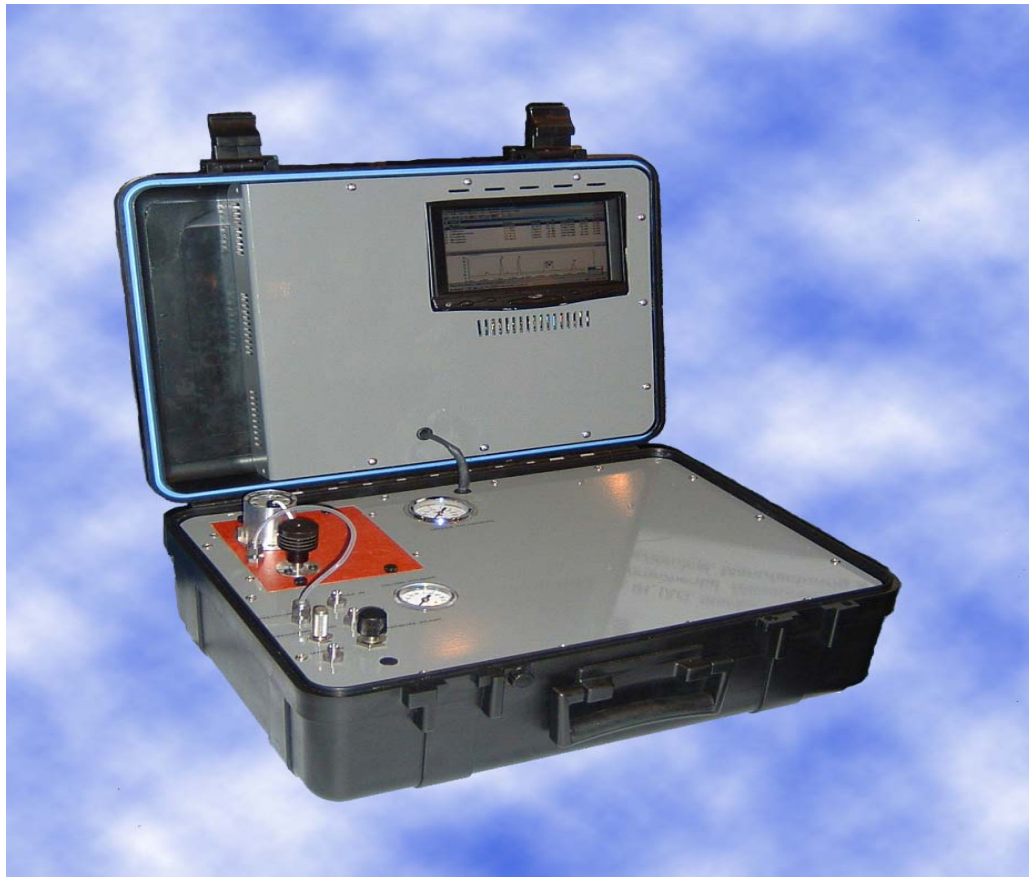


PORTABLE GC

For IH, Environmental , Process & Stack Monitoring, Building security



Model 312 Portable GC

ppb to % Levels of VOC's, S cpds, LNG, fixed gases



312 Portable Gas Chromatograph

Benzene, VC, H₂S, 1,3 BD, Methane, LNG, Nitro cpds, explosives, Sulfur & Phosphorus Cpds., Nerve gases, Hydrocarbons, SF₆, PH₃, AsH₃, NH₃, Air, Water, IH, Process, Stacks, & Building security

Introduction

PID Analyzers offers a new lightweight portable GC for environmental, quality control, natural gas... applications. The GC is extremely easy to use with its 7" VGA Color touch screen programming. It has significant data storage capability in a 2 GByte smart card, & a choice one of our excellent GC detectors. The 312 will go anywhere with its light weight & rechargeable battery. The GC is powered by a Pentium PC with Windows XP (embedded) operating system and PeakWorks chromatography software. This new gas chromatograph is the Model 312.

Other Portable Analyzers include the Model 102+ PID with up to 3 additional sensors (EC, IR, CG...).

Principle of Operation

The principle of operation is gas chromatography with a series of 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 three sets of electronics for the five detectors, so an upgrade only requires the purchase of a second or third detector and second electronics pkg. PeakWorks is a dual channel system.

The GC will accommodate packed (1/8" or 1/16"), capillary (0.53 or 0.32 mm id) or PLOT columns by any manufacturer on a 4: diameter spool) 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 embedded software.

Applications

- PID**-VOCs, aromatics, unsaturated HC, S compounds and inorganic gases (H₂S, AsH₃, PH₃, NH₃...). It is an ideal detector for environmental analysis, and QC with its low ppb to % detection range; 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- ppm to 100%
- FUV**-hydrocarbons, inorganic & fixed gas response at levels 10-100 times lower than the TCD- also H₂O, O₂, N₂O at ppb to ppm levels
- FID**-Responds to all hydrocarbons including methane- environmental field measurements, landfill gases, oil patch monitoring...
- COD**- Responds to nearly all oxidizable, compounds & H₂, NH₃ gaseous compounds- ppm to %

Features-

Embedded Pentium PC with 7" ColorMonitor & Windows XP

- Touch Screen** Programming provides convenience & ease of use
- No mouse needed
- Rugged case for field operations
- Gas or liquid samples
- Battery or line operation
- Interchangeable Detectors expand the applications
- Choose from the following detectors: **PID**, TCD, **Far UV**, **FID**, COD or FPD; single or dual detectors

PeakWorks Chromatography Software- Integration: Reintegration, Area or height, tangent skimming or baseline projection. Very easy to calibrate & use; Ideal for unskilled operators as a result of methods.

GC Analyzers, Options & Applications

Brief Specifications

GC Detectors available: PID, FID, COD, FPD, FUV, & TCD

Measurement mode: Manual or Continuous

Battery life- NiMH 3-4 hours

Temperature range- 30-50°C on battery; 30-125°C on line or 12 VDC

Zero drift- Automatic zero

Span drift- less than 1% every month with calibration

Wide range of response- from ppb to 100 %

PC: 300 MHz pentium

Readout- 7" Color VGA Monitor with touch screen (640 x 480 resolution)

Storage device: 1 Gbyte smart card; USB memory stick

Operating System: Windows XP

Standard outputs: 1 RS232; USB ports, 1 0-10VDC analog output

Enclosure: Heavy duty plastic

Dimensions: 18.75" L x 13.75" W x 7.5" H

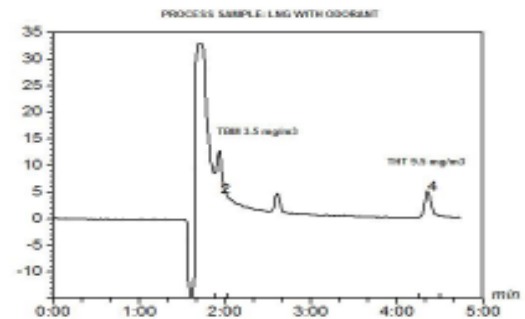
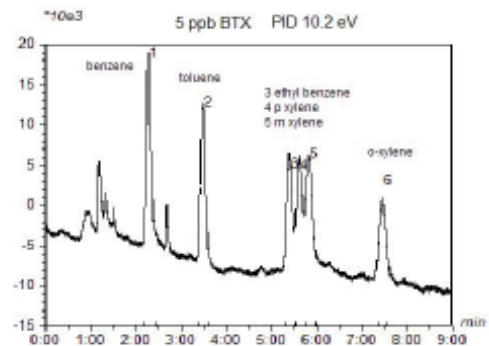
Weight: 27.5 pounds

Power requirements- 90-240 VAC- 1 amp; 12 VDC

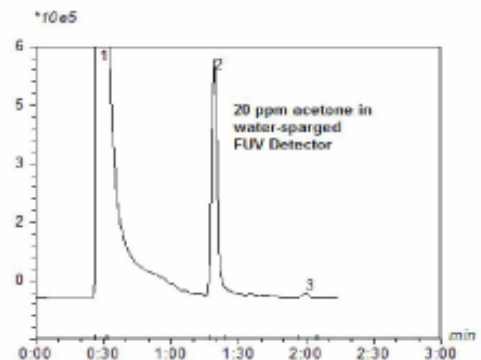
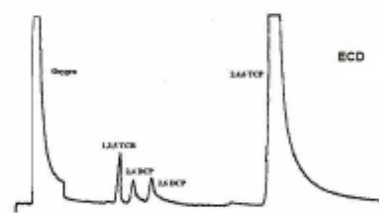
The base Model 312 comes with syringe injection, oven, power supplies & Pentium PC with Windows XP (embedded) and PeakWorks chromatography software in a rugged plastic case.

Options

- Choice of detector (with electronics- for PID, TCD, COD, FID, FPD (2008) or FUV)
- Refill adapter for on board gas cylinder



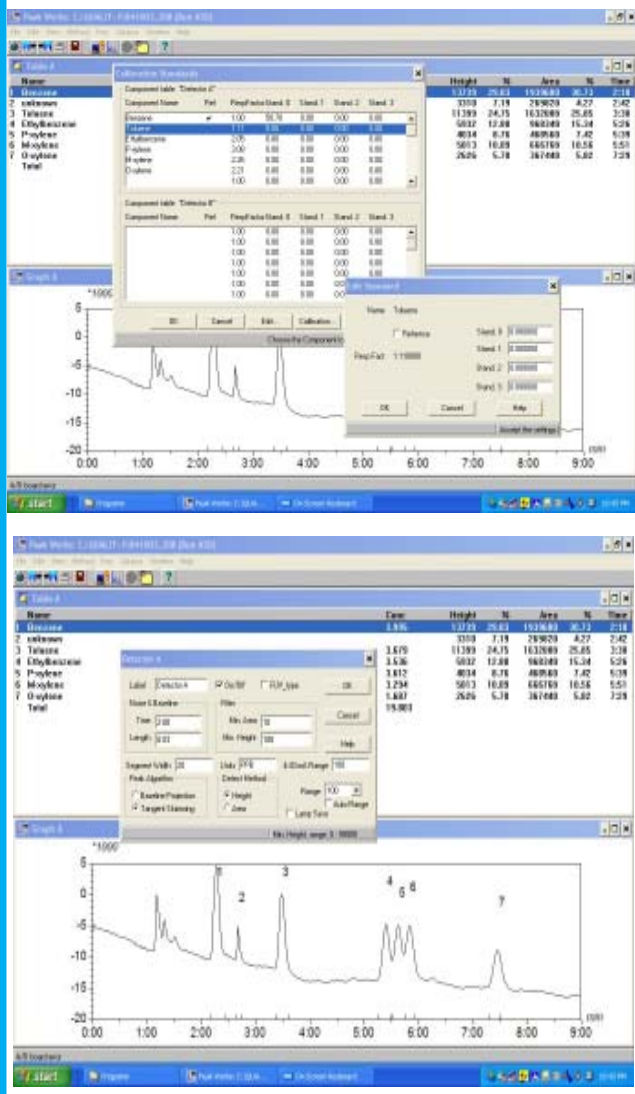
Chlorophenols Low ppb Levels at a remediation site



PeakWorks Chromatography Software

PeakWorks™

PeakWorks™ is PID's chromatography software. The data system utilizes a 16 bit ADC and is written in 32 bit C++ language. The calibration screen and detector/integration screens are shown below.



PeakWorks Controls/Functions

PeakWorks for Windows has been used on our Portable and Process GCs for more than a decade. The software is written in 32 bit C++ and works seamlessly in Windows XP. The Model 312 has a **7" Touch Screen** for programming.

The analog signal from the GC detector/amplifier goes to the ADC board where it is converted to digital format. The signal is processed by PeakWorks and the retention time (identifies the compound) and the peak height/peak area determines the concentration after calibration.

The following menus are available: File, Edit, View, Method, Run, Options, Window, Help

File-Save job, chromatogram as rtf file, exit

Edit-for editing

View-Expand screen or peak, view one or more peaks in chromatogram

Method-Setup detector range and integration parameters, Setup Components- retention time, response factors, peak windows..., Setup Calibration- single or 4 point for each component

Run- Calibrate, Acquire, Continuous or Manual Run, Remote start, Save calibration results

Options- setup communications

Window-Tile window vertically or horizontally, chart and/or graph

Help-provides help functions for operating PeakWorks



780 Corporate Park Dr. Pembroke, MA 02359

Tel. 1-781-709-2131 USA or Canada 1-800-724-5600 Fax. 1-781-700-2050 Web: <http://www.hnu.com> E-mail: sales@hnu.com

PID Analyzers, UK, 9 Pennington Close, Frodsham Cheshire WA6 7NL Tel/Fax 01928-732-395

Web: <http://www.pidanalyzers.co.uk> E-mail: sales@pidanalyzers.co.uk

HNU Nordion, Ltd, OY, Atomitie 5 A 3, PL 1, Helsinki, Finland Tel. +358-9-565 7240 Fax +350-9-562 6801

Web: <http://www.hnunordion.fi> E-mail: Info@hnunordion.fi