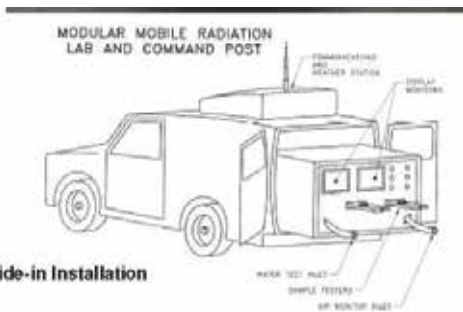




**MoRad Electronics**



**Super Morad – Self-Contained Unit with All Features**

# Mobile Radiation Detector

## Model Series: MoRad and Super MoRAD

### Features

- Vehicle / Robot Mounted Radiation Detectors
- Choose Up To 7 Beta-gamma and/or Neutron Detectors
- Detects Beta-gamma Radiation and Neutrons.
- Simultaneous Detection With 4 Detectors
- Optional: Simultaneous 7 Detectors
- Sensitive - 1 $\mu$  R/hr Resolution
- Rugged, Splash Proof
- Wide Measurement Range
- Data Download: PC / Computer (Morad and Super Morad)
- Optional: Wireless Remote Access
- Remote Access Available
- User Settable Alarm Levels
- **Small Size – Morad Super Morad**
- **Slip In Self-contained Modular Unit for Van or Truck with All Features Including Air and Water Sampling, MCA, Electronics – Computer HUB FM 9-HUB**
- Targeted and Omni-Directional Detectors
- **Optional** GPS (Morad); Built-in GPS (Super Morad)
- **IP63**

### Applications

- Scrap Yards
- Landfills
- Fire
- Military
- Police
- EPA
- Collection Services
- Demolition
- Nuclear Power Plant
- Government Agencies
- National Laboratories



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# Mobile Radiation Detector

## Model Series: MoRad and Super MoRAD

### Situation 1

Landfills, scrap yards, recycling centers, demolitions and collection services are industries at great risk for coming into contact with radioactive contamination. The high cost and specific laws for disposal of radioactive waste are often deterrents to proper disposal.

### Situation 2

When the police get a call out to a suspected dirty bomb or nuclear device site, they **need maps showing long-standing radiation levels at each point**, as well as current radiation levels. This valuable information is available with the use of the **MoRad Radiation Detection** instrument.

### Summary

Power:	Vehicle, battery or AC
Detects:	Neutron, Gamma, with optional Alpha and Beta probes
Detectors:	Rugged with mounting brackets and appropriate cabling
Supports:	Alpha / Beta Air Monitor
Display:	Directly to laptop or SELF-CONTAINED UNIT – SUPER MORAD
Data Download:	USB ports on both models: MoRad and Super MoRAD
Sensitivity:	

**Usable Probes Cover Range:** 1uR/hr to 1000 R/hr; 0 to 30,000 Cps; 0.1 mRem/hr to 10 Rem/hr. *Please see following chart.*

### Specialty Features

- High sensitivity Gamma can be mounted with swivel controlled aim
- Radio telemetry for remote monitoring option
- Displays results on satellite image of local terrain
- Chemical sensor and or Chemical Warfare Agents sensor integration option
- Will support up to 4 detectors simultaneously – Standard, **Optional** - 6 Detectors
- **Super MoRAD** is a slide in unit to a van or a truck creating a mobile radiation lab and command post. Self-contained for 7 detectors and built in computer. Air, water, weather and command communication.

### Description

Detectors are rugged and waterproof. If detectors are mounted on the vehicle brackets are provided with enough cabling to reach the electronics box.

- The user's laptop is connected to the electronics and detector readout is displayed.
- Interface software is provided. **Optional:** Laptop with loaded software.

#### When and why are security personnel interested in radiation levels?

Three time periods are of interest:

- **Baseline time period / Baseline mapping:** Background varies from place to place, due to natural causes, and old pollution as well as uranium and potassium in found in roads and in building materials.
- **Prior to Detonation:** The terrorist moves radioactive materials into an area, for storage or pre-positioning a dirty bomb or nuclear bomb prior to detonation.
- **After Detonation:** An industrial accident or a dirty bomb explosion releases large mounts of radioactive material in solid, liquid or airborne form.




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Mapping and recording the baseline radiation levels is an invaluable tool for emergency personnel. Having this information in hand is critical in determining a potential threat level short of an actual detonation.

Omni-Directional Detectors (choose up to 7 detectors)	Detector Model	Type	Diameter	Range
Ultra Low Range Gamma Mapping & Search Tool	PGS-3x3Lmomo	Scintillator	3"	0.1 $\mu$ R/hr to 1mR/hr
Low Range Gamma Mapping & Search Tool	PGS-3Lmo	Scintillator	2"	1 $\mu$ R/hr to 1mR/hr
Mid to High Range Gamma Mapping	P-7LBmo	GM	1"	10 $\mu$ R/hr to 10mR/hr
Very High Range Gamma Mapping	TBM-ICHmo	Ion Chamber	3"	100mR/hr to 500R/hr
Neutron Mapping Tool	PNS-19mo	Scintillator	1.5"	5-10,000 neutrons/cm <sup>2</sup> /sec. Sensitive to all energies.
AIR-BORNE PARTICULATES After dirty bomb explodes	AIR-TBMmo	Air Samples + filter + detector	2"	3 x 10 <sup>-7</sup> $\mu$ Ci/cc in 1 minute detects Rad dust & vapors.

### OPTIONAL: Model PGS-3LSW is a Targeted Detector:

This collimated detector with operator controlled swivel, allows operator to determine specific direction of Gamma-emitter threat.

OPTIONS	MODEL
Drinking Water Tester	MEDA-5T
Food Tester	FL-1000

### Also Available For Emergency Response

USERS	MORAD	SUPER MORAD
Police Departments	Yes	Yes
Health Departments	Yes	Yes
First Responders	Yes	Yes
Nuclear Power Plants		Yes
National Laboratories		Yes
Environmental Protection Agency		Yes
Homeland Security	Yes	Yes
Radiation Map Makers	Yes	Yes



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# Mobile Radiation Detector

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### Specifications

#### Main Read Out Via Laptop PC (MoRad), Self-Contained Unit (Super MoRAD)

- **Optional - Digital Readout:** 6 digit LCD Rate, 8 digit integrate
- **Time Base:** Crystal controlled 1-10,000 seconds, user settable
- **Range:**  
**Usable Probes Cover Range:** 1uR/hr to 1000 R/hr; 0 to 30,000 Cps; 0.1 mRem/hr to 10 Rem/hr
- **Alarm:** 2000 Hz audio tone with audio "mute" switch + RED LED  
**Optional:** High Current Relay – User Settable
- **Single Channel Adjustable Energy Window:**
- **Energy Analyzer/Discriminator:** 10-turn, 1000 division pot for each threshold  
10-turn, 1000 division pot for window width
- **Detector:**

#### Mates with T/A Probes, any GM, Proportional or Scintillation:

- Alpha, Beta, Gamma, Positron, X-Ray, Neutron, Tritium
- **Detector Connector:** BNC bulkhead mount (MHV optional)
- **Detector Bias:** 0-2000V regulated and filtered
- **Supply:** High Voltage is adjustable and repeatable with the 10 turn dial
- **Settable scale factors allow readout in almost any units on PC.**
- **Engineering Units:** R/h or cpm User Settable
- **Panel Controls:** On-Off Toggle; (2-4) Upper and Lower Threshold Dials;  
(2-4) High Voltage Dials
- **Calibration:** Digital input of calibration factor gives high precision adjustment
- **Serial Output:** Two-way, RS-232 standard, USB optional
- **Construction:** NEMA-4X aluminum gasket sealed case with handle:  
Rugged / Splash-proof. All plug in circuit cards
- Data Archive:** 10,000
- **Computer Interface:** Ethernet and RS-232 Port **Optional:** USB ports  
TAquire Software
- **Option:** GPS

#### Power:

- **Power:** Built-in Rechargeable Battery Pack, Vehicle Power, or AC
- **Batteries:** 12v, 4.8 Amp Hour built-in L-ion battery pack with AC Charger Adapter
- **Battery Life:** 3-5 days at 8 Hours per day

#### Dimensions and Weight:

- **Dimensions:** 13" W x 10" D x 10" H
- **Weight:** 6 lbs



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Customized Emergency Response Vehicles with MoRad on Board



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