

MULTIRAE IR

One-to-Five Gas Monitor with CO₂ & VOC Detection

The MultiRAE IR combines a PID (Photo-Ionization Detector) and Carbon Dioxide (CO₂) sensor with O₂, LEL, and one specific toxic gas sensor in one compact monitor with sampling pump. The MultiRAE IR's versatility allows it to replace a wide range of monitors, saving training and maintenance costs. The MultiRAE IR is quickly and easily changed from a sophisticated technician instrument to a simple text or display only monitor. The same monitor can be used as a personal monitor, a hand-held sniffer or as a continuous, operational area monitor for use in applications including indoor air quality, industrial hygiene.

Standard Features

- **O₂, LEL, PID CO₂ and any plug-in "smart" toxic sensors: CO, H₂S, SO₂, NO, NO₂, Cl₂, HCN, NH₃, PH₃**
- **0-20,000 ppm measurement of CO₂** using our patented non-dispersive infrared (NDIR) sensor
- **0-2,000 ppm measurement of VOCs** (Volatile Organic Compounds) with 0.1 ppm resolution
- **Measure more Chemicals than with any other PID:** With over 60 Correction Factors built into the MultiRAE IR memory and the largest printed list of Correction Factors in the world (300+), RAE Systems offers the ability to accurately measure more ionizable chemicals than any other PID!
- **Drop-in Battery:** when work schedules require putting in more hours than the 12 hours supplied by the advanced Lithium Ion (Li-Ion) battery, the drop in alkaline pack supplied with every MultiRAE IR allows you to finish the job.

- **User friendly screens** make it easy to use for simple applications and flexible enough for sophisticated options.
- **Rugged Rubber Boot:** the standard rubber boot helps assure that the MultiRAE IR survives the bumps and knock of tough field use.
- **Strong, built-in sample pump** draws up to 100' (30m) horizontally or vertically. Liquid trap and automatic low flow alarm protect the MultiRAE IR from damage.
- **Large keys** operable with 3 layers of gloves
- **Easy-to-read display** with backlight
- **Store up to 80 hours of data** at one minute interval for all 5 sensors for download to PC with the optional data-logging.
- **Loud audible alarm** that varies for different alarm conditions and an optional external vibration alarm for noisy areas

Applications

- Indoor Air Quality
- Beverage and Brewery
- Food Industry
- Hospitals
- Respirable Breathing Air Testing



Specifications

Sensor Specifications

Gas Monitor	Range	Resolution
Carbon Dioxide	0 - 20,000 ppm	10 ppm
Oxygen	0 - 30.0%	0.1%
Combustible gas	0 - 100% LEL	1%
VOCs	0 - 200.0 ppm 200 - 2,000 ppm	0.1 ppm 1 ppm
Carbon Monoxide	0 - 500 ppm	1 ppm
Hydrogen Sulfide	0 - 100 ppm	1 ppm
Sulfur 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

Detector Specifications

Size	4.6"L x 3.0"W x 1.9"H (12 x 7.6 x 4.8 cm)
Weight	16 oz with battery (454g)
Sensors	<ul style="list-style-type: none">• Up to 5 sensors including non-dispersive infrared sensor for CO₂• Protected catalytic bead for combustible gas• Interchangeable electrochemical sensors for oxygen and toxic gases.• Photo-ionization detector for VOCs (10.6 eV, 9.8 eV and 11.7 eV lamps)
Battery	Interchangeable Li-Ion and alkaline battery packs Rechargeable units include lithium-ion battery pack with internal smart charging, 120V AC/DC wall adapter, and spare alkaline battery pack
Operating Hours	<ul style="list-style-type: none">• 12 hours continuous operation• Unit will run and charge simultaneously
Display	2 line, 16 digit LCD with LED back light automatically in dim light or alarm condition
Keypads	1 operation and 2 programming keys
Direct Readout	Instantaneous (up to 5) values: <ul style="list-style-type: none">• Oxygen as percentage by volume• Combustible gas as percentage of lower explosive limit (LEL)• Toxic gas, VOC and CO₂ as parts per million by volume• High and low values for all gases• STEL and TWA values of toxic gas, VOC and CO₂• Battery and shut down voltage• Date, time, elapsed time, temperature• LEL/VOC scale (using correction factors)
Alarm	90 dB buzzer and flashing red LED to indicate exceeded preset limits <ul style="list-style-type: none">• High: 3 beeps and flashes per second• Low: 2 beeps and flashes per second• STEL and TWA: 1 beep and flash per second• Alarms automatic reset or latching with manual override• Additional diagnostic alarm and display message for low battery and pump stall
Datalogging	20,000 points (80 hours, 5 channels at one minute intervals) download to PC with serial number of unit, user ID, site number, calibration date
Calibration	Two point field calibration for zero and span gas
Sampling Pump	Internal pump with user selectable flow rate: High: ~250 cc/min, Low: ~150 cc/min
Temperature	-4° to 113°F (-20° to 45°C)
Humidity	0% to 95% relative humidity (non-condensing)
Attachment	Wrist strap and high visibility rubber boot
Warranty	Lifetime on non-consuming components (per RAE Standard Warranty), 2 years for CO ₂ , O ₂ , LEL, CO and H ₂ S sensors, 1 year all other sensors, 1 year pump, 1 year battery, 1 year for 10.6 eV PID lamp

MultiRAE IR Accessories

Monitor Only Includes:

- Sensors as specified
- Calibration adapter
- Quick reference guide
- Operation and maintenance manual
- Rubber boot with belt clip
- Rechargeable Lithium-ion battery pack
- 120 / 230 V AC/DC wall adapter (if specified)
- Alkaline battery adapter
- 3 water trap filters
- 3" Inlet probe
- Water trap adapter

Monitor with accessories kit also includes:

- Hard transport case with pre-cut foam
- 15' (5m) Teflon™ tubing
- Tool Kit

Optional calibration kit also includes:

- Four gas mix in a 34L cylinder (CH₄ 50% LEL, 20.9% O₂, 50 ppm CO, 5000 ppm CO₂, balance N₂)
- Isobutylene gas in a 34L cylinder (for units with PID)
- Calibration Regulator (male) and tubing
- *Note: Must have zero air for non-PID units*

Datalogging Monitors also include:

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

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