

Model 3078 Series Stretch Scope

Features

- Lightweight, Telescoping Carbon Fiber Pole - 1.3 to 4.7 m (4.1 to 15.3 ft)
- Range: 1 $\mu\text{Sv/h}$ to 10 Sv/h (0.1 mR/hr to 1000 R/hr)
- 1 $\mu\text{Sv/h}$ (0.1 mR/hr) Display Resolution
- Low, High, or Auto Range Selection
- Rate, Max, Count, and Dose Modes
- External Detector with 2 GM Tubes
- Versions Available with Internal Detector for Dose Measurements
- 4-Button Meter Interface for Easy Operation (see photo below)
- 3-Button Handle Interface for Easy Feature Control (see photo below)
- Digital Calibration and Data Logging
- Large Backlit LCD for Ease of Reading
- Lamp on End of Detector to Illuminate Inspection Area
- Bluetooth and Headphone Options

Introduction

The Model 3078 Series Stretch Scopes are designed to survey areas for gamma radiation while maintaining distance from potentially high radiation fields. These instruments include external GM detectors mounted at the end of a 4.7 m (15.3 ft.) carbon fiber telescoping pole, allowing the detector to reach areas difficult to access with other types of instruments. The Model 3078i versions have an additional internal GM or scintillation detector for monitoring user dose exposure.

The meter body is made of durable, high-impact plastic with splash-resistant construction for outdoor use. The instrument has a large, easy-to-read LCD with a backlight that adjusts to changing ambient light to provide optimum viewing in any conditions. User-adjustable audio levels provide the operator with audible clicks and alarms across all modes of operation.

Each Model 3078 Series instrument has four modes of operation (RATE, MAX, COUNT, and DOSE) selectable using the MODE button. Measurements can be collected in two sets of units (primary and secondary) for all modes of operation by pressing the UNITS button. The external detector can operate in LOW, HIGH, or AUTO range modes by pressing the DET button. With data logging enabled, a simple press of the LOG button will record and timestamp the current reading. Each instrument can store up to 1000 data points. On the Model 3078i versions, the internal detector runs continuously and reports accumulated dose measurements, which can be viewed at any time by pressing the PRG button.



Handle Buttons



Meter Buttons



Configurations

Model	Internal Detector / Range	Part Number
3078	NA	48-4332
3078i	Energy-compensated GM Background to 50 mSv/h (5 R/hr)	48-4337
3003i/1	CsI scintillator Background to 500 $\mu\text{Sv/h}$ (50 mR/hr)	48-4337-1

Specifications

EXTERNAL DETECTOR: Two energy-compensated GM tubes

INTERNAL DETECTOR (3078i versions only): Energy-compensated GM or scintillation detector, see table on front for options

ENERGY RESPONSE: Within 25% of true value from 60 keV to 3 MeV

LINEARITY: Readings within 10% of true value

DISPLAY: Three-digit auto-ranging LCD. Units: $(\mu)(m)(k)(M)R/h$, $(\mu)(m)(k)(M)Sv/h$, (k)cps, (k)(M)cpm. Indicators: bar graph, mode (MAX, INTG), three alarm levels, fault messages (FAULT, OVERLOAD, LOSS OF COUNT, OVERRANGE), USB, wireless, audio, and low-battery.

DISPLAY RANGE: 1 $\mu Sv/h$ to 10 Sv/h (0.1 mR/hr to 1000 R/hr)

RANGE SELECTION: LOW range (1 $\mu Sv/h$ to 20 mSv/h, or 0.1 mR/hr to 2 R/hr), HIGH range (8 mSv/h to 10 Sv/h, or 0.8 R/hr to 1000 R/hr), or AUTO range across full display range

DISPLAY BACKLIGHT: Built-in ambient light sensor automatically activates LED backlight unless internal dipswitch is set to continuous-on (will reduce battery life)

USER CONTROLS:

- ON/AUD: Extra-long press to turn ON; Tap to adjust audio level; Extra-long press to turn OFF
- UNITS: Changes the units between count rate, dose/exposure, or disintegration
- DET: Tap to change external detector to operate on LO, HI, or AUTO range; Extra-long press to switch between external and internal detector (3078i versions only)
- LAMP/MODE: Short press alternates between RATE (count rate), MAX (captures peak rate), COUNT (user-selectable preset count time from 0 to 2775 hours), and DOSE (current accumulated dose); Extra-long press enables lamp on end of stretch scope detector

RESPONSE TIME: User-selectable from 1 to 60 seconds, auto SLOW, auto FAST, fixed SLOW (22s), fixed FAST (4s)

ALARMS: Three count rate, exposure/dose, count, and accumulated dose alarm set-points adjustable over the display range

OVERLOAD PROTECTION: High count rate saturation protection designed to prevent false display of lower count rates. If the instrument detects an overload condition, OVERLOAD will appear on the display and an audio warning will be triggered.

LOSS OF COUNT PROTECTION: After 60 seconds of no pulses from the detector, the instrument will flash a zero reading, an audio alarm will be triggered, and LOSS OF COUNTS will appear on the display

OVERRANGE: If the reading exceeds the predefined detector range, the instrument will flash a maximum reading, an audio warning will be triggered, and OVERRANGE will appear on the display

AUDIO: "Click" audio greater than 65 dB at 0.6 m (2 ft); Alarm audio greater than 72 dB at 0.6 m (2 ft)

CALIBRATION PROTECTION: Internal dipswitch to disable front-panel calibration parameter changes

POWER: Four "AA" batteries

BATTERY LIFE: Approximately 75 hours with no backlight (as low as 20 hours with backlight and lamp continuous-on), 16 hour low-battery warning

CONSTRUCTION: High-impact polycarbonate with rubber seals and separate battery compartment attached to telescoping carbon fiber pole

TEMPERATURE RANGE: -20 to 50 °C (-5 to 122 °F), may be certified for operation from -40 to 65 °C (-40 to 150 °F)

ENVIRONMENTAL RATING: NEMA rating of 3x or IP rating of 53

SIZE: 20.0 x 11.4 x 125.1 cm (7.9 x 4.5 x 49.25 in. [4.1 ft.]) retracted, fully extended length 466.7 cm (183.75 in. [15.3 ft.])

WEIGHT: 2.5 kg (5.4 lb) including batteries and shoulder strap

Options

- **Lumic Calibration Kit (PN 4519-865):** Includes software and required cable. Lumic Calibration Software allows reading and writing of instrument parameters via a USB port.
- **Lumic Data Logger Kit (PN 4498-1019):** Includes software and required cable. Lumic Data Logger Software is required to use instrument data logging features.
- **Bluetooth® Option (PN 4519-564):** Wirelessly connects the instrument with an Android or iOS mobile device.
- **Headphone Jack (PN 4498-555):** Adds a headphone jack to the instrument.

Ludlum Measurements, Inc. P.O. Box 810, Sweetwater, Texas 79556

Web: ludlums.com **Tel:** 800-622-0828 / 325-235-5494 **Fax:** 325-235-4672 **Email:** sales@ludlums.com

Note: specifications subject to change without notification. We are not responsible for errors or omissions.