

The MBD™ was designed to be used for 6+ months between battery replacements. It uses an inexpensive CR2032 3V Lithium button-style battery (minimum 210 mAH nominal capacity) which can be found at many stores and on the internet. The MBD™ will sound a continuous, steady tone when the battery is low and needs replacing (as opposed to a beeping sound during an actual radiation alert). If you press the diagnostic button and the LED does not light, replace the battery. If you install a new battery and the LED still does not light when you press the diagnostic button please contact us for further instruction.

To replace battery:

- Pry between key ring halves of the case to separate the two halves and remove the bottom half of the unit. Be careful not to touch the circuits on the board with your fingers.



- Remove the existing battery (CR2032) by lifting the battery from one side. To install a new battery, insert one end first then snap down the other end of the battery. Close the case by aligning the two halves and pressing firmly until it snaps together. Press the diagnostic button to illuminate the red LED and verify that your MBD™ is now operational.



Warranty

The MBD™ has a 2-year parts and labor limited warranty. This limited warranty shall not extend to water damage or damage caused or occasioned by exposure of the product to a corrosive environment. Nor shall this warranty extend to physical damage caused by misuse, abuse, or service by anyone other than the manufacturer's authorized representative, or damaged due to accident or act of God. If warranty conditions are met, the product may either be repaired or replaced at the sole discretion of the manufacturer.

Legal Disclaimer

The liability of AI Applications Inc. for all damages, losses and causes of action (whether in contract, tort or otherwise) shall be limited in aggregate to the price paid by the Buyer for the Goods. The liability of AI Applications Inc. for any breach of this Agreement (including the failure of the Goods to conform to any express or implied use, warranty or condition) shall in all circumstances be limited to the price paid by the Buyer for the Goods. Without limitation, AI Applications Inc. shall not be liable in any circumstances for any incidental, special, consequential damages resulting from or with respect to the performance or use or non-performance or non-use of the Goods, including any such damages:

- (a) the possibility of which AI Applications Inc. was informed of, or was otherwise aware of, prior to the purchase and sale transaction; or
- (b) that are attributable to the negligence or gross negligence of AI Applications Inc., and the Buyer hereby waives any right to claim any punitive, aggravated or exemplary damages with respect to a breach of the purchase transaction or the performance or non-performance of the Goods, and whether any such claim is founded in contract, tort or otherwise.

The Buyer shall notify AI Applications Inc. forthwith in writing of any defects in the Goods detected at the time of inspection or during the warranty period, whereupon AI Applications Inc. shall have a reasonable time to correct those defects by repairing or replacing any defective parts or Goods.

MBD™ 1240C Micro Bomb Detector



User Guide

Phone: 1-716-304-6711
www.dirtybombdetector.com

MBD™ 1240 User Guide

The MBD™ personal radiation detector is designed to alert you to the presence of gamma-ray, beta, fast-neutron and x-ray radiation fields by producing audible and visual alerts. The MBD's patent-pending design is based on a highly sensitive, near-instant response, dual-mode intelligent microprocessor. Twenty-four hours a day the MBD's microprocessor samples the air 32,768 times per second during normal operation. It continues to sample at this rate if radiation is detected so as to determine your level of exposure and instantly alert you accordingly. Though the MBD™ detects gamma, beta, fast-neutron and x-ray radiation, it alerts you only to the *presence* of radiation, not the specific *type* of radiation. The MBD™ will not report false alarms or "beep" when exposed to varying temperature levels (such as some other keychain style detectors). The MBD™ remain quiet when not exposed to detectable radiation levels unless the low-battery tone is sounded (a continuous, steady tone) at which time you need to replace the battery.

Dual-Mode Radiation Alerts

Auto Alert (with directional feature)

- Exposure to gamma, beta, fast-neutron or x-ray radiation of 75 milliRoentgens per hour (mR/hr) is sufficient to trigger the low-level auto-alert which will cause the MBD™ to automatically flash and beep once (in sync) every 2 seconds. The flash is emitted by the red LED light on the front of the unit. The MBD's alarms will flash and beep (in sync) increasingly *faster* as your radiation exposure rate *rises*. The MBD's alarms will flash and beep (in sync) decreasingly *slower* as your radiation exposure rate *drops* and will stop alerting when the level drops below the 75 mR/hr level.
- Directional Feature: An unmatched benefit of the real-time auto-alert capability of the MBD™ is that by holding the unit vertically - with the gray diagnostic button facing you - and slowly turning in a circle, you are able to monitor the real-time increasing/decreasing auto-alert rate (as described above), allowing you to determine the direction from which the radiation is coming. This allows you to move in the *other* direction away from the radioactive source. This feature is possible because the microprocessor samples the air 32,768 times a second and gives you *instant* feedback of the current radiation levels. We do not recommend you use the MBD™ to *locate* the radioactive source (although could be used for that purpose), but instead use your MBD™ to quickly locate a safe location away from the source of radiation.

Diagnostic Alert

- If the diagnostic button is quickly pressed and released when the MBD™ is auto-alerting you to the presence of radiation, the 'flash and beep' auto-alerts will pause momentarily. At which point the red LED light on the front of the MBD™ will flash at different rates (view chart below) to alert you to your current minimal level of radiation exposure measured in Roentgens per hour (R/hr). This LED 'exposure-level' alert is flashed each time you press and release the diagnostic button. (No audible alert will be heard). After the release of the button the MBD™ will then revert back to the beeping/flashing auto-alert mode (as described under Auto Alert).
- *Note: During normal function (no radiation present) the MBD's functionality can be confirmed by pressing and holding the gray diagnostic button. The microprocessor will illuminate the red LED and will turn it off when the diagnostic button is released. No audible alert will be heard.*

Diagnostic Alert Radiation Level (Press Gray Diagnostic Button)	
Low:	LONG – LONG (75mR/hr – 1R/hr) 1 second flash - pause - 1 second flash
Med:	LONG – SHORT (1R/hr – 9R/hr) 1 second flash - pause - ¼ second flash
High:	SHORT – SHORT (9R/hr – 2000R/hr) ¼ second flash - pause - ¼ second flash