

# MSpec

Gamma & Gamma/Neutron  
Handheld Spectrometer



**MSpec with protective boot**

## Locate and Identify Specific Isotopes

The MSpec is palm sized gamma ray spectrometer that utilizes a Sodium doped Cesium Iodide Crystal with high signal to noise ratio PMT and state-of-the-art electronics for the most accurate results. The MSpec scans suspect material and quickly analyzes to determine what nuclide isotope is present and then categorizes the result as Medical, Industrial, Natural Occurring Radioactive Material (NORM), or Special Nuclear Material (SNM).

## User Friendly

The MSpec has two modes a user may choose from: Manual or Automatic. Automatic is the quickest and easiest to use mode. Set in Automatic the MSpec will search for and detect radioactive material. Once in range the instrument will automatically begin isotopic identification and display the results. Manual mode gives the user greater control including the ability for longer scan times which increases the accuracy of results. This is especially important if there are multiple isotopes present in the same sample.

## RadView Software

RadComm's exclusive RadView software interfaces with a user's PC and enables a user to see detailed results of recorded scans in a Histogram format. Each result can be edited with comments, saved as a PDF and archived for future reference or email compatibility.

# MSpec

## SPECIFICATIONS

### MECHANICAL

- Rugged Case: 4.75" x 2.5" x 1.22" (12 cm x 6.4cm x 3.1cm)
- Display Window: 1.56" x 1.81" (3.96cm x 4.6cm)
- Weight : 0.44lbs (200g)
- Five Push Button Actuation Mini USB Connector for Internal Battery Charging
- Operating Temperature Range: 14°F to +113°F (-10°C to +45°C)
- Thru-hole for Audio Alarm
- Shock resistance – 1 meter drop test

### ELECTRICAL

- Micro-Controller Based Architecture
- 1.56" x 1.81" (3.96cm x 4.6cm) LCD with Backlight
- Backlight Auto-Off (180 seconds) with Push Button Auto-On
- Audio Alarm with Vibration
- Stable Low Noise H.V. Power Supply
- Internal Rechargeable Li Ion Battery with Charging LED indicator
- Battery Life: 6 hours continuous with Backlight
- Battery Recharge Time: 4.5 hours based on 2400mAh Battery

### SOFTWARE

- Menu Driven User Interface
- Menu Feature Selection Controlled by a Five Push Button Actuation
- Storage of 300 spectra, resettable and downloadable via USB
- Selectable Features: Date and Time, Units of Measure, Readings Update, Language
- PC Configurable
- Up to 6 Digit Auto-Scaling Displayed Radiation Level
- Selectable Displayed Units - CPS, R/hr, Sv/hr
- Base Sampling Rate is 200 mSec, Screen Updates Every 1/Second (CPS)
- Battery Level Indicator: Three Bars for Full Battery, Low Battery Warning Message with the battery bar flashing, 10% Battery Capacity Remaining Audio Beep Every One Minute, System will Turn Off at 5% Battery Capacity
- Warning Messages: Move Closer; Move Away, CPS Exceeds Threshold, Stabilization Off. No ID, Stabilization Required, Memory is Full, Scanning

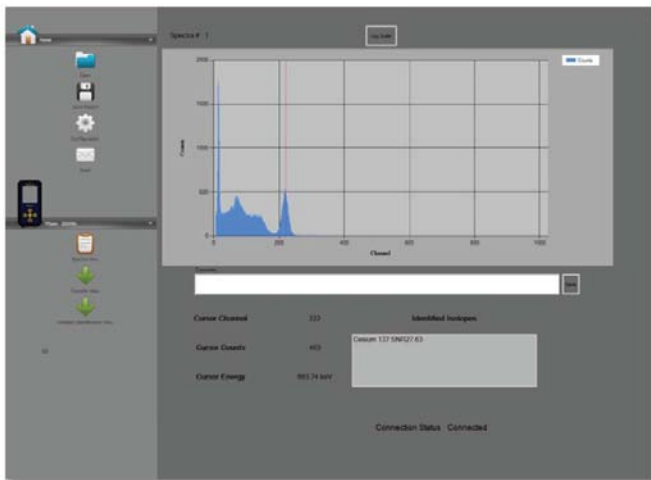
### DETECTOR

#### Gamma

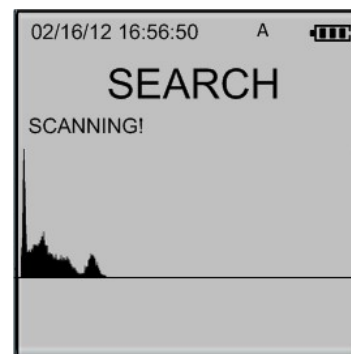
- CsI(Na) Crystal: 0.5" X 1.5" (13mm X 38mm)
- Energy Range: 20 KeV – 3.0 MeV
- Dose Rate Range: 1  $\mu$ R/hr to 1 R/hr (0.01 $\mu$ Sv/hr to 10.0 mSv/hr)
- Gamma Sensitivity: Cs137 1,300 (cps/mR/hr)
- Gamma Spectrum: 1024 Channels
- Resolution: 9% or better at 662 KeV
- Optional Neutron Detector; 4.5 cm<sup>3</sup> He3, Sensitivity - .6 cps per /NV
- Accumulated Dose: 1000 R (10 Sv), resettable
- Radiation Warning Level: 1.14 mR/hr (10.0  $\mu$ Sv/hr)

#### Neutron

- Neutron He3 Tube
- High Density Moderator
- High Gain with High Signal to Noise Ratio Amplifier
- Mechanical Noise rejection Circuitry
- Neutron Software Option for the MSpec and the PC Software



RadView PC Software Program for Data Management



Real Time Spectrum Display

