American Marine is proud to introduce the *PINPOINT*® Calcium Monitor. The only truly affordable and accurate digital Calcium measurement instrument designed exclusively for marine saltwater. Powered by a 9-volt battery (not included). *PINPOINT*® Calcium Monitor will operate for approximately 150 total hours before battery replacement is indicated on the display.

NOTE: The Calcium Monitor unit is NOT waterproof and must be operated on a dry surface. Liquid contact on the printed circuit board will cause corrosion and void warranty.

•Probe Set-up

1) This probe Ver. 1.04 has a refillable tip. Unscrew the gray cap and shake out the old Reference Fill Solution and fill with new if the calibration process shows "err".
2) Remove the storage bottle that protects the probe tip by unscrewing the bottle from the bottle cap. When not in use, probe should be stored in the protective bottle without any fluid added to the bottle.
3) Be careful not to damage the flat PVC membrane on the probe tip. This membrane should be kept clean and free from algae, etc.

•Meter Set-up

1) All calibration fluids and tank water sample should be room temperature for greatest accuracy.
2)Install a new 9-volt battery or the *PINPOINT* AC Adapter to the battery connector on the back of the meter.
3) Attach the BNC connector from the probe cable to the front of the meter. Lock it into place with a 1/4 turn to the right.

•Calibration and Measurement

1) Activate meter on by pressing the ON/OFF/CAL button for 1 second.
2) Now press the ON/OFF/CAL button continuously for 3-4 seconds (you will hear a beep) when "CAL" appears on the display.
3) The number 100 should appear on the display. If not; then press the Range button to change the calibration value to 100.
4) Put the probe tip into the 100 ppm Ca++ Calibration Fluid. Be sure that the 2 white dots (reference junctions) that are located about 1 inch from the membrane tip are surrounded by fluid. Wait until the number 100 begins to flash on the display. This may take a few minutes or so for a new probe. Let the flashing continue at least 3-5 minutes is advised. Then press the Enter button to register the 100 ppm Ca++ calibration. The LCD should display the word "good"
5) Shake the probe dry. Press the Range button until 1000 is displayed.
6) Put the probe tip into the 1000 ppm Ca++ Calibration Fluid. Be sure that the 2 white dots (reference junctions) that are located about 1 inch from the membrane tip are surrounded by fluid. Wait until the number 1000 begins to flash on the display. This may take a minute or two. Let the flashing continue for at least 3-5 minutes. Longer "flashing time" will yield the most stable readings. Then press the Enter button to register the 1000 ppm Ca++ calibration. The LCD should display the word "good".
7) Now press the ON/OFF/CAL button to read Calcium ppm.
8) Test your sample. Take a sample of water away from your system in a clean cup and insert the probe to take a precision measurement. Allow enough time for the reading to settle down.
9) Rinse the probe in fresh water, shake the probe dry and store it in the protective bottle.
10) The meter will store the calibration even when the power is off.

•Calcium Monitoring

The accuracy of this and other electronic instruments is the greatest immediately following a calibration process and hydration of the tip. Measure the calcium frequently, if the value drifts, calibration should be performed to verify the reading. The probe should not be totally submerged. Only the bottom 1 –2 inches of the probe tip should be in the water.

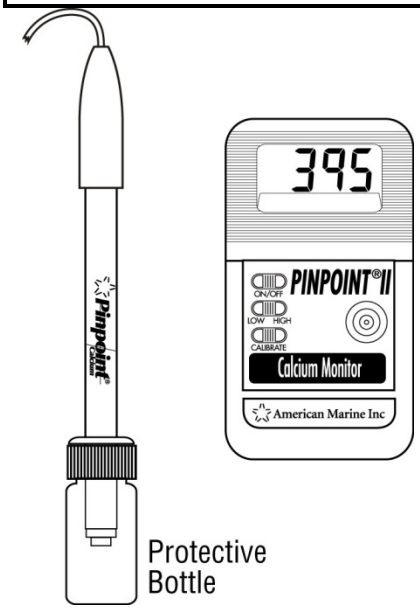
Troubleshooting and Important Points to Remember on back

# *PINPOINT*®II Calcium Monitor ver. 1.04

## User's Guide

American Marine Inc.
54 Danbury Road, Suite 172
Ridgefield, CT 06877 U.S.A.
Phone/FAX 203-205-0811
www.americanmarineusa.com






Protective Bottle

American Marine Inc

The world's finest selection of electronic measurement and control instruments designed and optimized for the professional aquaculture industry.

PH
ORP/REDOX
Oxygen
Calcium (Marine)
Conductivity Freshwater Hardness
Wireless Temperature
Nitrate (Marine)
Salinity (Marine and Koi)
Complete line of all calibration materials and accessories

## Important Points to Remember

- There are several possibilities for the meter to show "err" during the calibration process:

1-The probe tip is very dry (common with a new probe) and it should be hydrated by placing the tip into 1,000 ppm fluid calibration fluid for an hour or so and then the 100 ppm calibration fluid for an hour. Then recalibrate.

2-The 2 reference junctions are not surrounded by fluid during calibration or measurement (white dots embedded on the side of the probe located 1 inch from the tip).

3-The gray membrane cap should be refilled with fresh Reference Fill Solution

4-The probe or probe membrane cap has reached the end of its useful life

5-The calibration fluids have become contaminated.

- At the end of the calibration process if the meter shows a ppm reading of zero; one or both of the calibration fluids may be out of specification and are no longer accurate. Obtain new calibration fluids and recalibrate. Do not mix old calibration fluids with new calibration fluids; discard the old set.

- Calcium Probe stability will be greatly improved when the probe tip is allowed to properly hydrate for 5-10 minutes in any calibration fluid prior to calibration.

- *PINPOINT* Calcium Monitor is NOT waterproof and must be operated on a dry surface. Liquid contact with any of the printed circuit boards will cause corrosion and void the warranty.

- Measurements above the instrument range will be indicated on the LCD as "HI".

- The Calcium Probe should never be placed in RO or DI water for an extended period of time.

- If you observe an unusually high or low calcium ppm value, it is advisable to re-check the calibration.

- The Calcium Probe tip should be stored dry. The storage bottle can be used to prevent physical damage to the tip and should not be filled with any fluid.

- The Calcium Meter will always store the last calibration even when the power is off.

- Replace batteries in the *PINPOINT* Calcium Monitor when the appropriate LCD battery icon appears.

- Display Range: 000.0 – 9,772 ppm Ca+
  Resolution: 000.2 ppm
  Accuracy: +/- 2 % of the reading after calibration

## Warranty

*PINPOINT*® Calcium Monitor by American Marine Inc. is warranted to be free of defects in material and workmanship for a period of 2 years from date of sale.

*PINPOINT*® Calcium Probe is warranted to be free of defects in material and workmanship for a period of 6 months from the date of sale.

Positive proof of purchase is required for warranty claim. American Marine Inc. will not be liable for any costs of removal, installation, transportation charges, or any other charges, which may result in connection with a warranty claim.

American Marine Inc. will not be liable for any damage or wear to products or livestock caused by abnormal operating conditions, water damage, abuse, misuse, unauthorized alternation or repair or if the product was not installed in accordance with the printed operating instructions. Any defective product must be sent freight prepaid with appropriate documentation supporting the warranty claim. Replacement or repair will be at the discretion of American Marine Inc.

American Marine Inc.
54 Danbury Road, Suite 172
Ridgefield, CT 06877 U.S.A.
www.americanmarineusa.com