

ADVANCEDSENSE[®] IAQ DIRECTSENSE[®]

Indoor Air Quality Meters



GRAYWOLF[®]
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Advanced Environmental Instrumentation Harnessing the Power of Mobile Computing



Surveyed



Documented



Reported

Example Screens

Realtime

File	Log	Probe	View
TVOC	256 ppb		
Carbon Dioxide	945 ppm		
Carbon Monoxide	1.3 ppm		
Ozone	0.04 ppm		
Temperature	18.9 °C		
Relative Humidity	17.3 %RH		

Click for "Snapshot" data-log

Photo(s) attached

Time Tagged Event Note attached

Audio Note attached

Text Note attached

Drawing attached

Live: Bldg 6/General Office

Trend Log Graph

Logging: Carbon Dioxide ppm

Options Full Screen Select

Carbon Dioxide ppm

Menu Live Log memorial hall: 30 secs

Drawing Note

Mold Monitor Window

Screen Clear Undo Cancel OK

Audio Note

WolfSense 2013

Audio Note: Hospital/Nurses Stn

ERASE Play Stop Rec

Available Memory: 4015MB or approx 388 minutes of recording at 11KHz

OK

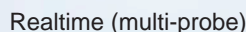
GrayWolf is transforming the way that environmental measurements are taken. GrayWolf's IAQ kits harness leading edge sensor technology with the power and performance of mobile computing. Efficiently display, document, access educational info (on-site) and report on IAQ parameters.

- An essential component of any professional IAQ program
- Organizes ALL survey info; data, text, calibration history and more...
- Measures VOCs, CO₂, CO, %RH, Dewpoint, Temperature and more...
- Options for Toxic Gases, Differential Pressure, Particulates, Airspeed and more...
- On-board help files, including advanced product help videos and IAQ industry videos (view on PC or *in situ*)
- Comes with numerous IAQ field forms (Mold Checklist, etc.) and auto-data fill reports for on-site input (or create your own)
- WolfSense[®] PC desktop software is included for data review, graph creation, cut & paste report generation
- Optional Advanced Report Generator software for automated, ultra-efficient, detailed IAQ reports
- Tap the screen for educational info: sensor tips, IAQ documents and guidelines
- Intuitive and extremely Easy-To-Use

AdvancedSense



On-board Docs



Video
attached

Text template
Attached

- Interactive Data template attached

Probe Cal Info
attached

Operational Tips

(extensive on-board meter and sensor info)

Display measurements in realtime. Access “sensor tips”, IAQ documents and guidelines on-screen. Store “snapshot” readings. “trend” log over hours/days/weeks. Document each measurement location with text, graphic, even audio notes. Also attach photos, Word field forms, time-stamped event notes, calibration history and other info to data files.

- Optimize the balance between ventilation energy efficiency and occupant performance (and health)
- Easily establish baseline data & respond immediately to complaints
- Test conditions before and after building modifications
- Screen for additional testing requirements
- Bloodhound pollutant sources

Example WIN 8/7/XP Screens

Realtime (IQ-410 w/
Particulate Concentration)

[illegible]

DirectSense probes can also plug directly into a Windows 8/7/XP PC via a USB port and GrayWolf's WolfSense LAP software.

VOCs
 CO₂
 CO
 %RH
 Temperature
 +1 more
 Toxic Gas

Highly accurate, extremely fast response sensors. Perfect for *both* quick walk-through surveys *and* for long-term IAQ trending.

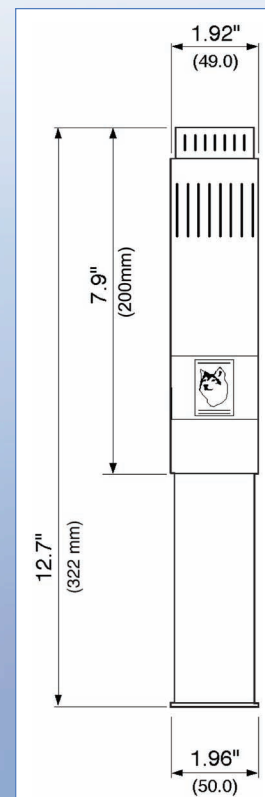
Track VOCs over time, rapidly bloodhound VOC sources or determine optimum locations and times to take air samples for VOC speciation via lab analysis. A very powerful screening tool.



IQ-610

One specific gas sensor slot (*additional* to CO) is available on the IQ-610. Choose from:

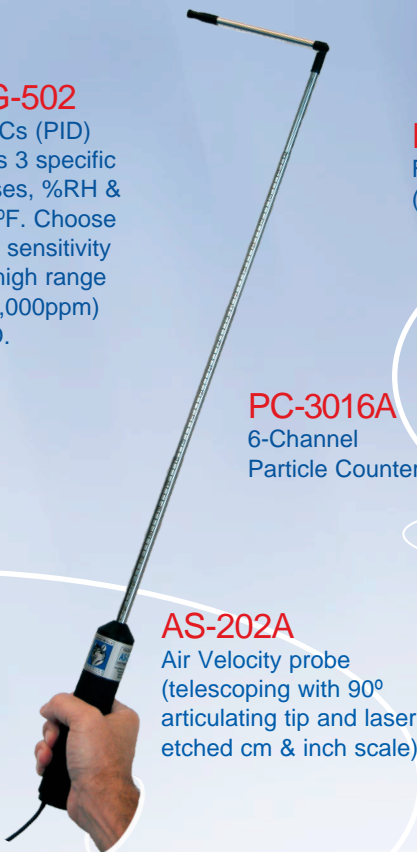
Ozone
 Ammonia
 Chlorine
 Hydrogen Sulfide
 Nitrogen Dioxide
 Nitric Oxide
 Sulfur Dioxide
 Oxygen
 Ethylene Oxide
 HCN, HCl, H₂, SiH₄,
 AsH₃, PH₃, ClO₂, COCl₂,
 HF or F₂



**IQ-410/
 IQ-604**
 CO₂, CO,
 %RH & °C/°F
 The IQ-604 also
 includes sockets
 for 1 PID (VOCs)
 and 1 EC (specific
 gas) sensors for
 future upgrade.



TG-502
 VOCs (PID)
 plus 3 specific
 gases, %RH &
 °C/°F. Choose
 low sensitivity
 or high range
 (10,000ppm)
 PID.



AS-202A
 Air Velocity probe
 (telescoping with 90°
 articulating tip and laser
 etched cm & inch scale)

FM-801
 Formaldehyde
 (ppb HCHO)



PC-3016A
 6-Channel
 Particle Counter



PM-205
 Particulate
 Concentration



A 2nd probe (a 3rd probe + airspeed +DP +BP for AdvancedSense or WolfPack) may be connected simultaneously with the option to also add a particulate and/or formaldehyde meter. All parameters display and log to the same data file.

GrayWolf manufactured instruments, tablet PCs, and Pocket PCs, ideal for your application, are all available from GrayWolf. Or use your own.

More probes, sensors,
 display/logging platforms
 and software features are
 on the way. Expand your
 GrayWolf system as
 your measurement needs
 grow and as legislative
 requirements change.



ADVANCEDSENSE[®] DIRECTSENSE[®] IAQ

Indoor Air Quality Meters

SPECIFICATIONS: IQ-410, IQ-604, IQ-610

Carbon Dioxide: (NDIR) Range: 0 to 10,000 ppm
Accuracy: $\pm 3\%$ rdg ± 50 ppm

Carbon Monoxide: (electrochemical) Range: 0 to 500 ppm
Accuracy: ± 2 ppm <50ppm, $\pm 3\%$ rdg >50ppm

VOCs: (PID) IQ-610 only Range: 5 to 20,000 ppb
(user selectable units: ppb, ppm, $\mu\text{g}/\text{m}^3$, mg/m^3)
Resolution 1 ppb, L.O.D. <5 ppb

10.6 eV PIDs do not respond to VOCs with ionization potentials >10.6, such as ethane, methane or formaldehyde. However, they do respond to the vast majority of VOCs. Standard calibration is to Isobutylene. Users may calibrate to alternative VOCs.

Relative Humidity: (capacitive) Range: 0 to 100 %RH
Accuracy: $\pm 2\%$ RH <80%RH ($\pm 3\%$ RH >80%RH)

Temperature: (Pt100) Range: -10° to 160°F (-25° to +70°C)
Accuracy: $\pm 0.3^\circ\text{C}$

Response Time: All sensors exhibit 90% response <1 minute

Probe Dimensions: 2in. (5cm) dia. x 12.5in. (30cm) lgth.

Weight (probe): w/batteries 1lb. 10oz. (0.7kg)

Power (IQ-410, IQ-604): 2 x D cells; probe battery life 120+ hrs.
(IQ-610): typical probe battery life 60+ hrs.

(computer battery life varies by make and model)

Operating Range

PID (VOC) sensors: 0 to 90%RH, -15 to 60°C

Probe & other sensors: 0 to 98%RH (non-condensing), -15 to 60°C

PC Software Req's: Windows 8/7/Vista/XP

GRAYWOLF SOFTWARE IS 21 CFR PART 11 COMPLIANT.

ALL SPECIFICATIONS ARE TO SUBJECT TO CHANGE WITHOUT FURTHER NOTICE.

- **AdvancedSense IAQ** kits include an AdvancedSense meter. **DirectSense IAQ PPC** kits include a Pocket PC. **DirectSense IAQ LAP** kits include a WIN8 tablet PC. These complete kits also come with probe, WolfSense PC desktop data transfer software, hardshell security case, probe & meter/mobile PC pouches and more. Contact GrayWolf for details.
- Wall mounting brackets, direct connect cameras, belt carried air pumps, extension cables, audio note-to-text transcription software and other accessories are also available from GrayWolf. View them on our web-site at: accessories.graywolvesensing.com.



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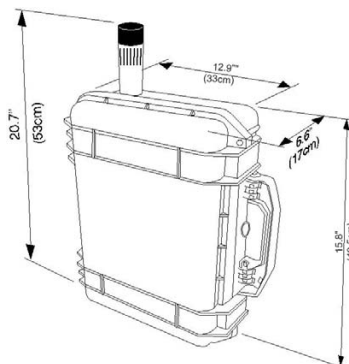
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✓ MEASURE SMART

✓ REPORT EFFICIENTLY



▲ **PCC-10** Security Case (shown above w/optional **ACC-BRK1** brackets for external HCHO or other meters)

► **PCC-AS01** AdvancedSense pouch and **PCC-05IQ** probe pouch (shown w/ **FM-801** formaldehyde meter)



► **PCC-15** Dual probe Security Case (shown with optional **FM-801** HCHO meter and **PM-205** particulate concentration meter)



ACC-TPDL-KIT includes tripod and mounts for various meters/probes, plus nylon carrying case ▼



CA-HD2
Gas Calibration Hood ▼



► **CA-RH1**
%RH Cal Kit



CA-GS25
▼ VOC Cal Kit



◀ **CA-GS12**
CO₂ and CO Gas Cal Kit



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