

## Model THY-2244-11 Benchtop Thyroid Counting System

Part Number: 48-3786



### Introduction

This counting system pairs the Model 2200 Scaler-Ratemeter with the Model 44-11 Integral-Line Gamma Scintillation Detector for thyroid sample counting applications. Scaler count times can be set from 0.1 - 999 minutes, with count results shown on a 6-digit LED display. Count rate is indicated on a 4-range analog display with a display range of 0 - 500,000 counts/min. The unit also operates as a single channel analyzer with adjustable window and threshold settings. Power can be provided by wall current or by four alkaline "D" cell batteries. A 9-pin RS-232 port is included on the back of the instrument for connection to a computer or printer.

The Model 44-11 is a highly sensitive detector with a 5.1 x 5.1 cm (2 x 2 in.) [Dia. x L] NaI(Tl) scintillator. In this configuration, the detector is mounted in the Model L-16A051-626 Collimator for improved resolution.

### Model 2200 Specifications

**SCALER DISPLAY:** six-digit LED display

Range: 0 - 999,999 counts

**SCALER LINEARITY:** within 2% of true value

**RATEMETER:** 6.4 cm (2.5 in.) arc, 1 mA analog type

Meter Dial: 0 - 500 cpm, 0 - 2.5 kV, BAT TEST

Range: 0 - 500,000 cpm

Multipliers: x1, x10, x100, x1000

**RATEMETER LINEARITY:** within 10% of true value

**TIMER:** push-wheel adjustment from 0 - 999 minutes with selectable x0.1 and x1 multipliers

**RESPONSE SWITCH:** toggles between FAST (4 s) or SLOW (22 s) from 10% to 90% of final reading

**ZERO PUSHBUTTON:** zeros meter

**HIGH VOLTAGE:** adjustable from 200 - 2500 V

**THRESHOLD:** adjustable from 1.0 - 10.0

**WINDOW:** adjustable from 0 to 10.00 above the threshold setting, switch to enable or disable

**DISCRIMINATOR:** adjustable from 2 - 100 mV at threshold setting of 1.0

**RATEMETER MODE SWITCH:** RATE, HV, BAT

**COUNT BUTTON:** resets and starts scaler counting

**POWER SWITCH:** switch between off, line power, or battery power

**DATA OUTPUT:** 9-pin RS-232 port

**POWER:** 95 - 250 Vac, 50 - 60 Hz or 4 "D" cell alkaline batteries. Battery life typically 120 hours.

**SIZE (H x W x L):** 21.6 x 12.7 x 21.6 cm (8.5 x 5 x 8.5 in.)

**WEIGHT:** 3.4 kg (7.5 lb)

### Model 44-11 Specifications

**DETECTOR TYPE:** NaI(Tl) scintillator, 5.1 x 5.1 cm (2 x 2 in.) [Dia. x L]

**SENSITIVITY:** typically 900 cpm per  $\mu\text{R/hr}$

**ENERGY RESPONSE:** energy dependent

**BACKGROUND:** typically 9750 cpm (in 10  $\mu\text{R/hr}$  field)

**PHOTOMULTIPLIER:** 5.1 cm (2 in.) dia., magnetically shielded

**OPERATING VOLTAGE:** 500 to 1200 V (typical)

**CONSTRUCTION:** integral-line

**SIZE (Dia. x L):** 6.4 x 26.7 cm (2.5 x 10.5 in.)

**WEIGHT:** 0.6 kg (1.4 lb)