Пожарный метеомер Kestrel 3550FW

CONTENTS

OUT OF THE BOX

Turn the Kestrel 3550 On:

Press the center button to turn your Kestrel on.

Pressing and holding the center button will turn it off.

📌 *To conserve battery, the Kestrel will power off 45 minutes after the last button press unless the Kestrel is connected to the Kestrel KDEX app.*

KESTREL KDEX APP BLUETOOTH CONNECTIVITY

Download the Kestrel KDEX app:

Make sure to choose Kestrel KDEX app, NOT the Kestrel LiNK Ballistics app. Kestrel KDEX app is the only app compatible with the Kestrel 3550 unit.

COMPASS CALIBRATION

Calibrate the Compass

Compass calibration is required before using your 3550. You can calibrate the compass by following the steps outlined below or by using the Compass Calibration feature in the KDEX app. The screen will display "CAL" plus flashing degree and compass symbols on start up, indicating the Kestrel is in calibration mode:

Hold the Kestrel vertical.

Press the center button to begin calibration.

Carefully spin the Kestrel at about 8 seconds per rotation while the screen counts down from 30 to 0.

⚠ **Troubleshooting Tip:** *If the calibration fails and returns to the "CAL" screen, simply press the center button and repeat the calibration.*

COMPASS CALIBRATION

When calibrated, the display will change to show the compass direction screen.

To ensure accuracy of readings, you must calibrate the compass each time the battery is changed or removed. The screen will show "CAL" plus the compass & degree symbols on start up, indicating the Kestrel is in calibration mode.

To initiate a new calibration, remove the battery for 3 seconds and then replace it or use the Compass Calibration feature available in the app.

📌 *The 3550 display will always show the magnetic heading.*

COMPASS CALIBRATION

The Kestrel KDEX App can be changed to display TRUE or MAGNETIC heading.

The Kestrel KDEX app can be used to initiate compass calibration via the device settings view.

CONNECT TO YOUR MOBILE DEVICE

Connect your Kestrel 3550 to your phone or tablet:

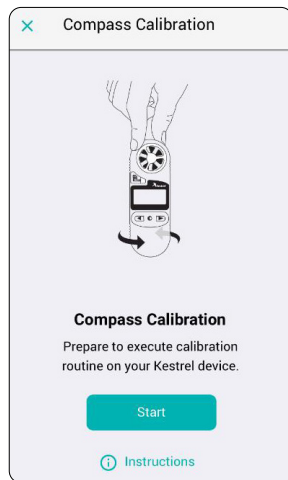With your Kestrel unit turned on, open the app and follow the app instructions and prompts to connect your Kestrel.

Certain permissions are required. User must select "Allow" on the app.

After scanning and connecting to your device, the "Realtime" measurements screen will display the current readings from the Kestrel. Readings are updated at the frequency of the Sync Rate shown in the upper right corner of the Realtime screen. Use the buttons on the bottom navigation bar to explore other app features.

⚠️ **Troubleshooting:** *Make sure Bluetooth® is turned on in your mobile device. Do not try to connect the Kestrel using the Bluetooth menu in your mobile device settings, but use the "Connect" function on the "Devices" view in the app instead.*
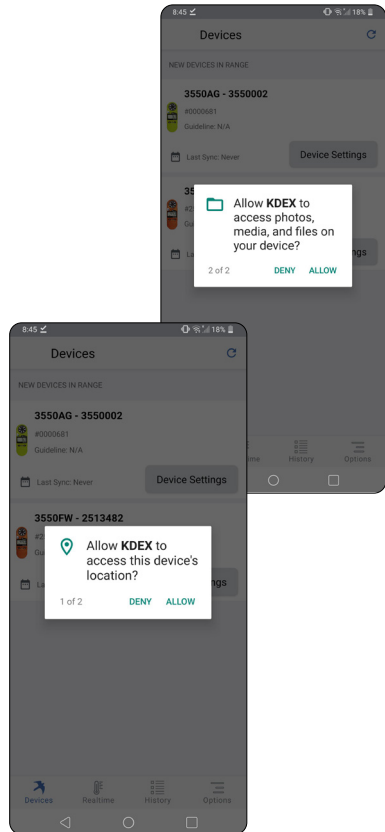
MEASUREMENTS

The table below shows all Measurement screens available with their corresponding screen icon and "Hint" abbreviation.

Measurement	Icon	Hint	Units of Measure	3550FW
Wind Speed	⬦	SPd	mph | kt | B | m/s | ft/min | km/h	•
Temperature	🌡	dEG	˚F | ˚C	•
Wind Direction	⬎	dir	°	•
Wind Chill	⬦🌡	chil	˚F | ˚C	•
Relative Humidity	💧%	r.h.	%	•
Heat Stress Index	🌡💧%	H.I	˚F | ˚C	•
Dewpoint Temp	💧	d.P.	˚F | ˚C	•
Barometric Pressure	↑	bAro	inHg | hPA | mb	•
Altitude	⛰	Alt	m | ft	•
Wet Bulb Temp	🌡💧	bulb	˚F | ˚C	•
Pressure Trend	→			•
Backlit Display				•
Clock				•

📌 *Only one arrow icon will be displayed on screen to indicate the 3-hour pressure trend.*
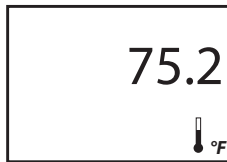
IN THE FIELD

Select Measurement Mode

- Use ◀ or ▶ to access each measurement screen.

- The instantaneous measurement value will be displayed on each screen and updated once per second.

- The Kestrel's compass is intended for measuring wind direction. The Kestrel must be held vertically with the back of the unit facing into the wind, i.e. towards the direction to be measured.

📌 *Each measurement screen will flash a brief "Hint" to clarify which measurement is being displayed.*

📌 *The measurement and units of measure will be displayed in the lower line of the screen.*

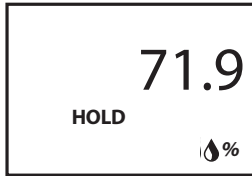

Temperature "Hint"
flashes before

Temperature
Measurement Screen

IN THE FIELD

HOLD Mode

Hold mode can be useful for taking measurements when you are unable to view the display.

Hold Screen

» Double press the center button to enter hold mode

» The word "HOLD" will blink on each screen and all values will stop measuring and freeze in memory.

» Use ◄ or ► to view each measurement screen in Hold mode.

» Double press the center button a second time to exit "Hold" mode.

USING THE APP

Bluetooth Connection

If the Kestrel 3550 is turned on, it can connect to the app at any time.

HOLD Mode / App Snapshot

A snapshot of all live measurement values can be initiated by the Kestrel device or by the App. Snapshots can be easily exported from the app as .csv files.
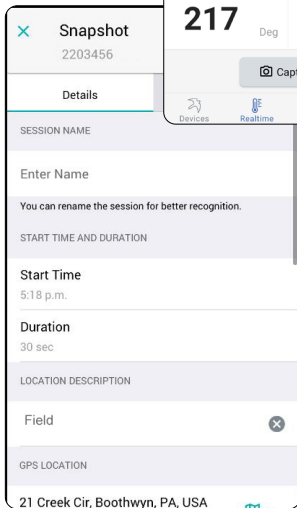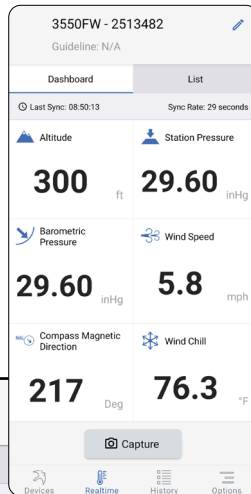
To take a snapshot from the App

Click the "capture" button on the "Realtime" screen.

Press "View" to review the snapshot measurements.

You can also conveniently add notes, location information, and photos to the snapshot record.

⚠️ *Snapshots initiated by the App will not cause the Kestrel 3550 to enter HOLD mode.*

snapshot details

USING THE APP

Take a snapshot from the Kestrel 3550

- » First confirm that the Bluetooth symbol is displayed on the 3550 unit. This indicates the unit is successfully connected to the app.

- » Next, be sure that the app is on the "Realtime" screen.

- » Double press the center button on the 3550. Within 3 seconds, the App will display a "SNAPSHOT" confirmation pop up and the 3550 will enter "Hold" mode.
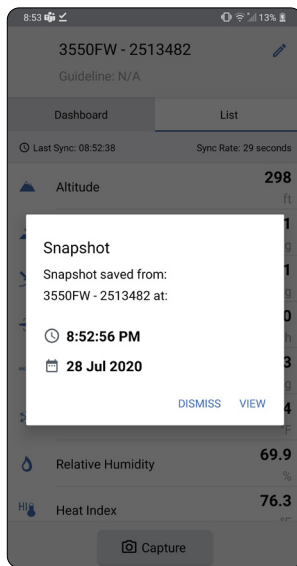
The snapshot function has a delay (up to 3 seconds) between pressing the button and recording the data when it is initiated in the app. Taking the snapshot from the Kestrel will give a more instantaneous measurement.

USING THE APP

Take a snapshot from the Kestrel 3550

» In this mode, the word "HOLD" will blink on each measurement screen, and all displayed measurement values will freeze in memory.

» Double press the center button a second time to exit "Hold" mode.

If a new snapshot is triggered from the Kestrel unit while the app is still displaying the "SNAPSHOT DETAILS" from an earlier capture, the data from the previous capture will be automatically saved.

Hold mode does not interrupt data logging in the app.

⚠️ *The Kestrel 3550 unit must be connected to the app and showing the Realtime screen when "Hold" mode is initiated, otherwise the "Hold" data will be lost when you exit "Hold" mode.*

SETUP + OPTIONS

Select the Unit of Measure

Select the unit of measure. While holding ◐ , press ▶ to scroll through the available units of measure for that measurement.

Adjust the Clock

Adjust the clock. Simultaneously press ◀ and ▶ to access clock setting. While the time is blinking, press ◀ or ▶ to change the time. Hold either button down to adjust quickly. Simultaneously press ◀ and ▶ to exit clock setting. The unit change function can be used to toggle the clock between 12 and 24 hour display modes.

📌 *Each time a 3550 is connected to the app, the 3550 clock is updated to match the time on the mobile device.*

Wind Max/Avg Function

To view the maximum wind gust recorded, press ◀ or ▶ until you see "MAX" appear at bottom of screen. Press again to view average wind gust. "AVG" will appear at bottom of screen. Both Max and Average are reset each time the unit is powered down. To restart averaging, simply turn the unit off and back on again.

📌 *The MAX and AVG wind displayed on the 3550 are independent of the min/max/avg session data that is displayed in the app.*

📱 *The MAX and AVG wind values are not available on the app.*

BAROMETRIC PRESSURE & ALTITUDE ADJUSTMENT

Setting Reference Barometric Pressure & Altitude

The Kestrel Meter measures "station pressure," which changes in response to both changes in altitude and changes in atmosphere. Barometric pressure is a measurement of the air pressure adjusted to sea level. **To obtain accurate barometric pressure and altitude readings, you must first enter EITHER your location's current barometric pressure OR your current altitude.**

Station pressure is displayed if the reference altitude is set to zero.

Starting with Known Altitude for your Location

- Use ◀ or ▶ to highlight the "BARO" screen.
- Press ◀ and ▶ simultaneously until the word "REF" starts blinking on screen.

- Use ◀ or ▶ to adjust the value to the correct known Altitude.
- Press ◀ and ▶ simultaneously to exit the reference setting mode.

⚠️ *After the Altitude reference is set, place the unit on a table and allow it to stabilize. The accurate Barometric Pressure reading will then be displayed on screen.*

Note the correct barometric pressure reading above and use this measurement to set the Altitude:

- Use ◀ or ▶ to highlight the "Altitude" screen.
- Press ◀ and ▶ simultaneously until the word "REF" starts blinking on screen.
- Use ◀ or ▶ to adjust the value to the barometric pressure measurement noted above.
- Press ◀ and ▶ simultaneously again to exit the setting mode.

BAROMETRIC PRESSURE & ALTITUDE ADJUSTMENT

Starting with Known Barometric Pressure for your Location

- Use ◀ or ▶ to highlight the "Altitude" screen.
- Press ◀ and ▶ simultaneously until the word "REF" starts blinking on screen.
- Use ◀ or ▶ to adjust the reference value to the correct known Barometric Pressure.
- Press ◀ and ▶ simultaneously again to exit the setting mode.

⚠ *After the Pressure reference is set, place the unit on a table and allow it to stabilize. The accurate Altitude reading will then be displayed on screen.*

Note the correct altitude reading above and use this to set the Barometric Pressure:

- Use ◀ or ▶ to highlight the "BARO" screen.

- Press ◀ and ▶ simultaneously until the word "REF" starts blinking on screen.
- Use ◀ or ▶ to adjust the reference value to the correct known Altitude.
- Press ◀ and ▶ simultaneously again to exit the setting mode.

Once these steps are complete, both screens will display accurate readings.

📌 *Be sure to adjust your reference measurements when you change your location for altitude and/or barometric pressure or when there has been dramatic change in weather conditions.*

MEASUREMENT NOTES

MEASUREMENTS

Barometric Pressure Trend

↑ : *indicates pressure is rising quickly (> +0.18 inHg) in 3 hours*

↗ : *indicates pressure is rising (within +0.06 and +0.18 inHg)*

→ : *indicates pressure is stable (remains between -0.06 and +0.06 inHg)*

↘ : *indicates pressure is dropping (within -0.06 and -0.18 inHg)*

↓ : *indicates pressure is falling quickly (> -0.18 inHg)*

Water and Snow Temperature

The Kestrel Meter may also be used to measure the temperature of water and snow. Submerge the thermistor portion (curly exposed wire in window next to impeller) in water or snow to get an accurate reading. Kestrel Meters are completely waterproof and can be safely submerged in water according to IP-67 standards (up to 1 meter for a maximum of 30 minutes).

Backlight

- Press ◉ to activate the backlight for 10 seconds.
- Press ◉ again to manually deactivate the backlight before 10 seconds expire.

Compass Accuracy

The accuracy of the compass can be affected by:

- Compass calibration: Refer to calibration instructions.
- Local magnetic fields: Metal objects and devices emitting electric signals may influence the compass accuracy.
- Rapid Movements

📌 *Confirm that the accuracy of the compass in the measurement environment is suitable for your purposes.*

MAINTENANCE & SERVICE ADDENDUM

Replacing the Battery

- When your display becomes dim or disappears, you need to change the battery.

- Use a US nickel or similar coin to twist open the battery compartment.

- Replace battery with a new, clean CR2032 coin-cell battery, with positive side (+) facing up.

- CR2032 batteries are available in most stores that sell batteries.

⚠️ *When replacing the battery door, be sure to keep the black rubber o-ring seated in the groove on the case back.*
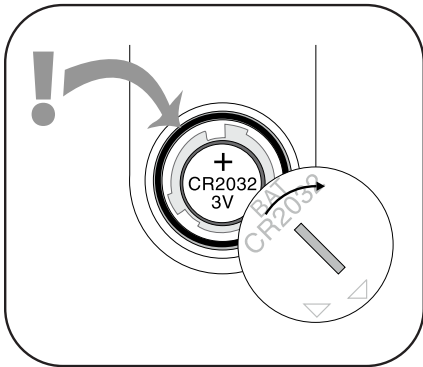
SENSOR DRIFT & CALIBRATION

Impeller

The Kestrel impeller calibration drift is less than 1% after 100 hours of use at 16 MPH | 7 m/s. Drift increases with higher-speed use. For most users, the impeller will provide accurate wind speed/air flow readings for years if not physically damaged. However, if your application requires extremely high precision or if you perform frequent high-speed readings, we recommend you replace your impeller at one-year intervals. Every replacement impeller is supplied with a certificate of conformity and restores your Kestrel's calibration upon installation.

Temperature Sensor

The Kestrel temperature sensor exhibits virtually zero drift over time and generally does not require recalibration for accurate performance during the life of the product. If your industry or application requires calibration or verification, please contact NK or a certified calibration lab for options and pricing.

Humidity Sensor

The Kestrel humidity sensor calibration may drift up to two percentage points up or down over 24 months. For high-precision applications, we recommend recalibration at 24-month intervals. If you require calibration, please contact NK or a certified calibration lab for options and pricing. The humidity sensor may also be recalibrated in the field using a Kestrel Humidity Calibration Kit (NK PN-0802). Instructions for running the recalibration routine are provided with the Humidity Calibration Kit and may also be found at

Pressure Sensor

The Kestrel pressure sensor drift may be up to 1 mbar over 12 months. For high-precision applications, we recommend recalibration at 12-month intervals. If you require calibration, please contact NK or a certified calibration lab for options and pricing. The pressure sensor may also be recalibrated in the field with reference to a known-accurate and calibrated pressure standard. We do not recommend simply recalibrating to a local weather station as this may not be accurate for your location. Instructions for recalibrating the pressure sensor may be found at

WIND VANE MODE

As an added feature, your Kestrel 3550 can be used with the Kestrel Basic Series Vane Mount (sold separately) as a real-time wind speed and wind direction weather station viewable on the Kestrel KDEX app.

1. Connect your Kestrel to the Kestrel KDEX app.

2. Place your Kestrel in the Kestrel Basic Series Vane Mount (PN# 0781) on a tripod in an open location exposed to the winds. The Bluetooth range of the Kestrel is about 100 feet – reduced by trees or obstructions.