Gas Detection & Monitors

The Gas Sniper Portable Gas Detector
VOC Leak Detector (EPA Method 21) – Monitors '1' to '6' Gases Simultaneously

Gas Sniper-01 Model for EPA Method 21

"Optional" carrying case shown with Gas Sniper accessories

Application

The Gas Sniper Portable Gas Detector is one of the most versatile portable gas monitors available in the market today. The Gas Sniper has the capability to monitor up to '6' gases simultaneously and is ideal for performing EPA Method 21 fugitive emission monitoring of volatile organic compound (VOC) leaks from process equipment. Potential leak sources include:

• **Valves, seals, drains, other connections**
• **Pressure relief devices and vents**
• **Pumps and compressors**

EPA Method 21 requires the use of a monitoring instrument that meets a series of specifications and performance criteria. Additional information can be found under EPA 40 CFR Ch.1, Pt.60, App.A, Method 21.

Description

The Gas Sniper features PPM , %LEL or %Volume measurement capability to address a wide range of monitoring requirements. The Gas Sniper detects and monitors a wide range of standard gases including many toxic gases (refer to Gas Sensor Selection Table). In addition, the Gas Sniper's ability to simultaneously detect up to '6' gases provides users with the ability to configure multiple gas monitoring combinations never before offered in a portable gas monitor. For quick response and recovery from distant sampling locations, the Gas Sniper utilizes an internal pump to draw samples up to 125 feet and utilizes hydrophobic filters to prevent moisture contamination. The Gas Sniper will continuously operate for up to 30 hours on alkaline batteries or 18 hours on Ni-Cad batteries.

A high resolution LCD screen provides easy viewing of all measurements, alarms and operating status. The Gas Sniper offers convenient access to all control functions such as auto-calibration, alarm silence, demand zero, peak hold and other features. Each standard gas monitoring channel has '2' alarm levels (setpoints) plus TWA and STEL alarms for the toxic channels. The alarm levels are adjustable and can be latching or self-resetting.

The Gas Sniper is furnished with several standard accessory items including: shoulder strap, alkaline batteries, hydrophobic probe, sampling hose, internal hydrophobic filter, and instruction manual. Certain toxic gas applications are equipped with a special probe, inlet fitting and teflon sampling hose (for HF and O_3 versions, the Teflon hose is used without a probe).

Product Features

• Simultaneous detection of up to '6' different gases
• Detects over '25' gases including a wide range of toxic gases
• Ergonomic design allows easy handling and transport
• PPM & LEL hydrocarbon detection
• High resolution LCD operating screen provides clear display of gas concentrations, alarms and diagnostic data
• Low flow alarm shuts pump off to avoid damage
• Hydrophobic filters standard in sensing probe
• Autocalibration
• Single gas calibration capability
• Methane elimination switch for environmental applications
• Security "Adjustment Lockout" Switch
• Alkaline or Ni-Cad battery operation
• Up to 30 hours of continuous operation
• Data-logging Kit option (up to '4' gases only)
• Remote alarm(s) option
• Carry Case option (for base unit and accessories)
• Extension Sensing Probes

The Gas Sniper meets or exceeds the specifications and performance criteria required by EPA Method 21.

	EPA Method 21 Model	Gas Sniper
Portable	Yes	Yes
Sampling Type	Suction	Suction
Response Time	<30 seconds	<30 seconds
Response Factor to Reference VOC	<10	<10
Scale Readable to +/-2.5% of leak concentration	Yes	Yes
Sensor Output	Linear	Linear
Intrinsically Safe	Yes	Yes

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The Gas Sniper can be calibrated on any number of compounds; however, methane is most typical as it provides the best response factors to other substances.
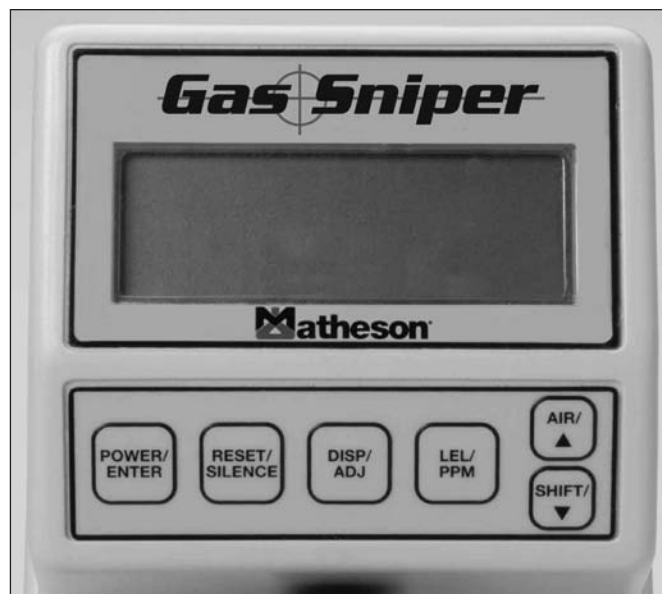
Once the instrument is turned on, the internal system automatically checks the battery voltage and selects the sensitivity range desired. A maximum of 30 seconds is all that is needed for instrument warm up. And although not required by EPA Method 21, the Gas Sniper is constructed with a built-in audible/visual alarm, as well as a Serial port for downloading data from the optional Data Logging System.

Principle of Operation
Depending on the specific gas being monitored, the Gas Sniper utilizes catalytic combustion, electrochemical cell, galvanic cell and infrared sensor technologies to accurately detect gases within several full scale ranges. These sensors provide accurate measurement for the target gas being monitored and are designed for continuous duty with the following features:

• **Linear Output**
• **High Accuracy; Superior Repeatability**
• **Immune to Ambient Temperature Changes**
• **Low Power Consumption**

An integral, extremely low power suction pump provides a continuous, steady sample flow to provide accurate and repeatable measurements. Sample flow to the gas sensor is regulated and consistently monitored.

Large LCD Viewing Screen provides operating status

Specifications

Detection Principle:	Catalytic Combustion, Electrochemical Cell, Galvanic Cell & Infrared
Enclosure:	Casing is constructed from chemical and weather resistant RFI/EMI coated high impact polycarbonate-polyester material; can function in rain or immersed in 2.5" of water without damage. Ergonomically designed with top mounted handle.
Sampling Method:	Auto-Suction (integral pump)
Sampling Distance:	Up to 125 feet
Safety Rating:	Intrinsically safe, Class I, Division 1; Groups A, B, C and D. CSA (C/US) & UL Classified (most versions)
Display:	LCD based, 4 x 20 viewing screen; displays readings and status of all monitoring channels simultaneously; backlight is automatic with alarms and on demand with timed adjustment
Measuring Range:	Dual scale
Sensor Output:	Linear
Sensor Lifespan:	2 Years under normal operating conditions
Calibration Gas:	Customer to specify on order (typically Methane (CH_4)
Accuracy:	Maximum variance +/- 5% f.s.
Alarms:	2' alarms per channel plus TWA and STEL alarms for toxic gases. The '2' alarms are fully adjustable for levels, latching or self-reset and are silencable
Alarm Method:	Audio alarm at 85 db at 30 cm distance; dual high intensity LED's and flashing screen display
Warm Up Time:	30 seconds maximum
Response Time:	<30 seconds to 90% with 5 foot hose
Operating Time:	30 hours with alkaline; 18 hours with Ni-Cad batteries
Power Source:	4 Alkaline or Ni-Cad Size "D" batteries
Operating Temperature:	14 °F to 104 °F
Operating Humidity:	0 to 95% RH (non-condensing)
Dimensions:	10.5" L x 5.9" W x 7" H
Weight:	5 lbs.
Warranty:	1 Year

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Ordering Information

Standard Gas Sniper Models

Model Number	Description
SNIPER-01	Gas Sniper Portable Gas Detector with LEL/ppm (Methane) Sensor*
SNIPER-02	Gas Sniper Portable Gas Detector with O_2 Sensor
SNIPER-03	Gas Sniper Portable Gas Detector with LEL (Methane), O_2, H_2S & CO Sensor
SNIPER-04	Gas Sniper Portable Gas Detector with '1' Toxic Sensor
SNIPER-05	Gas Sniper Portable Gas Detector with '2' Toxic Sensors[†]

Special Configured Gas Sniper Models

Model Number	Description
SNIPER-SC2	Gas Sniper Portable Gas Detector with '2' Sensors Configured[†]
SNIPER-SC3	Gas Sniper Portable Gas Detector with '3' Sensors Configured[†]
SNIPER-SC4	Gas Sniper Portable Gas Detector with '4' Sensors Configured[†]
SNIPER-SC5	Gas Sniper Portable Gas Detector with '5' Sensors Configured[†]
SNIPER-SC6	Gas Sniper Portable Gas Detector with '6' Sensors Configured[†]

Gas Sniper-01 model suitable for EPA Method 21 applications.

[†]*The Gas Sniper can be ordered with up to '6' sensors installed. Please specify the gas or gas combinations when ordering (Refer to Gas Sensor Selection Table for gases). For Gas Sniper models requiring '2' toxic sensors and special configured models containing up to '6' sensors – please consult factory for availability, pricing and delivery. In models where multiple gas sensors are desired, some gas combinations may not be available due to cross-interference/compatibility considerations.*

Accessories and Replacement Parts

Model Number	Description
SNIPE-SSPC	Shoulder Strap w/padded cushion
SNIPE-CCF1	Carry Case with foam for Gas Sniper and accessories
SNIPE-INFIT	Standard Inlet Metal Fitting – Quick Disconnect (Female)
SNIPE-PUMP	Pump (internal) with connector RP-GX-94
SNIPE-HSP10M	10" Standard Hydrophobic Sensing Probe with Metal Fittings
SNIPE-HSP10P	10" Hydrophobic Sensing Probe with Plastic Fittings (Toxic Gases)
SNIPE-RFE5	Hydrophobic Filter Element (Set of 5)
SNIPE-DLB	Data Logging Board (Factory Installed)♦
SNIPE-DLDK	Data Logging Downloading Kit♦
SNIPE-CHAR12	12 V-DC Battery Charger with Cigarette Lighter Plug
SNIPE-ALKBATD	Set of '4' Alkaline Batteries (Size D)
SNIPE-NCBATD	Set of '4' Rechargeable Ni-Cad Batteries (Size D)
SNIPE-NCCHAR115	Ni-Cad Battery Charger, 115 VAC with alkaline recognition
SNIPE-HT5	5 ft Teflon Sampling Hose
SNIPE-HT10	10 ft Teflon Sampling Hose
SNIPE-HP6	6 ft Polyurethane Sampling Hose with 1641 Fittings
SNIPE-HP10	10 ft Polyurethane Sampling Hose with 1641 Fittings
SNIPE-HP15	15 ft Polyurethane Sampling Hose with 1641 Fittings
SNIPE-HP20	20 ft Polyurethane Sampling Hose with 1641 Fittings
SNIPE-CH115C	115 VAC Cont. Operation Adapter/Battery Charger with 20 ft Cable
SNIPE-ORP-1	O-Ring for Hydrophobic Sensing Probe
SNIPE-IA90	Internal Alarm-Extra Loud (90 db @ 2 ft) feature, added to Gas Sniper
SNIPE-MES	External Methane Elimination Switch, Added to Gas Sniper
SNIPE-RAA20	Remote Audible Alarm with 20 ft Cable

♦*Data Logging Feature requires both SNIPE-DLB and SNIPE-DLDK components; this feature is only available for up to '4' gases; this option is not available on Gas Sniper units with '5' or '6' gas sensors installed or more than '2' toxic sensors installed.*
NOTE: Polyurethane hose recommended for standard gases and selected toxic gases; Teflon hose required for the following gases: HF, HCL & O_3

Shoulder Strap

10" Hydrophobic Sensing Probe

Polyurethane Sampling Hose (Hydrophobic Sensing Probe Separate)

115 VAC Adapter/Battery Charger

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Gas Sensor Selection Table

Model Number	Description	Full Scale Range
STANDARD Confined Space Gases		
SGS-CO2-5K	Carbon Dioxide	0-5000 ppm
SGS-CO2-10K	Carbon Dioxide	0-10,000 ppm
SGS-CO2-20V	Carbon Dioxide	0-20% Vol
SGS-CO2-60V	Carbon Dioxide	0-60% Vol
SGS-CH4-L/P	Hydrocarbons[+]	0-100% LEL/0-50,000 ppm
SGS-O2	Oxygen	0-40% Vol
TOXIC Gases▲		
SGS-NH3-75	Ammonia	0-75 ppm
SGS-ASH3-1	Arsine	0-1 ppm
SGS-ASH3-2	Arsine	0-0.2 ppb
SGS-BR-1	Bromine	0-1 ppm
SGS-CO-150	Carbon Monoxide	0-150 ppm
SGS-CO-500	Carbon Monoxide	0-500 ppm
SGS-CL2-3	Chlorine	0-3 ppm
SGS-CLO2-1	Chlorine Dioxide	0-1 ppm
SGS-B2H6-03	Diborane	0-0.3 ppm
SGS-B2H6-30	Diborane	0-30 ppm
SGS-F2-5	Fluorine	0-5 ppm
SGS-N2H4-5	Hydrazine	0-5 ppm
SGS-HC-L/AR•	Hydrocarbons[+]	100% LEL
SGS-HBR-9	Hydrogen Bromide	0-9 ppm
SGS-HCL-15/R■	Hydrogen Chloride	0-15 ppm
SGS-HCL-15	Hydrogen Chloride	0-15 ppm
SGS-HCN-30	Hydrogen Cyanide	0-30 ppm
SGS-HF-9	Hydrogen Fluoride	0-9 ppm
SGS-H2S-1	Hydrogen Sulfide	0-1 ppm
SGS-H2S-30	Hydrogen Sulfide	0-30 ppm
SGS-H2S-100	Hydrogen Sulfide	0-100 ppm
SGS-CH4-L/AR•	Methane[+]	0-100% LEL
SGS-NO2-15	Nitrogen Dioxide	0-15 ppm
SGS-NO-100	Nitric Oxide	0-100 ppm
SGS-O3-1	Ozone	0-1 ppm
SGS-PH3-1	Phosphine	0-1 ppm
SGS-SIH4-15	Silane	0-15 ppm
SGS-SO2-10	Sulfur Dioxide	0-10 ppm

Gas Sensors

▲*The Gas Sniper can be configured with up to '6' gas sensors; only a maximum of '2' toxic sensors may be used in the Gas Sniper with any configuration.*
+ *Flammable gas*
•*"AR" denotes gas sensor has "autoranging" capability; the sensor automatically ranges from % LEL to % Vol in concentration.*
■*"R" indicates sensor also has capability to detect CL₂.*

If a gas or detection range is not listed above for a specific gas detection application, please consult with a Customer Service Representative by calling 800-828-4313 to determine product availability.

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