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You can read the recommendations in the user guide, the technical guide or the installation guide for HANNA INSTRUMENTS HI 96711. You'll find the answers to all your questions on the HANNA INSTRUMENTS HI 96711 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 96711
User guide HANNA INSTRUMENTS HI 96711
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Instruction manual HANNA INSTRUMENTS HI 96711

Instruction Manual

HI 96711
Free & Total Chlorine
Fast Tracker
Ion Specific Meter



HANNA
instruments
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Manual abstract:

@@@@@If you need additional technical information, do not hesitate to e-mail us at tech@hannainst.com or see the back side of this manual for our worldwide sales and technical service contacts. This instrument is in compliance with directives. WARRANTY HI 96711 is warranted for two years against defects in workmanship and materials when used for its intended purpose and maintained according to instructions. This warranty is limited to repair or replacement free of charge. Damage due to accidents, misuse, tampering or lack of prescribed maintenance is not covered. If service is required, contact the dealer from whom you purchased the instrument. If under warranty, report the model number, date of purchase, serial number and the nature of the failure. If the repair is not covered by the warranty, you will be notified of the charges incurred. If the instrument is to be returned to Hanna Instruments, first obtain a Returned Goods Authorization number from the Technical Service Department and then send it with shipping costs prepaid. When shipping any instrument, make sure it is properly packed for complete protection. To validate your warranty, fill out and return the enclosed warranty card within 14 days from the date of purchase. TABLE OF CONTENTS WARRANTY ...

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Note: If the value is over range, the maximum value (5.00) will blink. INTERFERENCES · Bromine (positive error). · Chlorine dioxide (positive error). · Iodine (positive error). · Oxidized Manganese and Chromium (positive error). · Ozone (positive error).

Alkalinity above 250 mg/L CaCO₃ or acidity above 150 mg/L CaCO₃ will not reliably develop the full amount of color or it may rapidly fade. To resolve this, neutralize the sample with diluted HCl or NaOH. In case of water with hardness greater than 500 mg/L CaCO₃, shake the sample for approximately 2 minutes after adding the powder reagent. 16 or VALIDATION PROCEDURE Use the validation procedure to ensure that the instrument is properly calibrated. Warning: Do not validate or calibrate the instrument with standard solutions other than Hanna CAL CHECK™ Standards, otherwise erroneous results will be obtained.

For accurate validation and calibration please perform test at room temperature, 18 to 25°C (64.5 to 77.0°F). · Turn the meter on by pressing ON/OFF.

When the LCD displays "----", the meter is ready.

On the secondary LCD "P1" or "P2" will appear, indicating that the free or total chlorine parameter is selected. The display code that appears is the one of the last selected parameter. · Select the parameter program for Free Chlorine "P1", or Total Chlorine "P2", by pressing UP or DOWN keys. · Place the CAL CHECK™ Standard Cuvet A into the holder and ensure that the notch on the cap is positioned securely into the groove. · Press ZERO/ and "----" will blink on the display. · Wait for a few seconds and the display will show "-0.0-". The instrument is now zeroed and ready for validation. · Remove the cuvet. 17 · Place the specific CAL CHECK™ Standard Cuvet B into the holder: Free Chlorine Total Chlorine or B, HI 95701-11 B, HI 95711-11 Ensure that the notch on the cap is positioned securely into the groove.

· Press CAL CHECK and "----" will blink during measurement. · Wait for a few seconds and the display will show the validation standard value. Note: The reading should be within specifications as reported on the CAL CHECK™ Standard Certificate. If the value is found out of specifications, please check that the cuvetts are free of fingerprints, oil or dirt and repeat validation. If results are still out of specifications, then recalibrate the instrument. CALIBRATION PROCEDURE Note: It is possible to interrupt the calibration procedure by pressing CAL CHECK or ON/OFF. Warning: Do not validate or calibrate the instrument with standard solutions other than Hanna CAL CHECK™ Standards, otherwise erroneous results will be obtained. For accurate validation and calibration please perform test at room temperature, 18 to 25°C (64.5 to 77.0°F).

CALIBRATION PROCEDURE · Turn the meter on by pressing ON/OFF. When the LCD displays "----", the meter is ready. On the secondary LCD "P1" or "P2" will appear, indicating that the free or total chlorine parameter is selected. The display code that appears is the one of the last selected parameter. ·

Select the parameter program for Free Chlorine "P1", or Total Chlorine "P2", by pressing UP or DOWN keys.

18 · Enter the calibration mode by holding the CAL CHECK key for three seconds. The date of the last calibration appears (e.g. 2004 05 23). "F. CAL" means that the factory calibration is selected. Note: At this moment it is possible to restore Factory Calibration (see instructions, page 20). · Place the CAL CHECK™ Standard Cuvet A into the holder and ensure that the notch on the cap is positioned securely into the groove. or · Press ZERO/ and "----" will blink on the display. · After a few seconds the display will show "-0.0-". The meter is now zeroed and ready for calibration. · Remove the cuvet. · Place the specific CAL CHECK™ Standard Cuvet B into the holder: Free Chlorine Total Chlorine or B, HI 95701-11 B, HI 95711-11 Ensure that the notch on the cap is positioned securely into the groove. · Press READ/TIMER and "----" will blink on the display.

19 · The instrument will show for two seconds the CAL CHECK standard value and then "Stor" to confirm that the new calibration data has been accepted. The meter returns automatically to the measurement mode. Note: If the display shows "Err", the calibration procedure failed. Verify that the right CAL CHECK™ Standard Cuvet B is inserted or that both A and B cuvetts are free from fingerprints or dirt. Factory Calibration Reset It is possible to restore factory calibration. · Enter the calibration mode by holding CAL CHECK for three seconds. The date of last calibration appears on the display. · Press /DEL and "CAL", "DEL" will appear, with "CFM" blinking. · Press LOG/CFM to restore factory calibration. The display will show for two seconds "F. CAL" and the meter returns automatically to the measurement mode. SETUP · Turn the meter on by pressing ON/OFF. · Enter setup by holding the RCL/SETUP key for three seconds. The current date appears on the LCD. · Use the UP or DOWN keys to switch between time and date.

20 Setting the date The year is displayed on the main display and the month and day on the secondary one. · To set a new date, press LOG/CFM. The last two digits of the year start blinking. · Set the year by using the UP and DOWN keys. · Press LOG/CFM to switch to the month.

· Set the month by using the UP and DOWN keys. · Press LOG/CFM to switch to the day. · Set the day by using the UP and DOWN keys. · Finally press LOG/CFM. The instrument saves the new date and returns to the main setup menu. 21 Setting the time The time is displayed in hours and minutes. · To set a new time, press LOG/CFM and the hour start blinking. · Set the hour by using the UP and DOWN keys. · Press LOG/CFM to switch to minutes. · Set the minutes by using the UP and DOWN keys.

· Press LOG/CFM. The instrument saves the new time and returns to the main setup menu. Note: The internal clock will lose the date and time if the battery is removed for more than 30 seconds. 22 LOGGING LOG DATA The log on demand feature is active after a valid measurement is obtained (no errors). · To log a value, press LOG/CFM when a measurement result is displayed. The meter asks to "READ TAG" for identification of the sampling location. · To give the ID code for the identification of the sampling location, simply touch the iButton® tag with the matching connector, located on the back of the instrument (see page 9).



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· If the tag is successfully read, the meter will beep once, displaying the unique hexadecimal string of the tag, and store the data in a log record. Each logged measurement is stored in a separate record, with a different record number (e.g. "r06"). · After the data is stored, the meter returns to the measurement mode. Note: If the tag is not read within 20 seconds, the logging procedure is canceled. A measurement can be stored only once. Also an over range value can be stored.

· To store a record without identification of the sampling location, press LOG/CFM when "READ TAG" is displayed. "----" will appear on the display. · If another key is pressed, the log procedure is canceled. · If less than five free records are available, the "LOG" will blink while storing data. · If the log memory is full, the "Full" message appears for two seconds and the meter returns to the measurement mode.

Note: See Delete Records for free log space. @@The first displayed record is the last one stored. · To view logged data, press RCL/SETUP. @@ · Press ZERO/ key to scroll through the record contents. The record panels are displayed one by one. @@ii) Sample value and parameter number. @@If data was stored without the identification of the sampling location, "----" is displayed. iv) Measurement date. v) Measurement time. vi) Delete the last record.

vii)Delete all records. 24 Notes:To make log searching easier, the following features are available: It is allowed to scroll from any record panel, except from delete last or delete all. If you scroll between records, the new selected record number is displayed for one second on the secondary LCD, together with "TAG" if the identification of the sampling location was made. If the logged sample value is an over range reading, the maximum value (5.00) will blink, when recall the log. Delete Records · To delete the last or all records, press /DEL. · The instrument asks to confirm that you want to delete the record(s). or · Press LOG/CFM to confirm. The meter will display the first panel for the previous record (if delete last record was chosen) or will remove all records and returns to the measurement mode. or 25 TAG INSTALLATION Place the tag near a sampling point.

Fix it securely with the provided screws, in such a way that the metallic iButton® is easily accessible for reading the tag. The number of tags that can be installed is practically unlimited. Additional tags can be ordered (HI 920005 - five tag holders with tags). BATTERIES REPLACEMENT Warning: Replace batteries only in a non-hazardous area. The blinking " " will appear when the batteries power gets low.

From this moment, approximately 100 measurements can be taken until the battery is dead. When batteries are completely discharged, "bA Err" will appear and the instrument will lock-up. Press the ON/OFF key to turn off the meter. Unscrew the 2 screws from the battery cover and take it away. Take out the batteries and insert 4 fresh 1.

5V batteries, while paying attention to the correct polarity. Replace the cover and screw the 2 screws on again. Note:If batteries are removed from the instrument for more than 30 seconds, the date and time are lost and need to be set again. 26 ACCESSORIES REAGENT SETS HI 93701-01 Reagents for 100 Free Chlorine tests HI 93701-03 Reagents for 300 Free Chlorine tests HI 93711-01 Reagents for 100 Total Chlorine tests HI 93711-03 Reagents for 300 Total Chlorine tests OTHER ACCESSORIES HI 95701-11 CAL CHECKTM Standard Cuvets for Free Chlorine (1 set) HI 95711-11 CAL CHECKTM Standard Cuvets for Total Chlorine (1 set) HI 731318 Tissue for wiping cuvetts (4 pcs) HI 731331 Glass cuvetts (4 pcs) HI 93703-50 Cuvets cleaning solution (230 mL) HI 920005 5 tag holders with tags HI 740027P 1.5V AA battery (12pcs) HI 92000 Windows® compatible software HI 920011 5 to 9 pins RS232 connection cable RECOMMENDATIONS FOR USERS Before using this product, make sure that it is entirely suitable for your specific application and for the environment in which it is used. Operation of this instrument may cause unacceptable interferences to other electronic equipments, requiring the user to follow all necessary steps to correct interferences. Any variation introduced by the user to the supplied equipment may degrade the instrument's EMC performance. To avoid damage or burns, do not put the instrument in microwave ovens. For your own and the instrument safety do not use or store the instrument in hazardous environments. Hanna Instruments reserves the right to modify the design, construction and appearance of its products without advance notice.

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