SPECIFICATIONS

Dissolved Oxygen—
Range: 0.0 to 20.0 mg/L
Resolution: 0.1

Dissolved Oxygen Air Saturation—
Range: 0.0 to 100.0%
Resolution: 0.1

Temperature—
Range: 32.0 to 122.0 °F / 0.0 to 50.0 °C
Resolution: 0.1°

Automatic Temperature Compensation—
Range: 32.0 to 122.0 °F / 0.0 to 50.0 °C

Sensor—
Type: Polarographic with integrated temperature sensor

Update Rate: 1 second

Battery: 4 each AAA (1.5V)

CALIBRATION CHECK

Prior to each use, the meter's calibration should be checked to insure accurate readings.

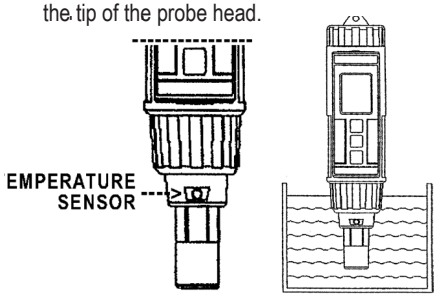
1. Remove the protective rubber cover from the probe head.
2. Press the POWER button to turn the meter on.
3. Set the display mode to $\%O^2$ (see the "Selecting $\%O^2$ or mg/L" section).
4. Wait until the upper display stops fluctuating and is stable, this could take up to 3 minutes.
5. Press and release the HOLD button ("HOLD" will appear on the display).
6. Press and release the REC button, "CAL" will flash on the display and the meter will countdown from 30 and then show "END".

This upper display should read 20.8 $\%O^2$ or 20.9 $\%O^2$. If it does not, please see the "Probe Maintenance" section.

7. Take the desired measurements (see the "Dissolved Oxygen Measurement" and/or the "Dissolved Oxygen Air Saturation Measurement" section).

DISSOLVED OXYGEN MEASUREMENT

1. Check the meter's calibration (see the "Calibration Check" section).
2. Set the display mode to mg/L (see the "Selecting $\%O^2$ or mg/L" section).
3. Select the desired temperature display mode (see the "Selecting °F or °C" section).
4. To insure Automatic Temperature Compensation, immerse the probe head and temperature sensor completely. If Automatic Temperature Compensation is not desired, simply immerse the tip of the probe head.



For accurate Automatic Temperature Compensation, the temperature sensor must reach equilibrium with the liquid being measured, this could take several minutes.

5. Insure that there is adequate movement of the liquid around the tip of the probe head (0.2 - 0.3 meters per second minimum). This can be achieved by stirring the meter in the liquid, or by the use of a magnetic agitator if in a laboratory environment.
6. Take the desired measurements.
7. Press the POWER button to turn the meter off. To preserve battery life, always turn the meter off when not in use.
8. Rinse the probe head with tap water and replace the protective rubber cover. Always replace the protective rubber cover to prevent damage to the probe head.

If no button is pressed for ten (10) minutes, the meter will turn off automatically to preserve battery life (see the "Automatic Shutoff" section).

DISSOLVED OXYGEN AIR SATURATION MEASUREMENT

1. Check the meter's calibration (see the "Calibration Check" section).
2. Set the display mode to $\%O^2$ (see the "Selecting $\%O^2$ or mg/L" section).
3. Select the desired temperature display mode (see the "Selecting °F or °C" section).
4. Take the desired measurements.
5. Press the POWER button to turn the meter off. To preserve battery life, always turn the meter off when not in use.
6. Replace the protective rubber cover. Always replace the protective rubber cover to prevent damage to the probe head.

If no button is pressed for ten (10) minutes, the meter will turn off automatically to preserve battery life (see the "Automatic Shutoff" section).

SELECTING $\%O^2$ OR mg/L

The $\%O^2$ display mode is for measuring the dissolved oxygen saturation in air. The mg/L display mode is for measuring the dissolved oxygen in liquids.

The following procedure is used to change the display from $\%O^2$ to mg/L, or from mg/L to $\%O^2$.

1. Press the POWER button to turn the meter on.
2. Press and hold the HOLD button. After approximately three (3) seconds, the display will switch to the opposite unit of measure. If the meter had been displaying $\%O^2$, it will now display mg/L, and vice-versa.
3. Release the HOLD button.

The meter will always default to the $\%O^2$ display mode when turned on.

SELECTING °F OR °C

The following procedure is used to change the temperature display from °F to °C, or from °C to °F.

1. Press the POWER button to turn the meter on.
2. Press and hold the REC button. After approximately three (3) seconds, the temperature reading will switch to the opposite unit of measure. If the meter had been displaying °F, it will now display °C, and vice-versa.
3. Release the REC button.

The unit of measure selected will be the default unit of measure for temperature until changed.

HOLD FUNCTION

The hold function allows the readings on the display to be "frozen" so that they may be recorded.

1. Press and release the HOLD button to "freeze" the display at the current reading. "HOLD" will appear at the top of the display.
2. Once the reading has been recorded, press and release the HOLD button to return the display to the current reading. "HOLD" will no longer appear on the display.

RECORD MODE (Min/Max Memories)

While in the Record Mode, the maximum and minimum dissolved oxygen readings will be recorded. While in the Record Mode, the Automatic Shutoff feature is disabled so that long term monitoring may be performed.

1. To enter the Record Mode, while taking measurements, press and release the REC button. "REC" will appear on display.
2. To recall the maximum and minimum readings achieved since entering the Record Mode ("REC" appearing on the display), press and release the REC button.
3. The first press of the REC button will display the maximum reading achieved since entering the Record Mode. ("REC MAX" will appear on the display).
4. The second press of the REC button displays the minimum reading achieved since entering the Record Mode. ("REC MIN" will appear on the display).
5. To return the display to the current reading, press and release the HOLD button. "MAX" or "MIN" will no longer appear on the display.
6. To exit from the Record Mode, press and hold the REC button for 3 seconds. "REC" will no longer appear on the display. *The maximum and minimum readings are automatically cleared once the Record Mode has been exited.*

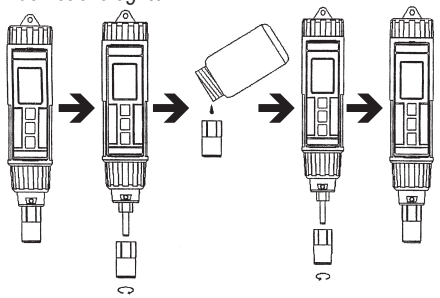
AUTOMATIC SHUTOFF (Disable)
If no button has been pressed for ten (10) minutes, the Automatic Shutoff feature will turn the meter off to preserve battery life.

The automatic shutoff feature setting is overridden while in the Record Mode. (See the "Record Mode" section)

To disable the Automatic Shutoff feature, place the unit into the Record Mode (see the "Record Mode" section).

PROBE MAINTENANCE
Electrolyte Solution Replacement
If the calibration check does not return the desired results (see the "Calibration Check" section) or if the readings are unstable, it may be necessary to replace the electrolyte solution in the probe head.

1. Unscrew the probe head.
2. Pour out the old electrolyte solution from the probe head.
3. Fill the probe head with fresh electrolyte solution.
4. Replace the probe head and tighten securely, *do not overtighten*.

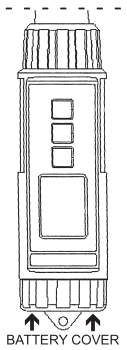


Diaphragm Replacement
A damaged diaphragm can cause the calibration check to return incorrect results (see the "Calibration Check" section) or cause the readings to be unstable or inaccurate. The diaphragm may be damaged if it comes into contact with a solid object, or is subjected to impacts. The diaphragm is integrated into the probe head.

1. Unscrew the probe head.
2. Pour out the old electrolyte solution from the probe head.
3. Fill the replacement probe head with fresh electrolyte solution.
4. Place the new probe head on to the meter and tighten securely, *do not overtighten*.

ALL OPERATION DIFFICULTIES
If this meter does not function properly for any reason, replace the batteries with a new, high quality batteries (see the "Battery Replacement" section). Low battery power can occasionally cause an number of "apparent" operational difficulties. Replacing the batteries with new fresh batteries will solve most difficulties.

BATTERY REPLACEMENT
An erratic display, faint display, no display, or a battery symbol appearing on the display are all indicators that the batteries need replacement. The battery cover is located at the bottom of the unit. While holding the unit upside down, unscrew the battery cover by turning it counter-clockwise. Remove the exhausted batteries and replace them with four (4) new AAA alkaline batteries. Make certain to insert the new batteries with the proper polarity as indicated by the "+" and "–" symbols in the battery compartment. Replace the battery cover and tighten securely.



ACCESSORIES
Cat. No. 7790– Replacement Probe Head w/Diaphragm

Cat. No. 8024– Electrolyte Solution

TRACEABLE® DISSOLVED OXYGEN PEN INSTRUCTIONS

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