March 23, 2009

Calibrate the meter before you go into the field and leave it on until done for the day.

DO NOT LET SPONGE INSIDE THE PROBE CHAMBER DRY OUT!

KEEP SPONGE MOIST BY RE-WETTING AT LEAST WEEKLY. If the sensor becomes damaged, you will need to replace sensor and wait 12 hours before calibrating and using the monitor.

- 1. Turn on the meter and allow 15 minutes of warm up time before calibration.
- 2. Verify the good condition of the sensor.
 - a. Check that the sponge inside the probe chamber is still moist.
 - b. Shake or blow off excess water on the sensor.
 - c. Check for holes or tears in the membrane.
 - d. Check for air bubbles beneath the membrane.
 - e. Replace the solution and membrane if air bubbles or damage exist.
 - f. If you need to replace the membrane, ensure that membrane housing has been filled with KCL fluid for at least 12 hours before calibrating and first use.
- 3. Insert the sensor into the probe chamber.
- 4. Record *date*, *time*, name of *analyst* calibrating the monitor, and the *altitude* (ft) where calibrating.
- 5. Record the number of minutes of *warm up time*.
- 6. Record the *stabilized probe temperature* (°C).
- 7. Press the **MODE** button to change from % saturation to (mg/L).
- 8. Record the *stabilized pre-calibration D.O.* (mg/L).
- 9. Press and release both the UP ARROW and DOWN ARROW keys at the same time to enter the calibration menu. The meter will say CAL on the screen in large letters and CAL in small letters in the lower left corner. The small CAL letters will stay on the screen until the calibration process is done.
- 10. Press **ENTER** on the meter. This will show a value for altitude (x100) in feet.
- 11. Adjust the altitude with the up and down arrow buttons for the elevation where the calibration is taking place and press **ENTER**. The % saturation value is now showing on the meter display.
- 12. Allow the % saturation value to stabilize.
- 13. Press **ENTER**. The salinity of the water samples is now on the screen.
- 14. Press **ENTER** again to accept 0 (the salinity of fresh water). The calibrated % saturation value is now on the screen and the small CAL is no longer visible in the lower left corner.
- 15. Press the **MODE** key to switch to the dissolved oxygen (mg/L) screen. The MODE key is used to toggle between (mg/L) and % saturation on the meter.
- 16. Record the *post-calibration D.O.* (mg/L).
- 17. Look up the calibration chart D.O. value (mg/L) from the table included with your meter. Find the probe temperature and altitude and record the corresponding D.O. (mg/L) value as the *calibration chart D.O.* on the calibration log. If the difference between the *post-calibration D.O.* and the *calibration chart D.O.* is greater than 0.3 (mg/L), re-calibrate the meter before using in the field.

LEAVE THE METER ON UNTIL THE LAST READING OF THE DAY HAS BEEN COMPLETED.

18. Press the green button to turn the meter off at the end of the day.

To Measure Dissolved Oxygen in the Stream:

- 1. Enter the stream, approaching the site you will monitor from downstream.
- 2. Insert the probe into the water to be measured.
- 3. Continuously stir or move the probe through the water (especially when monitoring in very still water).
- 4. Allow the temperature and dissolved oxygen readings to stabilize (about 2-3 minutes).
- 5. Observe and record temperature and dissolved oxygen values on the monitoring data sheet.
- 6. Press MODE and observe and record the % saturation on the monitoring data sheet.
- 7. If possible, rinse the probe with clean water after each use, and replace in the probe chamber.
- 8. Be sure to always keep the probe sponge moist.