

DOSIMETER CHARGERS

Jordan Nuclear Charger



**Model JN 750-5 (Jordan Nuclear)
(Battery not included)**

- **POWER:** 1 ea. "D" Cell battery
- **Range:** 200-250 volts
- **Mil-Spec:** NSN 6665-00-856-8813
- **BATTERY LIFE:** Capable of recharging dosimeters thousands of times.
- **SIZE:** 4"(10.2 cm)W X 4"(10.2 cm)L X 3"(7.6 cm)H
- **WEIGHT:** 1.2 lb (495 grams)
- **1 YEAR WARRANTY**

The 750-5 is a compact lightweight instrument designed to charge direct reading pocket dosimeters .

The Jordan 750-5 Charger is a compact lightweight charger designed to charge most direct-reading quartz fiber dosimeters. This instrument features a fully transistorized and printed circuit board. Power required for operation is furnished by a single "D" flashlight type battery, capable of recharging dosimeters thousands of times before replacement is necessary, thus making it an economical and reliable charger to operate.

A safety spring located in the charging socket of the Model 750-D prevents damage to the dosimeter in the event that excessive pressure is exercised when recharging. Both moisture-proof and dust-proof, the charger also features a protective cap to prevent any moisture or dust from accumulating in the charging socket when not in use.

The dosimeter has a built-in string electrometer and ion chamber. The Jordan 750.5 Charger is used to impress a charge on this ion chamber. A zero position on the built-in scale will indicate that the dosimeter is fully charged. Radiation passing through the chamber will cause the charge to leak off in proportion to the amount of radiation and move the electrometer string upscale accordingly. This upscale position indicates the amount of radiation exposure.

Operating Conditions:

- **Temperature:** -20 degrees F to +140 degrees F
- **Humidity:** No effect, unit has water and dust tight seals
- **Altitude:** Independent of pressure changes from sea level to over 50,000 Ft.
- **All metal, built to meet rigid Military Standards requirements for extremes of Temperature, Altitude, Shock and Vibrations**
- **Cover:** Heavy aluminum casting
- **Case:** Drawn steel. (0.025 c.r.s.)

Operating instructions on the back of this sheet

The Charging Process - Zeroing the Dosimeter

Accumulated radiation is read directly on an internal calibrated scale of the Dosimeter. A Dosimeter Charger (Jordan 750-5 or Rad Alert 750-6) is required in order to return the dosimeter to zero after each exposure period if desired.

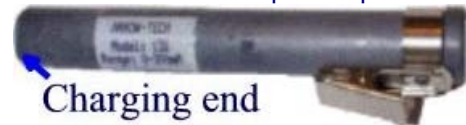
One end of the dosimeter contains an optical eye-piece; the opposite end is sealed by a diaphragm switch which houses the insulated steel charging pin. The instrument is charged (set to zero) by pressing the charging pin onto the charging socket on the charger.

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

Step 1.

Reading a dosimeter: Remove the cap on the charging socket by unscrewing the cap. Then press down lightly with the dosimeter on the charging socket. The light should come on.

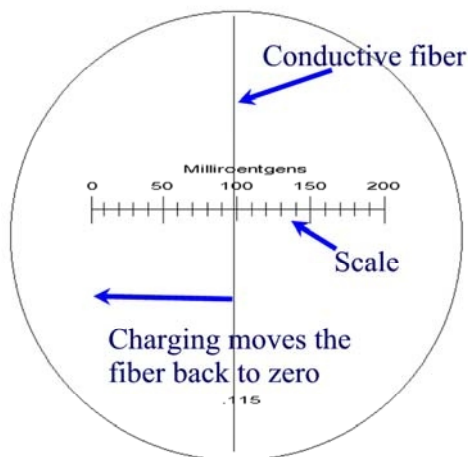
If the light does not come on it could mean there is no battery inside the charger. **Replace the battery** by removing the screw in the center of the faceplate. (See diagram) and installing new battery. Note the + end of the battery needs to be aligned with the + (pos) marking on the circuit board inside the charger.



Arrow-Tech Model 138 dosimeter



Jordan Charger Model 750-5



Here you see

Ron zeroing a dosimeter, notice his left hand on the adjustment knob.

After he has zeroed the dosimeter, he lets up just a little to keep the light on and see if the fiber is still on zero.

Step 2 While pressing the charging end of the dosimeter firmly down in the receptacle of the charger, **adjust** the "down-scale/up-scale" control on the charger, while looking through the dosimeter at the light that comes on 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 "down scale / up scale" 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 to use.

When properly zeroed the fiber will remain on zero. ➤

