to change at the sole discretion of the manufacturer. For up-to-date product information, visit kestrelinstruments.com/support.

Compliance



EU Declaration of Conformity

This product was tested and found to comply with EU Council Radio Equipment Directive 2014/53/EU (RED).

EN 61010-1, SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT

EN 55022, Enclosure of Ancillary Equipment

EN 61000-4-3, Radio Frequency Electromagnetic Field

EN 61000-4-2, Electrostatic Discharge

This product contains:

ESPRESSIF SYSTEMS Wi-Fi & Bluetooth Internet of Things Module, Model ESP32-C3-MINI-1U, with a manufacturer

Declaration of Conformity to EU Council Radio Equipment Directive 2014/53/EU (RED).

Microchip Inc Bluetooth Module, Model RN4871, with a manufacturer

Declaration of Conformity to EU Council Radio Equipment Directive 2014/53/EU (RED).



RoHS (Reduction of Hazardous Substances) compliant.



Marked in accordance with the WEEE (Waste Electrical and Electronic Equipment) Directive.

Please do not dispose of the Kestrel batteries in your household trash. Return to NK, an NK dealer, or a designated recycling center for proper recycling and disposal.



Does not contain greater than >0.1% of the substances of Very High Concern (SVHC) on the REACH European Regulation on the Registration, Evaluation, Authorization and Restriction of Chemicals Candidate List.

CONTACT US AT

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Techsupport@nkhome.com

(800) 784-4221 Toll-Free North America

(610) 447-1555 Continental US

Prop 65



WARNING: This product and/or its included or branded accessories can expose you to chemicals, including lead, lead compounds and phthalate DEHP, which are known to the State of California to cause cancer, and lead and lead compounds, bisphenol A (BPA), and phthalate DnHP, which are known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warning.ca.gov.

More Information

Many of the elements listed under Proposition 65 are commonly found in products in the electronics industry. Although Kestrel Instruments' manufacturing process is "lead-free," it remains possible that small amounts of lead could be found in components or subassemblies. Bisphenol A (BPSA) could be found in plastic housings, lenses, labels or adhesives, and DEHP & DINP (phthalates) could be found in PVC wire coatings of cables, housings, carrying cases, an/or power cords. Because we cannot guarantee that these chemicals are never present, we have elected to place the warning on our products to ensure compliance with California law and our customers' right to know. While we have not attempted to evaluate exposure, we believe that normal consumer use of this product is unlikely to result in exposure that creates a significant risk of harm. For more information visit kestrelinstruments.com/Prop65 or contact us directly at techsupport@nkhome.com.

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**PROUDLY DESIGNED
AND BUILT IN THE USA**

