

MODEL IQ-1000

# 100+ GAS PORTABLE

UTILIZING

**IST'S**

REVOLUTIONARY

MEGA-GAS

SENSOR



**MODEL  
IQ-1000**

- **Mega-Gas** Sensor detects over 100 toxic/combustible gases!
- Microprocessor controlled unit maintains a library of setup and calibration data for all gases, ready for your selection. No conversions or guessing!
- **"Gas Search"** feature allows you to quickly determine if any of the **100+** gases are present.
- Additional Solid State, Electrochemical, and Catalytic Bead Sensors provide increased selectivity. **IQ-1000** accepts and simultaneously displays the readings of up to 4 sensors.
- Optional data logging allows storage of months worth of data which can be sent to a printer or PC. **"Einstein"** data management PC software included.
- **Additional features include:**
  - Built-in sample pump
  - Audible and visual alarm indication
  - Large, backlit LCD display
  - Automated calibration
  - RS-232 port
  - Carrying case with shoulder strap



**INTERNATIONAL  
SENSOR TECHNOLOGY**

*The Leader In Gas Detection Since 1972*



**IST**'s Model **IQ-1000** is the most powerful and versatile portable gas detector on the market today. By using **IST's Mega-Gas** Sensor in one of the **IQ-1000's** four available sensor ports, this remarkable unit can detect OVER 100 toxic and combustible gases (see **Mega-Gas** Sensor Gas List below). Three alarm setpoints are provided for each gas, and audible as well as visual indicators alert you if any of these alarm limits have been exceeded.

Besides the **Mega-Gas** sensor, the **IQ-1000** also accepts electrochemical, catalytic bead, and solid state sensors, allowing the unit to provide greater selectivity for key gases. The **IQ-1000** accepts and simultaneously displays the readings of up to 4 sensors, giving it the flexibility to meet a wide range of applications. The **IQ-1000's "Gas Search"** feature allows you to use the **Mega-Gas** sensor to scan an area for hazardous gases. Because the **Mega-Gas** sensor can detect over 100 gases, if a gas search indicates a zero reading, chances are that no hazardous gases are present.

**THE MOST POWERFUL PORTABLE GAS DETECTOR AVAILABLE TODAY!**

The **IQ-1000** has impressive capabilities, yet still remains convenient and easy to use. Calibration is simple and automated, with no manual adjustments necessary. Operation is a snap. Simply select the gases you want to monitor and the microprocessor based **IQ-1000** will do the rest. A large, 8-line, 40-character per line display allows the simultaneous display of 4 gases along with alarm and calibration information for each gas.



The **IQ-1000** includes a built-in sample pump and sample wand as well as a handy carrying case. Datalogging can be provided as an option, allowing the storage of months of data. An RS-232 port allows you to send data to a computer or printer. Included with datalogging is the **IQ-1000's** powerful **"EINSTEIN"** data management PC software. This software allows you to download, manipulate, and plot data in a variety of ways.

Power is provided via 6 'D' size alkaline or nickel cadmium batteries. The unit will operate approximately 20 hours on alkaline batteries and 14 hours on nickel cadmium batteries.

**MEGA-GAS SENSOR GAS LIST**

Gases with an "•" have a 100% LEL range also.

GAS	PPM Ranges	GAS	PPM Ranges	GAS	PPM Ranges
Acetic Acid	1000	Dichlorosilane	100	Methyl Bromide	50 2000
Acetic Aldehyde	1000	Diesel Fuel	2000	Methyl Butanol	100, 1000
Acetone	1000	Diethyl Benzene	2000	Methyl Chloride	100
Acetonitrile	200, 1000	Epichlorohydrin	100	• Methyl Ethyl Ketone	100
• Acetylene	1000	• Ethane	1000	Methyl Isobutyl Carbinol	2000
Acrolein (Acrylaldehyde)	50, 200	• Ethanol	1000	Methyl Isobutyl Ketone	1000
Acrylonitrile	1000	• Ethyl Acetate	500	Methyl Mercaptan	50
Allyl Methacrylate	1000	• Ethyl Benzene	1000	• Methyl Methacrylate	500
Ammonia	200, 500	Ethyl Chloride	100	Methylene Chloride	100, 500
Anisole	4000	Ethyl Ether	500	Monoethylamine	500
Arsine	10	• Ethylene	1000	• Naptha	500
Benzene	100	Ethylene Oxide	50	Nonane	2000
Boron Trichloride	1000	Formaldehyde	100	• Pentane	1000
Boron Trifluoride	2000	Formic Acid	2000	Pentanol	1000
Butadiene	100	Freon-22	1000	Pentene	1000
• Butane	1000	Freon-502	1000	Phosphine	10
• Butanol	2000	Gasoline	1000	• Propane	1000
• Butene	1000	• Hexane	1000	• Propanol	500
Butyl Acetate	1000	Hexene	1000	• Propylene	1000
Carbon Disulfide	50, 1000	Hydrogen	500	Propylene Oxide	100, 1000
Carbon Monoxide	500	Hydrogen Bromide	100	Silane	50
Carbon Tetrachloride	1000	Hydrogen Chloride	200	• Styrene	-
Carbonyl Sulfide	100	Hydrogen Cyanide	100	Sulfur Dioxide	50
Cellosolve Acetate	2000	Hydrogen Sulfide	50	Tetrahydrofuran	200, 1000
Chloroform	200	Isobutane	1000	Toluene	200
Cyanogen Chloride	100	Isobutanol	1000	Trichloroethane	100
• Cyclohexane	1000	• Isobutylene	1000	Trichloroethylene	500
Cyclohexanol	2000	• Isopropanol	1000	Triethylamine (TEA)	200
Cyclopentane	1000	JP4	2000	Trifluoroethanol	1000
Diborane	10	JP5	2000	Trimethylamine (TMA)	500
Dibromomethane	100	• Methane	1000	Vinyl Acetate	50
Dichlorobutane	1000	• Methanol	500	Vinyl Chloride	50
Dichloroethane (EDC)	500	Methyl Acrylate	500	Xylene	1000

# EINSTEIN

## DATA MANAGEMENT SOFTWARE

*Brings Out The Genius In You!*

Equipped with the optional datalogging feature, the **IQ-1000** becomes a very powerful datalogger. Standard memory allows the storage of months worth of data for up to four sensors. And, if needed, additional memory can be added. Data stored by the **IQ-1000** can be displayed on the unit, sent to a printer, or transferred to a computer. Included with datalogging is **IST's** one-of-a-kind Data Management Software, **EINSTEIN**, a Windows-based (Windows '95 compatible) PC software program which provides direct access to the **IQ-1000**, allowing you to download logged data with the click of a button.

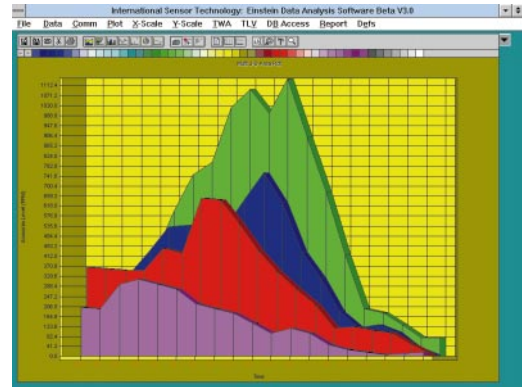
Once loaded, **EINSTEIN** then automatically sorts through the data and puts it in an easy to read format. All vital information is displayed, including readings, time and date, channel number, gas, calibration status, and alarm status. **EINSTEIN** also provides you with critical calculations on your data such as Time Weighted Average (TWA) and Threshold Limit Value (TLV) information.

Next, view your data graphically using **EINSTEIN's** array of powerful charting tools. Scatter plots, bar graphs, pie charts, best fit curve plots, you name it—**EINSTEIN's** got it! Plots can be scaled by minutes, hours, or even days, and can be single or multi-channel, 2-D or 3-D.

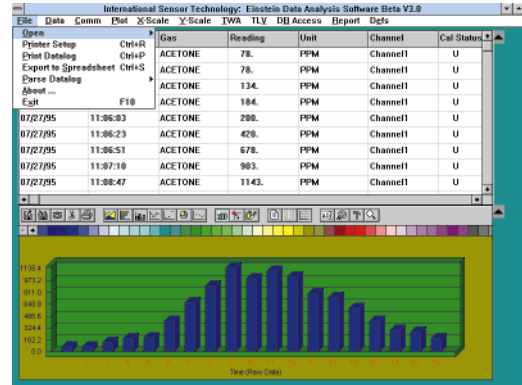
**EINSTEIN** also includes a reporting feature which lets you generate and print out professional looking reports. An on-board database allows you to archive years worth of data. And data sorted by **EINSTEIN** can be easily imported into your own favorite spreadsheet or company database for custom analysis.

Together, **EINSTEIN** and the **IQ-1000** provide you with the most powerful gas detection combination in the business!

Multi-Channel Plots



Sorting, TWA Calculations, Reporting, ...



On-Board Database

Date	Time	Channel	Gas	Reading	TLV	O2gas
07/27/95	20:04:12	Channel1	ACETONE	8	PPM	
07/27/95	20:04:12	Channel2	METHANE	5	%LEL	
07/27/95	20:04:12	Channel3	OXYGEN	20	%Oxygen	
07/27/95	21:31:12	Channel1	ACETONE	240	PPM	
07/27/95	21:31:12	Channel2	METHANE	15	%LEL	
07/27/95	21:31:12	Channel3	OXYGEN	30	%Oxygen	
07/27/95	23:19:17	Channel1	ACETONE	500	PPM	
07/27/95	23:19:17	Channel2	METHANE	18	%LEL	
07/27/95	23:19:17	Channel3	OXYGEN	25	%Oxygen	
7/27/95	11:04:12	Channel1	ACETONE	78	PPM	
7/27/95	11:04:12	Channel2	METHANE	9	%LEL	
7/27/95	11:04:12	Channel3	OXYGEN	14	%Oxygen	
7/27/95	11:04:52	Channel1	ACETONE	78	PPM	
7/27/95	11:04:52	Channel2	METHANE	9	%LEL	
7/27/95	11:04:52	Channel3	OXYGEN	14	%Oxygen	



# THE MEGA-GAS SENSOR

## HOW IT WORKS

IST's remarkable **Mega-Gas** Sensor is a Solid State Sensor which is specially manufactured to be sensitive to a wide variety of gases. In all, it is sensitive to over 100 gases. The **IQ-1000**, in turn, stores the setup and calibration data for each gas in memory. This data includes the gas response curve, the sensor operating temperature, and the zero and span values. When a gas is selected from the **IQ-1000**'s menu, the **IQ-1000** automatically uses this data to configure itself properly for the gas selected, allowing the unit to provide an accurate reading of the gas concentration. To change gases at any time, simply select the new gas from the menu and the **IQ-1000** will do the rest.

*It's that simple!*

## GAS SEARCH

In addition to looking for a single gas, the **Mega-Gas** Sensor also comes with a "Gas Search" feature which allows you to perform a scan for all 100+ gases. Each of the 100+ gases is placed into 1 of 3 gas groups. The **IQ-1000** searches each group and provides a relative reading from 0-100. A zero reading in all gas groups indicates that no hazardous gases are present.



## GENERAL SPECIFICATIONS

<b>Operating Life:</b>	20 hours on alkaline batteries, 14 hours on nickel cadmium.
<b>Sensors:</b>	Accepts solid state, electrochemical, and catalytic bead sensors. 4 sensors maximum. Channels 1 and 2 accept all sensor types; channels 3 and 4 accept electrochemical only.
<b>Controls:</b>	Pushbutton.
<b>Display:</b>	Backlit LCD supertwist. 8 lines, 40 characters per line.

## ELECTRICAL SPECIFICATIONS

<b>CPU:</b>	Hitachi HD64180 or Zilog Z180.
<b>Memory:</b>	128K EPROM. 128K non-volatile SRAM, additional 256K non-volatile SRAM optional for data-logging.
<b>External Interface:</b>	RS-232 using a DB-9 connector (1200 to 38,400 baud).
<b>Batteries:</b>	6 'D' size alkaline or nickel cadmium batteries.

## ENVIRONMENTAL SPECIFICATIONS

<b>Temp:</b>	0°C to +50°C operating. -20°C to +60°C storage.
<b>Humidity:</b>	0 to 95% RH, non-condensing.

## MECHANICAL SPECIFICATIONS

<b>Case:</b>	Weatherproof.
<b>Pump:</b>	Built-in sample pump capable of drawing up to 1000 cc/min.
<b>Size:</b>	9.0"L x 4.5"W x 5.4"H (229 x 114 x 137 mm)
<b>Weight:</b>	Approx. 6 lbs. (2.7 kg), including batteries.

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