



ELECTRONIC CONTROL CONCEPTS

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INSTRUCTION MANUAL

MODEL 380

PERSONAL RADIATION DETECTOR

DESCRIPTION

The ECC Model 380 Personal Radiation Detector is an early warning alarm designed for anyone concerned about radiation safety. The ECC Model 380 is a simple, easy to use instrument designed to indicate the presence of abnormally high levels of alpha, beta, gamma and x-ray radiation.

The Model 380 is perfect for emergency personnel, paramedics, police and other first responders, as well as anyone working or living near a nuclear power plant, highway or railroad where radioactive waste is transported. Since there is no need for the user to understand the scientific principles of nuclear radiation, the ECC Model 380 can truly be used by anyone to monitor personal radiation exposure or protect first responders and the public from radioactive spills and contamination.

The Model 380 is a lightweight, handheld device that can easily be clipped to a belt or slipped into a pocket. The Model 380 is easy to use, a simple beep sounds as a red light illuminates in the presence of a radiation event. If the radiation reaches a level of concern an alarm will sound to alert the user.

GENERAL INSTRUCTIONS

General Operation

To use the Model 380, simply slide the ON/OFF Switch to the left to turn on the instrument. When the instrument is on the green "Power On" LED will start to blink, and a beep will sound to let the user know the unit is working. If the battery is low, the "Power On" LED will blink red. Remember to turn the instrument off when not in use to conserve the battery.

When the unit is turned on it will automatically be in the sound mode, (to switch the unit to the "silence" mode see the section on **Silence Mode** below.) In this mode the red LED will illuminate and a beep will sound at any radiation event. Everyday background radiation will cause random short beeps from the unit. This is completely normal and can range anywhere from as high as 1 to 2 beeps per minute or as low as 1 beep every 5 minutes. The beep / illumination due to background radiation indicates that the unit is operating properly.

If the presence of radiation reaches an abnormally high level and there is need for concern, an alarm will sound and the red LED will remain illuminated. The alarm indicates a level of more than 2 mR/hr for at least 2 seconds. This audio alarm will sound regardless of the mode of operation you have chosen. The unit is designed to always sound the alarm in the presence of a high level of radiation.

Silence Mode (mute)

There is a small switch located between the red and green LEDs, labeled "Mute", which can be used to switch the unit into a "silence" mode. Simply use the tip of a pencil or a small screwdriver to press in the switch. The green LED will "blink" indicating the unit has been turned to "silence." Once the unit is in the "silence" mode the red LED will still illuminate to indicate a radiation event, but the beep will not sound. Even in the silence mode, the alarm will sound to alert you of the radiation concern.

To turn the "silence" feature off simply press the switch in again, the unit will beep to indicate normal functioning.

Battery Replacement

The unit is powered by one standard 9volt battery, which should be replaced when indicated. The green LED will change to red to indicate the battery is low and needs to be changed. Although the unit will still work for approximately 1-2 hours after the initial indication, the battery needs to be changed to insure the unit's reliability.

To replace the battery, slide open the battery compartment on the bottom of the case. Remove the old battery, and install the new battery. Observe the correct

polarity of the battery. To prolong battery life, turn the instrument off when not in use.

WARRANTY

Electronic Control Concepts warrants the Model 380 Personal X-ray Detector from defects in materials and workmanship for a period of 2 years. There is no warranty on the battery. ECC will replace or repair any Model 380 during the first two years after shipment that does not show obvious signs of abuse. Contact the factory as described below.

SERVICE INFORMATION

To verify operation turn the unit on in a quiet room and listen for an occasional beep due to background radiation. This indicates that the unit is operating properly.

If a unit should need service, please contact the factory by phone, fax, or email to obtain a Return Materials Repair authorization.

(800)VIP-XRAY or (800)847-9729 Phone
(845)247-9028 Fax
eccxray@verizon.net email

After obtaining an RMR number, ship the unit to:
Electronic Control Concepts
160 Partition Street
Saugerties, NY 12477

For Further Information:

Please contact ECC for more information on the Model 380 Personal Radiation Detector or any of our other products:

- Electronic Universal X-Ray Timer
- Digital X-ray Timer
- Pulse Counter/ Exposure Time Meter
- kVp Meter
- X-Ray Output Detector
- Electronic X-ray Detector

- or ask about our Design Services
Visit us on the web at www.eccxray.com,
e-mail us at eccxray@verizon.net
or call us at 1-800-VIP-XRAY

SPECIFICATIONS

ALARM

2mR/hr rate for 2 seconds.

PHYSICAL SIZE

2.65 X 4.4 X 1.1 in.

CONNECTIONS

None for normal use.

POWER

Standard 9 Volt battery, replaceable
without tools.

BATTERY LIFE

10 days continuous, Low battery indicated
below 5.25Volts.

WARRANTY

2 Years.

WEIGHT

2 Ounces

SENSITIVITY

1000 cpm for ¹³⁷Cs at 1mR / hr