



Identifinder ISOTOPE IDENTIFIER

The Isotope Identifier is a radiation detection tool that has the ability to calculate DOSE RATE in microREM/Hour, find a radiological source by alarming as it gets closer that source, and identify that source by class and specific radiologic isotope.

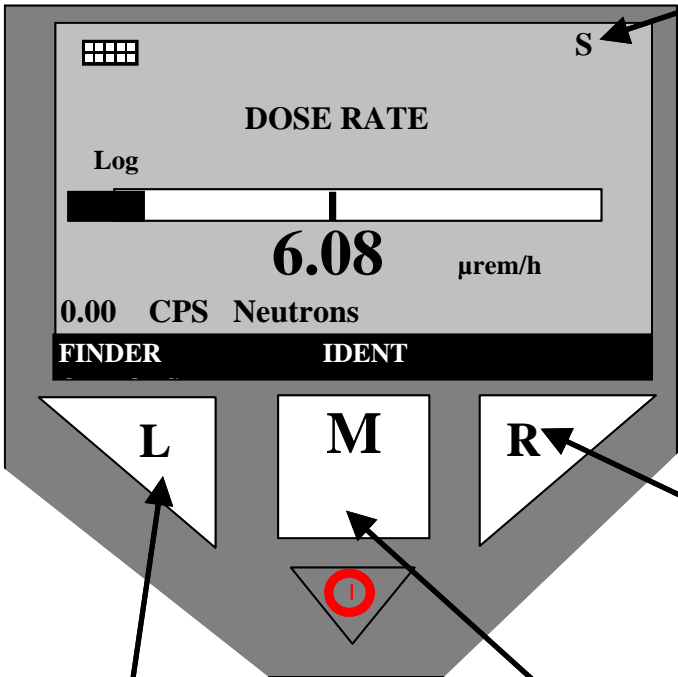
The identiFINDER will pick up Gamma and Neutron Radiation

TURNING THE METER ON and OFF
 Press the triangular start up button and the start sequence will be initiated. This will include an AUTOMATIC calibration using the internal Cs-137 source. Do not start the machine near a known radiological source.



Batteries/Power Sources
 The meter will not work if a battery pack is not inserted into the handle. There are two battery packs - 1 that is rechargeable and one that uses four AA batteries. Rechargeable AA batteries CANNOT be charged while in the unit. To change the battery pack, unscrew the nut at the distal end of the handle.

Calibration Note
Once the meter is calibrated, the DOSE RATE screen will appear. If "S" appears in the upper right hand corner, that indicates a successful calibration. "N" in the upper right corner indicates a failed calibration. Turn the meter off and try again.



Dose Rate Mode
 The dose rate is displayed in microREM / Hour. It will automatically change to mREM / hour when the 999 microREM / Hour is exceeded. The bar in the middle of the screen is a logarithmic depiction of the dose rate. The black line in the middle of the bar represents the alarm threshold (2 mREM/Hr).

OPTIONS MODE
 By pressing the R button, the meter will enter the OPTIONS MODE. The password is needed to enter this screen.

The indicator lights on the front of the device flash in the presence of Gamma Radiation (G) or Neutron Radiation (N)

FINDER MODE
 By pressing the L button, the meter will enter the FINDER MODE. See the back page for a protocol of use.

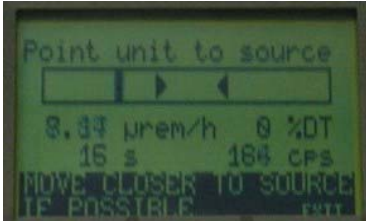
IDENTIFY MODE
 By pressing the M button, the meter will enter the IDENTIFY MODE. See the back page for a protocol of use.

Alarm Settings for the METER		
	Early Warning	Alarm
DOSE Mode	2 REM	5 REM
DOSE Rate Mode	1 mREM	2 mREM
Neutron Counter		10 CPS



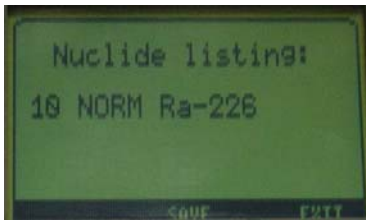
FINDER Mode (Entered by the L Button)

This mode is used to locate a radiological source. Use a grid to make sure the entire area is covered. The closer you get to the radiological source, the higher the spikes appear on the screen and the higher the intensity of the audible and vibration alarm. A reading of the radiation level will appear on the lower portion of the screen



IDENTIFY Mode (Entered by the M Button)

Once you have located the source (Either known or through the FINDER Mode), enter the IDENTIFY MODE to identify the radiological isotope. As you get closer to the source, the vertical black bar will move closer to the middle of the horizontal line. The goal is to be close enough that the vertical bar is positioned between the two arrows. Hold it in that location as the time counts down and the result will be a screen that identifies the material.



NUCLIDE LISTING

Once the nuclide has been identified, it will be displayed on the screen. The number on the left identifies the certainty of identification. "--" means that the certainty is minimal. The highest number is 10.

NUCLIDE CLASSIFICATIONS

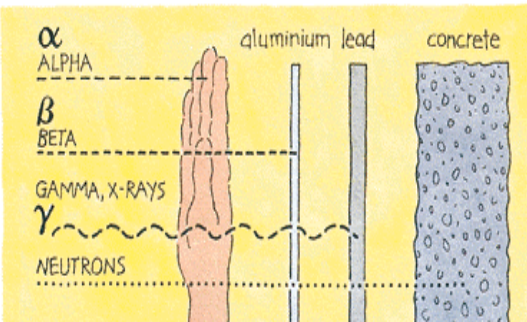
MED = Medical Grade Isotopes **NUC** = Product of fissile and used for weapons
IND = Industrial Grade Isotopes **NORM** = Naturally Occurring Radioactive Materials
OSI = Materials may be present at **O**n **S**ite **I**nspections of Nuclear Test Fields

The nuclide is also listed with the isotope (Ra-226 in the above picture). This can be entered into Google to ascertain additional information about the source.

BASIC RADIATION FACTS

Ionizing radiation is harmful:

1 REM = 1000 milliREM (mREM) = 1,000,000 microREM (µREM)



DOSE	DESCRIPTION
360 mREM	Average dose over a ONE YEAR period
2 mREM/Hr	THIS IS THE HOT ZONE
5 REM	OSHA allowable exposure over 1 YEAR
25 + REM	Volunteers for RESCUE ONLY
Twice Background	Indicates that radiation is present and that decontamination may need to be repeated
1000 REM	This will kill 80% of the population (LD80)
600 REM	This will kill 50% of the population (LD50)

How do I protect myself: TIME - DISTANCE - SHIELDING
 Inverse Square Rule: Double the distance, quarter the dose
 ALARA = As Low as Reasonably Achievable

Resources: Joint Analysis Center: 1-877-DNDO-JAC
 (877-3636-522)

KPH 2007