Problem: The pH electrode is not reading correctly.

What is on the controller display?

Error message

- Constant “15.00 pH” or “0.00 pH” with correct temperature value → Go to Box #3.
- "Standard too close to Slope!" “Slope too close to Standard!” → When calibrating, make sure you use buffer solutions at least 2 pH units apart, such as pH 4 and pH 7. → Clean and calibrate electrode.
- “Out of Range Check Sensor” / “Check Sensor?” → Go to Box #2.

pH value

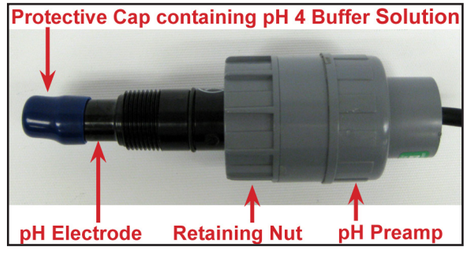
9 Check the pH reading against a hand held pH meter. Do the readings match?

- YES → 7 Problem solved! Be sure to clean and calibrate the pH electrode every two weeks.
- NO → Check the glass tip of the electrode. Is it broken?
  - YES → 5 You may need to replace the electrode. Contact Aquaneering to discuss replacement options.
  - NO → Have you recently (within the month) calibrated the electrode?
    - YES → 4 Place the electrode in pH 7 buffer solution. What is the millivolt (mV) reading in pH 7 buffer solution?
      - < 50 mV → Are the settings in the controller correct?
        - YES → Go to Box #8.
        - NO → Reprogram controller with the correct settings. → Go to Box #9.
      - + / - 50 mV → Clean electrode. Check mV reading in pH 7 buffer solution again. Is the mV reading still + / - 50 mV?
        - YES → Go to Box #5.
        - NO → Go to Box #7.
    - NO → 3 Calibrate the electrode. Were you able to calibrate it?
      - YES → 4 Place the electrode in pH 7 buffer solution. What is the millivolt (mV) reading in pH 7 buffer solution?
      - NO → Go to Box #2.

No display

2 Check the wiring/electrical connections in the controller. Consult wiring diagram and tighten loose wires. Are you able to calibrate the electrode?

- YES → Go to Box #4.
- NO → 8 Remove the electrode from the pre-amp. Is there any water between the pre-amp and the electrode? Are any of the brass pins broken or missing on the keyed contacts?
  - Water present / Brass pins intact → Dry out the pre-amp and electrode thoroughly. Reinstall the electrode. Is the controller reading a pH value?
    - YES → Go to Box #9.
    - NO → Go to Box #6.
  - No water / Brass pins broken. → 6 You may need to replace the pre-amp. Contact Aquaneering to discuss replacement options.
  - No water / Brass pins intact → Go to Box #5.



pH Transmitter (current)

pH Transmitter (old)