

**Spectroscopic Gamma/Neutron
Detection System for Mobile Use**



Ground Based Vehicular Deployment



MOBILE SPEC Analyzer

- Rugged, easy-to-operate and cost-effective mobile monitoring system for both ground and airborne platforms
- Fully operational once mounted in or on vehicle
- Uses BTP's advanced probes (spectroscopic gamma and neutron counting)
- Provides real time automatic peak search and radionuclide identification with comprehensive, user-modifiable isotope library
- On-board GPS for dose mapping
- Touch-screen system control and data displays provided in Windows based pull down menu and text boxes
- Remote operation by wireless link (optional)
- Splash and dust resistant (MIL810E)

Bubble Technology Industries has developed a spectroscopic mobile system that can be easily mounted on any vehicle platform. This system (called the "MOBILE SPEC") is ideally suited for pilot based/UAV air and driver based/ROV land platforms. MOBILE SPEC is perfect for rapid and accurate detection of gamma and neutron-emitting materials by a broad range of users (Customs officials; Cargo inspectors; Dock, airline and railway workers; Military personnel; Police, firefighters and EMS personnel; and Radiation monitoring authorities).

MOBILE SPEC can be internally or externally mounted with a optional protective hard shell pod and mounting brackets for use with land vehicles, watercraft or aircraft. A ruggedized laptop provides the user with real-time, straight-forward information on the amount of radiation, the identity of the radioisotope and the alarm status.

The system conveniently operates from a wide variety of power supplies, including: a built-in rechargeable battery, any external 12 to 32 volt DC power supply (including common batteries and generators) and AC power. The standard system detects both gamma and neutron radiation with spectroscopic capability.

Probe Specifications for MOBILE SPEC

Model	Type	Approx. Weight (kg/lbs)	Size (mm/in)	Range (keV)	Photo-peak Counts (16 µCi ¹³⁷ Cs 5 mph @ 3 m)
16E-PROBE	Gamma	16/35	100x100x400 (4x4x16)	50-8000 (user-selectable ranges)	1000
Model	Type	Weight (kg/lbs)	Size (in)	Range	Neutron Sensitivity (counts per emitted n @ 3 m)
LARGE FORMAT N-COUNTER	Neutron	25/55	Nominally 2" diameter x 25" active length in a polyethylene moderator	Thermal to 20 MeV	1.2 x 10 ⁻⁴

MOBILE SPEC™

Technical Specifications

(Visit www.bubbletech.ca for more information)

PHYSICAL SIZE

System: Four shipping containers: 1) Analyzer, laptop and cables, 2) 16E-PROBE, 3) LARGE FORMAT N-COUNTER and 4) External hard shell protective pod (optional). Approx. system weight of 70 kg (154 lb).

POWER

Type: Built-in rechargeable NiMH battery
Runtime: >12 hours, fully charged
Power: 12-32 V vehicle power/power pack to 110 - 240 V, 50/60 Hz autosensing

ENVIRONMENTAL

Operating: -20 °C to +40 °C
Storage: -40 °C to +70 °C
Rel. Humidity: Up to 93% @ 40 C

FEATURES

- At the notebook, operator can use default alarm levels or set their own and can mute alarm levels either before or during an alarm
- Comprehensive, user-accessible isotope library with automatic peak search and isotope identification for detailed post-analysis of threat
- Ability to incorporate GEOTIFF maps or satellite images for real time, global positional radiological data

RADIOLOGICAL

Gamma: One (1) NaI crystal
Neutron: One (1) moderated polyethylene He-3 proportional counter

DISPLAY (LAPTOP)

Panasonic Toughbook or equivalent.

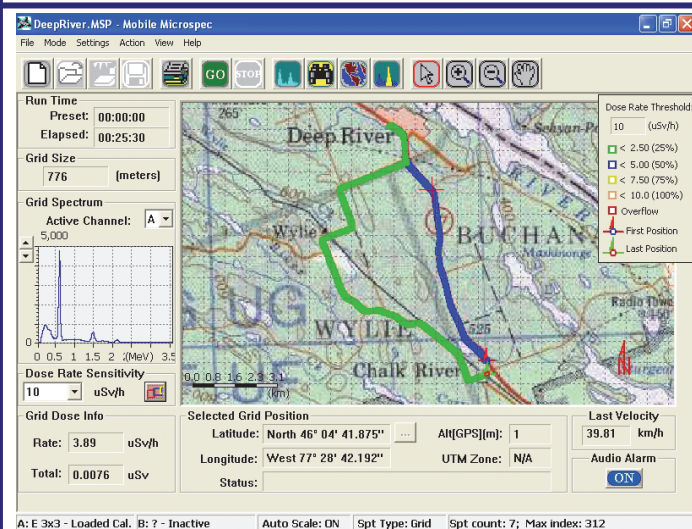
- Tested to the military requirement for EMI emission and susceptibility (MIL461E)
- Incorporates a sealed membrane keyboard and connectors and is splash and dust proof (MIL810)
- Vibration hardened and can withstand a 1 metre drop without failure
- Requires Windows XP - Windows 7 not currently supported

OPTIONS

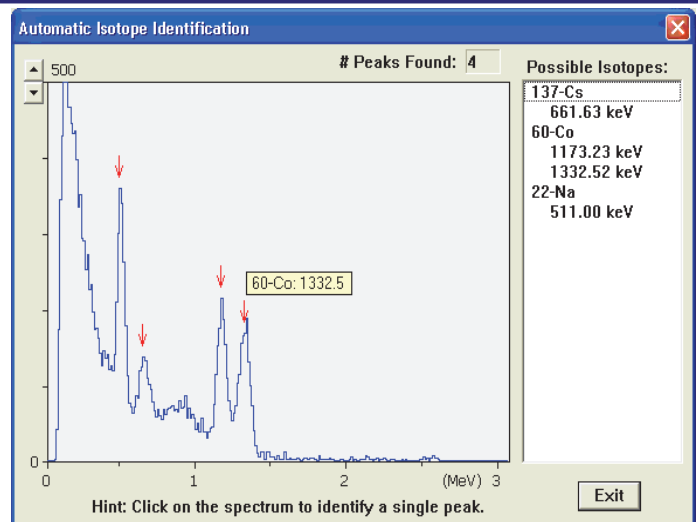
- Unique B-PROBE, a portable beta spectrometer capable of identifying beta radionuclides down to 100 keV for checking for beta contamination
- High performance weather-proof transport cases with custom-cut protective foam liners for off vehicle storage
- RS232-based transceiver system for remote control and data acquisition

WARRANTY

- 1 year parts and labour, under normal use.



MOBILE SPEC Mapping Mode



MOBILE SPEC Automatic Isotope Identification

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