

The identiFINDER™ EOD kit provides two gamma/neutron detection systems that employ digital gamma spectrometers intended for rapidly identifying radioactive gamma/X-ray isotopes. The kit comes complete with check sources, carrying holsters, setup software/cables and power adapters.

identiFINDER™ EOD Isotope Identifier Kit

Explosive Ordinance Disposal configuration



The identiFINDER EOD kit is supplied with a custom made black P-1600 Pelican case that contains the following:

- 2 x identiFINDER-NGH units
- 2 x web-gear compatible black carrying holsters with positive lock clasp
- 2 x wrist lanyards
- 2 x universal ac power supply units with "micro" USB connector
- 2 x micro USB to USB serial communication cables
- 2 sets of winTMCA software, technical manuals & calibration records
- 1 custom set of exempt radioactive check sources (RRS-8 EOD)
- 1 factory optimized spare detector assembly with set up sheet



The identiFINDER-NGH (Gamma and Neutron) Complete System

The digital gamma spectrometer is intended for rapidly locating, accurately measuring, and quickly identifying radioactive gamma/X-ray isotopes. In addition, an integral PE moderated, ^3He -neutron detector provides an indication of neutron intensity in cpm.

The gamma detector is a 31 x 38 mm (1.2" x 1.5") NaI (TI) detector with integral, exempt (15 nCi) ^{137}Cs stabilization source, the useful measuring range is from background to 100 mrem/h. A vibration alarm feature is included, in addition to the audible and visual alarms, all of which can be preset for gamma dose & dose rate levels and neutron count rate. This unit is easily distinguished from the standard gamma only unit by its blue aluminum end cap.

Explosive Ordinance Disposal configuration

Features

Functions:	Nuclide identification, spectrum analysis, dose rate calculation, total dose display, source finding
Integrated electronics:	Multi-Channel-Analyzer, PMT preamplifier, spectroscopy amplifier, power supply
• Standard Instruments:	<ul style="list-style-type: none"> - identiFINDER-NG w/ 1.2"x1.5" NaI & GM detectors - identiFINDER-NGH w/ 1.2"x1.5" NaI, ³He & GM detectors - identiFINDER-NG ultra w / 1.4"x2" NaI & GM detectors - identiFINDER-NGH ultra w/ 1.4"x2" NaI, ³He & GM detectors
• Specials:	with 1.2"x1.4" LaBr with a resolution of <3.3% at 662 keV
• Watertight (-U versions):	up to 1 atm (33') emersion
• Telescopic (-X versions):	with ~4' to 8' extension
• Safeguards:	with 1" x 1" NaI (TI) tungsten shielded detector and specialized SNM firmware
Stabilization:	In the non-Ultra models a built-in ¹³⁷ Cs reference source (<15 nCi/500 Bq) is used for online stabilization and in-situ calibration without user interaction. With either stabilization method this special identiFINDER™ feature allows operation over temperatures between -4 and 122 °F (-20 to 55 °C)
Software:	The identiFINDER provides for easy storage of up to 100 spectra and rapid transfer to a PC for reach-back and/or qualitative in-situ analysis with the software supplied

User Selectable Nuclide Library

There are 74 reference spectra of radionuclides stored in 6 libraries (Nuclear, Industrial, Medical, Customs, OSI, and Security). All sub-libraries except OSI can be edited by adding or deleting specific nuclides from the list. Ten (10) reference spectra can be measured by the user and added to the predefined library spectra. Identification is done by a template-matching correlation procedure

Physical Dimensions

Weight:	2.75lbs (1250g) with 1.4" x 2" NaI and batteries
Temperature range:	-20 to 55 °C (-4 to 122 °F)
Protection:	water proof, dust tight
Protection class:	IP 54
Drop test:	2' 8" on concrete
Dimensions:	9.8" x 3.7" x 3"

Spectrometry System Specifications

HV-Bias:	200 - 1275 V automatically set to suit individual detector
Shaping type:	digital filter
INL, top 99%:	<0.05%
DNL, top 99%:	<0.1%
Spectrum length:	1024 channels
Pileup rejection:	<100 nS, pulse pair res.
Throughput rate:	>100,000 cps
Input rate:	>350,000 cps
Spectrum memory:	100 spectra at 1024 channels
Real time presets:	1 s - 1,000,000 s
Live time presets:	1 s - 1,000,000 s

Dose/ Dose Measurement Specifications

Sensitivity:	>10,000 cps/mrem for 1.4"x2" NaI (TI) detector
Dose-rate range:	1 µrem/h - 100 rem/h
Dose range:	10 µrem - 100 rem
Energy range:	NaI: 15keV - 3.0 MeV; GM: 60 keV - 1.6 MeV
Alarm levels:	Gamma: Four preset levels
Neutron:	Separate neutron alarms for ³ He model, with blue indicator lamp



Figure 2
Overall view of the identiFINDER (front view) with

- 1-battery compartment lock,
- 2-ON/OFF button,
- 3-blue LED (neutron alarm),
- 4-selection buttons,
- 5- command line,
- 6-red LED (gamma alarm),
- 7- internal GM tube,
- 8-internal He-3 tube (neutron detection),
- 9-internal NaI(Tl) scintillation detector

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