Model RD-120 *SAM*pack
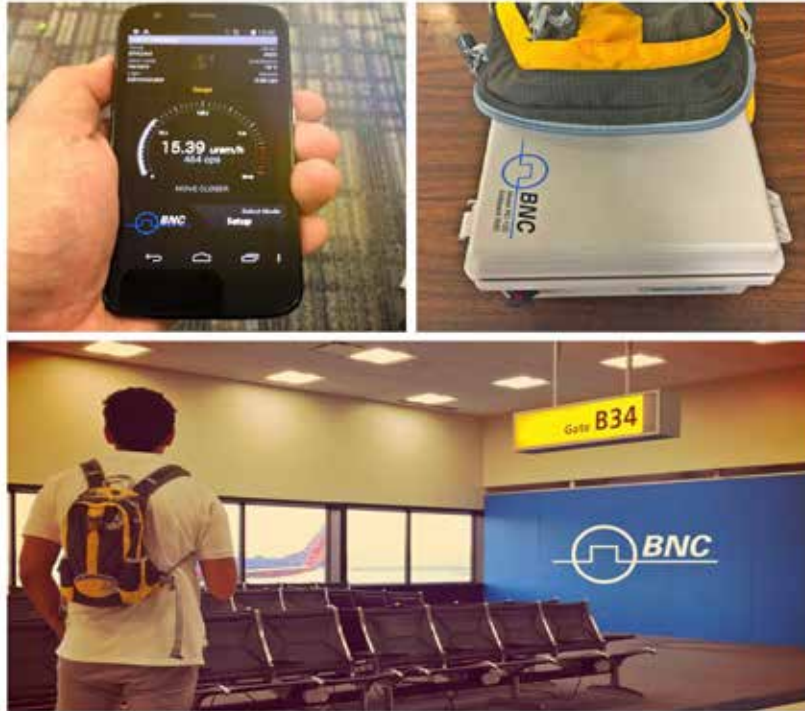## Isotope Identifier

FEATURES

- **Sigma threshold triggering with auto correction.**
(Allows high sensitivity during changes in background)

- **< 9 lbs, Easily carried in serveral configurations**
- **Low power consumption and Lithium Ion battery allows 24 hours operation**

- **Clandestine mode with or without earphones**
(e.g, vibration mode, color alert, real-time spectrum)

- **Shock resitstant and water resistant**

- **Automated detector calibration**

- **Smart phone, ring tones, camera, etc.**

APPLICATIONS

- **Emergency Response**
- **Law Enforcement**
- **Homeland Security**
- **Undercover Surveillance**
- **HAZMAT**
- **Industrial**
- **Medical**
- **Radiation Safety**
- **Passenger and Freight Monitoring**
- **Non-proliferation Enforcement**
- **Health Physics**
- **Environmental Waste Monitoring**
- **Unattended/Remote Monitoring**

BNC Berkeley Nucleonics
Test, Measurement and Nuclear Instrumentation since 1963

Backpack Radioisotope Device (BRD)

Standard Internal Detectors	3x3 NaI	Highest Sensitivity General Purpose Isotope Identification
	GM-Tube	High Gamma Count Rates
Internal Alternatives to NaI	1.5x1.5 LaBr	Highest Resolution Specialized Identification and Spectroscopy
	1.5x1.5 CeBr	Less Costly, High Resolution Identification and Spectroscopy
Optional Internal Detector	Neutron Option	Solid State Detector
Electronics (MCA)	Digital Signal Processing	
	32 bit RISC, ARM Cortex	
	4096 Channels	
	150,000 CPS max	
Alarms	Automatic	Count Rate, Dose Rate, Health/Safety, Neutron Rate (optional),
	Adjustable Threshold	Fixed or Variable (up to 5 Sigma)
Data Output	Type	1024 Channel Spectra, Alarm Conditions, Count Rates,
		Dose Rates, Channel Energy and Count, Time, Location
	Identification	Isotope, Classification, Confidence
	Energy Range	20 keV - 3.0 MeV
	Dose Rate Range	10 nR/hr - 10 R/hr
	Reachback	XML, per ANSI N42.42
Operational Modes	User, Administrator	Independently or Networked
Functions	Designed to meet or exceed requirements of ANSI N42.34 (2006)	
	Background, Dose, and Dose Rate	
	Search, Manual Capture, Automatic Capture, Isotope ID	
Enclosure	IP65 Rated	Droppable to 1 m, Water Spray Resistant, Dustproof
	Dimensions	10" x 5" x 6"
	Weight	8 lbs max (w / NaI Detector)
	Operating Temperature	-20° C to 50° C
	Deployment	Handheld, 4 Steel Cleats for Shoulder Strap
		Detachable for Stand-off operation, Tripod Mountable
Library	25 ANSI, 7 SNM, 7 Medical, 7 Industrial, 4 NORM, Customizable	
	Color Coded Classification Data	
	User enabled, On-screen Isotope Help Directory	
	Expandable to include 393 Isotopes from Kocher's Radioactive Decay Data Table	
Smartphone Functions	Display	5" OLED Touch Screen
	Control	Secure Mounting, Tilt-able and Rotatable
	Event Alarms	Adjustable Speaker Volume, Headphones, Vibration, and Visual Display
	Location	3G GPS, Reported in Spectrum File
	Communication	Bluetooth, Wi-Fi, micro USB, and Cellular Network (optional)
	Features	Camera, Video and Voice Recording attached to Spectrum File
File Memory	4.5 GB including Event Notes, Photos, Videos	
Calibration	Automatic Self-Calibration	^{40}K
	Automatic Self-Stabilization	^{40}K
	Manual Calibration	^{137}Cs
Battery Details	Identifier	Li-Ion, >8 hours continuous operation
	Smartphone	Li-Ion, >2 hours continuous operation, >8 hours intermittent operation
	Charging	12 VDC Wall (AC) or Vehicle (DC)

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The Model RD-120-G *SAM*pack -- Backpack Radioisotope Device (BRD)

The Model RD-120-G is a remote controlled radiation detection and identification system which can be configured as a backpack, shoulder pack, stationary monitor or custom design. Clandestine operation is convenient with a smart phone or PDA Bluetooth controller. Operation is intuitive and automated with event monitoring in real time. ANSI standard reports and spectra are displayed on the smart device with the ability to manipulate the spectrum, review data and transmit all information to the users command center. The RD-120-G is designed to carry out various emergency response operations involving hazardous rad waste, orphaned sources, remediation activities and unobtrusively monitoring for WMD and RDD threats. The high sensitivity of large NaI detectors makes this system unique for many applications. GPS data, photos and note are also available which become part of the event log.

Ordering Options:

Model / P/N	Product Description
Model RD-120-G	SAM Pack, Backpack Isotope Identifier
Model RD-120-GN	SAM Pack, Backpack Isotope Identifier with Neutron Detection
Model RD-120-LG	SAM Pack, Backpack Isotope Identifier
Model RD-120-LGN	SAM Pack, Backpack Isotope Identifier, Lanthanum, Neutron Detector
Model RD-120-CG	SAM Pack, Backpack Isotope Identifier, Cerium
Model RD-120-CGN	SAM Pack, Backpack Isotope Identifier, Cerium, Neutron Detector
Model RD-120-2CG	SAM Pack, Backpack Isotope Identifier, 2.0 x 2.0 Cerium
Model RD-120-2CGN	SAM Pack, Backpack Isotope Identifier, 2.0 x 2.0 Cerium, He3