DIRECTSENSE® TOX

Toxic Gas Test Meters

Advanced Environmental Instrumentation
Harnessing the Power of Mobile Computing

✓ Surveyed   ✓ Documented   ✓ Reported

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

Menu   Snap   Live: Fabrication Floor

Attached Audio Note
Probe Calibration Info
Attached Photo(s)
Attached Text Note

Example Screens

Click the SNAP icon to record measurements, time, date and detailed location name

Log at intervals of your choice. Display real-time trend graphs on handheld and/or remote devices.
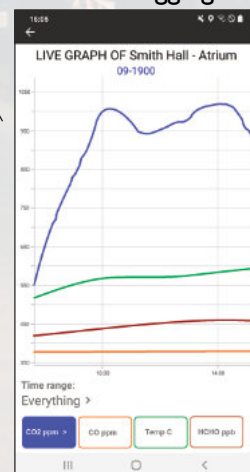
Snap-Shot Log

File	Log	Probe	View

Ozone	0.54 mg/m3
Ammonia	1.3 mg/m3
Sulfur Dioxide	1.3 mg/m3
Nitric Oxide	2.0 mg/m3
Hydrogen Sulfide	0.15 mg/m3
Temperature	22.9 °C
Barometric	754.2 mmHg

Menu   Snap   Snap Shot log to 'Lab 4'

Trend Logging

LIVE GRAPH OF Smith Hall - Atrium
09-1900

Time range: Everything >

CO2 ppm >   CO ppm   Temp C   HCHO ppb

Live — DSII-TOX

TVOC	28.16	ppm
H2S	0.26	ppm
NO	0.7	ppm
NH3	12.3	ppm
F2	0.02	ppm
O3	0.16	ppm
Temp	32.1	°C
RH	69.8	%RH

Burn Pit 3NE

On-Board Docs

EtO Factsheet.pdf   2:37

OSHA FACTSheet — Ethylene Oxide

p.1/2

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

- Choose from SO_2, NO_2, NO, CO, H_2S, HCN, EtO, Cl_2, O_2, O_3, NH_3, HCl, H_2, SiH_4, AsH_3, PH_3, PID (TVOCs) ...and more
- Up to 6 gas sensors (plus TRH) per probe
- Connect multiple probes simultaneously
- "Snap-Shot" instantaneous data capture and long-term data trending
- On-board measurement tips, industry guidelines and help files

- Remotely access readings, log to the cloud via secure Microsoft Azure servers with optional GrayWolfLive™
- Password protect access or other high-security options available
- Stores measured data along with calibration history, associated photos, videos, text notes, audio notes ...and more
- OEM option for alternative data connection

GRAYWOLF®
SENSING SOLUTIONS

Choose Your Platform:

AdvancedSense®
Purpose-built GrayWolf Meters

GrayWolf Supplied Windows Tablets

Apple iOS and Android Devices
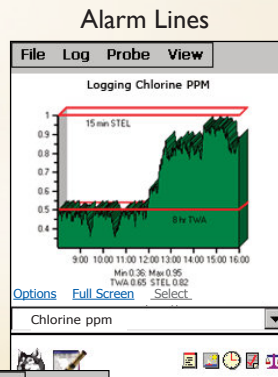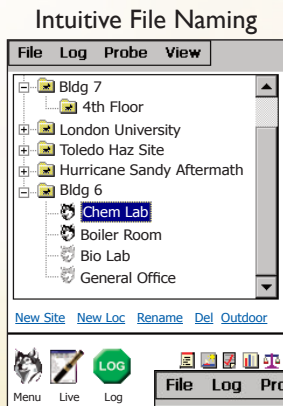(use your own or GrayWolf supplied)

GrayWolfLive™ Cloud App

Or use your device as the instrument platform **Remote Data Access** to, and email/text alerts from, any WiFi enabled platforms via optional **GrayWolfLive**
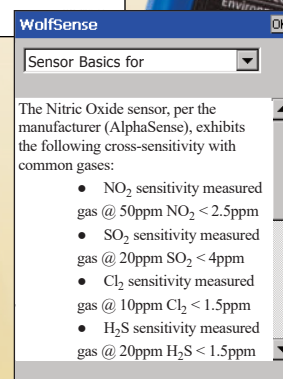
Advanced Toxic Gas Measurement

Example Screens

Intuitive File Naming

Alarm Lines

Video Help

Realtime (multi-probe)

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
Hydrogen Cyanide	1.3	ppm

Sensor Tips
(extensive info for each parameter)

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

- NO_2 sensitivity measured gas @ 50ppm NO_2 < 2.5ppm
- SO_2 sensitivity measured gas @ 20ppm SO_2 < 4ppm
- Cl_2 sensitivity measured gas @ 10ppm Cl_2 < 1.5ppm
- H_2S sensitivity measured gas @ 20ppm H_2S < 1.5ppm

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:

- Photos
- Videos
- Infrared Images
- Audio
- Text
- Events (time-tagged text)

Ozone	0.39	ppm
Ammonia	1.4	ppm
Sulfur Dioxide	0.3	ppm
Nitric Oxide	1.3	ppm
Hydrogen Sulfide	0.0	ppm
Carbon Monoxide	1.7	ppm
Temperature	19.8	°C
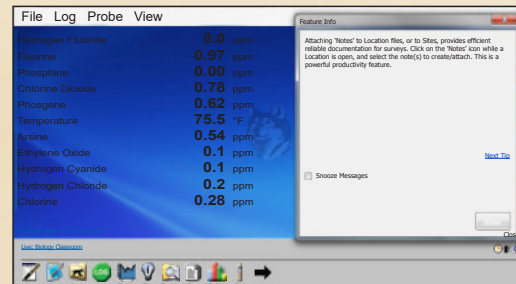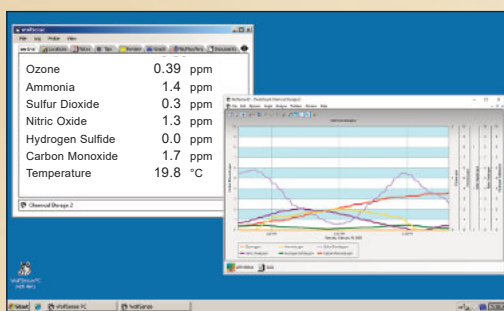
GrayWolf manufactured meters, WIN tablets, and Android devices that are ideal for the application are available from GrayWolf; or connect probes to your own device.

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

DSII-8

- Easy to calibrate all parameters

- Calibration history stored on smart sensor

- Select up to 6 gas sensors in one probe (plus %RH and °F/°C)

- Plus %RH Temperature

Toxic exposure and/or IAQ applications with the appropriate sensors.

Sensors are true plug-and-play, and may be swapped on-site.

- Sulfur Dioxide (SO_2)
- Nitrogen Dioxide (NO_2)
- Nitric Oxide (NO)
- Carbon Monoxide (CO)
- Hydrogen Sulfide (H_2S)
- Hydrogen Cyanide (HCN)
- Hydrogen Chloride (HCl)
- Hydrogen Fluoride (HF)
- Ethylene Oxide (C_2H_4O)
- Chlorine Dioxide (ClO_2)
- Carbon Dioxide (CO_2)
- Diborane (B_2H_6)

- Ozone (O_3)
- Oxygen (O_2)
- Ammonia (NH_3)
- Chlorine (Cl_2)
- Hydrogen (H_2)
- Fluorine (F_2)
- Formaldehyde (HCHO)
- Phosphine (PH_3)
- Arsine (AsH_3)
- Silane (SiH_4)
- Phosgene ($COCl_2$)
- PID (TVOCs)

Display units as:

- ppb
- ppm
- µg/m³
- mg/m³

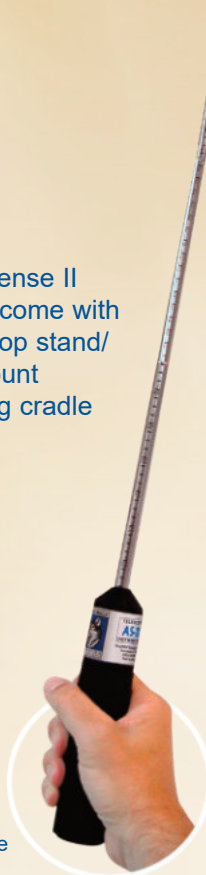(mass concentration readings are auto-compensated w/optional barometric pressure sensor)

VOCs (PID) plus 5 specific gases, %RH, and temperature

DirectSense II probes come with bench-top stand/wall-mount charging cradle

ZEPHYR-LDP
Differential Pressure Module
(option for barometric)

Interface these meters to GrayWolf platforms; and/or use as stand-alones

AS-201/202A
Air Velocity Probe (connects via cable to AdvancedSense or WIN tablets)

PC-3016A
6-Channel Particle Meter (optional WolfRadio™ XM to transmit data directly to the cloud, iOS or Android)

PM-601
Particulate Concentration

DIRECTSENSE® TOX

Toxic Gas Test Meters

✔ Ogcuwtg Uo ctv   ✔ Tgr qtv Ghhkekgpvl

SPECIFICATIONS: DirectSense II GAS	Range/ Resolution (ppm)	Limit of Detection (ppm)
Ammonia (NH$_3$) Standard range sensor	0.0 to 100.0	<1.0
Ammonia (NH$_3$) High range sensor	0 to 1000	<5
Carbon Monoxide (CO) Standard range sensor	0.0 to 500	0.1
Carbon Monoxide (CO) High range sensor	0.0 to 5000	1
Chlorine (Cl$_2$)	0.00 to 20.00	<0.02
Hydrogen (H$_2$)	0 to 1000	<2
Hydrogen Chloride (HCl)	0.0 to 20.0	<0.2
Hydrogen Cyanide (HCN)	0.0 to 100.0	<0.05
Hydrogen Sulfide (H$_2$S)	0.00 to 50.00	<0.03
Formaldehyde (HCHO) (Inquire about higher range) standard range:	0.00 to 1.00	<0.02
Nitric Oxide (NO)	0.0 to 250.0	<0.2
Nitrogen Dioxide (NO$_2$)	0.00 to 20.00	<0.02
Oxygen (O$_2$)	0.0 to 25.0%	0.2%
Ozone (O$_3$)	0.00 to 1.00	<0.02
Sulfur Dioxide (SO$_2$)	0.0 to 50.0	<0.1
Arsine (AsH$_3$)	0.00 to 1.00	<0.03
Chlorine Dioxide (ClO$_2$)	0.00 to 1.00	<0.03
Diborane (B$_2$H$_6$)	0.00 to 1.00	<0.03
Ethylene Oxide (C$_2$H$_4$O)	0.0 to 100.0	<0.1
Fluorine (F$_2$)	0.00 to 1.00	<0.02
Hydrogen Fluoride (HF)	0.00 to 10.00	<2
Phosgene (COCl$_2$)	0.00 to 1.00	<0.02
Phosphine (PH$_3$)	0.0 to 10.0	<0.1
Silane (SiH$_4$)	0.00 to 50.00	<0.1
Carbon Dioxide (NDIR CO$_2$)	0 to 6,000 10,000 or 20,000	1

TVOC (PID)	4 ranges from low ppb to 10,000ppm, suitable for varied IAQ, mfg, and toxic gas exposure applications. Contact GrayWolf for specifications.
Temperature: (PT100)	Accuracy: ±0.3°C Range: -10.0° to 160.0°F (-25.0° to +70.0°C)
Relative Humidity (capacitive)	Accuracy +/- 2%RH 0 to 80%RH, +/-3%RH >80 to 100%RH
Operating Range:	0 to 98%RH (non-condensing), -20° to 50°C
Specific gas sensors may have a reduced operating range	
Probe Dimensions (DSII):	3.3" (83mm) W x 2.2" (55mm) H x 11.6" (295mm) L
Weight (probe):	without sensors 1lb (0.46kg)
Power (probe):	6600mAh Li-Ion rechargeable Typical battery life 9 hours to 36+ hours dependent on sensor mix
Meter/Tablet/Smartphone battery life varies by make and model	
Typical sensor life, sensor drift and response times vary by sensor	

URgekhhecvkqpu ctg uwdlgev vq ejcpig ykvjqwv pqvkeg

• Automated reporting software, and many other accessories are available from GrayWolf. View them on our website at
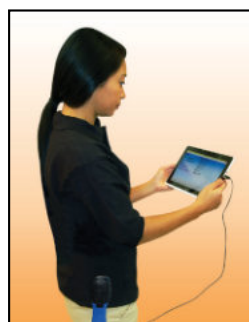**graywolfsensing.com/accessories/**

◄ PCC-25
Dual-Probe
Security Case

PCC22-AP1 ►
Hardshell Case

CA-HD4-A1 ►
Calibration Cap

▲ **ACC-BELTCL-2** or **ACC-BELTCL-3** beltclips for convenient walk-thru measurements or personal protection monitoring.

► ACC-TPD-1
Tripod (with optional mounting hardware)

▲ **CA-GSXX**
Gas Calibration Kits. Specific calibration gases are available in various portable cylinder sizes

▲ **PCC-07T**
Nylon carrying case for ACC-TPD1 tripod, mounting hardware, and added accessories

DirectSense TOX kits are available that include the platforms of your choice. These complete kits also come with WolfSense PC desktop data transfer software, hardshell case, required accessories and much more. Contact GrayWolf for details.

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