

Instruction sheet: pH Probe Advanced

The pH probe advanced sensor must be used in conjunction with a Logbook datalogger.

Before using the pH advanced sensor it will be necessary to:

- Prepare some pH 7 buffer solution.
- Remove the protective soaker bottle from the end of the probe sensor, by turning clockwise, looking at the covered end of the probe sensor. Check that the plastic shroud around the glass bulb is in place before using the probe sensor.
- During shipment it is possible for air bubbles to move into the glass bulb. To remove the air, shake down the electrode in the same manner as a clinical thermometer until the glass bulb is filled with solution.



How to calibrate the sensor remotely using a Logbook GLE datalogger:

- Select range 3 on the sensor.
- Connect the sensor to the GLE datalogger, switch it on and observe that pH values are being shown on the meter screen.
- To calibrate, place the sensor in a sample of pH7 buffer. Let the reading stabilise and then press 'Calibrate' on the sensor. Whilst calibrating, the LED will flash. The reading on the meter should change to pH 7. Calibration is now complete and will be retained even when powered off until calibrated again.
- To fine-tune or calibrate at a different pH value hold down the 'Calibrate' and the 'RANGE' button. Releasing the 'RANGE' button (keeping the 'Calibrate' button pressed) will cause the pH output to increase, slowly at first, then faster after a few seconds. Releasing the 'Calibrate' button (keeping the 'RANGE' button pressed) will cause the pH output to decrease. When the desired pH level has been reached, release both buttons.
- If you wish to use temperature compensation, attach a temperature probe, and a pH probe sensor to Logbook, and make a recording. When downloaded to Datadisc the temperature compensated values can be calculated using the Supplementary data feature.

How to calibrating the sensor using Logbook Graphing and a Logbook GLE datalogger:

- Set up the GLE datalogger by plugging the pH sensor into it and connect the GLE to the computer via USB.
- Connect the probe to the bnc connector on the end of the sensor.
- Start Logbook Graphing.
- **Single point calibration.**
 - Select range 2 on the sensor.
 - A meter screen appears in Logbook Graphing with the pH advanced sensor showing on one of the channels.
 - Place the probe into a solution of carefully prepared pH 7 buffer, agitate and leave until stable.
 - Click the “Set cal” button on the meter screen and type in the pH value of the solution. In this case 7.0.
 - Select “set this value” and then “finish”.
- Note that the probe sensor contains sensitive electronics. Mains interference can occur from transformers in mixers and other electrical devices.
- Due to variations inevitable in the construction of the sensor bulbs, each probe sensor will react at different speeds, and each sensor’s reaction times will improve with use, after long storage (a few days).