

HI 83200

2008 SERIES

Multiparameter Photometers

with up to 45 Measurement Methods



ISO 9001:2000 Certified

 **HANNA[®]**
instruments
With Great Products, Come Great Results™
www.hannainst.com



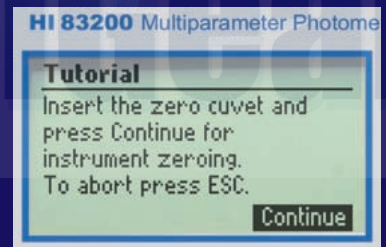
Setup Button

Instrument preferences such as backlight intensity and screen contrast can be changed via the setup button.



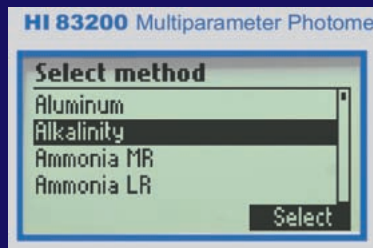
HELP Button

Screen specific help can viewed at the touch of a button.



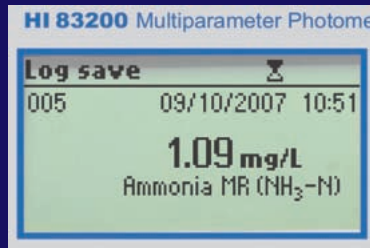
On-screen Tutorial

With the tutorial function enabled, short guides relating to current operation are displayed.



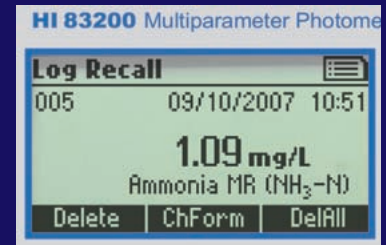
Method Selection

Users can easily select parameters via the Method button.



Save and Recall Logged Data at the Touch of a Button

Simply touching the LOG button users can save readings into memory. Pressing the RCL button brings back logged information for viewing on-screen. The logged information can later be transferred to a PC using the HI 92000 Windows® compatible software for further study.



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Application Specific Photometers with More Methods

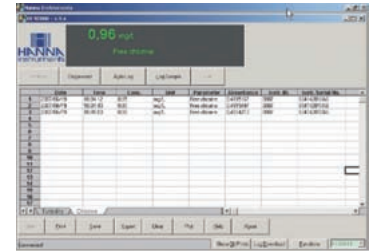
The 2008 Series of HI 83200 benchtop photometers from HANNA offers all the features from our previous popular series plus many upgrades and improvements that make these instruments much more versatile and easy to use.

These instruments have been completely redesigned to accommodate more sophisticated optical systems, resulting in greater reproducibility of tests. These new casings feature a cuvette compartment door that eliminate external light disturbances.

The 2008 Series also feature a graphic, backlit LCD which greatly enhances user friendliness. The method selection and set up modes are clearly shown on the LCD. Each method's measuring procedure is displayed on the LCD taking the user step by step through the process. At any stage in the measurement process or during setup, the help button will show context sensitive help. All these features are available in a user selectable language. Additionally, the help screen also list the required reagent sets, accessories and customer support contact information.

The 2008 Series eliminates confusion by automatically converting readings to other chemical forms. Common conversions are available at the touch of a button.

Other features included in the 2008 Series are a USB connection to transfer logged data (the instruments allow up to 200 data points) and the capability to run on rechargeable batteries or a 12 Vdc power adapter (included).



Data Management

Data can be transferred for further analysis using the HI 92000 Windows® compatible software.



Cuvette Holder with Door

The HI 83200 2008 Series cuvette cover aids in stopping stray light from affecting measurements.



Season
www.easeongear.com

HI 83200 2008 Series with 45 Methods

Built for Labs, Flexible for Field Use

HI 83200 2008 Series is one of the most versatile photometers on the market. Just one meter measures up to 45 of the most important water quality parameters.

ORDERING INFORMATION

HI 83200-01 2008 series (115V) and **HI 83200-02** 2008 series (230V) are supplied with cuvettes (4), bottle for DO test, 12 Vdc adapter and instruction manual.

HI 83200C-01 2008 series (115V) and **HI 83200C-02** 2008 series (230V) are supplied with a rugged carrying case, cuvettes (4), bottle for DO tests, scissors, cuvette cleaning cloths (4), 12 VDC adapter, and an instruction manual.

SPECIFICATIONS

Light Source	HI 83200, HI 83203, HI 83205, HI 83206 and HI 83208 2008 Series	4 tungsten lamps with narrow band interference filters at 420/525/575/610 nm
	HI 83215 2008 Series	3 tungsten lamps with narrow band interference filters at 420/525/610 nm
	HI 83216 and HI 83226 2008 Series	2 tungsten lamps with narrow band interference filters at 525/575 nm
Light Detector	Silicon Photocells	
Power Supply	built-in rechargeable batteries or 12 Vdc adapter	
Auto-off	after 10 minutes of non-use	
Logging	200 data points	
Computer Interface	USB	
Environment	0 to 50°C (32 to 122°F); RH max 90% non-condensing	
Dimensions	230 x 200 x 110 mm (9 x 7.9 x 4.3")	
Weight	900 g (32 oz.)	



HI 83203 2008 Series for Aquaculture

ORDERING INFORMATION

HI 83203-01 2008 series (115V) and **HI 83203-02** 2008 series (230V) are supplied with cuvettes (2), bottle for DO test, batteries, 12 Vdc adapter and instruction manual.

HI 83203C-01 2008 series (115V) and **HI 83203C-02** 2008 series (230V) are supplied with a rugged carrying case, cuvettes (2), bottle for DO tests, scissors, cuvette cleaning cloths (4), 12 Vdc adapter, and an instruction manual.

HI 83205 2008 Series for Boiler and Cooling Tower

ORDERING INFORMATION

HI 83205-01 2008 series (115V) and **HI 83205-02** 2008 series (230V) are supplied with cuvettes (2), bottle for DO test, batteries, 12 Vdc adapter and instruction manual.

HI 83205C-01 2008 series (115V) and **HI 83205C-02** 2008 series (230V) are supplied with a rugged carrying case, cuvettes (2), bottle for DO tests, scissors, cuvette cleaning cloths (4), 12 Vdc adapter, and an instruction manual.

HI 83206 2008 Series for Environmental Testing

ORDERING INFORMATION

HI 83206-01 2008 series (115V) and **HI 83206-02** 2008 series (230V) are supplied with cuvettes (3), bottle for DO test, batteries, 12 Vdc adapter and instruction manual.

HI 83206C-01 2008 series (115V) and **HI 83206C-02** 2008 series (230V) are supplied with a rugged carrying case, cuvettes (3), bottle for DO tests, scissors, cuvette cleaning cloths (4), 12 Vdc adapter, and an instruction manual.

HI 83208 2008 Series for Water Conditioning

ORDERING INFORMATION

HI 83208-01 2008 series (115V) and **HI 83208-02** 2008 series (230V) are supplied with cuvettes (2), bottle for DO test, batteries, 12 Vdc adapter and instruction manual.

HI 83208C-01 2008 series (115V) and **HI 83208C-02** 2008 series (230V) are supplied with cuvettes (2), bottle for DO tests, scissors, cuvette cleaning cloths (4), 12 Vdc adapter, and an instruction manual.

HI 83215 2008 Series for Nutrient Analysis

ORDERING INFORMATION

HI 83215-01 2008 series (115V) and **HI 83215-02** 2008 series (230V) are supplied with cuvettes (4), batteries, 12 Vdc adapter and instruction manual.

HI 83215C-01 2008 series (115V) and **HI 83215C-02** 2008 series (230V) are supplied with a rugged carrying case, cuvettes (2), scissors, cuvette cleaning cloths (4), 12 Vdc adapter, an instruction manual, plastic beakers (100 mL and 170 mL), syringes (5mL and 60mL), filter assembly, filter discs, 100mL graduated cylinder, demineralizing water bottle, pipettes (2), plastic spoon (1.5 mL) and activated carbon (50 tests).

HI 83216 • HI 83226 2008 Series for Pools and Spas

ORDERING INFORMATION

HI 83216-01 2008 series (115V) and **HI 83216-02** 2008 series (230V) and **HI 83226-01** 2008 series (115V) and **HI 83226-02** 2008 series (230 V) are supplied with cuvettes (4), batteries, 12 Vdc adapter and instruction manual.

HI 83216C-01 2008 series (115V) and **HI 83216C-02** 2008 series (230V) and **HI 83226C-01** 2008 series (115V) and **HI 83226C-02** 2008 series (230 V) are supplied with a rugged carrying case, cuvettes (4), scissors, cuvette cleaning cloths (4), 12 Vdc adapter, and an instruction manual.

Measure Crucial Aquaculture Parameters

Aquaculture has gained more and more importance as a supplement to fishing. Monitoring and controlling parameters such as the oxygen, pH and nitrate is vital to assure good health and rapid growth. Frequent testing is crucial to maintaining good water quality, which can prevent outbreaks of disease and increase production yields. Research personnel, fish farm operators and wildlife specialists now have a compact and easy-to-use meter to keep a close tab on the most important parameters in aquaculture.



The 2008 Series of the HI 83203 Aquaculture photometer measures Ammonia (medium and low ranges), Free and Total Chlorine, Copper (high and low ranges), Nitrate, Nitrite (high and low ranges), Dissolved Oxygen, pH and Phosphate (high and low ranges). Sample preparation is easy with HANNA's pre-dosed reagents. The meter shows the results in mg/L or µg/L on a large LCD. There is no need to match colors, calibrate probes or change membranes.

Accurate and Affordable Boiler and Cooling Tower Monitoring

The 2008 Series of the HI 83205 photometer for Boiler and Cooling Towers measures Aluminum, Ammonia (medium and low ranges), Bromine, Free and Total Chlorine, Chlorine Dioxide, Chromium VI (high and low ranges), Copper (high and low ranges), Hydrazine, Iron (high and low ranges), Molybdenum, Nitrate, Nitrite (high and low ranges), Dissolved Oxygen, pH, Phosphate (high and low ranges), Silica and Zinc.

Engineers as well as maintenance personnel have with a cost-effective, professional way to monitor boilers and cooling towers. With just one meter, technicians can monitor 24 key parameters for proper and efficient functioning of their systems. Monitoring can help prevent corrosion, microbiological fouling, scaling and contamination of feed water.

Simply zero the instrument, add the HANNA pre dosed reagents to the sample and measure. The instrument shows results in clear digits on the large LCD. There is no need to match colors, calibrate probes or change membranes.

Measure 24 Critical Environmental Parameters

The 2008 Series of the HI 83206 photometer for the Environmental Testing measures Ammonia (medium and low ranges), Free and Total Chlorine, Chromium VI (high and low ranges), Color, Copper (high and low ranges), Cyanuric Acid, Molybdenum, Nickel (high and low ranges), Nitrate, Nitrite (high and low ranges), Dissolved Oxygen, pH, Phosphate (high and low ranges), Phosphorous, Silica, Silver and Zinc.

Environmental consultants and engineers can quickly and accurately test up to 24 different parameters. Critical parameters such as pH, Dissolved Oxygen, nitrite, ammonia and chlorine can be monitored with this meter, there is no the need to carry a multitude of instruments or test kits.

Zero the instrument, prepare the sample with HANNA's pre-dosed reagents and measure. The instrument shows the results in on the large LCD. There is no need to match colors, calibrate probes or change membranes.

Water Conditioning Measurement Made Simple

The 2008 Series of the HI 83208 photometer for Water Conditioning measures Ammonia (medium and low ranges), Free and Total Chlorine, Copper (high and low ranges), Fluoride, Iron (high and low ranges), Manganese (high and low ranges), Molybdenum, Nickel (high and low ranges), Dissolved Oxygen, pH, Phosphate (high and low ranges), Phosphorous, Silica, Silver and Zinc.

Instead of having to carry multiple meters and chemical test kits with different color cubes, indicators and instructions, users can now just take the HI 83208.

www.esseasongear.com

Don't wait for lab results!

The 2008 Series of the HI 83215 photometer for Agricultural applications measures Ammonia (high, medium and low ranges), Nitrite (high, medium and low ranges), Phosphorous (high, medium and low ranges), and Potassium (high, medium and low ranges).

HI 83215 is a practical instrument made for the hydroponics and greenhouse industries to measure nutrients commonly present in fertilizer enriched solutions. Fertilizers can now be easily and quickly tested on the spot – and no longer need to be sent to a testing Lab. This can result in substantial savings and improved yields over a period of time. The ease of use of this instrument make it possible for non technical personnel to conduct analysis.

Simply zero the instrument, add the HANNA pre-dosed reagents to the sample and measure. The instrument shows the reading in direct concentration mode on the large LCD.

For Daily Home and Commercial Swimming Pool and Spa Monitoring

The 2008 Series of the HI 83216 Pool and Spa photometer measures Alkalinity, Free and Total Chlorine, Cyanide, Hardness, and pH. In addition to these parameters, the 2008 Series of the HI 83226 Pool and Spa photometer measures Bromine, Free and Total Copper, Cyanuric Acid (instead of Cyanide), Iron and Ozone.

Swimming pool water parameters, like chlorine and pH need to be monitored daily. Chlorine, is used in swimming pools to disinfect water, but its effectiveness depends on the pH. If these parameters are not monitored, potentially dangerous micro-organisms can grow. Excessive levels of chlorine will result in strong odors, and the water can cause eye and skin irritation.

Cyanuric acid is used as a stabilizing agent for chlorine, especially in warm months or in heated pools. As equally important, alkalinity and hardness balance water condition and prevent corrosion or deposit problems.

HI 83216 and HI 83226 are practical photometers designed to monitor these parameters. The measuring procedure is simple: zero the meter, add the HANNA pre-dosed reagents to the sample, and measure. The instrument displays the results on the LCD.

HI 83200

2008 SERIES

Multiparameter Photometers
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HI 83200 2008 Series
45 Measurement Methods

HI 83203 2008 Series
Aquaculture

HI 83205 2008 Series
Boilers and Cooling Towers

HI 83206 2008 Series
Environmental Testing

HI 83208 2008 Series
Water Conditioning

HI 83215 2008 Series
Greenhouses and Hydroponics

HI 83216 2008 Series
Pools and Spas

HI 83226 2008 Series
Pools and Spas

TEST	RANGE	HI 83200	HI 83203	HI 83205	HI 83206	HI 83208	HI 83215	HI 83216	HI 83226
Aluminum	0.00 to 1.00 mg/L	•							
Alkalinity	0 to 500 mg/L	•							
Ammonia HR	0 to 100 mg/L						•		
Ammonia MR	0.00 to 10.00 mg/L	•	•	•	•	•	•		
Ammonia LR	0.00 to 3.00 mg/L	•	•	•	•	•			
Bromine	0.00 to 8.00 mg/L	•		•					•
Calcium	0 to 400 mg/L	•							
Chlorine Dioxide	0.00 to 2.00 mg/L	•		•					
Chlorine, Free	0.00 to 2.50 mg/L	•	•	•	•	•			•
Chlorine, Total	0.00 to 3.50 mg/L	•	•	•	•	•		•	•
Chromium VI HR	0 to 1000 µg/L	•		•					
Chromium VI LR	0 to 300 µg/L	•		•					
Color	0 to 500 PCU	•		•					
Copper HR	0.00 to 5.00 mg/L	•	•	•	•	•			
Copper LR	0 to 1000 µg/L	•	•	•	•	•			
Copper, Free	0.00 to 5.00 mg/L								•
Copper, Total	0.00 to 5.00 mg/L								•
Cyanide	0.000 to 0.200 mg/L	•						•	
Cyanuric Acid	0 to 80 mg/L	•			•				•
Fluoride	0.00 to 2.00 mg/L	•				•			
Hardness (calcium)	0.00 to 2.70 mg/L	•						•	•
Hardness (magnesium)	0.00 to 2.00 mg/L	•						•	•
Hydrazine	0 to 400 µg/L	•		•					
Iodine	0.0 to 12.5 mg/L	•							
Iron HR	0.00 to 5.00 mg/L	•		•		•			•
Iron LR	0 to 400 µg/L	•		•		•			•
Magnesium	0 to 150 mg/L	•							
Manganese HR	0.0 to 20.0 mg/L	•				•			
Manganese LR	0 to 300 µg/L	•				•			
Molybdenum	0.0 to 40.0 mg/L	•		•	•	•			
Nickel HR	0.00 to 7.00 g/L	•				•			
Nickel LR	0.000 mg/L to 1.000 mg/L	•				•			
Nitrate	0 to 30.0 mg/L	•							
Nitrite HR	0 to 150 mg/L	•	•	•	•		0 to 3000 mg/L		
Nitrite MR	0 to 750 mg/L						•		
Nitrite LR	0.00 to 0.35 mg/L	•	•	•	•		0.0 to 30.0 mg/L		
Oxygen, Dissolved (DO)	0.0 to 10.0 mg/L	•	•	•	•	•			
Ozone	0.00 to 2.00 mg/L	•							•
pH	6.5 to 8.5 pH	•	•	•	•	•		•	•
Phosphate HR	0.0 to 30.0 mg/L	•	•	•	•	•			
Phosphate LR	0.00 to 2.50 mg/L	•	•	•	•	•			
Phosphorus HR	0 to 100 mg/L						•		
Phosphorus MR	0.0 to 50.0 mg/L						•		
Phosphorus LR	0.0 to 10.0 mg/L						•		
Phosphorus	0.0 to 15.0 mg/L	•		•	•	•			
Potassium HR	20 to 200 mg/L	•					•		
Potassium MR	10 to 100 mg/L	•					•		
Potassium LR	0.0 to 20.0 mg/L	•					•		
Silica	0.00 to 2.00 mg/L	•		•	•	•			
Silver	0.000 to 1.000 mg/L	•		•	•	•			
Sulfate	0 to 150 mg/L	•							
Zinc	0.00 to 3.00 mg/L	•		•	•	•			

ACCESSORIES

- HI 731318 Cuvette cleaning cloth (4 pcs)
- HI 731321 Glass Cuvette (4 pcs)
- HI 92000 Windows® Compatible Software
- HI 920013 PC connection cable
- HI 93703-50 Cuvette cleaning solution (230 mL)



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