Taking good care of your pH probes:

1. The pH probes (if supplied by Intech Instruments Ltd) are supplied with protection caps which are also designed to keep the glass electrodes wet. Do not dispose of these caps as they will be required, when transporting the pH probe.
2. The glass electrodes on the pH probes must always be kept wet.
3. Short term storage of pH probes in pH7 solution is OK, but pH4 solution is preferred.
4. Long term storage of pH probes in KCL solution.
5. Always buffer (calibrate) the pH probe and logger before use. Setup and buffer probe and logger using fresh buffer solutions. Use a suitably qualified technician. Allow plenty of time for the logger to settle in each buffer. The easiest way is to set the logger going and look at the graph to see if the logger has settled.
6. If the pH probes cannot be buffered satisfactory, replace with new pH probes.
7. The buffer solutions used should cover the pH range to be measured.
8. Where the pH probes in use are not fitted with a temperature compensation probe, the buffer solution should be at the same temperature as the liquid being measured.
9. When deploying in the field, leave the logger attached to the pH probe after buffering has been carried out. Buffering should be carried out as close to when deploying in the field as possible. The initial samples taken may need to be excluded from the data, as while the logger settles, these may read differently.
10. Take measures to protect the pH probe cable if there is any possibility of damage occurring.
11. Check for water in the pH probe cable plugs (if fitted). If present, clean and dry.
12. To maintain the pH probes correctly, carefully follow the instructions from the manual included with the pH probes.

IMPORTANT: You will need to buffer (calibrate) the pH sensors with your pH-HR loggers before each use. pH calibration instructions can be found in the OmniLog help file under 'Calibration Procedures > pH Calibration', or online: http://www.trutrack.com/intech/omnilog/usermanual/289.htm

Cleaning of pH electrodes:

Cleaning of the pH electrodes sensor is always necessary:

- Before buffering,
- Before measurement,
- After measurement.

To clean the electrode sensor after use with fluids that are not easily dissolved by water, including food products, fats and oil, mineral solutions, etc:

1) Rinse the electrode in a Pepsin/HCL solution or a 10% HCL solution followed by a saturated Pepsin rinse.

2) Rinse thoroughly with deionised water.

3) Absorb excess water from the sensor with a clean lint free paper towel.

4) Replace the protective cap on the electrode sensor to keep the sensor from drying out.

Tenside:

- **For fatty or oily products:**
  Use a Tenside Cleaner Solution, then continue with steps 2-4 above.

- **For Calcium deposits or metal hydrocide coatings:**
  Use a 10% HCL solution, then continue with steps 2-4 above.

When using any acid solutions or proprietary cleaners, disposal must conform to manufacturers recommendations.

After cleaning, always rinse all parts with deionised water.

Re-vitalising pH probes:

The life of a pH probe is dependent on the environment and eventually the pH probe will become slow in response. It is sometimes possible to bring sluggish pH probes back to life by following this procedure:

Important: Proceed in a well ventilated area and wear appropriate protective clothing.

1. Place the pH probe to be treated in a beaker containing a fresh solution of pH4 buffer.
2. Slowly heat to 64 deg C and leave at this temperature for approx 60 minutes.
3. Allow the pH probe to cool and buffer as instructed above. If the pH probe remains excessively sluggish, replace with a new pH probe.