

# NEW LMI REMOTE AREA MONITOR

*March 1991*

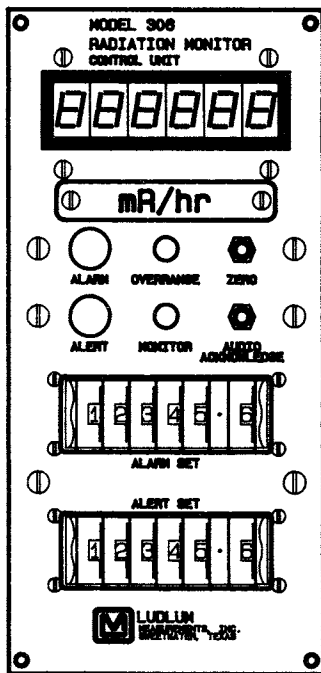
LMI has recently introduced a new updated Model 306 / 307 Remote Area Monitoring System. This complete system is composed of a Model 306 area monitor which possesses an RS-232 computer output port, an optional Model 307 remote readout display unit and the Model 306 Series detector signal conditioner (DSC). The system requires one of four different types of the DSC. The M306 detects gamma or neutron radiation when paired with most any Ludlum Measurements Geiger-Mueller (G-M), proportional or neutron detector.

Using 22 AWG cable, each Model 306 Series DSC is a signal conditioner and a detector communicating to the control unit via the power/signal conditioner combination. The M306 control unit receives pulses from the DSC and displays the alarm/alert conditions as well as sending the conditions to the remote readout. Any of the DSC and the remote readout(s) may be separated from the control unit by a maximum distance of 1000 feet.

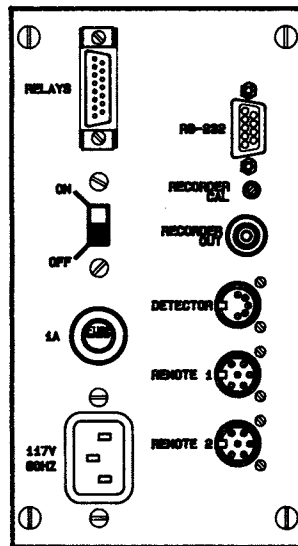
The Model 306 control unit displays the counting rate, alarm status, alert status, overrange status, and monitor status on the front panel. The alarm and alert levels are independent and are set via thumbwheel switches on the front panel of the Model 306. The rate meter may be zeroed via the zero button on the front panel. The Model 307 remote readout(s) display the same readouts on the front panel as the M306 and possesses an audio alarm and audio acknowledge button which silences the audio.

An external status indicator may be connected to the system by installing the optional relay board. An optional relay board is driven by the alarm, alert, overrange, and monitor status. This relay board has normally open and normally closed contacts which switch according to the status of the system.

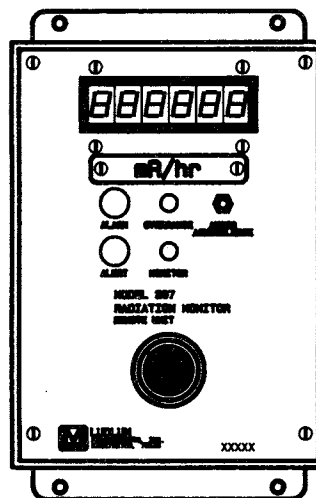
The Model 306 is available in multiple rack mountings and the M307 is available in wall mount or rack mountings. For more information please call the LMI Sales Department.



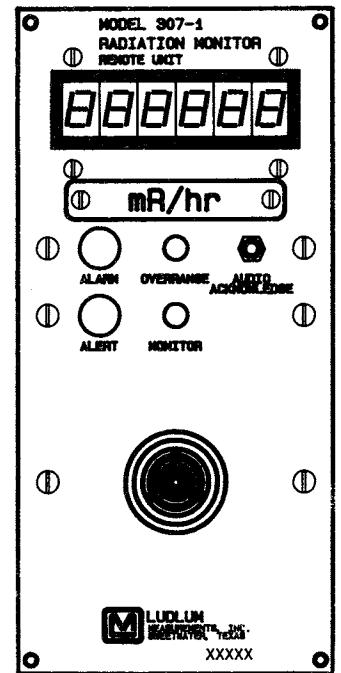
Model 306  
Front panel



Model 306  
Rear panel



Model 307  
Front panel



Model 307-1  
Front panel

## M306/307 GENERAL SPECIFICATIONS

March 1991

**POWER:** 120 VAC, 25 watts (max), 60 Hz, single phase power. The Model 306 powers the DSC and the M307.

**READOUT RATE:** Displayed on both M306/M307 front panels using 6 LED 7-segment displays. The range is 0.0 - 99,999.9. The display is updated every 2 seconds. The readout will follow an exponential rise or fall time based on the response mode (FAST or SLOW).

**ANALOG OUTPUT:** Provided on back panel labeled **Recorder Out**. The recorder output is updated every half-second. The recorder output is a five decade log scale calibrated at 1 VDC full-scale for a readout of 10,000.0 on the LED display.

**RS-232 PORT:** Located on back panel of the M306 and used primarily to dump the rate and status of the M306 in ASCII format every 2 seconds. The baud rate is user selectable (300, 1200, 2400, 9600).

**ALARM/ALERT LAMPS:** Both checked every half-second lighting the corresponding lamp whenever the rate is greater than or equal to the alarm/alert setpoint set via the front panel thumbwheel switches on the M306.

**OVERRRANGE LAMP:** Lights whenever the DSC is in a overload condition normally associated with very high fields.

**ZERO BUTTON:** Located on the front panel of the M306 zeros the count display on M306 and M307. Normal operating conditions will resume after 1 second. This function is the same as zeroing an analog meter.

**AUDIO:** Setpoints for both M306/M307 located on front panel of M306. Audio Acknowledge buttons located on both M306/M307 will suppress the audio if the annunciator is on.

**MONITOR LAMP:** Illuminates when there is a loss of signal from the detector. User selectable time-out period for loss of detector signal for monitor light is 5 sec., 30 sec., 1 min., 5 min.

### SIZE AND WEIGHT:

MODEL 306 RACK MOUNT - 4.125"W x 13.0"L x 8.625"H. (5 lbs. 7.6 oz.)

MODEL 307 WALL MOUNT - 5.75"W x 8.875"L x 4.125"H. (2 lbs. 15 oz.)

MODEL 307 RACK MOUNT - 4.125"W x 10.0"L x 8.625"H. (2 lbs. 12.5 oz.)

**LMI CALIBRATION DEPARTMENT: G-M PANCAKE DETECTOR CHANGE** *March 1991*

Due to customer requests we are changing the calibration procedure for Geiger-Mueller(G-M) pancake type detector assemblies. Historically, we have calibrated the G-M pancake detectors with the tube's back facing the calibrated source in order to shield the Beta emission from Cs-137 thus, providing a true Gamma emission only. The counts per minute (cpm) per mR/hr equivalent for this calibration is approximately 2000 - 2100 cpm for 1 mR/hr with Cs-137.

The new calibration procedure requires that the detector window is placed facing toward the calibration source. A Beta shield is placed in front of the source to attenuate Beta emissions. With the detector located in this position, the cpm/mR/hr equivalent is approximately 3000 cpm for 1 mR/hr with Cs-137.

Instruments which presently possess a dual meter face dial (cpm and mR/hr) will require a change to a new updated meter dial. The mR/hr only meter face will however, remain the same. All G-M pancake type detectors that are sent in for calibration with the mR/hr only meter dial will be calibrated by implementing this new calibration procedure which will start April 15, 1991.

If your current instrument has a dual meter face dial and you wish to have it calibrated to the new procedure, please notify our Repair or Calibration Department and the appropriate meter face will be substituted.

**LUDLUM MEASUREMENTS, INC.**

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