RADIATION SCANNER FOR CARGO CONTAINERS & TRUCKS

Model ~ RAD-10, -11 CANSCAN

FEATURES:

- FAST SCAN; NO MOVING PARTS
- NON-INVASIVE - EXTERNAL SCAN GIVES DETAILED INTERNAL INFORMATION
- DETECTS - ALL RADIOACTIVE MATERIALS, SOURCES & CONTAMINATION
- MORE SENSITIVE and BETTER RESOLUTION THAN BIGGEST VEHICLE MONITORS
- WIRELESS TRANSMISSION TO OPERATOR'S COMPUTER
- CREATES MAP OF INTERIOR
- PIN-POINTS LOCATION OF RADIOACTIVE CONTRABAND
- ISOTOPE IDENTIFICATION OF 'HOT' SOURCES
- OPERATOR COMPUTER WITH PRELOADED SOFTWARE & SPECTRUM LIBRARY
- EXTREMELY WELL SHOCK MOUNTED
- **IP67**

GANTRY CRANE MOUNTED

PROBLEM:

Large numbers of loaded shipping containers pass through & are stored at seaports around the world. We need to know which containers, if any, carry Radioactive Materials. Entering & doing a manual search of large numbers of containers is not feasible for many reasons.

SOLUTION:

The **RAD-10, 11 CANSCAN** give highly detailed, FAST RESPONSE, interior information from an external scan.

DESCRIPTION:

(20) Gamma detectors arranged in an 8 ft x 40 ft array, gives IMMEDIATE DATA on possible radioactive content of the entire container volume.

(2) METHODS OF USE:

1) **RAD-10: Detector Wall:** 8 ft H x 40 ft L array, Container is placed parallel & within 3 feet of the detector wall.

Proximity sensors start the measurement

Counting continues until:

1) Container is removed
2) Operator stops count
3) Count alarm is tripped
4) A combination of the above

CBRN Real - Time Air & Water Specialists

TECHNICAL ASSOCIATES Divisions of US NUCLEAR CORP

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METHODS OF USE: (continued)

2) RAD-11: Crane Mounted: Mounting of detector array is on a crane or a spreader.

Views container from above

This mounting has both advantages & disadvantages.

Proximity sensors start the measurement

Counting continues until:
1) Container is removed
2) Operator stops count
3) Count alarm is tripped
4) A combination of the above

Advantages:

- The entire container is scanned
- No additional handling
- The detector array is well shock mounted
- Contraband cargo is spotted early
- Suspicious container can be quickly separated from the rest
- Reliably detects CFR49-C Hazard Class 7 (Radioactive Material)

Disadvantages:

- Quick Scan costs more than TA's 'OFF-LINE' RAD – 20 CANSCAN
- Installation may require Port approval

NOTE: Patent Pending

SPECIFICATIONS:

Sensitive Length: 40 ft L x 8 ft H

Overall Dimensions: **RAD-10 CANSCAN Detector Wall:** 8 ft H x 2 ft W x 40 ft L

RAD-11 CANSCAN Crane Mount: 2 ft H x 1 ft W x 8 ft L (2 Each)

Detectors:

RAD TYPE	SCINTILLATORS	RAD-10 CANSCAN	RAD-11 CANSCAN
Gamma:	(20) ea 3" dia x 1" NaI(Tl) Scintillator	YES	YES
Neutron:	(2) ea. 3" Neutron Scintillator	YES	YES
Neutron Generator:	N/A	N/A	YES

SPECIFICATIONS continued:

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Neutron Generator: In the **RAD-11 CANSCAN** a Neutron Generator gives enhanced sensitivity to fissile materials.

Shielding: Shielding & Collimation is provided, but may be deleted for a special light-weight version: **RAD-10LW**.

Electronics: Each detector has pre-amp and HV.

Isotope Identification: A Multi-Channel Analyzer applies Background Subtraction and uses a Sophisticated algorithms to compare the output from the highest counting detector to the extensive pre-loaded Spectrum Library to achieve accurate Isotope Identification.

Location Mapping: The computer uses the detector data to overlay a virtual 4 x 20 grid onto the shipping container, with grid lines spaced every three inches

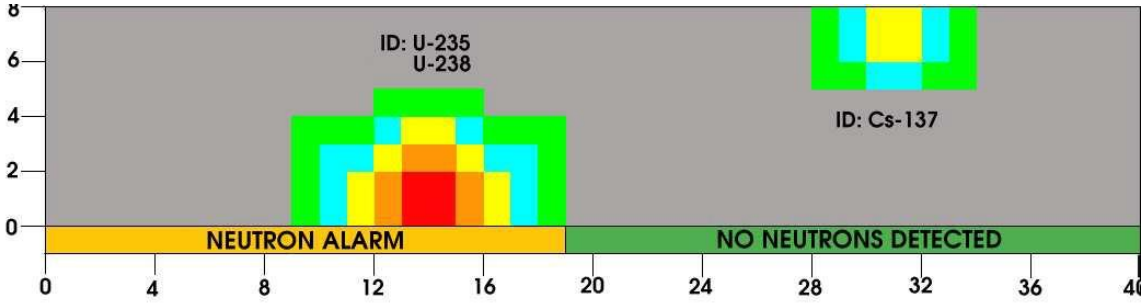
The visual display shows where the radiation emitting sources are located on this grid.

Data Transmission: Wireless transmission to operator's computer

Data Storage: All data is archived to computer memory.

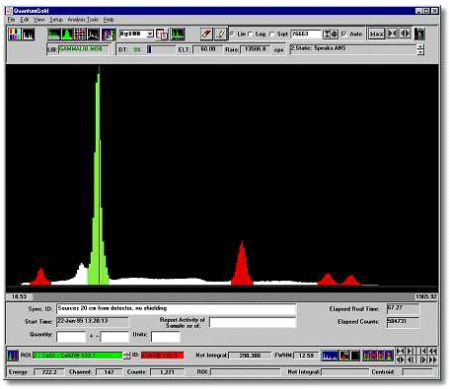
Image of Container Interior

Created By RAD-CANSCAN



RAD-10,11 CANSCAN

4 x 20 Grid Showing 2 Hot Spots & identifying the isotopes in this shipping container.



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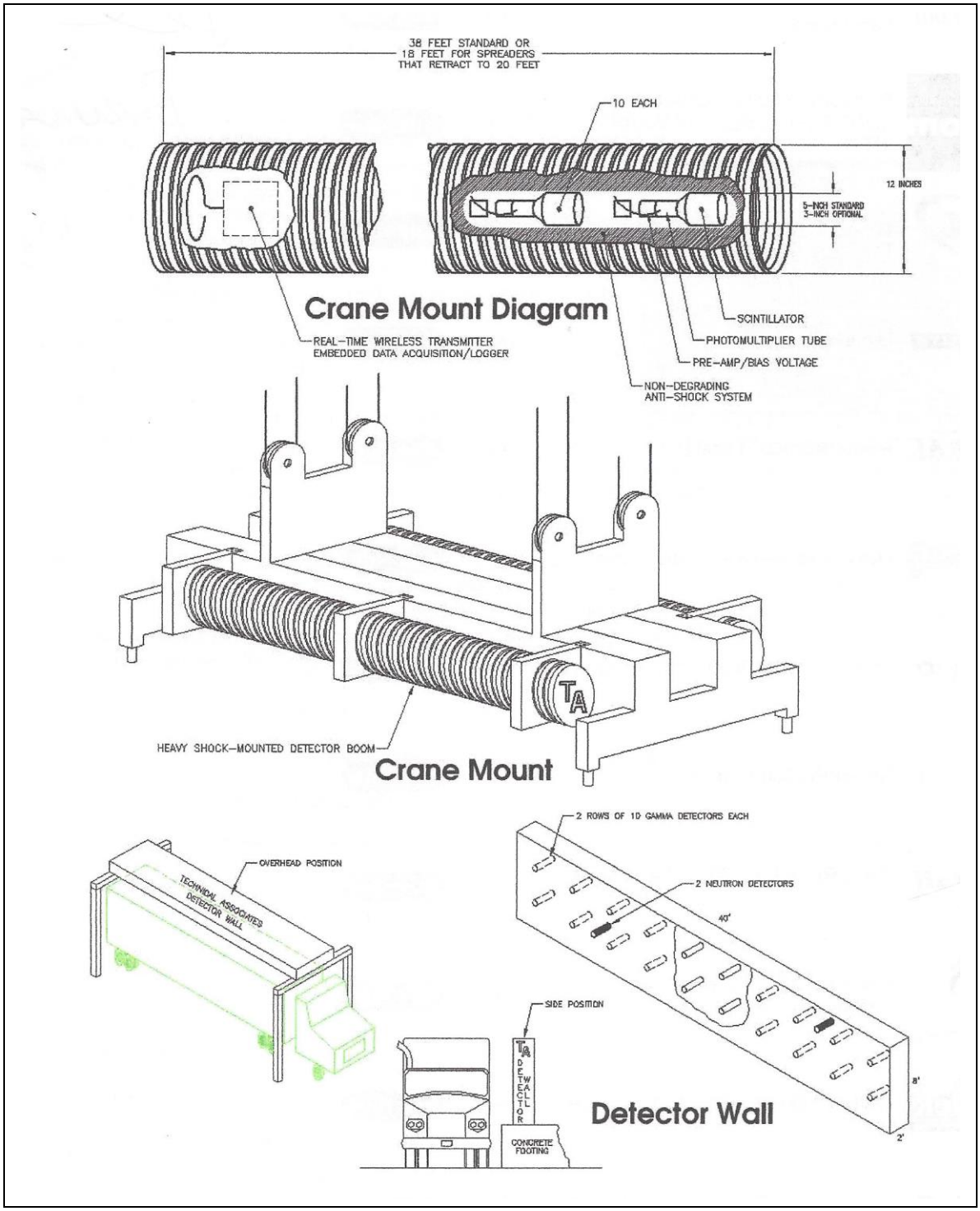

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