



Your PDF Guides

You can read the recommendations in the user guide, the technical guide or the installation guide for HANNA INSTRUMENTS HI 96742. You'll find the answers to all your questions on the HANNA INSTRUMENTS HI 96742 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 96742 User guide HANNA INSTRUMENTS HI 96742 Operating instructions HANNA INSTRUMENTS HI 96742 Instructions for use HANNA INSTRUMENTS HI 96742 Instruction manual HANNA INSTRUMENTS HI 96742

INSTRUCTION MANUAL

HI 96742

**Iron LR and
Manganese LR
ISM**

Dear Customer,

Thank you for choosing a Hanna product. This manual will provide you with the necessary information for the correct use of the instrument. Please read it carefully before using the meter. If you need additional technical information, do not hesitate to e-mail us at tech@hanna.com.

Preliminary examination:

Please examine this product carefully. Make sure that the instrument is not damaged. If any damage occurred during shipment, please notify your Dealer.

Each HI 96742 Ion Selective Meter is supplied complete with:

- Two Sample Cuvettes and Caps
- 9V Battery
- Instruction Manual

Note: use of pasting material until you are sure that the instrument works correctly. Any defective item must be returned in its original packing.

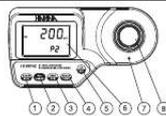
! For more details about spare parts and accessories see "Accessories".

Technical specifications:

Range	Iron LR	0.00 to 1.60 mg/L
	Manganese LR	0 to 300 µg/L
Resolution	Iron LR	0.01 mg/L
	Manganese LR	1 µg/L
Accuracy	Iron LR	±0.01 mg/L ±8% of reading @ 25°C
	Manganese LR	±0.2 µg/L ±3% of reading @ 25°C
Typical EMC Dev.	±0.01 mg/L Iron LR	
	±1 µg/L Manganese LR	
Light Source	Incandescent lamp	
Light Detector	Silicon Photodiode with narrow band interference filter @ 525 nm	
Method	For Iron LR: Adaptation of the IPE method. The reaction between iron and the reagent causes a violet tint in the sample. For Manganese LR: Adaptation of the PIR Method. The reaction between manganese and the reagent causes a orange tint in the sample.	
Environment	0 to 50 °C (32 to 122 °F), max 95% RH non-condensing	
Battery Type	1 x 9V	
Auto-Shut off	After 10' of non-use in measurement mode, with last reading retained.	
Dimensions	192 x 104 x 69 mm (7.6 x 4.1 x 2.7")	
Weight	360 g (12.7 oz.)	

HANNA
instruments
www.hannainst.com

Functional description:



1. RANGE/CLP/A key: press to change the parameter, press and hold for three seconds to enter CLP mode. In **calibration mode** press to edit the date and time.
2. CAL CHECK key: press to perform the validation of the meter, or press and hold for three seconds to enter calibration mode.
3. ZERO/CFM key: press to zero the meter prior to measurement, to custody added values or to custom factory calibration routine.
4. READ/TIMER key: In measurement mode, press to make a measurement, or press and hold for three seconds to start a pre-programmed countdown prior to measurement. In **CLP mode** press to view the read screen.
5. ON/OFF key: to turn the meter on and off.
6. Liquid Crystal Display (LCD)
7. Cuvette alignment indicator
8. Cuvette holder

DISPLAY ELEMENTS DESCRIPTION:



1. The measuring scheme (lamp, cuvette, detector), appears during different phases of zero or reading measurement.
2. Error messages and warnings.
3. The battery icon indicates the charge state of the battery.
4. The temperature appears when an internal check is in progress.
5. Status messages.
6. The chronometer appears when the reaction timer is running.
7. The month, day and date icons appear when a date is displayed.
8. Four digit status display.
9. Measuring units.
10. Four digit secondary display.

Errors and warnings:

ON ZERO READING:

Err PZ

Light High: There is too much light to perform a measurement. Please check the preparation of the zero cuvette.

Err PZ

Light Low: There is not enough light to perform a measurement. Please check the preparation of the zero cuvette.

Err PZ

No Light: The instrument cannot adjust the light level. Please check that the sample does not contain any dilute.

ON SAMPLE READING:

Err PZ

Inverted cuvettes: The sample and the zero cuvette are inverted.

Err PZ

Zero: A zero reading was not taken. Follow the instructions of the measurement procedure for zeroing the meter.

Err PZ

Under range: A flashing "0.00" indicates that the sample absorbs less light than the zero reference. Check the preparation and make sure you use the same cuvette for reference (zero) and measurement.

Err PZ

Over Range: A flashing value of the maximum concentration indicates an over range condition. The concentration of the sample is beyond the programmed range: dilute the sample and re-run the test.

Err PZ

READING CALIBRATION PROCEDURE:

Err PZ

Standard Low: The standard reading is less than expected.

Err PZ

Standard High: The standard reading is higher than expected.

OTHER ERRORS AND WARNINGS:

Err PZ

Cap error: Appears when external light enters in the cuvette cell. Assure that the cuvette cap is present.

Err PZ

Cooling lamp: The instrument waits for the lamp to cool down.

Err PZ

Battery low: The battery must be replaced soon.

Err PZ

Dead battery: This indicates that the battery is dead and must be replaced. Once this indication is displayed, normal operation of the instrument will be interrupted. Change the battery and restart the meter.

Err PZ

Measurement procedure:

Measurement by 1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

 [You're reading an excerpt. Click here to read official HANNA INSTRUMENTS HI 96742 user guide](http://yourpdfguides.com/dref/3688596)
<http://yourpdfguides.com/dref/3688596>

Manual abstract:

This manual will provide you with the necessary information for the correct use of the 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. Functional description: Errors and warnings: ON ZERO READING:

Light High: There is too much light to perform a measurement. Please check the preparation of the zero cuvette. Light Low: There is not enough light to perform a measurement. Please check the preparation of the zero cuvette. No Light: The instrument cannot adjust the light level. Please check that the sample does not contain any debris.

Measurement procedure: Measurement 2 Preliminary examination: Please examine this product carefully. Make sure that the instrument is not damaged. If any damage occurred during shipment, please notify your Dealer. Each HI 96742 Ion Selective Meter is supplied complete with: · Two Sample Cuvettes and Caps · 9V Battery · Instruction Manual Note: save all packing material until you are sure that the instrument works correctly. Any defective item must be returned in its original packing.

For more details about spare parts and accessories see "Accessories". 3 Technical specifications: Iron LR 0.00 to 1.60 mg/L Manganese LR 0 to 300 µ/L Resolution 0.01 mg/L Iron LR 1 µg/L Manganese LR Range Accuracy Iron LR ±0.

01 mg/L ±8% of reading @ 25°C Manganese LR ±2 µg/L ±3% of reading @ 25°C Typical EMC Dev. ±0.01 mg/L Iron LR ±1 µg/L Manganese LR Light Source Tungsten lamp Light Detector Silicon Photocell with narrow band interference filter @ 525 nm 1. RANGE/GLP/ key: press to change the parameter, press and hold for three seconds to enter GLP mode. In calibration mode press to edit the date and time. 2. CAL CHECK key: press to perform the validation of the meter, or press and hold for three seconds to enter calibration mode. 3. ZERO/CFM key: press to zero the meter prior to measurement, to confirm edited values or to confirm factory calibration restore. 4.

@@In GLP mode press to view the next screen. 5. ON/OFF key: to turn the meter on and off. 6. Liquid Crystal Display (LCD) 7. Cuvette alignment indicator 8. @@Zero: A zero reading was not taken. @@@@Check the procedure and make sure you use the same cuvette for reference (zero) and measurement. Over Range: A flashing value of the maximum concentration indicates an over range condition. The concentration of the sample is beyond the programmed range: dilute the sample and re-run the test.

DURING CALIBRATION PROCEDURE: Standard Low: The standard reading is less than expected. Standard High: The standard reading is higher than expected. 4 5-6 5-6 DISPLAY ELEMENTS DESCRIPTION: 8 Method For Iron LR: Adaptation of the TPTZ method. The reaction between iron and the reagent causes a violet tint in the sample. For Manganese LR: Adaptation of the PAN Method.

The reaction between manganese and the reagents causes an orange tint in the sample. Environment Battery Type Auto-Shut off 0 to 50°C (32 to 122°F); max 95% RH non-condensing 1 x 9 volt After 10' of non-use in measurement mode; after 1 hour of non-use in calibration mode; with last reading reminder. 192 x 104 x 69 mm (7.6 x 4.1 x 2.

7") 360 g (12.7 oz.). Dimensions Weight 1. The measuring scheme (lamp, cuvette, detector), appears during different phases of zero or reading measurement 2. Error messages and warnings 3. The battery icon indicates the charge state of the battery 4. The hourglass appears when an internal check is in progress 5. Status messages 6. The chronometer appears when the reaction timer is running 7.

The month, day and date icons appear when a date is displayed 8. Four digit main display 9. Measuring units 10. Four digit secondary display OTHER ERRORS AND WARNINGS: Cap error: Appears when external light enters in the analysis cell. Assure that the cuvette cap is present. Cooling lamp: The instrument waits for the lamp to cool down. Battery low: The battery must be replaced soon. Dead battery: This indicates that the battery is dead and must be replaced. Once this indication is displayed, normal operation of the instrument will be interrupted. Change the battery and restart the meter.

9-10 or www.hannainst.com 1· Turn the meter on by pressing ON/OFF. 2· When the beeper sounds briefly and the LCD displays dashes and "P1" (Iron LR) and "P2" (Manganese LR) the meter is ready. The code that appears on the secondary display is the one of the last selected parameter.

If necessary, press RANGE/GLP/ to change parameter. The blinking "ZERO" indicates that the instrument needs to be zeroed first. 3· For Iron LR: Fill one graduated mixing cylinder up to the 25 mL mark with deionized water. @@This is the blank. Fill a cuvette with 10 mL of the blank up to the mark and replace the cap.

For Manganese LR: Fill one cuvette with 10 mL of deionized water up to the mark. @@@@6· After a few seconds the display will show "0.0-". The meter is now zeroed and ready for measurement. 7· Remove the cuvette. @@@@10· Press and hold READ/ /TIMER for three seconds. The display will show the countdown prior to measurement. The beeper is playing a beep at the end of countdown period. @@@@Note: A temperature above 30 °C may cause turbidity. @@@@Use the Hanna CAL CHECK™ cuvettes (see "Accessories") to validate or calibrate instruments.

VALIDATION Validation Note: The validation is performed only for the selected parameter. For full validation of the instrument, the following procedure must be performed for each parameter. 3 1· Turn the meter on by pressing ON/OFF. 2· When the beeper sounds briefly and the LCD displays dashes, the meter is ready. 3· Place the CAL CHECK™ Standard Cuvette A into the cuvette holder and ensure that the notch on the cap is positioned securely into the 4-5 groove. 4· Press ZERO/CFM and the lamp, cuvette and detector icons will appear on the display, depending on the measurement phase. 5· After a few seconds the display will show "-0.0-". The meter is now zeroed and ready for validation. 6· Remove the cuvette.

7· Place the specific CAL CHECK™ Standard Cuvette B into the cuvette holder, for: Iron LR: B, HI 96746-11 7 Manganese LR: B, HI 96748-11 Ensure that the notch on the cap is positioned securely into the groove. Calibration Note: It is possible to interrupt the calibration procedure at any time by pressing CAL CHECK or ON/OFF keys. When calibrating, only the selected range is affected. 1· Turn the meter on by pressing ON/OFF. 4 2· When the beeper sounds briefly and the LCD displays dashes, the meter is ready.

3· To change the range, simply press RANGE/GLP/. 4· Press and hold CAL CHECK for three seconds to enter calibration mode. The display will 5 show "CAL" during calibration procedure.



[You're reading an excerpt. Click here to read official HANNA INSTRUMENTS HI 96742 user guide](http://yourpdfguides.com/dref/3688596)
<http://yourpdfguides.com/dref/3688596>

The blinking "ZERO" asks for instrument zeroing. 5· Place the CAL CHECK™ Standard Cuvette A into the cuvette holder and ensure that the notch on the cap is positioned securely into the 6-7 groove.

6· Press ZERO/CFM and the lamp, cuvette and detector icons will appear on the display, depending on the measurement phase. 7· After a few seconds the display will show "-0.0-". The meter is now zeroed and ready for calibration. The blinking "READ" asks for reading calibration standard. 8· Remove the cuvette. 9· Place the specific CAL CHECK™ Standard Cuvette B into the cuvette holder, for: 9 Iron LR: B, HI 96746-11 Manganese LR: B, HI 96748-11 Ensure that the notch on the cap is positioned securely into the groove. 10· Press READ/TIMER and the lamp, cuvette and detector icons will appear on 10-11 the display, depending on the measurement phase. 11· The instrument will show for three seconds the CAL CHECK™ standard value. Note: If the display shows "STD HIGH", the 12-14 standard value was too high.

If the display shows "STD LOW", the standard value was too low. Verify that both CAL CHECK™ Standard Cuvettes, A and B are free from fingerprints or dirt and that they are inserted correctly. 12· Then the date of last calibration (e.g.: or "01.08.2009") appears on the display, or "01.01.2009" if the factory calibration was selected before. In both cases the year number is blinking, ready for date input.

13· Press RANGE/GLP/ to edit the desired year (2009-2099). If the key returned Goods Authorization Number from the Customer Service Department and then send it with shipment costs prepaid. When shipping any instrument, make sure it is properly packaged for complete protection. To validate your warranty, fill out and return the enclosed warranty card within 14 days from the date of purchase. Recommendations for Users Before using these products, make sure that they are entirely suitable for your specific application and for the environment in which they are used.

Operation of these instruments may cause unacceptable interferences to other electronic equipments, this requiring the operator to take all necessary steps to correct interferences. @@@@The calibration month and day will appear on the main display and the year on the secondary display. 2· If no calibration was performed, the factory calibration message, "F.CAL" will appear on the main display and the instrument returns to measurement mode after three seconds. 1 Hanna Instruments reserves the right to modify the design, construction and appearance of its products without advance notice.

For additional information, contact your dealer or the nearest Hanna Customer Service Center. To find the Hanna Office in your area, visit our web site 2· Extract the battery from its location and replace it with a fresh one. · Insert back the battery cover and turn it clockwise to close. IST96742 11/10A w w w . h a n n a i n s t . c o m .



[You're reading an excerpt. Click here to read official HANNA INSTRUMENTS HI 96742 user guide](http://yourpdfguides.com/dref/3688596)
<http://yourpdfguides.com/dref/3688596>