Introduction

The Radlamp 300 is a dual purpose personal radiation detection device and small flashlight. When radiation is detected the flashlight changes from white to red. It is sensitive to beta, gamma and x-ray radiation.

Sealed, water-resistant and rugged, the Radlamp 300 can operates for 40 hours on a single set of inexpensive field-replaceable batteries.

The Radlamp 300 is perfect for law enforcement, customs, firefighters, border patrol, and military personnel to quickly and discreetly scan people and their possessions for radioactive materials. Additional uses include screening scrap metal, contamination detection and cleanup, and tracking medical isotopes and waste.

Operation

Before operating the Radlamp, please read and observe the warnings and cautions on page 3. The Radlamp is preconfigured to operate in threshold mode. To turn the Radlamp on, press the button on the end cap. Both the red and white LEDs will illuminate briefly, go out, and the white LEDs will illuminate. In this mode, the LEDs will glow red in the presence of radioactive material. The threshold is set to glow the red LEDs continuously with a 1.0uCi Cobalt 60 source or a 0.1 uCi Strontium 90 source within 2 centimeters from the face of the unit. A 10 uCi Cesium 137 source will glow the LEDs red at a distance of 12 centimeters.

As the unit's batteries become exhausted, the light produced by the LEDs will become dimmer. Replace the batteries with two type CR123A lithium cells before the LEDs become too dim to be useable. The unit will detect radiation and will function properly until the LEDs go totally dark.

As a safety feature, the Radlamp monitors background radiation count. If the unit fails to sense any background counts over a one minute period, the unit will flash the white LEDs at a regular interval while the red LEDs remain off. Should this happen, cycle the power and check for normal operation. If the error persists, the Geiger detector tube may have been damaged and the unit must be returned for service.

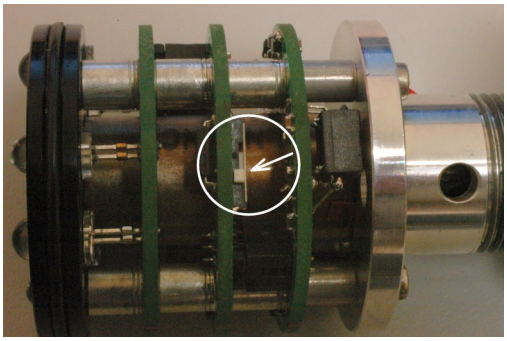
Advanced Configuration

The Radlamp can also operate in two other modes, Search Mode and Geiger Mode. To configure either of these modes, you must remove the Radlamp bell and electronics assembly to access the mode switch. To disassemble the Radlamp, first turn it off and remove the batteries. After removing the batteries, ***wait 15 minutes for the high voltage power supply to discharge.***

While holding the bell, unscrew the handle and set it aside. With firm pressure, push on the brass battery terminal while holding the bell. The electronics assembly will slide out. Note the location of any thin plastic spacers inside the bell and set it aside

Removing Handle from Bell

Rotate the electronics assembly until you see the mode switch.



Radlamp Mode Switch

Sliding the switch up to the topmost detent will place the Radlamp in Search Mode. In Search Mode, the red and white LEDs will show a modulated indication of the intensity of a nearby radiation source. As the Radlamp is moved closer to the source, the red LEDs will glow brighter and the white LEDs dimmer.

Sliding the switch to the center detent will place the Radlamp in Geiger Mode. The Radlamp will flash the red LEDs once for each nuclear event that it detects.

Sliding the switch to the bottommost detent will return the Radlamp to Threshold mode.

After the Radlamp mode is set to the desired position, reassemble the unit by checking the placement of any plastic spacers in the bell, reinstalling the electronics assembly inside the bell and screwing the handle back onto the rear of the bell. Reinstall the batteries and test the Radlamp for proper mode and operation.

User Maintenance

The Radlamp 300 user maintenance is limited to external cleaning and battery replacement. To replace the batteries, unscrew the end cap, remove the old batteries and replace them with fresh ones, with the positive button facing towards the bell. External cleaning should be done with a soft cloth and, if required, a mild detergent. The front window of the Geiger tube, visible

through the circular array of small holes in the center of the LEDs, is very fragile and no cleaning should be attempted with probes or compressed gas or air. Puncturing the Geiger tube mica window will destroy the tube and render the Radlamp useless until it can be repaired.

Detector Technical Details

The Radlamp 300 uses a LND, Inc. Type 712 Geiger tube as its radiation detector. The Type 712 tube is an alpha-beta-gamma detector with a mica window and is operated at 500 volts. Further information about the Type 712 detector is available on the manufacturer's website at http://www.indinc.com/products/711/

Safety Information

The Radlamp uses an internal 500 volt power supply to bias the Geiger tube. Do not operate the unit disassembled. Do not disassemble it without removing the batteries and then waiting 15 minutes for the high voltage circuits to discharge.

The Radlamp is intended as a simple radioactive screening tool only. It should not be used for quantitative radiation measurements, nor should it be used for making a sole determination of safe or unsafe radiation levels or contamination.

Do not insert any objects or force any liquid or gas into the Geiger tube front opening. The Geiger tube mica window is fragile and easily damaged. Puncturing the window will destroy the Geiger tube and render the Radlamp unusable.

Limited Warranty

Each Radlamp 300 is warranted to be free from defects in material and workmanship for a period of 90 days from the date of purchase. This warranty shall not apply to any unit which has been subject to misuse, neglect, accident, or abnormal conditions of operation.

Our obligation under this warranty is limited to repairing or replacing, at our option, any unit returned to the factory within 90 days of the date of purchase, provided that we determine that the unit is defective and has been used in compliance with the terms of this warranty. If the failure has been caused by misuse, neglect, accident, or abnormal conditions of operation, repairs will be billed at a nominal cost.

The foregoing warranty is exclusive and in lieu of all other warranties, expressed or implied, including, but not limited to, any warranty of merchantability or fitness for any particular purpose. We shall not be liable for any special, incidental or consequential damages, whether in contract, tort, or otherwise.

Damaged Geiger tubes are not covered by the warranty. We will replace a damaged Geiger tube for a flat fee of $150, including FedEx Ground return shipping to destinations in the US.

Important Notice

Life Support / Mission Critical Applications - This product is not fault-tolerant and is not designed, manufactured or intended for use or resale as on-line control equipment in hazardous environments requiring fail-safe performance, such as in the operation of nuclear facilities, aircraft navigation or communication systems, air traffic control, direct life support machines, or weapons systems, in which the failure of our hardware or software could lead directly to death, personal injury, or severe physical or environmental damage.

Contact Information

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