Kestrel® Ballistics

Instruction Manual
Kestrel 5700 Ballistics Weather Meter
with Hornady 4DOF

Kestrel

E 4.78U MIL

W 0.67/0.96R

Tgt... 000° 632yd
Wind... 2:30 6mph

BALLISTICS

www.HornadyKestrel.com

⚠ CAUTION

Your Kestrel Weather/Environmental Meter is designed to provide accurate measurement of current conditions only. Depending on your location and environment, conditions may change rapidly.

Rapid temperature and humidity changes (i.e., moving your meter from indoors to outdoors) may cause inaccurate readings of temperature and humidity as well as all readings that rely on either of these values. Before relying on readings from your Kestrel Meter, be sure to either a) force air flow over the sensors by waving or slinging your meter through the air; or b) wait until your unit's readings have stabilized, indicating it has equilibrated to its new environment.

To maximize the accuracy and reliability of your readings:
- *Ensure that your Kestrel Meter is in good repair and within factory calibration.*
- *Take readings frequently and carefully according to the guidelines above.*
- *Allow your meter's readings to stabilize after significant changes in temperature or humidity (i.e., changing location from indoors to outdoors).*
- *Allow a margin of safety for changing conditions and reading errors (2-3% of reading is recommended).*

Use care and good judgment when referring to your Kestrel Meter to make any decisions regarding safety, health or property protection.

⚠ WARNING

To reduce the risk of injury or death to persons, read and follow these guidelines!

Your Kestrel Weather/Environmental Weather Meter may provide one or more of these measurements relating to estimation of danger of injury to people or animals from heat or cold: Heat Stress Index, Wind Chill Index, Wet Bulb Globe Temperature ("WBGT"), Thermal Work Limit ("TWL"). Note that guidance tables based on these values are based on typical physiological response. Certain individuals or animals may be more susceptible to harm relating to environmental conditions and require additional precautions. For example, very young or elderly individuals, individuals with asthma, and individuals who have not become acclimatized to hot conditions are likely to be more prone to heat injury.

- *Know yourself and the individuals and items you are responsible for.*
- *Where appropriate, seek the guidance of a medical professional.*
- *Know what to do in the event of heat or cold injury and be prepared with supplies.*
- *In the case of heat illness, remember the rule – "Cool first, transport second." An inexpensive ice bath can mean the difference between life and death.*

Your Kestrel Weather/Environmental Meter is not a medical device. It is only one source of information and must be employed with care and good judgment.

BATTERIES

We recommend that ONLY Lithium AA batteries be used in your Kestrel Ballistics Weather Meter to provide the widest operating temperature range and to avoid damage caused by leaking batteries. If you must use conventional AA batteries, please do not store your Kestrel Meter with the batteries in place. Damage caused by battery corrosion is not covered under warranty.

⚠ **WARNING:** Lithium is a toxic substance and ingestion may cause serious injury or death. Keep lithium batteries out of the reach of children. If swallowed, immediately seek medical help. Have doctor phone 24-hour hotline at (202) 625-3333, call collect if necessary. Dispose of batteries properly and according to local regulations. Do not puncture or burn batteries. If the battery compartment does not close securely, stop using the product and keep it away from children.

⚠ **WARNING:** This product and/or its included or branded accessories can expose you to chemicals, including lead and 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.P65Warnings.ca.gov**

This User Guide contains only the information you need to get started using your Kestrel meter. For FAQ's, chat and e-mail support, visit www.HornadyKestrel.com.

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(610) 447-1555
Email: techsupport@hornadykestrel.com
Facebook: fb.com/KestrelMeters
Twitter: @KestrelWeather

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Measurements	Icon
Wind Speed | Air Speed (mph | fpm | m/s | km/h | kt)	
Temperature (˚F | ˚C)	
Wind Chill (˚F | ˚C)	
Relative Humidity (%)	
Heat Stress Index (˚F | ˚C) .	HI
Dewpoint Temp (˚F | ˚C)	DP
Wet Bulb Temp (˚F | ˚C)	WB
Station Pressure (Absolute Pressure)	
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Altitude, m | ft	
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LiNK Wireless Connectivity + LiNK Ballistics Mobile App	LiNK
Night Vision Preserving Back Light	NV

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Ballistics Data
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FRONT

BACK

REPLACEABLE IMPELLER

IMPELLER COVER

TEMPERATURE SENSOR

SERIAL NUMBER

HUMIDITY SENSOR

PRESSURE SENSOR

SUNLIGHT READABLE DISPLAY

AA BATTERY (1)
(Lithium recommended)

CAPTURE

OPTIONS/EXIT

BACKLIGHT

BATTERY DOOR

DATA TRANSFER PORT

SELECT

SCROLL/ADJUST

LANYARD ATTACHMENT

BATTERY DOOR LATCH

POWER

BUTTONS

Button	Name	Function
⏻	POWER	Turns Kestrel on and off. Press for on, hold for two seconds to turn off.
⚙	OPTIONS/ EXIT	Enter the main Options menu or exit a menu.
↵	SELECT	Access Settings on any measurement screen or select a menu option to enter its submenu or confirm a task.
▲▼	UP/DOWN	Scroll up and down through measurement screens or menus. Adjust values when entering text in name menus.
◀▶	LEFT/RIGHT	Scroll options left and right. Adjust values in combo menus and setting submenus.
—	CAPTURE	In Weather Mode, manually capture all environmental values. In Ballistics mode, turns on and off continuous wind capture.
☀	BACKLIGHT	Turn backlight on or off. (Also turns off automatically after one minute.)

KESTREL OPTIONS MENU

Most system-wide and weather setup options are accessed from the main Options menu by pressing the ⚙ button from any Weather Measurement Screen or the main Targeting Screen.

- MODE
- BLUETOOTH
  - » Bluetooth On/Off
  - » Conct
- DATA PORT
- MEMORY OPTIONS
  - » Clear Log
  - » Auto Store
  - » Store Rate
  - » Overwrite
- GRAPH SCALE
- DISPLAY
  - » Auto Shutdown
  - » Contrast
  - » Backlight
- SYSTEM
  - » Time & Date
  - » Compass Cal
  - » Measurements
  - » Units
  - » Lang
  - » Batt
  - » Humidity Cal
  - » Factory Restore
- ABOUT
  - » Version
  - » Legal

KESTREL OPERATING MODES

Your Kestrel Ballistics Weather Meter is both a complete weather meter AND an advanced ballistics calculator. You must select either Weather Mode, Ballistics Mode, or Easy Mode depending on the functions you desire:

- » Weather Measurements, History and Data Logs are accessed in Weather Mode.
- » The Targeting Screen and all ballistics settings (Target, Wind, Gun, Environment, Ballistics, Manage Guns) are accessed in Ballistics Mode.
- » Easy Mode is a simplified version of Ballistics mode with additional guidance for users new to using the Kestrel.
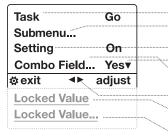
HOW TO SELECT THE OPERATING MODE:

- » Select Mode under the Options Menu.
- » Set Mode to Weather, Ballistics or Easy.

NOTE! You can also "jump" between Weather and Ballistic modes by pressing the ☼ BACKLIGHT button twice quickly. You will enter Weather Mode at the last Measurement Screen used, making it convenient to take advanced wind averaging measurements, for example.

TYPES OF MENU ITEMS

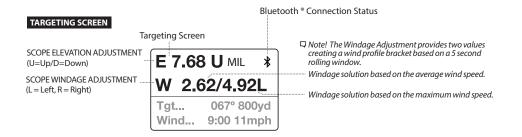|	
Task	Go
Submenu...	
Setting	On
Combo Field...	Yes▼
⚙ exit ◄►	adjust
Locked Value	
Locked Value...	

» Tasks are executed by highlighting the field and pressing Select.
» The presence of a submenu is indicated by a "…" following a field.
» Highlight the field and press Select to enter a submenu.
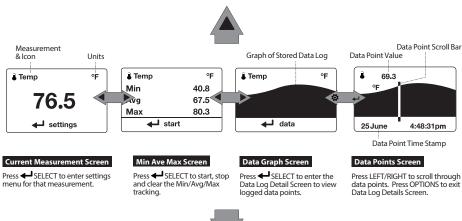» Adjust a setting by pressing left or right.
» An arrow indicates there are additional fields off screen.
» Adjust the value of a Combo Field by pressing left or right.
» Enter the Combo Field sub menu by pressing select.
» Navigation buttons indicate available actions on the current screen.
» Locked values are either driven by another value or cannot be edited on the current screen.
» Locked values may have submenus which are entered by pressing select.

Bluetooth ® Connection Status

TARGETING SCREEN

Targeting Screen

SCOPE ELEVATION ADJUSTMENT
(U=Up/D=Down)

SCOPE WINDAGE ADJUSTMENT
(L = Left, R = Right)

E 7.68 U MIL	✳
W 2.62/4.92L	
Tgt...	067° 800yd
Wind...	9:00 11mph

▢ *Note! The Windage Adjustment provides two values creating a wind profile bracket based on a 5 second rolling window.*

Windage solution based on the average wind speed.

Windage solution based on the maximum wind speed.

MORE MEASUREMENTS

Measurement & Icon   Units   Graph of Stored Data Log   Data Point Scroll Bar

Data Point Value

🌡 Temp °F	🌡 Temp °F	🌡 Temp °F	🌡 69.3
76.5	Min 40.8		°F
	Avg 67.5		
	Max 80.3		
↵ settings	↵ start	↵ data	25 June 4:48:31pm

Data Point Time Stamp

Current Measurement Screen

Press ↵ SELECT to enter settings menu for that measurement.

Min Ave Max Screen

Press ↵ SELECT to start, stop and clear the Min/Avg/Max tracking.

Data Graph Screen

Press ↵ SELECT to enter the Data Log Detail Screen to view logged data points.

Data Points Screen

Press LEFT/RIGHT to scroll through data points. Press OPTIONS to exit Data Log Details Screen.

MORE MEASUREMENTS

The ▲▼ UP/DOWN buttons navigate between all weather measurements set to "On" in Options|Measurements. The ◄► LEFT/RIGHT buttons scroll between the three display screens for the measurement.

The ⚙ OPTIONS button exits the settings submenu and Data Log Detail Screen.

GETTING STARTED

INSTALL BATTERY. Slide the battery door latch and open door. Insert the provided AA lithium battery as indicated by the label. Replace the battery door, ensuring it "clicks" fully into place.

1. **POWER ON KESTREL.** Press ⏻ to power on Kestrel.
2. **ENTER OPTIONS MENU.** Press ⚙ to enter the Options Menu.
3. **CALIBRATE THE COMPASS.** Scroll to and select **System**. Scroll to and select **Compass Cal**. Follow the on-screen instructions:

   » Place the base of the Kestrel on a flat surface at least 3 feet from any large metal objects.
   » Start the calibration routine. Rotate the Kestrel around its vertical axis 3 times, keeping the unit as vertical as possible and taking approximately 10 seconds per full rotation. You may need to restart the routine a few times until you get the timing correct.

   3x

   ▢ *Note! When taking compass readings, keep the Kestrel as vertical as possible for maximum accuracy.*

4. **EXIT OPTIONS MENU.**

BUTTON QUICK KEY

Options/Exit

Select

Scroll/Adjust

ADDITIONAL SETTINGS

All additional settings are accessed from the options menu.

1. **SET AUTO SHUTDOWN.** Scroll to and select **Display**. Scroll to **Auto Shtdwn** and choose a time window after which the Kestrel will shut down without any button presses.
2. **SET BACK LIGHT.** Scroll to and select **Display**. Scroll to **Backlight** and set to either standard White or night vision preserving **Red**.
3. **SET DATE AND TIME.** Scroll to and select **System**. Scroll to and select **Time & Date**. Adjust the time and date.
4. **TURN ON/OFF MEASUREMENT SCREENS.** Scroll to and select **System**. Scroll to and select **Measurements**. Set each measurement screen to either **On or Off** as desired.
5. **SET UNITS**. Scroll to and select **System**. Scroll to and select **Units**. To change all units select **Global**, then set **Global to Imperial** or **Metric**, and then scroll to **Apply** and select **Go**. To set units individually, scroll to each measurement type in the **Units** submenu and set to the desired units. Units can also be set in the **Settings** menu for each measurement.

ALTIMETER AND BAROMETER

The Kestrel employs a stable, accurate pressure sensor to measure station pressure, the unadjusted air pressure in your location.

» To use your Kestrel to measure barometric pressure (station pressure adjusted for local elevation), you must enter a correct reference value for your altitude. Accurate barometric readings require that no elevation changes be made while taking measurements.

» To use your Kestrel to measure altitude changes (changes in station pressure associated with changes in elevation), you must enter a correct reference value for your starting barometric pressure. Accurate altitude readings depend on stable, weather related barometric air pressure while measurements are taken.

» Synched values between the Altitude and Barometer measurement screens allow reference value updates on either screen to automatically update reference values on the other. You cannot use your Kestrel as a barometer and altimeter simultaneously.

SETTING REFERENCE VALUES ON BARO MEASUREMENT SCREEN:
» Scroll to the **Baro** measurement screen and select Settings.
» Adjust either the Altitude or the Barometric Pressure value to a local, known value obtained from a mapping reference, GPS, or accurate weather station in the same location.

SETTING REFERENCE VALUES ON ALTITUDE MEASUREMENT SCREEN:
» Scroll to the **ALTITUDE** measurement screen and select **Settings**.
» Adjust either the Altitude or the Barometric Pressure value to a local, known value obtained from a mapping reference, GPS, or accurate weather station in the same location.

Note! You should enter new reference values whenever you are using the Altimeter or Barometer functions and your location or the weather conditions have changed.

Note! You do NOT need to enter Altimeter or Barometer reference values to obtain accurate ballistics targeting solutions. The ballistics calculator employs the station pressure.

CREATING GUN & BULLET PROFILES

Note! Unless specified, all ballistics related functions are to be accessed with the Kestrel in Ballistics Mode. Features found in Easy Mode are called out specifically.
For ease of access, the ballistics Targeting Screen also contains the Ballistics Menu. Simply scroll down from the Targeting Screen to access these settings and submenus:

» Target
» Wind
» Gun
» Environment
» Ballistics
» Manage Guns

Note! The back of this guide contains a full Glossary of the terms used. Please read these definitions!

CREATE OR EDIT A GUN PROFILE:

» Scroll to and select **Manage Guns**. Either select an existing gun to edit or select **New Gun**.
» Scroll up and select **Gun** to rename the gun. Use the scroll/adjust buttons to enter a new name, then exit the naming menu.
» Set the remaining values in the **Gun** sub menu to match your gun, bullet and scope combination.
» Exit to the **Manage Guns** menu and ensure the new gun is set to **On**.

CREATING TARGETS

EDIT TARGET:

» Scroll to and select **Tgt**.
» Set range, angle, target speed, and wind values to match your target.

MEASURING WIND

An accurate crosswind measurement requires that the Kestrel "know" both the direction of fire and the wind direction and strength. You may use the Kestrel's built-in compass and wind measuring and averaging features to capture these values:

CAPTURING THE DIRECTION OF FIRE:
» Select **Tgt** to enter the Target menu, scroll down and select DoF, then scroll down and select **Capture**.
» Follow the on-screen instructions:
» While holding the Kestrel vertical, point the back of the unit directly towards the target and select **Capture**.
» **DoF** will automatically be populated in the Target menu.

CAPTURING THE WIND INPUTS:
» In the Target menu, scroll down and select **WD**, **WS1**, or **WS2**.
» Scroll down and select **Capture**.
» Follow the on-screen instructions:
  » While holding the Kestrel vertical, point the back of the unit directly into the wind and select **Capture**.
  » Continue to point the Kestrel into the wind for **at least 5 seconds** to capture a rolling 5 second average and peak value of the winds. Select **End Capture**
  » **WD**, **WS1**, **WS2** will automatically be populated in the Target menu.

Note! Selecting Wind in the Ballistics Menu jumps directly to the **WD, WS1, & WS2** *entries in the Target Menu.*

Note! For maximum accuracy of compass readings when capturing DoF and Wind, the Kestrel must be held as vertically as possible – be careful not to tilt it away from you while taking readings.

Note! Any time you are using the Kestrel to calculate an elevation hold a direction of fire plus wind direction and speeds must be input. These inputs contribute to an accurate elevation solution.

Because Zero Range (ZR) is a more commonly known, it is the default value asked for when creating a gun profile. Zero Angle is a comparable input but has certain advantages over Zero Range, particularly when zeroing at ranges greater than 100 yards or meters.

TURNING ON ZERO ANGLE:

» To switch between using Zero Angle and Zero Range, scroll to the GUN menu and press select, then scroll to Zero Range (ZR) and press select again.

» In the Rifle Zero sub menu, highlight **Zero** and toggle left or right to switch between **Range** and **Angle**. (When Zero Range is selected, ZR is displayed in the Gun menu. When Zero Angle is selected ZR changes to ZA.)

CALCULATING ZERO ANGLE:

» Enter the Rifle Zero sub menu and when **Zero Angle** selected, scroll down to **Cal Zero Angle** and press the center button.

» Confirm your approximate latitude is entered in the Kestrel and then select **Continue**. If you dont know your current latitude the Kestrel LiNK Ballistics App has a command to update your Kestrel's latitude using your phones GPS.

» On the **Capture Enviro**: screen, begin updating your environmental measurements by pressing **Start Capture**.

» The quickest way to ensure your Kestrel is reading accurate weather measurements is to alternate swinging the Kestrel by the lanyard and checking the **Temp** value displayed until the temperature value stops changing, at which point, select **End Capture**.

» Next, enter the distance to the target you are using to measure your Zero Angle. This distance should be approximately where you want your bullet to impact with no elevation held or dialed. Its preferable if your rifle scope has already been at least roughly sighted in at your zero target distance so you'll be able to easily identify where your bullets are impacting. Be as accurate as possible when measuring this distance and use a quality range finder or other method to confirm, then select **Continue**.

» Capture the Direction to Target by holding the Kestrel vertically and pointing the back of the unit at the target, then press **Capture**.

» Capture the Wind inputs by opening the impeller cover and while holding the Kestrel vertically, point the back of the unit into the wind, then press **Start Capture**. After measuring at least a 5-6 second sample of wind that is representative of your shooting location, press **End Capture**. The wind values just captured will be displayed. If desired, values can be scrolled to and manually changed. If the wind capture values are satisfactory highlight **Continue** and press select.

» With no Elevation dialed in your scope or held in your reticle, shoot at your zero range target until you can confidently confirm where your bullets point of impact is relative to your point of aim. Enter the vertical distance from your point of aim to your point of impact. This can be done using either Mils, MOA, inches or centimeters by changing units in the Kestrel. Remember to be as accurate as possible. After entering the **Impact height at Target** value and the Zero Angle (ZA) value has been calculated, scroll to **Continue** and press select.

» After accepting the new Zero Angle value the solver will use this value to calculate Elevation and Windage solutions. If you change altitude or if weather has changed significantly from when you calculated Zero Angle, the solver will automatically adjust your solution for the new environment with no need to re-measure Zero Angle.

AXIAL FORM FACTOR

If the vertical point-of-aim provided by the solver does not match match the point-of-impact of your rifle, Axial Form Factor can be modified to calibrate the solver and provide an even more accurate solution.

CALIBRATING AXIAL FORM FACTOR:

» Scroll to and select **Gun** in the Ballistics Menu.
» After accurately inputting all other gun, bullet, and scope parameters, as well as wind values and direction of fire, scroll to **Cal Axial FF** and press select**.**
» Confirm your approximate latitude is entered in the Kestrel and then select **Continue**. If you dont know your current latitude the Kestrel LiNK Ballistics App has a command to update your Kestrel's latitude using your phones GPS.
» On the **Capture Enviro**: screen, begin updating your environmental measurements by pressing **Start Capture**.
» The quickest way to ensure your Kestrel is reading accurate weather measurements is to alternate swinging the Kestrel by the lanyard and checking the **Temp** value displayed until the temperature value stops changing, at which point, select **End Capture**.
» Scroll the **Range** value to match a target approximately 300 to 800 yards away which will give you a clear indication of average point of impact, then press **Continue**. Further is generally better but if you have a hard time identifying a clear average point of impact find a closer target. Inputting an accurate distance to target here is key! Use a quality range finder or other method to confirm the distance to the target.
» Capture the Direction to Target by holding the Kestrel vertically and pointing the back of the unit at the target,

then press **Capture**.
» Capture the Wind inputs by opening the impeller cover and while holding the Kestrel vertically, point the back of the unit into the wind, then press **Start Capture**. After measuring at least a 5-6 second sample of wind that is representative of your shooting location, press **End Capture**. The wind values just captured will be displayed. If desired, values can be scrolled to and manually changed. If the wind capture values are satisfactory highlight **Continue** and press select.
» Based on the target and environmental inputs given, the Kestrel will provide the expected elevation correction required for your target on the **Elv** line. Dial or hold that elevation value and shoot at your intended target until an accurate average point of impact can be determined. If the elevation provided is not accurate, adjust the **Elv** value in the Kestrel until it is correct for your target.
» Adjusting **Elv** will automatically calculate a Axial Form Factor value. When the **Elv** value shown matches the elevation hold needed to hit your target scroll to Continue and press select. The **Axial FF** value is capped at 0.90 and 1.10. If adjusting the **Elv** value to match your target causes the Axial Form Factor value to change above or below those values, go back and check your scope and the gun and other inputs to your Kestrel.
» Once the **Elv** value matches the elevation required to hit your target select **Continue** and then press **Select** to confirm your new Axial Form Factor value.

ENVIRONMENT

Accurate Temperature, Humidity and Pressure measurements are critical to calculating an accurate Targeting Solution. It is important that the values measured by the Kestrel represent the ambient values, and for this the Kestrel needs continuous airflow over its sensors. When using a Kestrel in a position where airflow could be restricted, such as low to the ground or resting on a shooting mat or rock, it is better to make periodic environmental captures to avoid inaccurate measurements.

HOW TO CAPTURE ENVIRONMENTAL MEASUREMENTS:
» In the Ballistics Menu, scroll to **Enviro**.
» Adjust **Enviro** to **Live** and then wave the Kestrel rapidly through the air for 5-10 seconds. Next check the temperature shown and wave the Kestrel again. Repeat until the temperature value stops changing. If the area allows, and your lanyard is secure, you may also spin the Kestrel around by the lanyard to increase airflow over the sensors and measure ambient temperature as fast as possible.
» Once the temperature value stops changing, immediately adjust **Enviro** back to **Lock** to fix the environmental measurements you have just captured.

❏ *NOTE! Repeat this process every half hour or any time the temperature or pressure changes significantly.*

HOW TO SET THE LATITUDE:
Latitude is necessary for accurate Coriolis calculations.
» In the Ballistics Menu, scroll to and select **Enviro** then scroll to **Lat**.
» Adjust **Lat** to match your local latitude.

❏ *NOTE! Latitude default is the middle of North America if no new value is entered. Setting both DoF and Lat to 0 will effectively turn Coriolis correction off.*

CONTINUOUS WIND CAPTURE

As an alternative to the Wind Capture method described previously, you may mount your Kestrel on a tripod using the Kestrel Vane Mount. The Vane Mount ensures the Kestrel remains oriented into the wind and allows for continuous update of the windage solution. For convenience, this method works best when the firing solution is being displayed on a mobile device using Kestrel LiNK Ballistics.

HOW TO SET THE KESTREL TO CONTINUOUS WIND CAPTURE
» Select the correct **Gun** and **Target** and set the Direction of Fire.
» In the Ballistics Menu, highlight **Wind** and press the red Capture button. An arrow will appear next to the **Wind** menu item to indicate the unit is now in wind capture mode.
» While in wind capture mode, manual inputs to the unit will be locked and changes in wind speed or direction will automatically update the Targeting Screen Windage solution.
» To close wind capture press the red Capture button again.

CONNECTING TO DEVICES USING LINK

If your Kestrel is marked LiNK on the bottom front label, it can be connected wirelessly to other LiNK-compatible devices. LiNK is powered by Bluetooth Smart®, also known as Bluetooth® LE, which is available in most iOS devices released after 2014 and Android devices released after 2015, as well as in a USB Dongle available from Kestrel that supports connectivity to Windows and Mac OS devices. LiNK-enabled Kestrel units can connect to mobile devices running Kestrel LiNK Ballistics allowing you to view your targeting solutions remotely, build and manage gun profiles, access the library of Hornady 4DOF bullet files and install firmware updates.

USING PRIVACY PIN MODE
» To prevent unauthorized apps from connecting to your Kestrel, enter the Bluetooth menu and set Conct to PC/Mobile , then turn Privacy PIN to On.
» When connecting for the first consecutive time to a Privacy PIN compatible app, copy the PIN from the Kestrel's Bluetooth menu screen to the app.
» If Privacy PIN is set to ON, any apps or computer programs which connect without being able to provide the correct Privacy PIN number will be disconnected.

CONNECTING TO A COMPUTER, MOBILE PHONE OR TABLET:
» On your phone or tablet, follow the links at **kestrelinstruments.com/link-connectivity** to locate Kestrel LiNK Ballistics for iOS or Android in the App or Play store and install on your mobile device.

» On the Kestrel, open the Options Menu and select **Bluetooth**. Set **Bluetooth** to **On**. Set **Conct** to **PC/Mobile mode**, the Kestrel's Status will change to **Available**, indicating that it is available for pairing with a computer or mobile device.
» Ensure the computer or mobile device is searching and in range. When **Status** changes from **Available** to **Connected**, the pairing is active and your Kestrel is ready to communicate.

CONNECTING TO A NEW LINK-COMPATIBLE DEVICE: (SUCH AS A RANGE FINDER)
» Follow directions for your LiNK-compatible Device to power it on and put it in pairing mode.
» On the Kestrel, open the Options Menu and select **Bluetooth**. Set **Bluetooth** to On.
» Set **Conct** to **Device.**
» Scroll to **Name** and select **New**, then wait for the list of available devices in range to populate.
» Select a device from the available list. Once connected, the settings menu for that device will open, allowing you to manage the device's settings.
» Exit to the Bluetooth menu. **Status** should indicate **Connected**, meaning the pairing is active and your Kestrel is ready to communicate.

PAIRING TO A PREVIOUSLY PAIRED DEVICE

» Follow the directions for connecting to a new device except instead of selecting **New** in the **Name** field, scroll left or right to find the desired device.

» **Status** will change to **Searching**. If the device is in range and in active pairing mode, a connection will be made and **Searching** will change to **Connected**, indicating that the pairing is active and your Kestrel is ready to communicate.

BLUETOOTH CONNECTION INDICATOR:

» When connected to any LiNK compatible device, a ⚹ icon will appear in the Targeting screen in the upper right.

» If the paired device goes to sleep or if the connection is lost, the ⚹ icon may disappear but waking the device up or returning within range should automatically reestablish the connection and the icon should reappear.

Note! LiNK range is typically 100 ft/30M line of sight. Shorter distances should be expected if there are obstacles such as walls or metal enclosures. Range is also impacted by the signal strength of the other device.

CONNECTING TO COMPUTERS USING USB CABLE

All Kestrel 5 Series units can connect to a computer via the Data Transfer Port using the USB Data Transfer Cable available separately. Kestrel LiNK software is available for Windows and Mac for downloading logged weather data and installing firmware updates.

CONNECT YOUR KESTREL METER TO YOUR COMPUTER USING THE DATA TRANSFER CABLE:

» On your computer, follow the links at **kestrelinstruments.com/link-connectivity** to download Kestrel LiNK for PC or Mac. Install.

OR (Windows only)

» On your Kestrel in the main Options menu, scroll to and select **Data Port** and set to **On**.

» Insert the USB Data Transfer Cable into a USB port and plug into the Data Transfer Port on the back of the Kestrel unit.

» Follow the directions in the Kestrel LiNK program to confirm the connection and perform program actions.

DIRECTION – Compass heading in true or magnetic North.

WIND SPD – Wind Speed is the measurement of the wind passing through the impeller. For greatest accuracy, point the back of the Kestrel directly into the wind.

CROSWND – Crosswind uses the internal compass and a user selected heading to calculate the crosswind component of the full wind.

HEADWND – Headwind uses the internal compass and a user selected heading or target direction to calculate the headwind component of the full wind.

TEMP – Ambient Temperature is the temperature measured at the thermistor. For best results, ensure the thermistor is not exposed to direct sunlight and is exposed to good airflow.

CHILL – Wind Chill is a calculated value of the perceived temperature based on temperature and wind speed.

HUMIDITY – Relative Humidity is the amount of moisture currently held by the air as a percentage of the total possible moisture that the air could hold.

HEAT INDEX – Heat Index is a calculated value of the perceived temperature based on temperature and relative humidity.

DEW POINT – Dew Point is the temperature at which water vapor will begin to condense out of the air.

WET BULB – Wet Bulb is the lowest temperature that can be reached in the existing environment by cooling through evaporation. Wet Bulb is always equal to or lower than ambient temperature.

BARO – Barometric Pressure is the local station (or absolute) pressure adjusted to mean pressure. An accurate reading depends on a correct altitude input and unchanging altitude while measuring.

ALTITUDE – Altitude is the vertical distance associated with given atmospheric pressure. An accurate reading depends on correct initial barometric pressure input and stable barometric pressure while measuring.

STATION – Station Pressure (Absolute Pressure) is the pressure exerted by the atmosphere at the location.

DENS ALT – Density Altitude is the altitude at which the density of the theoretical standard atmospheric conditions (ISA) would match the actual local air density.

TARGET MENU

TR – Target Range is the distance from the muzzle of the rifle to the target.

DoF – Direction of fire is the direction from the position of the shooter to the target.

Ideg – Inclination is the angle above or below horizontal from the position of the shooter to the target.

Icos – Inclination Cosine is the cosine of the angle above or below horizontal from the position of the shooter to the target.

TS – Target Speed is the speed of the target perpendicular to the direction of fire.

TD – Target Direction is the direction of travel of the target perpendicular to the direction of fire.

WD – Wind Direction is the direction the wind is coming from in relation to the direction of fire.

WS1 – Wind Speed 1 is a five second rolling average wind speed.

WS2 – Wind Speed 2 is a five second rolling maximum wind speed.

GUN MENU

MV – Muzzle Velocity is the speed of the bullet as it leaves the muzzle. MV can be measured with a chronograph.

BF – A Hornady 4DOF Bullet File is a collection of data required to predict how a bullet will fly. Each file includes a Doplar Radar generated coefficient of drag vs velocity curve, data about the bullet's weight and inertia and the bullet's geometry.

DM – A Drag Model is the known aerodynamic drag profile of a standard projectile against which an actual bullet is referenced. Ballistics coefficients based on G1 drag models are more widely available but ballistic coefficients based on G7 drag models are more representative of a typical hollow tip, boat tail bullet. The Hornady Kestrel ships with BF as the default option but DM can be accessed by highlighting BF in the Kestrel's Gun menu and toggling left.

BC – A Ballistic Coefficient is a ratio that represents the ability of the bullet to overcome air resistance and maintain velocity while in flight in comparison to a standard projectile. Be sure to match the G1/G7 drag model setting to the BC value you are using. G1 BCs can not be used with G7 drag models and vice-versa. BC values can only be used in the Hornady Kestrel when Drag Model (DM) is selected instead of Bullet File (BF).

BW – Bullet Weight is the weight of the bullet measured in grains or grams.

BD – Bullet Diameter is the diameter of the bullet measured in inches or millimeters. (Note! Ensure bullet diameter is correct. The given name of a bullet's caliber does not always match its actual diameter, for example 300WM is actually .308", not .300")

ZR – Zero Range is the distance from the muzzle to the target at which the rifle was zeroed.

ZA - Zero Angle is the angle between the axis of your rifle's barrel and the axis of your rifle scope. Zero Angle can be measured using the Calculate Zero Angle tool in the Rifle Zero Sub Menu.

BH – Bore Hight (Scope Height) is the distance from the center axis of the rifle barrel to the center axis of the scope. This can be measured from the top of the bolt to the middle of the windage turret plus half the diameter of the bolt.

RT – Rifle Twist is the distance it takes for the rifling of your barrel to make one full rotation. RT is often provided by the gun or barrel manufacturer. It can also be measured by marking a tight fitting cleaning rod and measuring the insertion distance required to make one full rotation.

RTd – Rifle Twist Direction is the rotational direction of the rifle twist. A right hand twist (most common) is clockwise from behind the rifle.

Eunit – Elevation Unit is the unit of measure used in a scope and reticle for elevation and can be changed to Mil, TMOA, SMOA, inches or centimeters.

Eclck – Elevation Clicks is a user settable ratio of the number of clicks of the elevation turret required to adjust the point of aim one Mil, TMOA or SMOA. The Eclck value can be set in the Eunit sub menu when clik is selected as the Eunit.

Wunit – Windage Unit is the unit of measure used in a scope and reticle for windage, either TMOA, SMOA, or Mil.

Wclck – Windage Clicks is a user settable ratio of number of clicks of the windage turret per TMOA, SMOA, or Mil. The Wclick value can be set in the Wunit sub menu when clik is selected as the Wunit.

TMOA – True Minute of Angle is a measure of one actual minute of angle. 1 TMOA = 1.047" at 100 yards. Most MOA scopes are TMOA.

SMOA – Shooters Minute Of Angle is a simplified approximation of one minute of angle where 1 SMOA = 1" at 100 yards.

Mil – Milliradian is a measure of angle using the USMC definition of 6283 mils = 1 circle, or 1 mil = 3.438 MOA.

CLIK – Click is the value of each click of the turret where the user selects the number of clicks equal one TMOA, SMOA, or Mil, based on the turrets of their scope.

ENVIRONMENT MENU

Enviro - Setting Enviro to Live updates the ballistic solver with current sensor data for temperature, pressure, and relative humidity once every second. Selecting Lock for Enviro captures the current environmental inputs and makes them user editable.

Lat – Latitude. This input can be found on a map or internet search for your area.

Temp – Ambient Temperature is the temperature measured at the external temperature sensor.

SP – Station Pressure (Absolute Pressure) is the pressure exerted by the earth's atmosphere at any given point.

RH – Relative Humidity is the amount of moisture currently held by the air as a percentage of the total possible moisture that the air could hold at the current temperature.

Dalt - Density Altitude is the altitude at which the density of the theoretical standard atmospheric conditions (ISA) would match the actual local air density.

BALLISTICS MENU

Range – Range is the distance to target

Elv – Elevation is the vertical correction needed to hit a target at a given range.

Wnd1 – Windage 1 is the horizontal correction needed to hit a target at a given range and average measured wind speed.

Wnd2 – Windage 2 is the horizontal correction needed to hit a target at a given range and maximum measured wind speed.

Lead – Lead is the horizontal correction needed to hit a target moving left or right at a given speed and must be added or subtracted to the windage solution depending on the targets direction of motion.

RemV – Remaining Velocity is the amount of a bullet's initial velocity retained at a given distance. Transonic speeds are indicated by a small dot. Subsonic speeds are indicated by a large dot.

RemE – Remaining Energy is the amount of a bullets initial energy retained at a given distance attributed to the spin drift.

IMPELLER REPLACEMENT

❑ *Press only the sides of the impeller when removing and inserting to avoid damaging the precision hub bearing. [⧉ Figure 1].*

» Press FIRMLY on the impeller module to remove it.
» Insert the new impeller so the side that has the small triangle (close to the perimeter) faces the front of the Kestrel when installed.

⧉ *Figure 1*

» Orient one "arm" of the module straight up . [⧉ Figure 2]. The impeller can be pushed in from either side.

⧉ *Figure 2*

WARRANTY CERTIFICATE

Your Kestrel Weather/Environmental Meter is warrantied to be free of defects in materials and workmanship for a period of FIVE YEARS from the date of its first consumer purchase. NK will repair or replace any defective meter or part when notified within the warranty period, and will return the meter via domestic ground shipping or NK's choice of method of international shipping at no charge. The following are excluded from warranty coverage: damage due to improper use or neglect (including corrosion); damage caused by severe or excessive impact, damage caused by failed or leaking batteries, crushing or mechanical harm; modifications or attempted repairs by someone other than an authorized NK repair agent; impeller failure not caused by a manufacturing defect; normal usage wear and failed batteries. Measurement accuracy is warranted to be within the specifications on the supplied Certificate of Conformity including specified drift since date of manufacture. If no warranty registration or proof of purchase is provided, the warranty period will be measured from the meter's date of manufacture.

Except for the warranties set forth herein, NK disclaims all other warranties, expressed, implied or statutory, including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by applicable law are limited to the term of this warranty. In no event shall NK be liable for any incidental, special or consequential damages, including, but not limited to, loss of business, loss of profits, loss of data or use, whether in an action in contract or tort or based on a warranty, arising out of or in connection with the use or recalibration, performance of an NK product, even if NK has been advised of the possibility of such damages. You agree that repair, and (upon availability) replacement, as applicable, is your sole and exclusive remedy with respect to any breach of the NK Limited Warranty set forth herein.

All product liability and warranty options are governed exclusively by the laws of the Commonwealth of Pennsylvania.

FIVE-YEAR
5
LIMITED WARRANTY

Kestrel® Weather and Environmental Meters are designed and manufactured in the USA