

CWP Instruments™

Operating Instructions for the *Accurate* PPM 9.0 Nutrient Monitor

Specification: *Accurate* PPM 9.0 Nutrient Monitor

Range: 0 - 9990 PPM 32°F – 194°F
Resolution: 10 PPM
Accuracy: 2% ±2°F
Calibration: PPM 1-point 1382 PPM / 77°F Temp 1 point
Temperature: 41 degrees to 95 degrees F
Power supply: DC 9v transformer ⊖●⊕

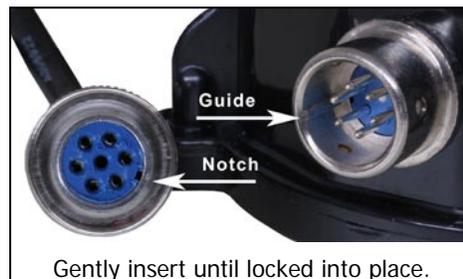
Replacement or Repair Warranty (at the manufacturer's discretion):

- 12 months for defective parts and materials from date of purchase on the monitor body.
- 12 month warranty on the PPM electrode from date of purchase.

Proof of purchase required. Warranty does not cover water damage, submersion in liquids or abuse. Warranty will be void if the person calibrating the meter damages any calibration screw. For warranty, return the meter to the place of purchase or call CWP Instruments at 888.433.6867 for a Return Authorization Number.

Operation of the *Accurate* PPM 9.0 Nutrient Monitor

IMPORTANT INFORMATION: The PPM electrode uses a DIN connector. Find the notch on the PPM electrode's DIN connector and match it to the DIN connector guide on the *Accurate* PPM 9.0 meter. This will line up the holes and the pins for easy insertion. Insert until the DIN connector snaps into place.



You have purchased a scientific instrument requiring a delicate touch when calibrating. Read both calibration and troubleshooting sections to familiarize yourself with the meter's operation before calibrating. Be gentle; do not force the calibration screws past their stop. They are sensitive and have less than 1 turn total travel. Hold the screwdriver between thumb and index finger to turn the calibration screws. Take care in turning them as the screwdriver slots can be stripped if pressure is applied to the screws after their maximum travel has been reached. The warranty will be void if any calibration screw is stripped or damaged in any way.

PPM Measurement –

Hang the PPM electrode in the water or nutrient solution in such a manner that it is out of harm's way and the currents in the tank will flow by. The monitor will constantly display the PPM value of the solution. The number displayed is the Parts Per Million of the solution in TDS (Totally Dissolved in Solution per the diluted nutrient formula or water).

PPM Calibration –

Remove the electrode shield and wipe the electrode with a clean cloth to remove sediment. Rinse the electrode with distilled water and again wipe it clean with a clean cloth to remove contamination. Replace the electrode shield and dip the electrode into CWP Instruments 1382 PPM calibration solution (500 PPM to 1 EC) . Swish back and forth to dislodge air bubbles. When the display stabilizes, gently adjust the PPM calibration screw to make the display read 1382 PPM. Calibration is complete.



Temperature Measurement –

Dip the Temperature electrode into the solution for measuring. The monitor will display the correct temperature after 10 minutes.

Calibration –

Dip the Temperature electrode and a waterproof thermometer into a solution for 10 minutes to determine temperature. (Waterproof thermometers can easily be found at stores selling aquarium supplies). After the PPM electrode and thermometer have been submerged for 10 minutes, gently adjust the calibration screw on the meter to display the same temperature as the thermometer.

Note: Before calibration, allow a waterproof thermometer to stabilize in the solution to determine water temperature.

Placement -

Place the *Accurate* PPM 9.0 meter out of direct light, sprays of water and areas of high humidity. Hang the meter on a wall using the holes located on the back of the meter. Plug the 9 volt transformer into a surge protected outlet.

*The latest electronic components have been incorporated into this meter and will hold calibration for long periods of time. The monitors are all calibrated before leaving the factory.