



W138

- 0-200 mR direct reading dosimeter
- Gamma and x-ray from 16-6100 KeV +/- 10%
- Meets ANSI specifications N13.5 and N322
- Barrel construction is of a durable, electrically conducting carbon fiber loaded liquid polymer
- All metal spring loaded clip is attached to barrel
- Can be charged with most available dosimeter chargers providing at least 195 volts
- Temperature range is between -20 degrees and 50 degrees celsius
- Humidity levels up to 90%
- Altitudes greater then 50,000 feet
- Shock, vibration and immersion tests meets Military and ANSI requirements
- Linear scale
- Length: 4.5" (12.4cm), Diameter: 0.6" (1.5cm)
- Weight: 1.0 oz (25 grams)
- All dosimeters come calibrated and includes calibration certification and decal
- Two year limited warranty from date of purchase
- Other model ranges available: W138 (0-200mR), W138S (0-2mSv), W500 (0-500mR/hr), 725 (0-5R), 730 (0-20R), 742 (0-200R), 746 (0-600R).

DCA Model 909 Charger

Model 909 Battery-Powered Dosimeter Charger

Easier charging, viewing, dosimeter protection and improved accuracy... these are the biggest reasons that the DCA Model 909 Dosimeter Charger is the best value on the market today!

The Model 909 Charger reading light reduces re-zeroing time and effort by eliminating the need to remove the dosimeter from the charger for reading. Simply view the scale while the dosimeter is resting lightly on the charger contact after re-zeroing. Reading in the same orientation as charging also minimizes the effect that gravitational induced fiber movement has on dosimeter accuracy and precision.

The Model 909 Charger charging contact is spring-loaded and has a positive mechanical stop. This design feature makes it virtually impossible to damage dosimeters through excessive charging force.

Features

- Capable of charging any self-reading dosimeter
- Conforms to ANSI N42.6-1980
- Operates on one 1.5 V "D" cell battery
- Has the ability to "Kick" or remove all residual charge from dosimeters properly, which prevents spurious upscale fiber movement
- Reading light to allow for easy charging/viewing
- Residual static charge removed for improved accuracy



Model 909

The patented "kick" feature found on the DCA Model 909 Charger automatically removes residual static charge from the dosimeter's charging pin every time the dosimeter is re-zeroed. This eliminates a major source of erroneous fiber movement (up to 5% of full scale)

Specifications

Weight:	10.6 oz. (302 g)
Width:	4" (102 mm)
Length:	4" (102 mm)
Height:	3.5" (89 mm)
Case	ABS Plastic
Controls	One turn potentiometer Reading; spring-loaded push rod
Power - Battery	1.5 V "D" cell
Charging voltage	40 V to 220 V
Operating Temperature	0 - 120 F (-18 - 49 C)
Lamp	Model 222 (TL-3 Miniature screw)

The Charging Process - Zeroing the Dosimeter

Accumulated radiation is read directly on an internal calibrated scale of the dosimeter. A Dosimeter Charger is required in order to return the dosimeter to zero after each exposure period if desired.

One end of the dosimeter contains an optical eye-piece, the opposite end is sealed by a diaphragm switch which houses the insulated steel charging pin. The instrument is charged (set to zero) by pressing the charging pin onto the charging socket on the charger.



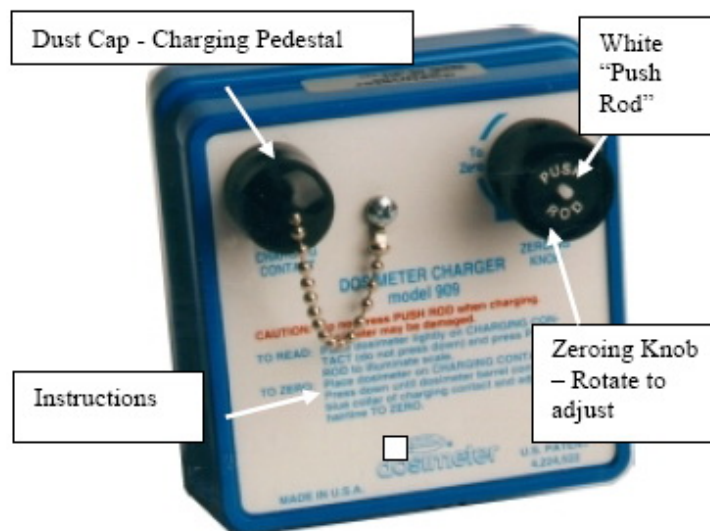
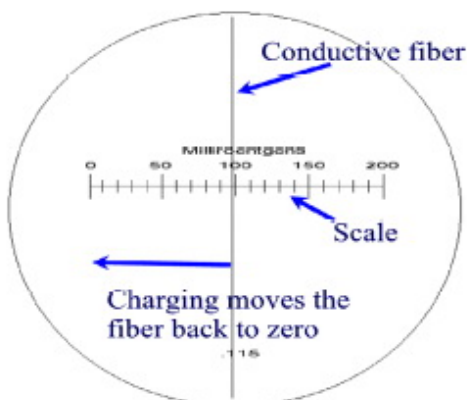
Arrow-Tech Model 138 dosimeter shown

When the charging end of the dosimeter is pressed firmly into the charging contact (pedestal) on the charger, the pin contacts the electrometer frame. Sufficient voltage is applied to charge the dosimeter and to set the fiber to zero.

Step 1: To read a dosimeter, simply remove the cap on the charging contact. Place the dosimeter on the charging pedestal and press the "Push Rod" to activate the light.

If the light does not come on, it could mean there is no battery inside the charger. Install the battery by removing the screw on the bottom of the charger and install a new battery.

Note: The + end of the battery needs to be aligned with the + (pos) marking on the circuit board inside the charger.



Step 2: While pressing the charging end of the dosimeter firmly down in the receptacle of the charger, adjust the "Zeroing Knob" on the Charger. While looking through the dosimeter at the light that comes, adjust until a zero reading is indicated. If the fiber is not moving, press the dosimeter farther down in the receptacle and try again.

Step 3: At times, a transient "kick" is experienced when zeroing the dosimeter. The charging contact of the charger automatically compensates for the kick when the dosimeter is withdrawn slowly from the contact. You can see this effect by holding the dosimeter on the charging contact while looking into the instrument. Withdraw the instrument slowly. You will note that just before the light turns off, the hairline will shift. With a little practice the hairline can be made to shift so that its final position coincides with the zero line. Optimum performance is obtained when electrostatic kick is compensated for in this manner. The hairline will remain on or near the zero position for long periods when not exposed to radiation.

Step 4: When resetting the dosimeter to zero, the fiber may disappear and remain hidden. To release the fiber, slowly turn the "Zeroing Knob" knob until the fiber reappears.

Keep repeating steps 1 through 4 as needed.

Some practice might be required to become proficient at zeroing the dosimeter.

Your dosimeter should now be on zero (0) and ready for use

Note: When properly zeroed the dosimeter will remain on zero

