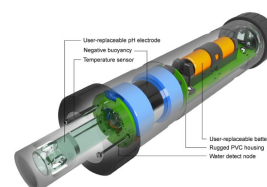
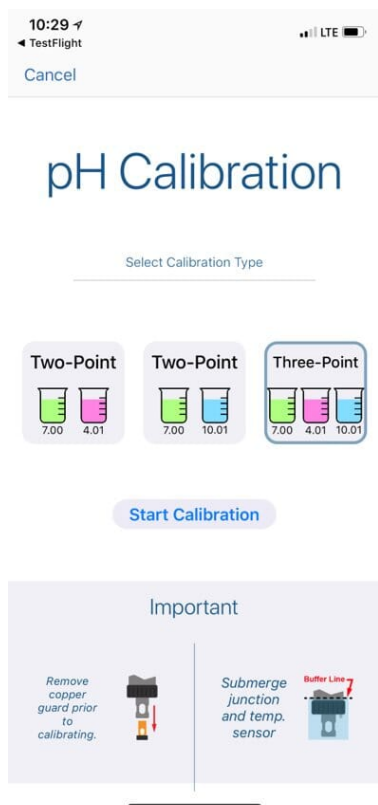




# HOBO MX2501 Bluetooth pH & Temperature Data Logger

## Product Images





## Short Description

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The HOBOnnect MX2501 pH and Temperature Data Logger is designed for long-term monitoring of pH in estuaries, lakes, streams, rivers, and oceans. This logger leverages Bluetooth technology to communicate wirelessly with the free HOBOnnect app running on your mobile device or Windows computer, making logger setup, calibration, and data offload quick and easy.

## Description

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This affordable and compact logger dramatically cuts the time and effort needed to collect field data, while also offering higher data resolution.

Plus, a guided pH calibration process in the free HOBOnnect app makes an otherwise complicated process easier to follow. This affordable, compact logger delivers high resolution data and dramatically cuts the time and effort needed to collect it.

## Key Features

- Guided pH calibration following on-screen prompts in HOBOnnect app
- Rugged PVC housing for deployment in both freshwater and saltwater environments
- Quick and easy data offload via Bluetooth to mobile devices or Windows computers
- Water detection system for longer battery life and less maintenance
- Potentiometric pH electrode with plastic body, gel electrolyte, and double cloth junction
- User-replaceable battery, pH electrode, and anti-biofouling copper guard

- Accuracy of  $\pm 0.10$  pH units within  $\pm 10^{\circ}\text{C}$  of temperature at calibration.

NOTE: pH electrodes should always be stored in storage solution when not deployed.

Requires the HOBOnnect app and a compatible mobile device or Windows computer.

**Access your data directly from your mobile phone**, tablet, or Windows computer when within 100 foot line-of-sight range of the logger - with the free HOBOnnect app.

**To enable [cloud data storage](#)** and analysis - add an [MX Data Plan](#) (select from options above).

**To enable near real-time remote monitoring and alerts via email/text message** - add an MX Data Plan [and](#) [MX Gateway](#) (select options above). Note: The MX Gateway must be indoors.

You can download the HOBOnnect app here



Additional Information

Country of Manufacture	United States
Explanation	<p><b>pH Sensor</b> <b>Range</b> 2.00 to 12.00 pH, -512 to 512 mV <b>Accuracy</b> ±0.10 pH units within ±10°C of temperature at calibration, ±0.20 mV <b>Resolution</b> 0.01 pH, 0.02 mV <b>Response Time</b> 1 minute typical to 90% at constant temperature in stirred water</p> <p><b>Temperature Sensor</b> <b>Range</b> -2° to 50°C (28.4° to 122°F) <b>Accuracy</b> ±0.2°C (±0.36°F) <b>Resolution</b> 0.024°C at 25°C (0.04°F at 77°F) <b>Response Time</b> 7 minutes typical to 90% in stirred water</p> <p><b>Logger</b> <b>Operating Range</b> -2° to 50°C (28.4° to 122°F) — non-freezing <b>Buoyancy</b> Fresh water: 13.6 g (0.48 oz) negative / Salt water: 19.6 g (0.69 oz) negative <b>Waterproof</b> To 40 m (131.2 ft) <b>Water Detection</b> Water conductivity level of 100 µS/cm or greater is necessary for reliable detection of water. Deionized water or water below 100 µS/cm may not be detected. The water conductivity circuit may not reliably detect water that has frozen around the electrodes, i.e. below 0°C (32°F). <b>Radio Power</b> 1 mW (0 dBm) <b>Transmission Range</b> Approximately 30.5 m (100 ft) line-of-sight in air <b>Wireless Data</b> Standard Bluetooth Low Energy (Bluetooth Smart) <b>Logging Rate</b> 1 second to 18 hours <b>Logging Modes</b> Fixed interval (normal, statistics) or burst <b>Memory Modes</b> Wrap when full or stop when full <b>Start Modes</b> Immediate, push button, date &amp; time, or next interval <b>Stop Modes</b> When memory is full, push button, date &amp; time, or after a set logging period <b>Time Accuracy</b> ±1 minute per month 0° to 50°C (32° to 122°F) <b>Battery Type</b> One AA 1.5 Volt, user-replaceable <b>Battery Life</b> 1 year typical at 25°C (77°F) with logging interval of 1 minute and Bluetooth Always On selected in software. 2 years typical at 25°C (77°F) with logging interval of 1 minute and Bluetooth Off Water Detect enabled in software. 3 years typical at 25°C (77°F) with logging interval of 1 minute and Bluetooth Always Off selected in software. Faster logging intervals and statistics sampling intervals, burst logging, remaining connected with the app, excessive downloads, and paging may impact battery life. pH Electrode Life 6 months <b>Memory</b> 152 KB (43,300 measurements, maximum) <b>Full Memory Download Time</b> Approximately 60 seconds; may take longer the farther the mobile device is from the logger <b>Dimensions</b> 22.86 x 4.27 cm (9.0 x 1.68 inches) <b>Weight</b> 268.2 g (9.46 oz) <b>Wetted Materials</b> Logger: PVC housing and sensor end cap, polycarbonate closure caps and mounting end cap with a TPE switch pH electrode: plastic-bodied with Pellon® junctions and gel electrolyte, glass pH sensor bulb <b>Environmental Rating</b> IP68 <b>CE Compliant</b> The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).</p>
Brand	HOBO
Maximum Temperature	50°C
Tolerance	0.024°C at 25°C
Typical applications	Datalogging, Environmental (Outdoor), Field Research, Water Quality
Measurements	pH, Temperature

# Additional Options

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<b>Optional cloud data storage and analysis - select an annual MX Data Plan from the options below (one Data Plan required per logger)</b>	MX-Speed (Supports up to 4 measurements with 1 minute logging)
	MX-Data (Supports up to 10 measurements with 5 minute logging)
<b>Optional near real-time remote monitoring and alerts via email/text message (requires an MX Gateway, plus one MX Data Plan for each MX Logger)</b>	MX Gateway for HOBO MX Data Loggers (SKU: MXGTW1)