



## FEATURES

- Rapid detection of presence of radioactivity or radioactive material
- Advanced Isotope identification
- Categorizes radiation as Innocent, Suspicious or Threat
- Alarms on dose rate changes above background
- Continually stabilizes for temperature and background conditions changes
- Wired or wireless communication to LAN
- Server and Client software packages available
- Visible and audible alarm annunciators
- Permanent event record storage
- Remote alerts to PCs, PDAs and the like
- Open or covert installations

Minimum Activities (µCi) for Nuclide Identification

	<sup>133</sup> Ba	<sup>57</sup> Co	<sup>60</sup> Co	<sup>137</sup> Cs	<sup>67</sup> Ga	<sup>131</sup> I	<sup>192</sup> Ir	<sup>99m</sup> Tc	<sup>201</sup> Tl	<sup>226</sup> Ra	
Time*	1 sec	12.8	26.3	4.8	2.9	16.1	3.8	2.7	12.8	60.2	13.3
	5 sec	6.4	14.3	1.0	1.7	8.1	1.9	1.5	6.6	30.1	2.9
	10 sec	4.0	9.6	0.6	1.2	5.4	1.1	1.1	4.9	21.1	1.6
	30 sec	1.6	3.2	0.2	0.5	2.7	0.6	0.5	1.8	9.0	0.6
	60 sec	1.1	2.0	0.2	0.3	1.6	0.4	0.4	1.1	6.5	0.4
Distance**	0.5 meter	17.3	51.8	5.2	4.7	23.3	10.3	4.1	22.1	97.9	15.6
	1.0 meter	51.9	129.6	10.5	14.2	67.0	20.5	12.3	58.1	261.2	31.3

\* Listed are the minimum source activities for the various nuclides at a distance of 20" (0.5 meter) from the STRIDE detector. For distances of 1 meter, 2 meter, 3 meter and 4 meter multiply the activity values by 4, 16, 36 and 64 respectively.

\*\*Detectable activity of unshielded source moving at a rate of 1.2 meters/second

Note: Green is for Naturally Occurring, Blue is for Medical and Orange is for Industrial nuclides

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The covert movement of special nuclear material or weapons into populated areas represents possibly the greatest threat to the security of our world. Radionuclide detection and identification systems are required to effectively detect or deter this threat by recognizing the presence or movement of radioactive material across borders, into government buildings, at large public gatherings or events and much more. Stride™ Detection Units and Systems were designed for this very purpose. They can be openly or covertly installed in building entrances, at airports, bus or train stations, above or beside luggage or freight conveyer belts, by stadium entrances, ship ports and many more similar locations of potential risk.



## STRIDE DETECTION UNITS

Detection Units are available in a wide variety of sizes and features for nearly any application. Detection units have several things in common. A typical Detection Unit consists of a NaI scintillation detector for gamma radiation detection; DSP (Digital Signal Processing) based electronics with source or LED stabilization; a multichannel pulse height analyzer; a K<sup>40</sup> source in the form of KCl for calibration verification and at times, stabilization; a usage appropriate enclosure; mains, battery or PoE (Power over Ethernet) power; and a data and control communication method. An optional He<sup>3</sup> neutron detector and high dose rate GM detector are available and wireless communication with rechargeable battery power is also available for Series 300 Stanchion Detection Units.





## DETECTION UNITS

Depending on the amount of radioactive material present, the pace of the transporter, and the detection unit chosen, radionuclides can be detected and properly identified in a few seconds. The type of material is classified as medical, industrial, naturally occurring (NORM) or special nuclear material (SNM), as well as whether it is innocent, suspicious or threatening. In addition, the specific isotope is identified and security personnel are alerted via visible or audible annunciators.



### Series 200

Basic Detection Units are housed in a dust and moisture proof Aluminum enclosure, with a 2" diameter by 3" NaI detector, RJ-45 Ethernet communication and PoE (Power over Ethernet). An optional He<sup>3</sup> neutron detector and high dose rate GM detector are available.



### Series 300

Stanchion Detection Units are housed in a security stanchion with a 2" diameter by 3" NaI detector, RJ-45 Ethernet communication and PoE (Power over Ethernet). An optional He<sup>3</sup> neutron detector and high dose rate GM detector are available. Wireless communication with rechargeable battery power is also available.



### Series 400

Ruggedized Detection Units are housed in a watertight Stainless Steel enclosure that is deployable down to depths of 165 feet with a 2" diameter by 2" NaI detector, RS-232C communication with rechargeable batteries for power.



### Series 700

Security Detection Units are housed in an Aluminum pedestal with wood top and base with a large 2" thick by 4" wide by 16" long NaI detector, DSP electronics, uninterruptable power supply (UPS) with an RJ-45 Ethernet communication. An optional He<sup>3</sup> neutron detector and high dose rate GM detector are available.



### Series 800

Portal Detection Units are enclosed in an Aluminum housing with a wood top and base with two (2) large 2" thick by 4" wide by 16" long NaI detectors, DSP electronics, uninterruptable power supply (UPS) with an RJ-45 Ethernet communication. An optional He<sup>3</sup> neutron detector and high dose rate GM detector are available.

## SPECIFICATIONS

Gamma Detector	Series 200 and Series 300; 2" diameter by 3" or 4" long NaI Series 400; 2" diameter by 2" long NaI Series 700 and Series 800; 2" thick by 4" wide by 16" long NaI
γ Energy Range	20 keV to 3 MeV
Neutron Detector	He <sup>3</sup> Gas filled ionization detector with moderator for thermal neutrons
Neutron Energy	0.025 eV to 15 MeV
High Dose rate Det.	Sealed GM detector
Operating Temp.	+5 °F to +122 °F (-15 °C to + 50 °C)
Storage Temp.	-40 °F to + 203 °F (-40 °C to +95 °C)
Operating Humidity	10% to 80%, non-condensing
Data Throughput	>100k cps
Data Input Rate	≤300k cps
Corrections	Spectrum linearization
Spectrum	1024 channels; 24 Bits per channel
Dose rate Range	0 to 100 μSv/h
Dose rate Resolution	10 nSv/h
Dose rate Energy	50 keV to 1.5 MeV
Stabilization	Peak stabilized on K40 gamma line or LED peak

### PERFORMANCE DATA FOR 2" DIAMETER BY 3" LONG NaI DETECTOR

Count Rates (cps) for 1 mCi sources\*

	<sup>133</sup> Ba	<sup>57</sup> Co	<sup>60</sup> Co	<sup>137</sup> Cs	<sup>67</sup> Ga	<sup>131</sup> I	<sup>192</sup> Ir	<sup>99m</sup> Tc	<sup>201</sup> Tl	<sup>226</sup> Ra
0.5 m	63000	42000	72000	34000	37000	53000	92000	39000	33000	90000
1 m	16000	10000	18000	8600	9200	13000	23000	9700	8200	22000
2 m	3900	2600	4500	2100	2300	3300	5700	2400	2100	5600
3 m	1700	1100	2000	950	1000	1500	2600	1100	910	2500
4 m	970	640	1100	540	570	820	1400	600	510	1400

\*Each source (37,000,000 dps = 1 mCi) is positioned perpendicular to the detector axis at a height equal to the center of the detector.