

**LUDLUM MODEL 3
SURVEY METER**

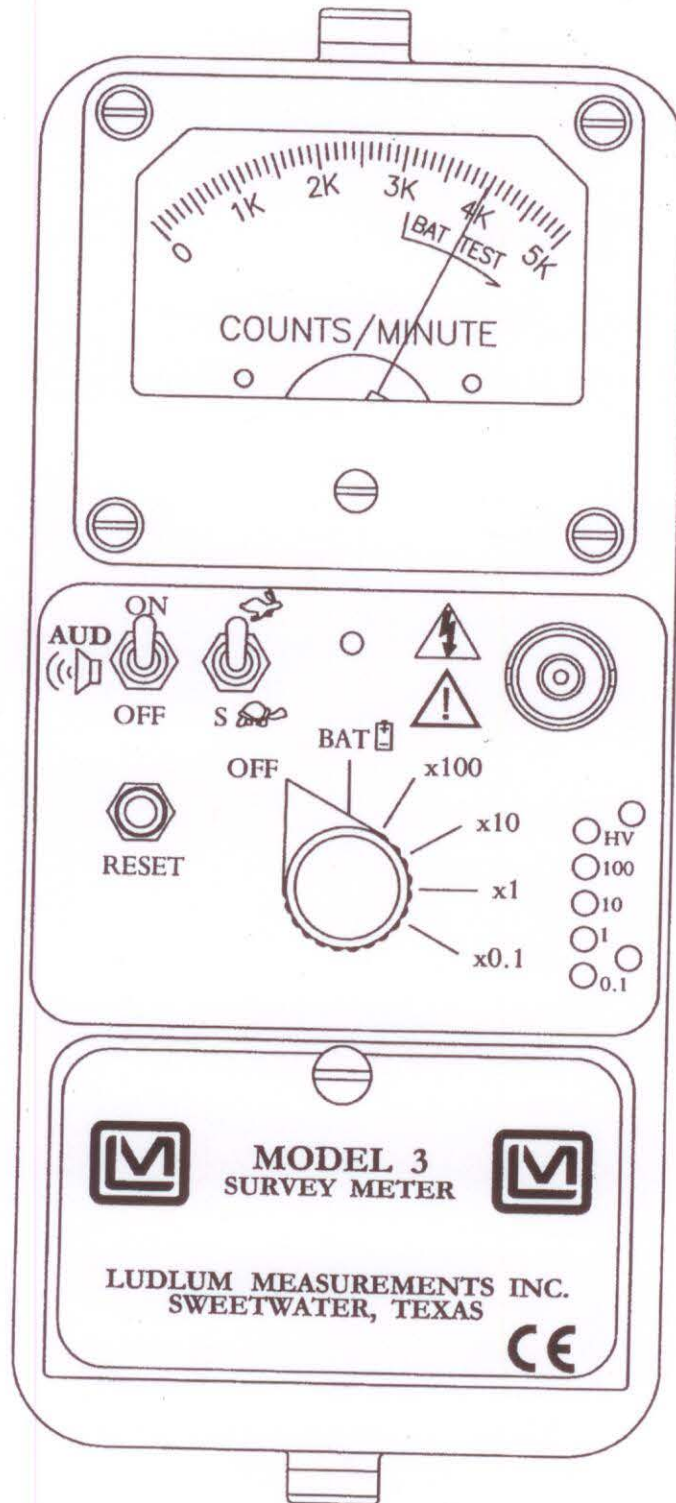
January 2006

**Serial Number 213363 and Succeeding
Serial Numbers**

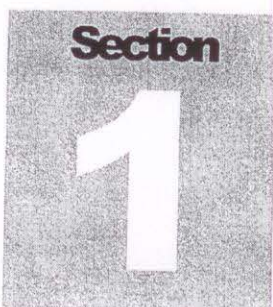


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REV #	ALTERATIONS	DATE	BY
1	VALID	12/21/05	DDW



DWN	DATE	CHK	DATE	APP	DATE
DDW	12/21/05			DDW	12-21-05
DWG NUM	4464-041	SCALE	FULL	OTHER	
TITLE	M 3 FRONT PANEL				
LUDLUM MEASUREMENTS, INC. 201 ONE STREET SWEETWATER, TEXAS 79556	SERIES	SHEET			
	464	41A			



Introduction

The Model 3 is a portable radiation survey instrument with four linear ranges used in combination with exposure rate or cpm (counts per minute) meter dials. The instrument features a regulated high-voltage power supply, unimorph speaker with audio ON-OFF capability, fast-slow meter response, meter reset button and a six-position switch for selecting battery check or scale multiples of $\times 0.1$, $\times 1$, $\times 10$ and $\times 100$. Each range multiplier has its own calibration potentiometer. The unit body and meter housing are made of cast aluminum and the can is 0.090" thick aluminum.

Any Geiger-Mueller (G-M) detector offered by Ludlum Measurements will operate on this unit as well as any scintillation type detector. The instrument is typically set at 900 volts for G-M tube operation. For special requirements of G-M or scintillation detectors, the instrument high voltage may be adjusted from 200 to 1500 volts.

The unit is operated with two "D" cell batteries for operation from -4°F (-20°C) to 122°F (50°C). For instrument operation below 32°F (0°C) either very fresh alkaline or rechargeable NiCd batteries should be used.

Section

3

Specifications

Power: Two "D" cell batteries housed in a sealed externally accessible compartment.

Battery Life: Typically greater than 2000 hours with alkaline batteries and with the AUD ON-OFF switch in the OFF position.

End-of-Battery Life Warning: At 2.1 Vdc the meter needle will drop to the edge of the BAT TEST or BAT OK area when the meter selector switch is moved to the BAT position. At 2.0 Vdc a steady audible tone will be emitted to warn the user of the low battery condition.

High Voltage: Adjustable from 400 to 1500 volts.

Threshold: Fixed at $40 \text{ mV} \pm 10 \text{ mV}$.

Meter: 2.5" (6.4 cm) arc, 1 mA analog type.

Meter Dial: 0-2 mR/hr, or 0-5k cpm, BAT TEST (others available).

Multipliers: $\times 0.1$, $\times 1$, $\times 10$, $\times 100$.

Range: Typically 0-200 mR/hr, or 0-500,000 counts/minute (cpm).

Linearity: Reading within 10% of true value with detector connected.

Battery Dependence: Less than 3% change in readings to battery failure indication.

Calibration Controls: Individual potentiometers for each range; accessible from front of instrument (protective cover provided).

Audio: Built-in unimorph speaker with ON-OFF switch (greater than 60 dB at 2 feet).

Response: Toggle switch for fast (4 seconds) or slow (22 seconds) from 10% to 90% of final reading.

Reset: Push button to zero the meter.

Connector: Series "C" (other available).

Size: 6.5" (16.5 cm) H × 3.5" (8.9 cm) W × 8.5" (21.6 cm) L.

Weight: 3.5 lbs. (1.6 kg) including batteries.

Construction: Cast and drawn aluminum with beige powder-coat

Cable: 39-inch with "C" connector (others available).