

**AWARE**   
Electronics

*RM-G90*  
*GAMMA RADIATION MONITOR*  
*With 78017 Tube*  
*--SUPPLEMENT--*

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## RM-G90 with 78017 GAMMA TUBE -SUPPLEMENT-

The RM-G90 radiation monitor is intended for use in conjunction with a P.C. compatible computer or a LCD-90 or USB-MSP. The monitor is based on the RM-60 microR monitor but with a type 78017 Gamma Geiger tube. For all general operating instructions refer to the latest edition of the standard RM-60 operating manual.

The tube sensitivity is 160 CPS/milliR/hr. standardized to Cesium 137. The Aw-Radw software stores the radiation data in the form of counts per user settable TBU (Time Base Unit).

When displaying the radiation data, the software can apply a factor to the count/TBU converting it into a standard unit of radiation. Since the tube sensitivity is 160 CPS/milliR/hr., to display data in the form of microR/hr., change Aw-Radw's "RM Calibration Factor" to 960. For microSv/hr., change Aw-Radw's "RM Calibration Factor" to 9600.

For CPS and CPM readings in Aw-Radw regardless of the TBU (time base unit) setting:

CPS Readings:

Aw-Radw Main Menu item "Rad Options" – "RM Calibration Factor" set to 6000

Aw-Radw Main Menu item "Rad Options" – "Radiation Units Caption" enter CPS

CPM Readings:

Aw-Radw Main Menu item "Rad Options" – "RM Calibration Factor" set to 100

Aw-Radw Main Menu item "Rad Options" – "Radiation Units Caption" enter CPM

As regards the LCD-90, set its LCD Display Calibration factor to 960 regardless of the units readout.

Information about Aw-Radw windows program: <http://www.aw-el.com/win.htm>

Information about the LCD-90 Pro: [http://www.aw-el.com/lcd\\_90g.htm](http://www.aw-el.com/lcd_90g.htm)

Information about the USB-MSP: <http://www.aw-el.com/win.htm#USB>

## Tube Data

78017 (RM-G90)

Dead Time: 75  $\mu$ sec

Capacitance: 4.5 pf

Gas Filling: Neon & Halogen Admixture

Max. Operating Temp.: 75°C.

Plateau Slope: 10%/100 Volts

Tube Sensitivity: 160 CPS/milliR/hr. standardized to Cesium 137.

Minimum Detectable Energy: 38 KEV.

### *Wall*

Thickness: 0.012"

Eff. Length: 9.45"

Eff. Diameter: 0.781"

Material: 446 SS

*The RM-G90 and software are digitally locked to the tube. No analog adjustments are necessary. Cesium 137 calibration: +/- 5%. Each tube has passed all examinations, inspections, tests and calibration of Quality Assurance Procedures including DCAS MIL-Q985A, MIL-E-I and appendix B of 10CFR50. Calibration is accomplished in accordance with MIL-STD-45662. Sources for calibration and/or dose rates have calibration traceable to National Bureau of Standards.*

The RM-G90 tube is very rugged and securely mounted. The surface of the tube (cathode) is connected to the negative power lead, not the PC's signal ground, so don't allow the tube to contact any grounded conductors. The case is ABS. You can cement ABS or PVC mounting brackets, etc. unto the case, using "Universal ABS-PVC" cement.

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