

## PGA

# Portable Gas Analyzer

Simple reliable field absolute analyzer for a variety of geoscience applications



- Proven IRGA technology
- Large range of gases
- Battery portable
- Sample pump
- Simple to use

**Gases Include:**  
Carbon Dioxide  
Methane  
Oxygen  
Carbon Monoxide

### Selectivity, sensitivity and repeatability

The PGA Portable Gas Analyzer is a self-contained portable measurement device for a wide range of geoscience research applications. It is available for measuring a wide number of gases in a wide variety measurement ranges.

The single beam infrared technology provides unparalleled selectivity, sensitivity and repeatability for such a portable device.

For measuring oxygen the PGA can be fitted with an electrochemical analysis cell. The PGA is also available with a dual gas option.

The PGA features an integral sample pump and an autozero. The PGA is simple to use and calibrate.

RS232 and USB is provided for real time monitoring and recording.

### True field portability

The new PGA is the latest addition to the ADC BioScientific range of Geoscience research analyzers. Weighing just 5kg and offering 8 hours of continuous use, the battery operated PGA is set to offer new levels in portability and performance for a field portable gas analyzer.

### CO<sub>2</sub> analysis

Probably the gas most commonly analyzed in related geoscience, environmental science and atmospheric science is CO<sub>2</sub>.

The PGA is available in ranges from 0-2000ppm CO<sub>2</sub> to 0-100% with a resolution of 0.5% full scale deflection (fsd). This corresponds to 10ppm resolution for the 0-2000ppm instrument.

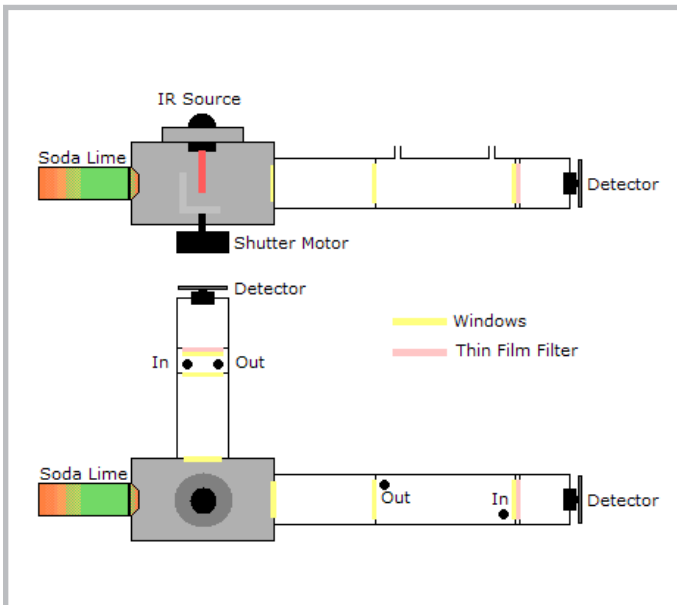
This extensive range makes the PGA suitable for a wide range of experimental studies including elevated CO<sub>2</sub> studies, atmospheric CO<sub>2</sub> monitoring, FACE experimentation and up to high concentration natural CO<sub>2</sub> springs.



# PGA Gas Ranges

GAS	Symbol	Minimum Range Available		Lowest Detection Limit	
		SB Single Beam Technology	ECC Chemical Cell	SB	ECC
Carbon Dioxide	CO <sub>2</sub>	2000ppm		10ppm	
Carbon Monoxide	CO	5000ppm	50ppm	50ppm	1ppm
Sulphur Dioxide	SO <sub>2</sub>	1.0%	50ppm	100ppm	1ppm
Sulphur Hexafluoride	SF <sub>6</sub>	1000ppm		10ppm	
Nitric Oxide	NO	2%	50ppm	200ppm	1ppm
Nitrous Oxide	N <sub>2</sub> O	2000ppm		10ppm	
Ammonia	NH <sub>3</sub>	2.0%		200ppm	
Methane	CH <sub>4</sub>	1.0%		100ppm	
Ethane	C <sub>2</sub> H <sub>6</sub>	1.0%		100ppm	
Propane	C <sub>3</sub> H <sub>8</sub>	1.0%		100ppm	
Butane	C <sub>4</sub> H <sub>10</sub>	0.5%		50ppm	
Pentane	C <sub>5</sub> H <sub>12</sub>	0.5%		50ppm	
Hexane	C <sub>6</sub> H <sub>14</sub>	0.5%		50ppm	
Heptane	C <sub>7</sub> H <sub>16</sub>	2.0%		200ppm	
Freons	-	2.0%		200ppm	
Oxygen			100ppm		1ppm
Hydrogen	H <sub>2</sub>		50ppm		1ppm
Hydrogen Sulphide	H <sub>2</sub> S		50ppm		1ppm

Single beam Infrared gas analyzer



## Specification

**Measurement technique:** Non-dispersive infrared absorption with solid state detector.

**Measurement range:** Up to 100% for gases and saturation concentrations for vapours.

**Resolution:** 0.5% fsd

**Repeatability:** +/- 1.0% fsd

**Noise:** 0.5% fsd

**Span stability:** 0.5% fsd over 24 hours

**Response time:** Typically 4 seconds to T90 dependent on cell size.

**Flow rate:** Typically 0.2 - 1 litre per minute

**Operating temperature range:** 5°C - 40°C

**Battery:** Rechargeable 3.2Ah lead acid allowing 8 hours of continuous operation.

**Dimensions:** 260 x 80 x 300mm

**Weight:** 5kg



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