By then the guy in the rear had extracted himself, and our hero beat a hasty retreat to the surface. After a few more drinks to celebrate his escape (and, no doubt, a few choice words for the gentleman who had been in the way), the hermit took another head-long dive down the hole.

There it, no, **THEY** were. Two more dead bears, shot right between the eyes. The cave may have gone farther. There may have been more bears. Five seemed to be enough — especially since after the celebrating it was difficult to find the exit again.

Olmsted reported that although the hermit would probably never make it into history, his place in local legends was assured.

Jeff Carroll, LEGENDARY TEXAS

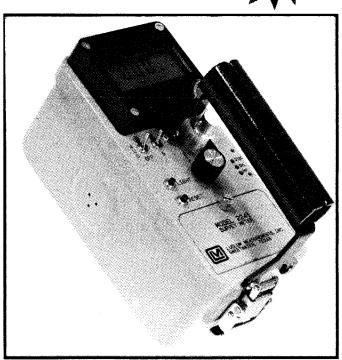
# THE WAY

# **MODEL 2241 DIGITAL SURVEY METER**

The Ludlum Model 2241 Digital Scaler/Ratemeter is a microprocessor based portable designed for use with G-M, scintillation, and proportional detectors. It incorporates a 4 digit LCD display.

The Model 2241 is an auto-ranging ratemeter that can display counting units in R/hr, Sv/hr, cpm, or cps. This unit features Alert and Alarm functions. An Alert is indicated by the ALERT annunciator on the display and the Alarm is indicated by the ALARM annunciator on the display plus a constant tone audio signal. The Model 2241 also features a scaler that can be selected using the control switch. The scaler is activated by a pushbutton in the handle and uses the 4 digit readout in conjunction with a 2 digit cycle counter in the lower right hand corner of the display.

Other features include Overload circuitry to sense voltage current to the detector, auto-ranging capability, dead time correction, an adjustable calibration constant, a RS-232 port for connection to a computer, and parameter storage for up to 6 different detectors. All parameters are stored in non-volatile memory allowing for removal of batteries without loss of memory. The unit operates on 2 each "D" cell batteries with battery life greater than 200 hours and weights approx. 3.5 lbs.



**MODEL 2241** 

PRICE: \$ 575.00

with switchboard

#### **SPECIFICATIONS:**

CONTROL SWITCH: A 3 position switch labeled OFF, RATEMETER, and SCALER

**DISPLAY:** A 4 digit LCD display with 0.5"(1.3cm) high digits, and separate annunciators for display units, alert, alarm, low battery, detector overload, and counting overflow

LIGHT: The display backlight can be activated by the LIGHT button on the front of the instrument

**CALIBRATION CONTROLS:** High voltage, discriminator, and overload adjustments are accessible from the front of the instrument and covered by a CAL cover to prevent tampering.

**SWITCHBOARD**: Set-up and calibration of the Model 2241 is done by an optional switch board. This board is not necessary for normal use of the instrument and can be removed after initial set-up to prevent tampering.

**HIGH VOLTAGE:** Adjustable from 400 - 2500 volts **DISCRIMINATOR:** Adjustable from 2 - 100 mV

OVERLOAD: Adjustable from 1 - 40 µA

RESET: A push button on the front of the instrument to zero the meter, acknowledge, and reset the alarm

**AUDIO:** Built in unimorph speaker with ON/OFF switch, and selectable divisions of 1, 10, 100, or 1000 events per click.

CONSTRUCTION: Cast and drawn aluminum with beige polyurethane paint, and black silkscreened nomenclature

**TEMPERATURE RANGE:** 5°F (-15°C) - 122°F (50°C) (May be certified to operate from -40°F (-40°C) - 150°F (65°C) if desired)

**SIZE:** 6.5"(16.5cm)H X 3.5"(8.9cm)W X 8.5"(21.6cm)L, including handle

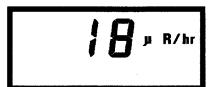
BBBBBBBBAChr

µmR/hr
kC/ms

OFLOW ALERT ALARM

OVERLOAD COUNTING 88

**MODEL 2241 DISPLAY** 



RATEMETER (only)



SCALER (only)



Our Mailing list has got so big, we are putting it on a diet. If you enjoy receiving the Murphy's Law Calendar and the Ludlum Report newsletter, please mail back the **postage paid** reply card.

#### Don't miss an issue of "THE LUDLUM REPORT" or a "Murphy's Law Calendar"

To remain on the mailing list,

Simply peel off mailing label from the newsletter with your address and transfer it to the **postage paid** reply card. Please make any necessary address corrections. Detach and return.

Thank you.

	Attach label below)	
Name		
Company		
Company Address		
City	State	Zip
Ph:( )	Fax:(	)

Ludlum Measurements, Inc., PO Box 810, Sweetwater, Tx 79556-0810



# From The Trenches

with David Wyatt

June 1994

## 10-TURN COUNTING DIALS DEFINED

There has been some confusion in correlating the 10-turn counting dials, found on some of our Ludlum Scaler/Ratemeters, to their purpose. For example the HV controls used on the Model 2000, 2200, 2929, and M2500's are used to vary the detector operating voltage (HV). The vernier scale on the dial has no correlation to the actual HV output (unless noted what the dial reading is for a specific HV output). The HV output is read on the analog meter KV (kilovolt) scale or an external HV meter at the detector connector. The 10-turn dial is simply used to vary the HV output and to utilize the locking feature incorporated on the dial.

Ten-turn dials are also used to control the THRESHOLD and WINDOW parameters on Scaler/Ratemeters. When used for this application the vernier scale does correlate to the use of the control(s). Using the Model 2200 as an example: The THRESHOLD (THR) dial is adjusted to 1.00 (1 in the dial window, vernier scale positioned at 0), then 10 millivolt (mV) pulses are applied to the detector input and the DISCR (discriminator) control is adjusted until the M2200 just starts to count. The WINDOW (WIN) control is adjusted to 1.00 and an internal adjustment is set to where the M2200 stops counting with 20 mV applied to the detector input. This calibration sequence matches the WIN and THR counting threshold levels to their vernier dial readings so that they can be used in determining the "counting window" used for Single Channel Analyzation (refer to LMI Newsletter Volume I Number 3 and Volume IX Number 1).

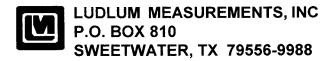


No Postage Necessary If Mailed In The United States

#### **BUSINESS REPLY MAIL**

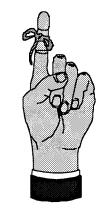
FIRST CLASS MAIL PERMIT NO. 203 SWEETWATER, TX

POSTAGE WILL BE PAID BY ADDRESSEE





### Please don't forget



Mail reply card today!

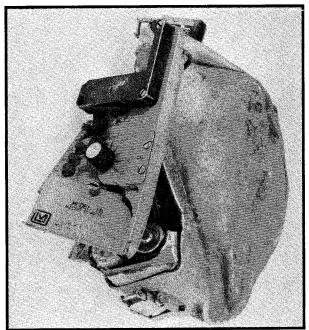
# REPAIR AND CALIBRATE NOT!

Although the instrument pictured was beyond repair, LMI offers a full Service Center for your Repair and Calibration needs. Along with the Ludlum equipment, our Service Center welcomes other manufacturer's instruments.

Currently our turnaround time for Calibrations is 5-7 working days and 7-10 working days for Repair.

An instrument with one detector is \$30.00. Extra detectors are \$15.00 each. Neutron calibrations are \$50.00 each. Instruments that require more time to calibrate are \$50.00 each. Repair rates are \$40.00 an hour plus parts.

For more information on types of instruments we can repair or calibrate and fees, please contact our Repair and Calibration Department.



The above instrument failed Shock Test #101. The Model 19 was accidently left on railroad tracks and was hit by a train. Not much was salvageable!

LUDLUM MEASUREMENTS, INC. 501 OAK STREET P.O. Box 810 SWEETWATER, TX 79556

Forwarding & Address Correction Requested

BULK RATE U.S. POSTAGE PAID Sweetwater, TX Permit No. 170