

ARTISAN®
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AreaRAE IAQ

Indoor Air Quality Monitor

The only IAQ Monitor with VOC Measurement

The **AreaRAE IAQ** is the only wireless equipped, Indoor Air Quality (IAQ) monitor to combine a photoionization detector (PID) with traditional measures of IAQ like temperature, humidity, carbon dioxide (CO_2) and a user-selected toxic gas sensor in one 1- to 5-sensor package. The PID gives the **AreaRAE IAQ** the ability to measure 0 to 500 ppm of VOCs (volatile organic compounds) with 0.01 ppm (10 ppb) resolution. The RF (radio-frequency) transceiver allows the unit to communicate and transmit readings and other information on a real-time basis with a remotely located base controller.

RAE Systems' advances in PID technology give IAQ investigators an ultra-sensitive VOC detective tool, providing immediate insight and diagnosis. The **AreaRAE IAQ** provides consultants, safety, and hygiene professionals and building managers with a reliable, affordable, accurate and instantaneous means of directly measuring VOCs so that problems can be quickly identified and fixed. Traditional IAQ monitors that measure just temperature, humidity and CO_2 miss this critical indoor contaminant.

CO_2 monitors are very popular for IAQ surveys, but CO_2 is only a secondary measurement tool for IAQ. Diluting the air enough to reduce CO_2 levels often solves the IAQ problem. However, high levels of CO_2 do not necessarily indicate high levels of VOCs. The PID in the **AreaRAE IAQ** complements its CO_2 sensor by providing a direct measurement of VOCs that would otherwise never be noticed.

Key Features

- Real-time wireless data transmission with built-in RF transceiver
- View real-time sensor data and alarm status at headquarters or command center
- ProRAE Remote software simultaneously controls and displays readings for up to 32 remote monitors
- License-free ISM band RF transmission with a communication range of up to 2 miles
- Continuous monitoring of total VOCs 0 to 500 ppm with 0.01 ppm (10 ppb) resolution with PID sensor
- Continuous monitoring of CO_2 at 0 to 20,000 ppm with 10 ppm resolution
- Continuous measurement of temperature and relative humidity
- Toxic sensor socket accepts CO, H_2S, SO_2, NO, NO_2, Cl_2, HCN, NH_3 or PH_3 sensors
- Built-in diaphragm pump for sampling
- 24 hours continuous operation with a built-in Li-Ion battery
- 24x7 continuous operation when plugged into wall charger
- Interchangeable Li-Ion or alkaline battery pack
- Data is easily downloaded with ProRAE Suite software
- Large digital display & keypad
- Field mounting tripod adapter
- Optional GPS provides ability to track and display readings from remote detectors

Sources of VOCs

- Cleaning and maintenance supplies
- Carpets, fabrics, finishes, furniture and building materials
- Office equipment (copiers, printers)
- Microbial contamination (mold, fungus, etc.)
- Human occupancy (exhalation and perfume)
- Renovations
- Vocational training shops & art rooms
- Pesticides



CE ISO 9001 CERTIFIED

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RAE SYSTEMS

AreaRAE IAQ

Specifications*

Sensor Specifications

Gas Monitor	Range	Resolution
VOCs	0.01 - 9.99 ppm	0.01 ppm
	10.0 ~ 99.9 ppm	0.1 ppm
	100 - 500 ppm	1 ppm
Carbon Dioxide	0 - 20,000 ppm	10 ppm
Carbon Monoxide	0 - 500 ppm	1 ppm
Hydrogen Sulfide	0 - 100 ppm	1 ppm
Sulfer Dioxide	0 - 20.0 ppm	0.1 ppm
Nitric Oxide	0 - 250 ppm	1 ppm
Nitrogen Dioxide	0 - 20.0 ppm	0.1 ppm
Chlorine	0 - 10.0 ppm	0.1 ppm
Hydrogen Cyanide	0 - 100 ppm	1 ppm
Ammonia	0 - 50 ppm	1 ppm
Phosphine	0 - 5.0 ppm	0.1 ppm
Temperature	32.0° - 122.0° F (0-50.0°C)	0.1° F or C
Humidity	5 - 95% RH	1% RH

Detector Specifications

Size	9.25"L x 5.0"W x 9.25"H (without handle) (23.5cm x 13.0cm x 23.5cm)
Weight	8.5 lbs (3.9 kg) with battery pack
Sensors	Up to five sensors (VOC, CO_2, Temperature, Humidity and one toxic), 10.6 eV PID sensor for VOC, Non-Dispersive Infrared (NDIR) for CO_2, electrochemical sensor for toxic gas, polymer capacitive for humidity and thermistor for temperature ***(temp & humidity sensors are located in housing on top of monitor***)
Battery	Rechargeable, 7.4V/7.2Ah Lithium-ion battery pack with built-in charger (less than 10 hours charge time) or a 6 C-cell alkaline battery pack
Operating Hours	Up to 24 hours continuous operation on Li-ion charge (continuous when plugged into charger) (typical)
Display	2-line, 16-digit LCD
Keypads	2 operation and 3 programming keys
Direct Readout	Instantaneous values (up to 5), sensor name, high and low values, battery voltage and elapsed time
Alarm	95dB buzzer (user enabled) and flashing red LED to indicate exceeded preset limits • High: 3 beeps and flashes per second • Low: 2 beeps and flashes per second • STEL and TWA: 1 beep and flash per second • Alarms automatically reset or with latching manual override • Optional plug-in pen-size vibration alarm
Datalogging	Optional 20,000 points (7 days on VOC, CO_2, Temp, Humidity and Toxic at 2.5-minute intervals)
Communication	Upload data to PC and Download monitor setup from PC through RS-232 link to serial port on PC
Calibration	• VOC, Toxic: Two-point field calibration for fresh air and standard reference gas • CO_2: Two-point field calibration for zero and standard reference gas • Humidity: Two-point field calibration • Temp: One-point field calibration
Sampling Pump	Internal integrated diaphragm pump with programmable "duty-cycle" for PID self-cleaning during long continuous run times (24/7)
Low Flow Alarm	Auto-shutoff pump at low-flow condition
Temperature	32° to 104°F (0 to 40°C)

Detector Specifications (continued)

Humidity	0% to 95% relative humidity (non-condensing)
Attachments	Shoulder strap, optional tripod/wall-mounting bracket
Warranty	Lifetime on non-consuming components (per RAE Systems Standard Warranty), 2 years for CO_2, CO, and H_2S sensors, 1 year all other sensors, 1 year pump, 1 year battery, 1 year for 10.6eV PID lamp

*Ongoing projects to enhance our products mean that these specifications are subject to change

Monitor Only Includes:

- Built-in wireless modem
- Sensors as specified
- Calibration adapter
- Operation and maintenance manual
- Shoulder strap
- Rechargeable Lithium-ion battery pack
- 110/240 V AC/DC Wall Adapter
- Spare alkaline battery pack
- 3" Inlet probe
- 10 spare external filters
- Hard transport case with pre-cut foam
- Sampling wand with 10' of self-coiling Teflon® tubing
- Tool kit

Instrument with calibration kit also includes:

- Mix gas in a 34L cylinder (50 ppm CO, 5,000 ppm CO_2, 20.9% O_2, balance N_2)
- Isobutylene gas in a 34L cylinder (for units with PID)
- Calibration regulator (female) and tubing

Datalogging Monitors also include:

- Software ProRAE Suite package for Windows 98, NT, 2000 and XP
- Computer interface cable

ProRAE Remote Basic Host Software Package includes:

- ProRAE Remote Software for Windows 98, NT, 2000 and XP
- RAELink2 Modem

DISTRIBUTED BY:

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Artisan Technology Group is an independent supplier of quality pre-owned equipment

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