PORTA-PORTAL™
Mobile Microspec Pedestrian Portal Monitor




- **Portable, easy-to-operate and cost-effective pedestrian portal monitor**
- **Fully operational within minutes of arrival at site**
- **Supports two probes simultaneously for extended gamma sensitivity range or monitoring of two radiation types**
- **Uses BTI's advanced spectroscopic probes (gamma, neutron with gamma suppression, X-ray and beta with gamma suppression)**
- **System control and data displays provided in Windows based pull down menu and text boxes**
- **Splash and dust resistant (MIL810E) and EMI certified (MIL461E)**
- **Fully compliant with the latest ANSI N42.35 standard**

One of the layers of security for ensuring public safety involves screening people to ensure they are not carrying any nuclear material. This can be achieved using personnel portal monitors, which monitor pedestrians at entry points to controlled areas or buildings. Personnel portals are simply placed on either side of an entrance for people. Many personnel portal monitors are "permanent" systems that must be installed at a specific site. Most are non-spectroscopic.

Bubble Technology Industries has developed a spectroscopic *portable* personnel monitor that can be easily set-up for an important event and then removed when the event is over. This system (called the "Porta-Portal") is ideally suited for radiation monitoring at conferences, hotels, airports, sports events, music concerts etc. BTI's Porta-Portal is based on the same technology as BTI's spectroscopic survey system, the Mobile Microspec. Most existing pedestrian portal monitors suffer from unacceptably high false alarm rates from Naturally Occurring Radioactive Material (NORM) and from frequent nuisance alarms caused by legitimate radioactive materials, such as medical isotopes due to their lack of spectroscopic capabilities (they only provide crude information relating to the intensity of the radiation field). With its ultra-high sensitivity (lower minimum detection levels) and the ability to identify the radionuclide material responsible for any alarm condition, BTI's Porta-Portal allows rapid and efficient portal throughput while pinpointing real threats instantaneously.

The system comes in a rugged, waterproof enclosure on wheels that can be easily transported and deployed at an event. 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 off of 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 portal detects gamma radiation with spectroscopic capability. Neutron spectroscopy is available as an option.

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PORTA-PORTAL™
Technical Specifications

(Visit www.bubbletech.ca for more information)

PHYSICAL SIZE

System: Each of the two (2) transport/system cases comprising a complete Porta-Portal system measures 79 x 50 x 30 cm (31 x 20 x 12 in). Case 1 weighs 25 (55 lb) and Case 2 weighs 14.5 kg (32 lb) respectively for a combined system weight of 39.5 kg (87 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 ºC to +40 ºC
Storage: -40 ºC to +70 ºC
Rel. Humidity: Up to 93% @ 40 C

FEATURES

- Weather-proof transport case and cable connections allowing operation in all environmental conditions
- At the notebook control station, operator can use default alarm levels or set their own and can mute alarms either before or during an alarming event
- Incorporates both audio and visual alarms triggered by dose rate which can be user set for two different levels i.e. Hazard/Turnback, Low/Critical etc. to meet regulatory concerns
- Comprehensive, user-accessible isotope library with automatic peak search and isotope identification for detailed post-analysis of threat

RADIOLOGICAL*

Gamma: NaI (various sizes)
50 keV to 8 MeV

Neutron: Liquid scintillator and ^{3}He counter
Thermal to 20 MeV

*Additional data sheets available for probes

DISPLAY

Panasonic CF-18 Toughbook or equivalent.

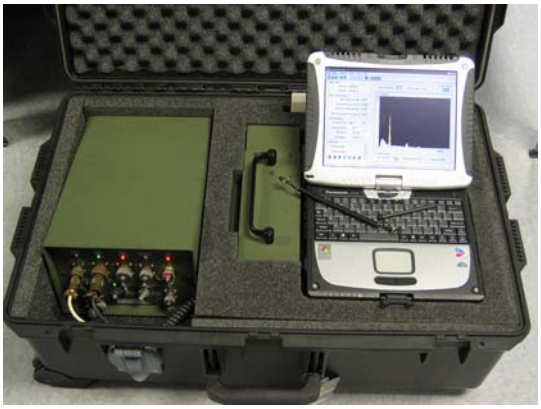
- Tested to the military requirement for EMI emission and susceptibility (MIL461E)
- Incorporates a sealed membrane keyboard and connectors and is splash and dust proof (MIL810)
- Vibration hardened and will withstand a drop to concrete without failure

OPTIONS

- Unique Beta-probe*, a portable spectrometer capable of identifying beta radionuclides to a minimum energy of 100 keV. For pre-screen for beta contamination
- Drivers for external anunciator devices (lights, horns, etc.)

WARRANTY

- 1 year parts and labour



Porta-Portal Equipment Case:
One rugged enclosure contains the analyzer and the first probe. The second enclosure contains the second probe and storage for additional equipment

THE SENSITIVITY ADVANTAGE

ANSI N42.35-2004 requires (for a 2-sided pedestrian monitor) a positive alarm for sources at 50 cm by a series of radioisotopic gamma sources spanning an energy range from 60 keV to 2.6 MeV.

Radionuclide	Energy (keV)	Source Activity (min)	Mobile Microspec (Sensitivity above spec)
241Am	59.54	17 MBq	>50X
137Cs	661.65	0.6 MBq	>10X
60Co	1173.23/1332.52	0.15 MBq	>3X
228 Th	2615	0.26 MBq	>2X

A spectroscopic portal system is considerably more sensitive than non-spectroscopic systems since natural background in the energy region of the gamma ray of interest is only a small fraction of the total background. The factor by which the Porta-Portal exceeds ANSI requirements is given above.

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