



# Product Research Gear, LLC

## Portable Weather Devices Overview & Comparison

	Kestrel	HOBO	Belt Weather Kit
<b>Model</b>	Kestrel Meter 4500	HOBO Micro Station Data Logger	Standard Belt Weather Kit
<b>Components/ Requirements</b>	Unit, computer and printer if you want to print graphs (output via Bluetooth or USB).	Unit, software (at additional cost), computer, and multiple accessories are required to measure desired data. <b>Four available</b> channels, each sensor sold separately. This chart assumes temp, pressure, humidity, wind speed sensors are chosen.	Belt weather kit components: wind meter, compass, sling psychrometer, water bottle for wet bulb with distilled water (preferred), RH charts & notebook for recording data, pencil.
<b>Accessories Available</b>	✓	✓	n/a
<b>Out-of-the-Box Setup</b>	Easy – Turn on, set date and time. Intuitive interface makes learning how to use this device very quick and easy.	Advanced - Software & accessories (sensors) installation required, time will vary depending on computer platform and chosen components.	Moderate – Check kit for components, add water (preferably distilled), make sure you have all charts and forms.
<b>Time (per reading)</b>	Seconds to retrieve recorded data. Kestrel will take readings at set intervals, record, chart and graph data.	Data must be downloaded to computer before retrieval. Readings will be taken at set intervals.	Proficient: 2 to 3 minutes (RH & dry bulb). Full weather reading & recording: 5 to 8 minutes.
<b>Heading (true &amp; magnetic)</b>	✓	No	No
<b>Wind speed</b>	✓	✓	✓
<b>Altitude</b>	✓	No	No
<b>Pressure trend</b>	✓	No	No
<b>Barometric pressure</b>	✓	✓	No
<b>Wet bulb temp.</b>	✓	✓	✓
<b>Relative humidity %</b>	✓	✓	✓ (Use chart to find RH)
<b>Heat stress index</b>	✓	No	No
<b>Dewpoint</b>	✓	No	No
<b>Density altitude</b>	✓	No	No
<b>Wind chill</b>	✓	No	No
<b>Air &amp; water temp., °F or °C</b>	✓	✓	No
<b>Waterproof and floats</b>	✓	No	No
<b>Data Logger (automatic &amp; manual)</b>	✓	Depends on software	No
<b>Calibration Kit available</b>	✓	✓ *product must be sent to company	n/a
<b>Data Charting</b>	✓	✓	No
<b>Overall Accuracy</b>	Very High Equipment accurate via third party testing (see letter of conformity). Also very low chance of operator error.	Medium to High Equipment accurate via third party testing. Improper sensor and software installation can increase possibilities for errors.	Low Recent evaluations have shown belt weather kits to have a high rate of inaccuracy, even when used by an expert; see article from 2011 Fire Management Today.*
<b>Battery Life (with stock battery)</b>	80-100 hours, 2 AAA; Energizer lithium batteries = 9x longer	80-100 hours, 4 AA; Energizer lithium batteries = 9x longer	n/a, no batteries
<b>Weight</b>	3.6 ounces	12.8 ounces	1.96 lbs (current forestry issued kit)
<b>Customer Support</b>	Yes	Yes	Depends on retailer
<b>Hazardous Components</b>	No (except for batteries, dispose of properly according to manufacturer's instructions)	No (except for batteries, dispose of properly according to manufacturer's instructions)	Yes (mercury)
<b>Letter of Conformity</b>	Yes	No	No
<b>Warranty</b>	5 years	Warranty not displayed online	Check with retailer
<b>Cost (MSRP)</b>	\$399.99 (complete digital weather station)	\$330.00 for station and required software. Approx \$1000+ for chosen sensors.	Approximately \$120.00 - \$170.00
<b>Overall PRg Rating (All factors, including cost.)</b>	★★★★★ PRg's Number One Pick	☆	★★

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\* <http://www.wildlandfire.com/docs/2011/misc/White-2011-How-Accurate-is-your-Kestrel.pdf>