



# Portable Gas Chromatograph



## Introduction

PID Analyzers offers a new lightweight portable GC for environmental, quality control, natural gas... applications. This GC is extremely easy to use with its touch screen programming, significant data storage capability in a 16 MByte memory module, & a choice of one of our excellent GC detectors. The robust 312 GC will go anywhere with its light weight & rechargeable battery. The GC is powered by an advanced microprocessor design that operates at 50 MIPS.



Model 312 Portable GC

## Principle of Operation

The principle of operation is gas chromatography with a series of sensitive detectors that can be easily interchanged allowing the GC to be used for a variety of applications in the field or the lab. The detector electronics are compact & modular and the detector can be changed by removing the column, connector and two screws. There are only two sets of electronics for the four detectors, so an upgrade only requires the purchase of a second or third detector.

The GC will take packed (1/8" or 1/16"), capillary (0.53 or 0.32 m id) or PLOT columns by any manufacturer and a optional heated injector is used for liquid samples.

The algorithms for data processing were taken from our powerful PeakWorks™ program and are incorporated in the imbedded software. The new microprocessor now runs at 20 times the speed (50 MIPS) of previous micros so that the display and data processing are almost instantaneous.

## Features

- Touch Screen Programming provides convenience & ease of use
- No keyboard -needed
- Rugged case for field operations
- Gas or liquid samples
- Interchangeable Detectors expand the applications of the Model 312 GC
- Choose from the following detectors:
  - PID- hydrocarbons; range-low ppb to %
  - TCD-hydrocarbons, fixed gases; range-low ppm to 100%
  - Far UV- high ppb to low %
  - FID- hydrocarbons-high ppb to %
- Integration: Reintegration, Area or height, tangent skimming or baseline projection
- Very easy to calibrate & use
- Ideal for unskilled operators since methods

## Applications for the Detectors

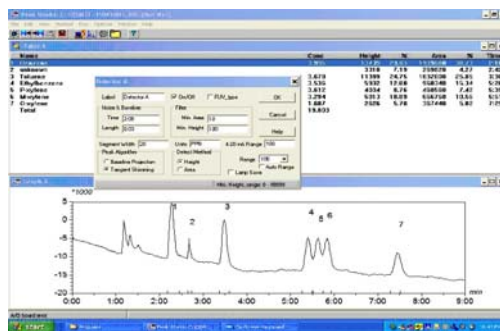
- PID**-VOCs, aromatics, unsaturated HC and inorganic gases (H<sub>2</sub>S, AsH<sub>3</sub>, PH<sub>3</sub>, NH<sub>3</sub>...); ideal detector for environmental analysis and trace measurements in process streams- with its low ppb detection limits; also fenceline, water, soil, field measurements...
- TCD**-hydrocarbons, inorganic & fixed gas response make this detector ideal for applications such as QC, natural gas analysis, LPG analysis, process streams, gas or liquid analysis... in the lab or field
- FUV**-hydrocarbons, inorganic & fixed gas response at levels 10-100 times lower than the TCD- also H<sub>2</sub>O, O<sub>2</sub>, N<sub>2</sub>O at ppb levels
- FID**-Responds to all hydrocarbons including methane- environmental field measurements, landfill gases, oil patch monitoring...

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## Portable Field or Lab Measurements: ppb to % range-VOC's,

### Specifications

Temperature: Isothermal  
Temperature range: 35-150°C  
Display & Programming: Touchscreen- Multipage  
Detector: Single detector that can be interchanged  
Dimensions: 6 " H x 12 " W x 9 " D  
Weight: 12 pounds  
Display: Chromatogram, Results & Program table  
Outputs: RS232 & 0-1VDC  
Connection to PC: RS232



5 ppb Aromatics via PID

### Controls

Touch Screen:  
**Setup**-detector sensitivity, temperature, anal time, ,  
**Start, Stop, Mode, Page** up/dn, **Cal**

### Options

Automatic valve  
Choose one detector: PID, TCD, FUV, FID  
Carrying case  
PeakWorks for Windows (on PC)  
Heated injector for liquid samples

### Reliability

The basic simplicity, durable construction and design of the Model 312 has resulted in the elimination of problem areas associated with other portable GCs. In short, the instrument is both designed and constructed to take the abuse required from field portable instruments. It will provide many years of service in the lab, field or in the plant.

### Other Instruments-

PID Analyzers manufactures continuous monitors such as: FIDs & PIDs for total hydrocarbons, NDIRs for CO, CO<sub>2</sub>, and hydrocarbons, Electrochemical & Paramagnetic O<sub>2</sub> Analyzers and TCD Analyzers for Hydrogen, & Process GCs. Additional products include portable PIDs, portable GCs laboratory GCs, add-on detectors and XRF instruments.

PID analyzers distributes Ocean Optics- miniature fiber opticspectrometers for the UV, visible & near Infrared.

### How to Contact us

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Local Representative

Environmental, QC, IH, Oil Drilling