

Highlights of Backpack Gamma Spectrometry System (BGSS)

- Search, Detect, Identify and Locate Orphan/hidden radioactive sources
- Source search operation without drawing the attention of public
- Detection unit is packed in a back pack and Radiation level is communicated to smart phone over Bluetooth
- Android app to analyse the data
- Smart phone vibrates upon detecting a radioactive source
- Auto identification of source
- Intuitive Android based GUI
- 2"x2" NaI(Tl) detector
- FPGA based 512 channel MCA board
- 10 hours continuous operation
- Measurement range : Background to 100 $\mu\text{Sv/h}$ (Cs-137)
- Spectrum Acquisition time : 1 sec
- Minimal detectable activity (source located at 1 m)- 450 kBq for Cs-137
- Energy resolution at 662 keV (Cs-137) : 7.5 %
- Alarm activation time: 1 sec
- Powered by 11.1 V, 10000 mAh LiPo battery
- Weight ~ 3.5 kg