

Advanced Environmental Instrumentation

Harnessing the Power of Mobile Computing



✓ Surveyed

✓ Documented

✓ Reported



ADVANCEDSENSE[®] TOX

DIRECTSENSE[®]

Toxic Gas Test Meters



GRAYWOLF[®]
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Realtime

File	Log	Probe	View
Hydrogen Chloride			0.2 ppm
Chlorine			0.64 ppm
Oxygen			20.8 %
Sulfur Dioxide			0.1 ppm
Hydrogen			0 ppm
Temperature			24.4 °C

Example Screens

Trend Logging

On-Board Docs

GrayWolf is transforming how to Measure, Data-log and Document worker exposure levels and indoor air quality parameters. The AdvancedSense and DirectSense TOX are powerful environmental data collection tools; intuitive and Easy-To-Use.

- Choose from SO₂, NO₂, NO, CO, H₂S, HCN, EtO, Cl₂, O₂, O₃, NH₃, HCl, H₂, SiH₄, AsH₃, PH₃... and more
- Up to 5 electrochemical gas sensors (plus °F / °C) per probe
- Connect multiple probes simultaneously (up to 4)
- “Snap-Shot” instantaneous data capture and long-term trending
- Stores measured data along with text notes, graphic notes, audio notes, user created field note templates... and more
- On-board measurement tips, industry guidelines and help files
- Calibration history and data file statistics auto-organized, stored with every data file
- Cal checks, and extensive additional features are highly intuitive and Easy-To-Use

Choose Your Platform:

AdvancedSense



Pocket PC



WolfPack



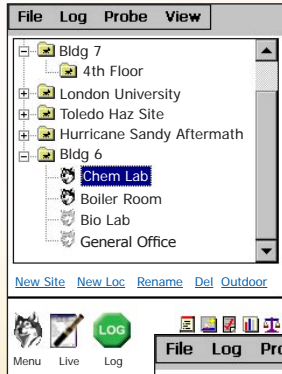
Windows Tablet



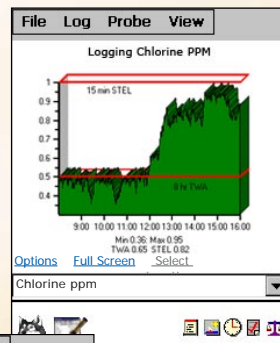
Advanced Toxic Gas Measurement

Example AdvancedSense/Pocket PC/WolfPack® Screens

Intuitive File Naming



Alarm Lines



Video Help



File	Log	Probe	View
Hydrogen Fluoride	0.0	ppm	
Fluorine	0.58	ppm	
Phosphine	0.00	ppm	
Chlorine Dioxide	1.00	ppm	
Phosgene	0.81	ppm	
Temperature	72.4	°F	
Arsine	0.34	ppm	
Ethylene Oxide	1.2	ppm	
Hydrogen Cyanide	1.3	ppm	

WolfSense

Sensor Basics for

The Nitric Oxide sensor, per the manufacturer (AlphaSense), exhibits the following cross-sensitivity with common gases:

- NO₂ sensitivity measured gas @ 50ppm NO₂ < 2.5ppm
- SO₂ sensitivity measured gas @ 20ppm SO₂ < 4ppm
- Cl₂ sensitivity measured gas @ 10ppm Cl₂ < 1.5ppm
- H₂S sensitivity measured gas @ 20ppm H₂S < 1.5ppm

Realtime (multi-probe)

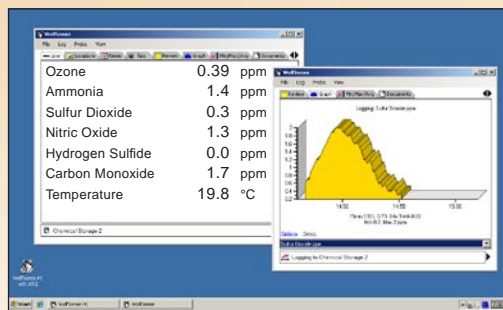
Sensor Tips (extensive info for each parameter)

Documenting and data-logging gas parameters has never been easier. Provide a descriptive name for files using the virtual keyboard. Record your readings as snap-shot data captures, or as trend logs over time. On-board educational info.

Efficiently attach notes, in-situ (or after-the-fact) direct to data files:

- Text
- Photos/Video
- Drawings
- Custom
- Audio
- Events (time-tagged text)
- Template "Field Forms"
- Auto-Fill (data & text)

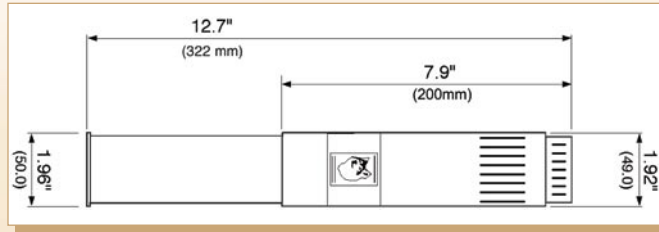
Example WIN 8/7/XP Screens



File	Log	Probe	View
Hydrogen Fluoride	0.0	ppm	
Fluorine	0.97	ppm	
Phosphine	0.00	ppm	
Chlorine Dioxide	0.78	ppm	
Phosgene	0.62	ppm	
Temperature	75.5	°F	
Arsine	0.54	ppm	
Ethylene Oxide	0.1	ppm	
Hydrogen Cyanide	0.1	ppm	
Hydrogen Chloride	0.2	ppm	
Chlorine	0.28	ppm	

GrayWolf provides embedded computer based meters, Windows Mobile Pocket PCs and Windows tablets that are ideal for the application; or connect probes to your own PC.

GrayWolf's TOX kits come with WolfSense PC software for data transfer, analysis, graph/report generation and/or simple export to Excel.



- Easy to calibrate all parameters
- Calibration history stored in probe
- CO & H₂S available in a single sensor
- Allows up to 6 total gases with one probe
- Plus Temperature

TG-501

Select up to 5 gas sensors in one probe (plus °F/°C):

Note: Sensors are factory installed (this optimizes their L.O.D.s). Sensors may be added or changed at a later time by GrayWolf or by an authorized cal lab.

- Sulfur Dioxide (SO₂)
- Nitrogen Dioxide (NO₂)
- Nitric Oxide (NO)
- Carbon Monoxide (CO)
- Hydrogen Sulfide (H₂S)
- Hydrogen Cyanide (HCN)
- Hydrogen Chloride (HCl)
- Hydrogen Fluoride (HF)
- Ethylene Oxide (C₂H₄O)
- Chlorine Dioxide (ClO₂)
- Ozone (O₃)
- Oxygen (O₂)
- Ammonia (NH₃)
- Chlorine (Cl₂)
- Hydrogen (H₂)
- Fluorine (F₂)
- Phosphine (PH₃)
- Arsine (AsH₃)
- Silane (SiH₄)
- Phosgene (COCl₂)

Display units as:

- PPB
- PPM
- µg/m³
- mg/m³ (mass readings are auto compensated w/optional AdvancedSense barometric pressure sensor)



EC-202

Any 1 (one) sensor in one probe, plus °F/°C

TG-502

ppm VOCs (PID) plus 3 specific gases, %RH, and temperature

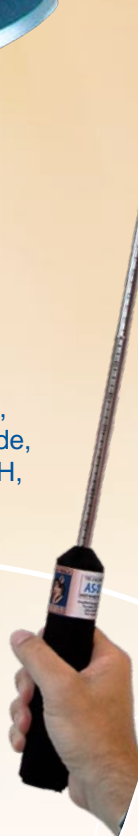


IQ-610

Carbon Dioxide, Carbon Monoxide, ppb VOCs, %RH, °F / °C plus one additional gas

AS-201

Air Velocity probe



FM-801

Formaldehyde (ppb HCHO)



PC-3016A

6-Channel Particle Counter



PM-205

Particulate Concentration



GrayWolf offers additional probes and 3rd party sensors...and more are on the way.



ADVANCEDSENSE[®] DIRECTSENSE[®] TOX

Toxic Gas Test Meters

SPECIFICATIONS: TG-501, EC-202

Gas	Range (ppm)	Limit of Detection (ppm)
Sulfur Dioxide (SO ₂)	0.0 to 30	0.1
Nitrogen Dioxide (NO ₂)	0.00 to 30	0.02
Nitric Oxide (NO)*	0.0 to 140	0.2
Carbon Monoxide (CO solo)	0.0 to 750	0.5
Carbon Monoxide (CO combo w/H ₂ S sensor)	0.0 to 500	1.0
Hydrogen Sulfide (H ₂ S solo)	0.00 to 50	<0.03
Hydrogen Sulfide (H ₂ S combo w/CO sensor)	0.0 to 200	0.5
Hydrogen Cyanide (HCN)	0.0 to 30	0.2
Hydrogen Chloride (HCl)*	0.0 to 30	0.5
Hydrogen (H ₂)	0 to 1000	2.0
Chlorine (Cl ₂)	0.00 to 10	0.02
Ammonia (NH ₃) Standard range sensor	0.0 to 100	1.0
Ammonia (NH ₃) High range sensor	0 to 1000	12
Ethylene Oxide (C ₂ H ₄ O)*	0.0 to 20	0.3
Ozone (O ₃)	0.00 to 1.00	0.02
Oxygen (O ₂)	0.0 to 25%	0.2%
Silane (SiH ₄)	0.00 to 50	0.05
Arsine (AsH ₃)	0.00 to 1.00	0.02
Chlorine Dioxide (ClO ₂)	0.00 to 1.00	0.02
Phosphine (PH ₃)	0.00 to 5.0	0.05
Phosgene (COCl ₂)	0.00 to 1.0	0.02
Fluorine (F ₂)	0.00 to 1.0	0.02
Hydrogen Fluoride (HF)	0.00 to 10.0	0.1
Temperature: (PT100)		Accuracy: ±0.3°C
		Range: -10° to 160°F (-25° to +70°C)
Operating Range:	0 to 98%RH (non-condensing), -20° to 50°C	
	Specific gas sensors may have a reduced operating range	
Probe Dimensions :	2in. (5cm) dia. x 12.5in. (30cm) lgth.	
Weight (probe):	w/batteries 1lb. 10oz. (0.7kg)	
Power (probe):	2 x D cells; typical battery life 1500 hrs.	
	Meter/Mobile PC battery life varies by make and model	
PC Software Req's:	Windows 8/7/Vista/XP	

*HCl, NO, EtO; up to 2, but not all 3 may be installed into a single TG-501 probe
ALL SPECIFICATIONS ARE TO SUBJECT TO CHANGE WITHOUT FURTHER NOTICE

- All gas sensors are electrochemical. One per EC-202 or up to 5 per TG-501 may be included. Typical sensor life, sensor drift and response times vary by sensor.
- **AdvancedSense TOX** kits include an AdvancedSense meter, **DirectSense TOX** kits include a mobile PC. These complete kits also come with WolfSense PC desktop data transfer software, hardshell security case, probe/meter pouches and more. Contact GrayWolf for details.



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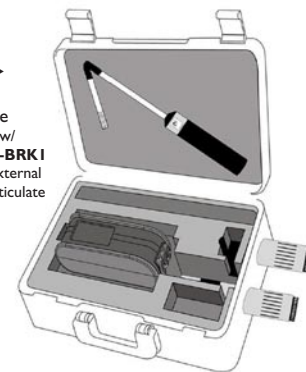
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✓ MEASURE SMART

✓ REPORT EFFICIENTLY



▶ **PCC-15** Multi-Probe Security Case (shown at left w/ optional **ACC-BRK1** brackets for external HCHO or particulate meters)



▶ **PCC-051Q** probe pouch. Neck pouches are also available for tablet, AdvancedSense or Pocket PC

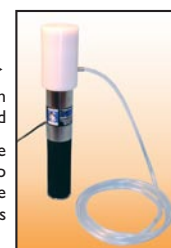
▶ **ACC-TPDI** tripod shown w/ **ACC-MNT2P** dual mount and **ACC-MNT1** & **ACC-MNT3** meter mounts. A soft carry case (**PCC-TPDL**) is also included with the **ACC-TPDL-KIT** tripod kit



▶ **CA-GS25** Gas Calibration Kit. Specific calibration gases are available in various portable cylinder sizes

▶ **CA-HD2** Calibration Hood

May alternatively be used with air pump to draw sample across sensors



▶ **ACC-APUMPI** Portable Air Sampling Pump with belt clip



- Probe wall mounting brackets, cameras (for photo/video notes), audio to text transcription software, automated reporting software, extension cables and other accessories are available from GrayWolf. View them on our website at accessories.graywolfsensing.com.



▶ **ACC-FIL6** Probe Filters for dirty environments

Ti **Techingenium**

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