



Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for HANNA INSTRUMENTS HI 96822. You'll find the answers to all your questions on the HANNA INSTRUMENTS HI 96822 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual HANNA INSTRUMENTS HI 96822
User guide HANNA INSTRUMENTS HI 96822
Operating instructions HANNA INSTRUMENTS HI 96822
Instructions for use HANNA INSTRUMENTS HI 96822
Instruction manual HANNA INSTRUMENTS HI 96822

Instruction Manual

HI 96822

Seawater Refractometer



HANNA
instruments
www.hannainst.com



[You're reading an excerpt. Click here to read official HANNA INSTRUMENTS HI 96822 user guide](http://yourpdfguides.com/dref/2865924)
<http://yourpdfguides.com/dref/2865924>

Manual abstract:

hannainst.com Dear Customer, Thank you for choosing a Hanna product. This manual will provide you with the necessary information for the correct use of this instrument. Please read it carefully before using the meter. If you need additional technical information, do not hesitate to e-mail us at *tech@hannainst.com*. This instrument is in compliance with directives. TABLE OF CONTENTS PRELIMINARY EXAMINATION ...

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....

2 GENERAL DESCRIPTION

.....
.....

.....
.....
.....

.....
.....
.....

.....
.....
.....

. 3 SPECIFICATIONS

.....
.....
.....

.....
.....
.....

.....
.....
.....

.....
.....

3 PRINCIPLE OF OPERATION

.....

.....
.....
.....

.....
.....
.....

.....

.....

.....

.....

. 4 FUNCTIONAL DESCRIPTION

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

..... 5 DISPLAY ELEMENTS ...

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

6 MEASUREMENT GUIDELINES

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.... 6 CALIBRATION PROCEDURE .

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....
.....
.....
..... @@@@9 BATTERY REPLACEMENT

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..10 WARRANTY

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

..10 ERROR MESSAGES

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

11 PRELIMINARY EXAMINATION Remove the instrument from the packing materials and examine carefully to ensure no damage has occurred during shipping. If any damage has occurred, notify your Dealer or closest Hanna Customer Service Center. Each instrument is supplied with: · 9 V battery · Instruction manual Note: Save all packing material until you are sure that the instrument functions correctly. A defective instrument must be returned in its original packing. All rights are reserved. Reproduction in whole or in part is prohibited without the written consent of the copyright owner, Hanna Instruments Inc., Woonsocket, Rhode Island, 02895, USA. 2 GENERAL DESCRIPTION The HI 96822 Digital Refractometer is a rugged portable, water resistant device that utilizes the measurement of refractive index to determine the salinity of natural and artificial seawater, ocean water or brackish intermediates. The HI 96822 device benefits from Hanna's years of experience as a manufacturer of analytical instruments. The digital refractometer eliminates the uncertainty associated with mechanical refractometers and is easily portable for ship, shore or home use.

The HI 96822 refractometer is an optical device that is simple and quick to use. After a simple user calibration with distilled or deionized water, a seawater sample is introduced to the sample well. Within seconds, the refractive index and temperature are measured and converted into one of 3 popular measurement units; Practical Salinity Units (PSU), Salinity in parts per thousand (PPT), or Specific Gravity (S.G. (20/20)). All conversion algorithms are based upon respected scientific publications using the physical properties of seawater (not sodium chloride). The temperature (in °C or °F) is also displayed on the large dual level display along with helpful message codes. @@@@ @@@@ This is called refraction. @@@@ (20/20). @@ It is based upon the work of the UNESCO, ICES, SCOR and IAPSO.

@@@@@2. 3. 4. 5. 6.

7. 8. @@ Battery Cover 10. Battery Compartment 5 DISPLAY ELEMENTS 1. 2.

3. 4. 5. 6 7. 8. @@ Do not drop. Do not immerse instrument under water. @@ The instrument is intended to measure seawater solutions. Do not expose instrument or prism to solvents that will damage it. @@ Particulate matter in a sample may scratch the prism.

@@ Use plastic pipettes to transfer all solutions. @@ Cover sample well with hand if measuring in direct sun. 6 CALIBRATION PROCEDURE Calibration should be performed daily, before measurements are made, when the battery has been replaced, between a long series of measurements, or if environmental changes have occurred since the last calibration. 1. Press the ON/OFF key, then release. Two instrument test screens will be displayed briefly; all LCD segments followed by the percentage of remaining battery life. It will briefly display an indication of the measurement units set. When the LCD displays dashes, the instrument is ready. 2. Using a plastic pipette, fill the sample well with distilled or deionized water.

Make sure the prism is completely covered. Note: If the ZERO sample is subject to intense light such as sunlight or another strong source, cover the sample well with your hand or other shade during the calibration. 3. Press the ZERO key. If no error messages appear, your unit is calibrated.

(For a description of ERROR MESSAGES see page 11). Note: The 0 screen will remain until a sample is measured or the instrument is turned off. 4. Gently absorb the ZERO water standard with a soft tissue. Use care not to scratch the prism surface.

Dry the surface completely. The instrument is ready for sample measurement. Note: If instrument is turned off the calibration will not be lost. 7

MEASUREMENT PROCEDURE Verify the instrument has been calibrated before taking measurements. 1. Wipe off prism surface located at the bottom of the sample well. Make sure the prism and sample well are completely dry. 2. Using a plastic pipette, drip sample onto the prism surface. Fill the well completely.

Note: If the temperature of the sample differs significantly from the temperature of the instrument, wait approximately 1 minute to allow thermal equilibration.

3. Press the READ key. The results are displayed in unit of interest. Note: The last measurement value will be displayed until the next sample is measured or the instrument is turned off. Temperature will be continuously updated. Note: The "ATC" tag blinks and automatic temperature compensation is disabled if the temperature exceeds the 0-40 °C / 32-104 °F range. 4. Remove sample from the sample well by absorbing with a soft tissue. 5.

Using a plastic pipette, rinse prism and sample well with distilled or deionized water. Wipe dry. @@@@ @@@@ 1. Press and hold the ON/OFF key continuously for approximately 8 seconds. The LCD will display the "all segment" screen followed by a screen with the model number on the primary display and the version number on the secondary display.

Continue pressing the ON/OFF key. 8 seconds 2. While continuing to hold the ON/OFF key, press the ZERO key. The temperature unit will change from °C to °F or vice versa. °C or °F MAKING A STANDARD SOLUTION Sodium Chloride solutions can be used to check the accuracy of the meter.

The table below lists several Sodium Chloride solutions and their expected ppt Seawater value. 9 To make a Standard NaCl Solution (g/100 g), follow the procedure below: · Place container (such as a glass vial or dropper bottle that has a cover) on an analytical balance. · Tare the balance. · To make an X NaCl solution weigh out X grams of high purity dried Sodium Chloride (CAS #: 7647-14-5; MW 58.44) directly into the container. · Add distilled or deionized water to the container so the total weight of the solution is 100 g. g of NaCl g of Water 5% NaCl 10% NaCl 15% NaCl 5.00 10.00 15.00 95.

0.



[You're reading an excerpt. Click here to read official HANNA INSTRUMENTS HI 96822 user guide](http://yourpdfguides.com/dref/2865924)
<http://yourpdfguides.com/dref/2865924>