

# Rad Elec Recon<sup>®</sup>

## Continuous Radon Monitor

### Technical Specifications

- Methodology:** Uses two independent photodiodes (each enclosed in an electrically conductive chamber). Alpha particles from radon decay are detected by these photodiodes.
- LLD:** Lower limit of detection experimentally determined to be 0.6 pCi/L.
- Sensitivity:** Combined sensitivity of approximately 13.5 counts per hour per pCi/L.
- % Error:** 0.75% (typical).
- Dimensions:** Height 3" (8 cm), Length 7" (18 cm), Width 5" (13 cm), Weight 2.0 lbs (0.9 kg), Tripod Mount Thread Size 1/4"-20.
- Procedures:** Keyed switch to initiate (and terminate) data collection, with optional delay up to 48 hours. Average results displayed on instrument LCD, but further analysis can be conducted via included software or with the Radon Report Manager software. Self-diagnostic on instrument boot.
- Battery Life:** 96 hour battery life, in addition to optional 4- to 48-hour delay before initiation of data collection.
- Background:** Experimentally determined to be between 0.2 and 0.3 pCi/L.
- Durability:** 0% to 85% relative humidity; safe operating temperature range from 0C to 40C. Unaffected by normal atmospheric pressure ranges. Able to withstand normal shocks during shipping, and can withstand drops up to 1 meter onto a hard surface. Battery case is rated to 10 Gs, and entire instrument has been field-tested to ~3 Gs.
- Data Storage:** EEPROM data storage, which is written and erased via electrical pulses. Minimum data retention of approximately 40 years and 1,000,000 erase/write cycles. Up to 127 days of hourly data collection.
- Thoron:** Radon and thoron must diffuse through two discrete Tyvek barriers and two tiny filter holes before reaching the sensitive volume.