

## F.I.D.L.E.R. Data Sheet

The F.I.D.L.E.R. (Field Instrument for the Detection of Low Energy Radiation) probe.

### APPLICATIONS.

This probe allows for the detection of isotopes in the outdoor environment which are normally difficult to detect.

Possible uses include:

- 1/ The detection of “alpha emitters” like Am-241 and Pu-239 in environmental surveys. The low energy gammas associated with these alpha emitting isotopes are easily observed with this device. Applications include monitoring land, building and strand line surveys.
- 2/ Monitoring of the above in accident / emergency surveys.
- 3/ Monitoring the above under paint or similar.
- 4/ Monitoring I-125 in the environment.
- 5/ Looking for trace materials in Home Land Security applications.



The detection efficiency for these probes is about 20/Bq/cm<sup>2</sup> for Am-241. This means that meaningful monitoring of radioactive contamination under paint is possible. Satisfying some of the detection limits required by the Substances of Low Activity (SoLA) Regulations.



Since these detectors are used in rugged field applications, the F.I.D.L.E.R. probe is configured with a rugged thick-walled machined aluminium housing which provides added mechanical and thermal protection for the NaI(Tl) crystal. A spun aluminium light shield is used to minimize the overall weight of the detector. All detectors are shipped with a protective cap for storage and handling. An additional protective cap with a Kapton window helps to minimise damage to the scintillator and energy entrance window when the detector is used in the field .

For ease of use the unit is also available with a horizontal or vertical handle or tripod where required.

A protective Kapton cap comes as standard.

Crystal description: 5.000"x.063" NaI(Tl) mounted on a quartz light pipe.

Crystal housing: Machined aluminium, with nickel/chrome plating, with .010" thick aluminium entrance window.

Photomultiplier: 5" wrapped with magnetic shielding foil, spun aluminium light shield. Low background configuration: low background glass, PMT

Connector MHV as standard, others available if required

