

1.1 Radiated emission data below 30 MHz

1.1.1 Test Procedure

The product has been tested according to ANSI C63.4-1992 and FCC PART15, Subpart C.

The product has been tested with 4 new alkaline AAA/LR03 batteries, at a distance of 10 meters from the loop antenna and compared to the FCC PART15, Subpart C limits. Measurement bandwidth was 9KHz below 30 MHz. Requirements of 15.209 have been observed.

The ARVA9000 has been moved in different positions in order to maximized emission. A summary of the worst case emissions found is shown on the following page.

Below 30MHz, a loop antenna has been used in 2 polarization (axial and horthogonal), measurements distance was 10 meters. The average measure was compared to an extrapolated limit. At the intentional carrier frequency of 457 KHz, the limit at 300 meter is $2400/457=5.25 \mu\text{V/m}$ which is $14.4 \text{ dB}\mu\text{V/m}$.

Using a 40 dB/decade factor, will extrapolate the limit to: $74.4 \text{ dB}\mu\text{V/m}$ at 10 meters.

Test Equipment: HP-8574A E.M.I Receiver

HP-8568B Analyzer + HP-85650 Quasi-Peak adapter + HP-85685A RF Preselector.

EMCO 3104C Biconical Antenna & EMCO 3146 Log Periodic Antenna

EMCO-1050, 6 meters height antenna mast & EMCO-1060, 3 meters diameter Turntable.

HP-8591EM Spectrum analyser

CHASE CBL6111A Antenna, 30-1000MHz

AILTECH STODDART 94607-1, Active Rod Antenna

ElectroMetrics Model RVR-30M, Passive Rod Antenna

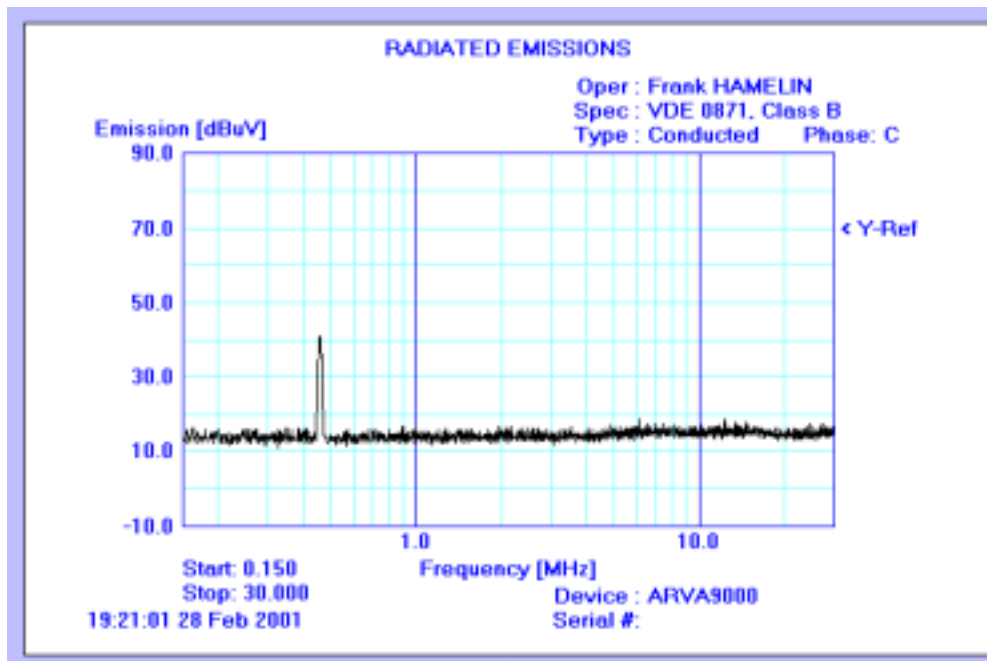
HP-85462A Analyzer + HP-85460 Preselector

SIDEN TELEC, Model CT2A, Loop Antenna

1.1.2 Radiated emission data (below 30 MHz) using a loop antenna

Final result below 30 MHz

Graph abstract – below 30 MHz (3 meters measurements in full anechoic chamber – Peak detector)



Final result below 30 MHz measured on open site at 10 meters using loop antenna:

Due to the low levels measured at 3 meters in full anechoic chamber, only the fundamental frequency has been measured on the open site.

Frequency (MHz)	Extrapolate Average Limit (dB μ V/m)	Average measure (dB μ V/m)	Average-Limit (dB)	Angle (deg)	Pol	Tot Corr (dB)
457 KHz	74.4	47.8	-33.6	25	Hortogonal	57.1