



# 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    |      |

Attached Audio Note

Probe Calibration Info

Attached Photo(s)

Attached Text Note

Live: Fabrication Floor

### 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.

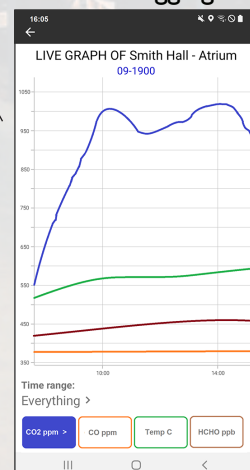
Snap-Shot Log

| 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  |      |

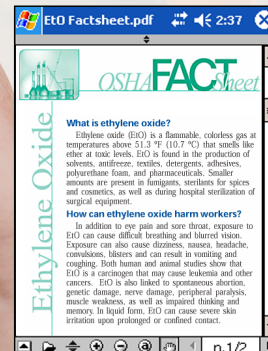
Menu Snap

Snap Shot log to 'Lab 4'

### Trend Logging



### On-Board Docs



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<sub>2</sub>, NO<sub>2</sub>, NO, CO, H<sub>2</sub>S, HCN, EtO, Cl<sub>2</sub>, O<sub>2</sub>, O<sub>3</sub>, NH<sub>3</sub>, HCl, H<sub>2</sub>, SiH<sub>4</sub>, AsH<sub>3</sub>, PH<sub>3</sub>, 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

## 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

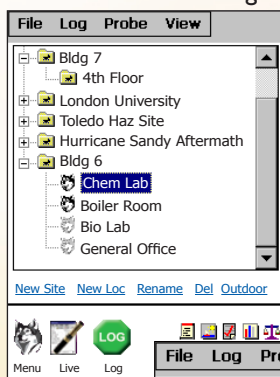


Or use your device as the instrument platform  
**Remote Data Access** to, and email/text  
alerts from, any WiFi enabled platforms  
via optional **GrayWolfLive**

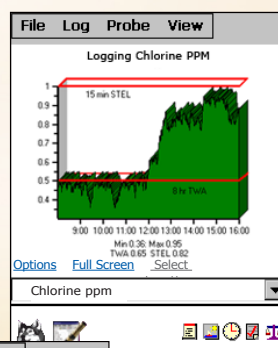
# Advanced Toxic Gas Measurement

Example Screens

### Intuitive File Naming



### Alarm Lines

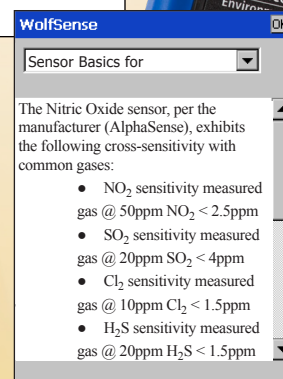


### Video Help



| 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   |      |
| Hydrogen Cyanide  | 1.3  | ppm   |      |

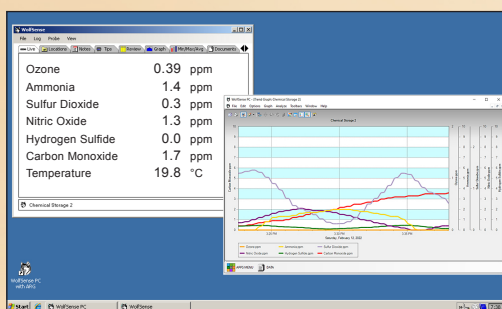
Realtime (multi-probe)



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:

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



| 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 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.

✓ Display

✓ Notate

✓ Data Log

✓ Organize

✓ Report

- 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



## DSII-8

Display units as:

- ppb
- $\mu\text{g}/\text{m}^3$
- ppm
- $\text{mg}/\text{m}^3$

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

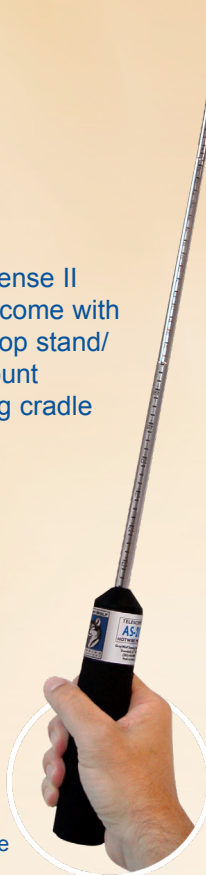
VOCs (PID) plus 5 specific gases, %RH, and temperature



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

## AS-201/202A

Air Velocity Probe (connects via cable to AdvancedSense or WIN tablets)



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

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

- |                                                     |                                  |
|-----------------------------------------------------|----------------------------------|
| • Sulfur Dioxide ( $\text{SO}_2$ )                  | • Ozone ( $\text{O}_3$ )         |
| • Nitrogen Dioxide ( $\text{NO}_2$ )                | • Oxygen ( $\text{O}_2$ )        |
| • Nitric Oxide ( $\text{NO}$ )                      | • Ammonia ( $\text{NH}_3$ )      |
| • Carbon Monoxide ( $\text{CO}$ )                   | • Chlorine ( $\text{Cl}_2$ )     |
| • Hydrogen Sulfide ( $\text{H}_2\text{S}$ )         | • Hydrogen ( $\text{H}_2$ )      |
| • Hydrogen Cyanide ( $\text{HCN}$ )                 | • Fluorine ( $\text{F}_2$ )      |
| • Hydrogen Chloride ( $\text{HCl}$ )                | • Formaldehyde ( $\text{HCHO}$ ) |
| • Hydrogen Fluoride ( $\text{HF}$ )                 | • Phosphine ( $\text{PH}_3$ )    |
| • Ethylene Oxide ( $\text{C}_2\text{H}_4\text{O}$ ) | • Arsine ( $\text{AsH}_3$ )      |
| • Chlorine Dioxide ( $\text{ClO}_2$ )               | • Silane ( $\text{SiH}_4$ )      |
| • Carbon Dioxide ( $\text{CO}_2$ )                  | • Phosgene ( $\text{COCl}_2$ )   |
| • Diborane ( $\text{B}_2\text{H}_6$ )               | • PID (TVOCs)                    |



**ZEPHYR-LDP**  
Differential Pressure Module  
(option for barometric)

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



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



**PM-601**  
Particulate Concentration

# DIRECTSENSE<sup>®</sup> TOX

## Toxic Gas Test Meters



### SPECIFICATIONS: DirectSense II

| GAS                                                                 |                                                                                                                                                | Resolution (ppm)                                                                                 | Detection (ppm) |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------|
| Ammonia (NH <sub>3</sub> ) Standard range sensor                    |                                                                                                                                                | 0.0 to 100.0                                                                                     | <1.0            |
| Ammonia (NH <sub>3</sub> ) 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 <sub>2</sub> )                                         |                                                                                                                                                | 0.00 to 20.00                                                                                    | <0.02           |
| Hydrogen (H <sub>2</sub> )                                          |                                                                                                                                                | 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 <sub>2</sub> S)                                 |                                                                                                                                                | 0.00 to 50.00                                                                                    | <0.03           |
| Formaldehyde (HCHO)                                                 | (Inquire about higher range)<br>standard range:                                                                                                | 0.00 to 1.00                                                                                     | <0.02           |
| Nitric Oxide (NO)                                                   |                                                                                                                                                | 0.0 to 250.0                                                                                     | <0.2            |
| Nitrogen Dioxide (NO <sub>2</sub> )                                 |                                                                                                                                                | 0.00 to 20.00                                                                                    | <0.02           |
| Oxygen (O <sub>2</sub> )                                            |                                                                                                                                                | 0.0 to 25.0%                                                                                     | 0.2%            |
| Ozone (O <sub>3</sub> )                                             |                                                                                                                                                | 0.00 to 1.00                                                                                     | <0.02           |
| Sulfur Dioxide (SO <sub>2</sub> )                                   |                                                                                                                                                | 0.0 to 50.0                                                                                      | <0.1            |
| Arsine (AsH <sub>3</sub> )                                          |                                                                                                                                                | 0.00 to 1.00                                                                                     | <0.03           |
| Chlorine Dioxide (ClO <sub>2</sub> )                                |                                                                                                                                                | 0.00 to 1.00                                                                                     | <0.03           |
| Diborane (B <sub>2</sub> H <sub>6</sub> )                           |                                                                                                                                                | 0.00 to 1.00                                                                                     | <0.03           |
| Ethylene Oxide (C <sub>2</sub> H <sub>4</sub> O)                    |                                                                                                                                                | 0.0 to 100.0                                                                                     | <0.1            |
| Fluorine (F <sub>2</sub> )                                          |                                                                                                                                                | 0.00 to 1.00                                                                                     | <0.02           |
| Hydrogen Fluoride (HF)                                              |                                                                                                                                                | 0.00 to 10.00                                                                                    | <2              |
| Phosgene (COCl <sub>2</sub> )                                       |                                                                                                                                                | 0.00 to 1.00                                                                                     | <0.02           |
| Phosphine (PH <sub>3</sub> )                                        |                                                                                                                                                | 0.0 to 10.0                                                                                      | <0.1            |
| Silane (SiH <sub>4</sub> )                                          |                                                                                                                                                | 0.00 to 50.00                                                                                    | <0.1            |
| Carbon Dioxide (NDIR CO <sub>2</sub> )                              |                                                                                                                                                | 0 to 6,000<br>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.<br>Contact GrayWolf for specifications. |                                                                                                  |                 |
| Temperature: (PT100)                                                |                                                                                                                                                | Accuracy: ±0.3°C<br>Range: -10.0° to 160.0°F (-25.0° to +70.0°C)                                 |                 |
| Relative Humidity (capacitive)                                      |                                                                                                                                                | Accuracy +/- 2%RH<br>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 11lb (0.46kg)                                                                    |                 |
| Power (probe):                                                      |                                                                                                                                                | 6600mAh Li-Ion rechargeable<br>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 |                                                                                                                                                |                                                                                                  |                 |

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT FURTHER NOTICE

- Automated reporting software, and many other accessories are available from GrayWolf. View them on our website at [graywolvesensing.com/accessories/](http://graywolvesensing.com/accessories/)

✓ MEASURE SMART

✓ REPORT EFFICIENTLY



◀ **PCC-25**  
Dual-Probe  
Security Case



**PCC22-API** ▶  
Hardshell Case



**CA-HD4-A1** ▶  
Calibration Cap



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



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



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

▶ **ACC-TPD-I**  
Tripod (with optional mounting hardware)



**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.