

Model 4404-16 Geo-Exploration Monitor



Ludlum Measurements, Inc.

FEATURES

- Large 2 x 4 x 16 in. NaI Scintillator Detector
- Multi-Single-Channel Analyzers
- Data Logging Program
- Google Earth™ Compatible Files



INTRODUCTION

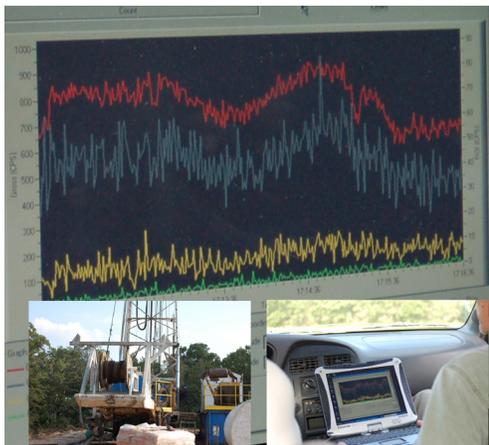
The Ludlum Model 4404-16 Geo-Exploration System provides radiation surface measurements to help discern the underlying geology. This instrument serves as an excellent oil exploration and ore prospecting tool. Its high sensitivity also facilitates large area surveys when looking for radioactive contamination.

This system is comprised of a large scintillation detector, multi-single-channel electronics, and a waterproof enclosure. A ruggedized computer is available as an option, or the computer may be provided by the customer. A GPS is also available to enable expedient relocation of points of interest. Contact Ludlum Measurements for more information about these options.

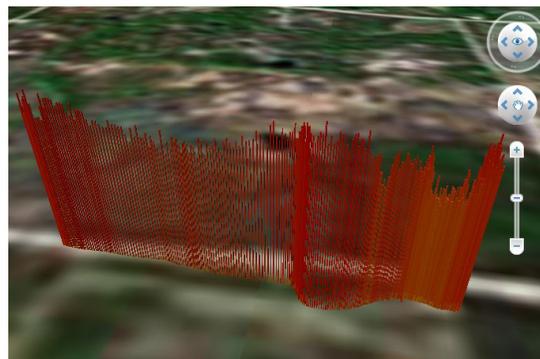
The software will display the radiation data just like a chart recorder and log the radiation data along with its corresponding GPS coordinates into a comma delimited file. The accompanying "KML Generator" software program converts the data files into files suitable for viewing in Google Earth™ or any other 3D earth browser implementing the KML encoding.

The Model 4404-16 Geo-Explorer (PN 48-3730) Includes

- M4404 Geo-Exploration Software
- Serial Cable 3.6 m (12 ft)
- Transformer
- Cable (BNC - SMB)
- Vehicle Power Cable 4.5 m (15 ft)
- Check Source 0.25 μC (^{137}Cs)



Data collection in the field



KML result on Google Earth

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Geo-Exploration Monitor



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SPECIFICATIONS

Part Number 48-3730

Detector

Scintillator: 5.1 x 10.2 x 40.6 cm (2 x 4 x 16 in.) (H x W x L) sodium iodide (NaI) with 8.9 cm (3.5 in.) photomultiplier tube (PMT), surrounded in protective foam to prevent mechanical and thermal shock

Enclosure: waterproof case, 17.8 x 43.2 x 101.6 cm (7 x 17 x 40 in.) (H x W x L) with wheels

Weight: approximately 18.1 kg (40 lb)

Electronics: four channels supplied, includes one gross channel plus three user-adjustable windows. Windows are software adjustable from 1 - 330 mV

High Voltage: adjustable from 0 to 2,000 Vdc

Amplifier Gain: adjustable from $\times 1$ to $\times 10$

Amplifier Range: 0 to 3.3 V

Power Input: 7.5 to 36 Vdc at 250 mA max. Power is received by the universal cigarette type power adaptor and cable connected to the detector system. A 12 Vdc output, AC wall adaptor is supplied.

Geo-Exploration Counter PC Software

Features:

- Real-time strip chart view of up to four detector channels
- Stores data from all four detector channels every second in csv format
- Stores accompanying GPS coordinates every second
- User starts and stops data recording controls with user-defined file names for collected data
- Calibration wizard for simplified onsite calibration
- User defined energy windows to optimize viewing the isotopes of interest
- KML file generator for viewing data on Google Earth™ or any other 3D earth browser (geobrowser) that supports the KML (Keyhole Markup Language) encoding

OPTIONS

COMPUTER

Model 4404-16 & Model 4404-16-4 Toughbook Laptop (Part Number 2311792)

Lightweight laptop with detachable screen that can be used as a tablet

MIL-STD-810G and MIL-STD-461F certified

IP65 certified sealed all-weather fanless design

Magnesium alloy chassis encased with ABS and elastomer edges

Built-in dual purpose handle & kickstand

25.7 cm (10.1 in.) sunlight-viewable 800 nit multi-touch + digitizer display

Intel® Core™ i5 vPro (7th Gen) processor

128 GB solid state drive

Power: Lithium ion battery pack (11.4 V, 2600 mAh), battery operation approximately 8.5 hours, battery charging time 3 hours,

AC adapter - 100-240 Vac 50/60Hz, auto sensing/switching worldwide power supply

Size (L x W x H): 27.2 x 23.4 x 3.3 cm (10.7 x 9.2 x 1.3 in.)

Weight: 1.8 kg (3.9 lb)

GPS

Model 4404-16 & Model 4404-16-4 GPS (Part Number 2312074)

This GPS is an ultra compact unit powered through the same USB 1.5 m (60 in.) cable used to transfer data, so there is no need for batteries, external power source, or a separate data cable.

Voltage range 2.7 to 5 V

LNA 28 dB gain typical

Low noise figure 1.5 dB

Temperature Range: -40 to 85 °C (-40 to 185 °F)

Size (Dia. x H): 5.3 x 1.9 cm (2.1 x 0.8 in.)

Weight: 0.06 kg (2.2 oz)

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Note: specifications subject to change without notification. We are not responsible for errors or omissions.