

## Long-Term Testing Devices



**Electrostatic Radon Monitor:** A device known as the Electret Passive Environmental Radon Monitor (E-PERM) is used by many professional radon testers to obtain fast results on radon concentration. This type of device can be used as a short-term or long-term test. E-PERM is a passive integrating radon detection system consisting of a charged Teflon disk (electret), an open-faced ionization chamber, a voltage reader, and a data logger. After placing the electret in the chamber, an electrostatic field is established. Radon gas diffuses passively into the chamber. The Alpha particles emitted from the decay of radon ionize the air molecules. These ions are attracted to the charged surface of the electret, thus reducing the initial charge of the electret. The initial and the final voltages are measured using the voltage reader. The rate of change of the charge is proportional to the concentration of radon in the test area.

[http://radelec.com/index.php?option=com\\_content&task=section&id=8&Itemid=31](http://radelec.com/index.php?option=com_content&task=section&id=8&Itemid=31)

## Alpha-Track Detectors:



Alpha-track detectors are long-term passive test devices that operate on a very different principle. Inside there is a piece of film that records the impacts (tracks) of Alpha particles produced by the decay of radon and its decay by-product, polonium. Depending on the design of the detector, it may be set out for anywhere from two weeks to an entire year. At the end of the test period, the detector is returned to the manufacturer who counts the Alpha tracks on the film, computes the radon concentration, and reports the results to the buyer.

<http://rssi.us/radon-alpha-track-radon-detector.htm>

## Radon detector



This low cost, consumer-oriented digital radon detector allows the homeowner to monitor the radon level in their home with an easy-to-read digital display. This detector should not be used as a substitute for performing a conventional radon test in your home, or for professional applications. The device is suitable for monitoring home radon levels only after an initial assessment has been performed using conventional test kits or by a radon

professional. Further, periodic testing using conventional test kits should be done in conjunction with the detector to ensure it is working properly. Radon is odorless and colorless and there is no way to ensure the device is working properly without such crosschecks.

<http://www.radonzone.com/radon-detector.html>