

American Marine is proud to introduce **PINPOINT® Conductivity Monitor**, the only truly accurate and affordable hardness measurement system. The precise measurement of inorganic salt by electronic conductive means has long been considered to be the most accurate method to determine hardness. A 9-volt battery should be used for intermittent or field use while a **PINPOINT AC Adapter Kit** can also be used. Battery replacement is visually indicated on the display as "LOBAT".

**NOTE:** The Conductivity 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.

• **Set-up**

Unwrap the protective plastic packaging from the **PINPOINT Conductivity Monitor** unit. Remove the battery cover on the back of the monitor and install a 9-volt battery or the **PINPOINT AC Adapter Kit**. Activate the unit by setting the power switch to the ON position. Use the pop-up stand on back and place meter on any flat, dry surface. Velcro can be used to mount the meter onto a vertical surface.

Your **PINPOINT Conductivity Monitor®** is now ready for calibration.

• **Calibration Procedure**

The meter should be calibrated immediately before use and should also be checked occasionally to verify the readings. Calibration should be done with the lower switch to the left; in the 2K position. Use a calibration solution of known value and high accuracy such as 45µS. The calibration adjustment screw #3 is located inside the battery compartment most toward the center of the meter. Place the probe into the liquid and allow a minute for any temperature compensation to take place. Swirl the probe and be sure to be sure that NO air bubbles have accumulated under the probe tip. Using a miniature screwdriver, turn **screw #3** until the display matches the value of your calibration fluid. **DO NOT** adjust **screw #4** since this is used to set measuring frequency and requires specialized equipment for adjustment. **Screw #4** has been factory set and does not require further adjustment. A small amount of blue glue has been placed onto screw #4 to prevent accidental adjustment.

Note: The 2K scale will display up to 2,000 microSiemens (µS) in a resolution of single microSiemen units (µS). This is most useful for freshwater applications. The 20K scale will display up to 20,000 microSiemen (µS). When the meter is used in the 20K mode, only the first four digits will be displayed, i.e. 15.41 is actually 15,410 microSiemens (µS). Samples in excess of 20,000 microSiemens will appear on the display as "1" signifying that the sample is out of range of this instrument. The **PINPOINT Salinity Monitor** can be used to measure this higher range up to 200,000 µS.

**CONVERSION TO OTHER SCALES OF HARDNESS**

33 microSiemens = 17.9ppm

33microSiemens = 1dH (German ° hardness)

1dH = 17.9ppm

\*\*\*Therefore the mathematical formula for a conversion to ppm is: Take the reading on the display and divide it by 33, then take the result and multiply it by 17.9

Please read "Important Points to Remember" printed on back

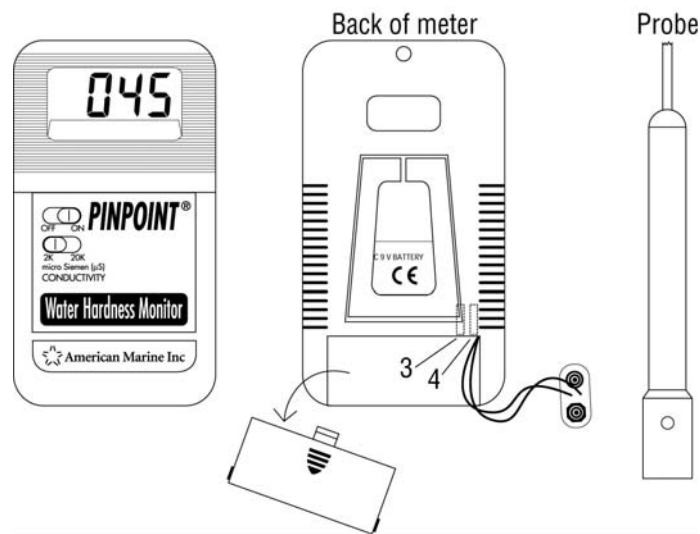
# PINPOINT® Conductivity Monitor Freshwater Hardness

\*includes 45µS Calibration Fluid

## User's Guide

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Also available:

- PINPOINT pH Monitor
- PINPOINT Wireless Thermometer
- PINPOINT ORP Monitor (REDOX)
- PINPOINT pH, ORP, Oxygen Electrodes
- High Precision pH Calibrating Fluids 4.00, 7.00, 10.00
- PINPOINT II Dissolved Oxygen Monitor
- 4 meter Oxygen Probe Extension Cord
- PINPOINT Salinity Monitor
- 110VAC Adapter Kit for most PINPOINT models
- PINPOINT pH Controller
- PINPOINT ORP (REDOX) Controller
- PINPOINT Calcium Monitor

## IMPORTANT POINTS TO REMEMBER

- The *PINPOINT Conductivity Meter* is NOT waterproof and must be operated on a dry surface. Liquid contact on the printed circuit board will cause corrosion and void warranty.
- "Swirl" the probe so as to eliminate any air bubbles that may accumulate under the probe before taking a measurement.
- The electrode should be cleaned every few months with a very weak solution of water (16 oz.) and dishwashing detergent (1/2 teaspoon). Rinse the electrode well with fresh water.
- The *PINPOINT Conductivity Monitor* is automatically compensated throughout the temperature range 32°F to 122°F (0° to 50°C). Therefore the displayed value has already taken the temperature into effect and this value is considered already corrected.
- Calibrate the monitor with the appropriate fluid before use. Be sure that the range switch is on the correct scale during calibration.

### Range Switch LEFT

- Use the 2K scale for a calibration fluid with a value under 2,000 $\mu$ S

### Range Switch RIGHT

- Use the 20K scale for a calibration fluid value between 2,000 and 20,000 $\mu$ S

- Check the calibration occasionally. Calibration fluid can be re-used if uncontaminated by other fluids and kept in a tightly capped container.

## Warranty

*PINPOINT® Conductivity 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. Positive proof of purchase is required for warranty claim.

Removal or alteration of the serial number will void warranty.

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 to be returned must be sent freight prepaid with appropriate documentation supporting the warranty claim. Replacement or repair will be at the discretion of American Marine Inc. Typical turnaround time within 48 hours. Overnight delivery available.

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