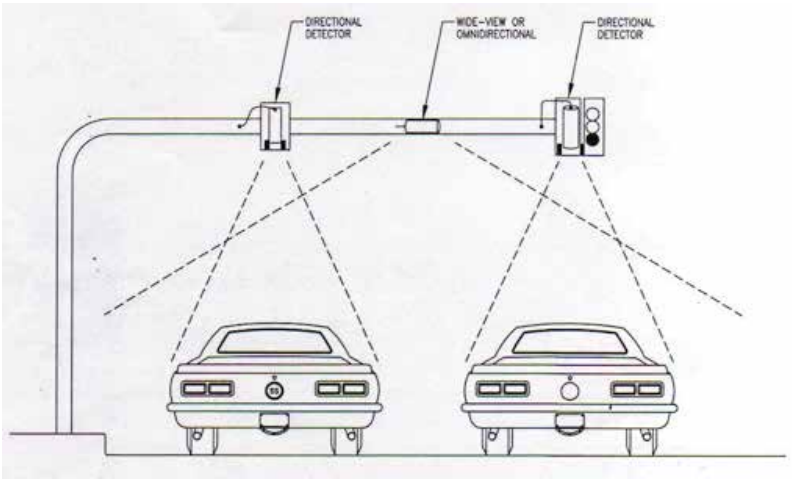
DSI-2NT-ITS
Traffic Signal Mount

Networked Radiation Tracking System

Model DSI-2NT-ITS



Features

- Detect and Track Movement of Vehicles Carrying Gamma And/or Neutron Radioactive Materials
- Enhance Existing Security
  - » Within Facility
  - » Around Town
  - » Border Crossing
  - » Shipping / Rail Yard
  - » Weigh Station, Etc.
- Easy Placement Of Detectors:
  - » Traffic Lights
  - » Buildings
  - » Industrial Complexes
- Sensitive - 1µ R/hr Resolution, Wide Range
- Small Size, Rugged, Splash Proof
- User Settable Alarm Levels
- Targeted and Omni-directional Detectors
- Connects to Existing Network
- Optional: Can Be Set to Allow Internet Access From Remote Sites
- **Optional:** Wireless Remote Notification – Phone, Email, Text, etc.
- RS-232 Based Alarm And Data Collection
- **Optional:**: Ethernet

CBRN Real - Time Air & Water Specialists

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DIVISIONS OF
US NUCLEAR CORP
OTCQB-UCLE

Networked Radiation Tracking System

Model DSI-2NT-ITS

Application

The DSI-2NT-ITS system is designed specifically for use to give warning in case of illicit or accidental storage or transport of radioactive material. Use for travel and shipment centers, power plants, hospitals, landfills, customs entry and exit points, border crossings, seaports, airports, etc.

Installing a network of DSI-2NT-ITSdetector systems throughout any highly traveled area: city thoroughfares, shipping centers, border crossings, industrial complexes, etc. will provide enhanced security to the public or work place safety.

By networking a number of DSI-2NT-ITS detector systems will provide detection and tracking of radioactive sources.

EXAMPLE OF NETWORKED TRAFFIC SIGNALS:

Each installation of DSI-2NT-ITS detector systems will contain 1-3 detectors: choice of Low Gamma, Medium Gamma, or Neutron, or all three. The detectors and electronics are contained in a rugged, weather-proof case. In this example of traffic control systems: The electronics will be hard wired into the traffic signal box at each intersection. Data download from the traffic signal box to the traffic control center will piggy back on the existing infrastructure.

At each location a baseline of background radiation level is recorded and stored locally at the central control station. This provides the data required to provide an alarm of detection of any increase of radiation about the set baseline for that intersection.

REASON FOR NEUTRON DETECTION: Some fissile materials have only WEAK Gamma emissions which are hard to detect. These materials also have spontaneous Neutron emissions. Detection of even a few Neutrons is significant since the natural background Neutron count rate is ZERO. When the Neutron indicator comes on the operator knows that Neutrons from fissile material are present.

Terrorist Scenario

Three Time Periods:

1. **Baseline time period: Have Baseline Map** Available: Background varies from place to place, due to natural causes, and old pollution and uranium and potassium in road and building materials.
2. **Prior to Detonation:** The terrorist moves radioactive materials into an area, for storage or pre-positioning a dirty bomb or nuclear bomb.
3. **After Detonation:** An industrial accident, or a dirty bomb explosion releases large amounts of radioactive material in solid, liquid, or airborne form.

Specifications

DETECTOR	LOW GAMMA	HIGH GAMMA	NEUTRON
TARGETED AND OMNI-DIRECTIONAL DETECTORS			
Energy Interpretation	Below 400kev Nuclear Medicine	Above 400kev Dirty Bombs or waste	All Energies Nuclear Bombs
Sensor	NaI (or BGO) Scintillation Crystal	NaI (or BGO) Scintillation Crystal	BF3 Proportional Probe
Sensor Size	2" dia x 2" thick	2" dia x 2" thick	1" dia x 8" L
Energy Range	1 µR/Hr - 1mR/h	1 µR/Hr - 1mR/h	0-1000 µRem/h - 1 Rem/h*

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Portable – Gamma Frisker GM 2

Model Frisker GM 2

Description - Electronics

- Small Gamma and Neutron monitor will alarm on radiation level settable down to background level.
- The **DSI-2NT-ITS** can alarm at any of 99 preset levels.
- Measures exposure rate.
- Dose rate is displayed on a local **LCD** display.
- When the alarm set-point is reached, the alarm relay is triggered.
- Connects to existing network
- Can be set to allow internet access from remote sites
- **Optional**: wireless remote notification – phone, email, text, etc.
- Serial or ethernet based alarm and data collection

DSI-E

Electronics

PORTABLE – DSI-E

Display:	Local Digital		
Readout:	6 digit LCD for Rate, 8 Digit for integrate. Optional backlight		
Integration:	Into existing traffic or monitoring/surveillance system		
Controls:	Power	Set (calibration aid),	Zero Adjust/Background Suppress,
	Meter	Programming (Two buttons).	
Alarm:	Audio / Visual		
Data Output:	RS-232 **Optional:** Ethernet		
Temperature:	14° F to 104° F (-10 C° to 40° C)		
Power:	IDEALLY: The DSI-2NT-ITS system will be powered by host traffic light system.		
	Optional: in-place rechargeable batteries.		
Case:	Deep drawn aluminum case, with handle and gasketed lid, easily cleanable polished stainless-steel chamber.		
Construction:	Rugged, Lightweight		

Weight and Dimensions

Instrument Case: 5" W x 12" L x 7" H ***(Including optional handle)***

Display Panel: 5.5" Long x 3" Wide. **Weight:** 3 lbs.

Other Networked Systems Available

TYPE	MODEL
Installed Vehicle Monitor: Beta, Gamma	**VMF-TA**
Portable or Installed Personnel & Vehicle Monitor: Beta, Gamma	**PPVM-TA**
Airborne Particulates: Alpha, Beta, Gamma. OPTIONAL: Radon	**ABG-NET**
Mobile Radiation Detector: Beta, Gamma, Neutron	**MORAD & SUPER MORAD**

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