



Plot 4.6.4

Test Specification: §15.109
Radiated emissions of receiver and digital incorporated device
F mid

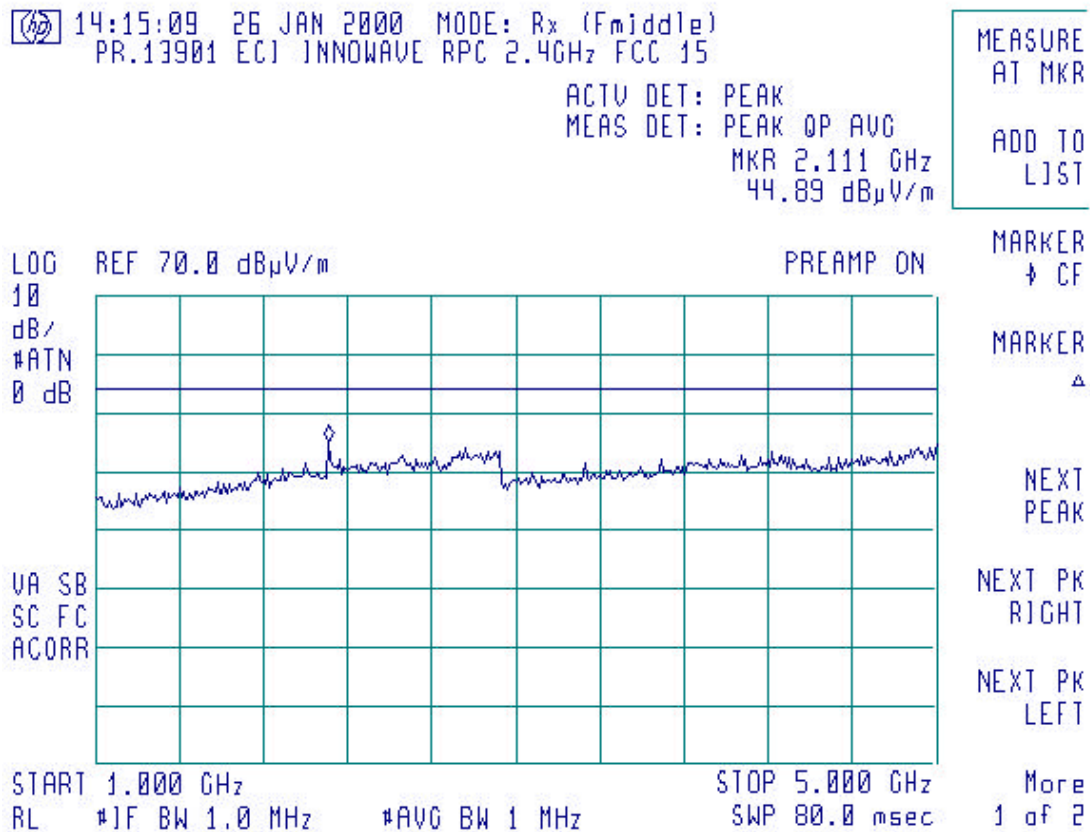
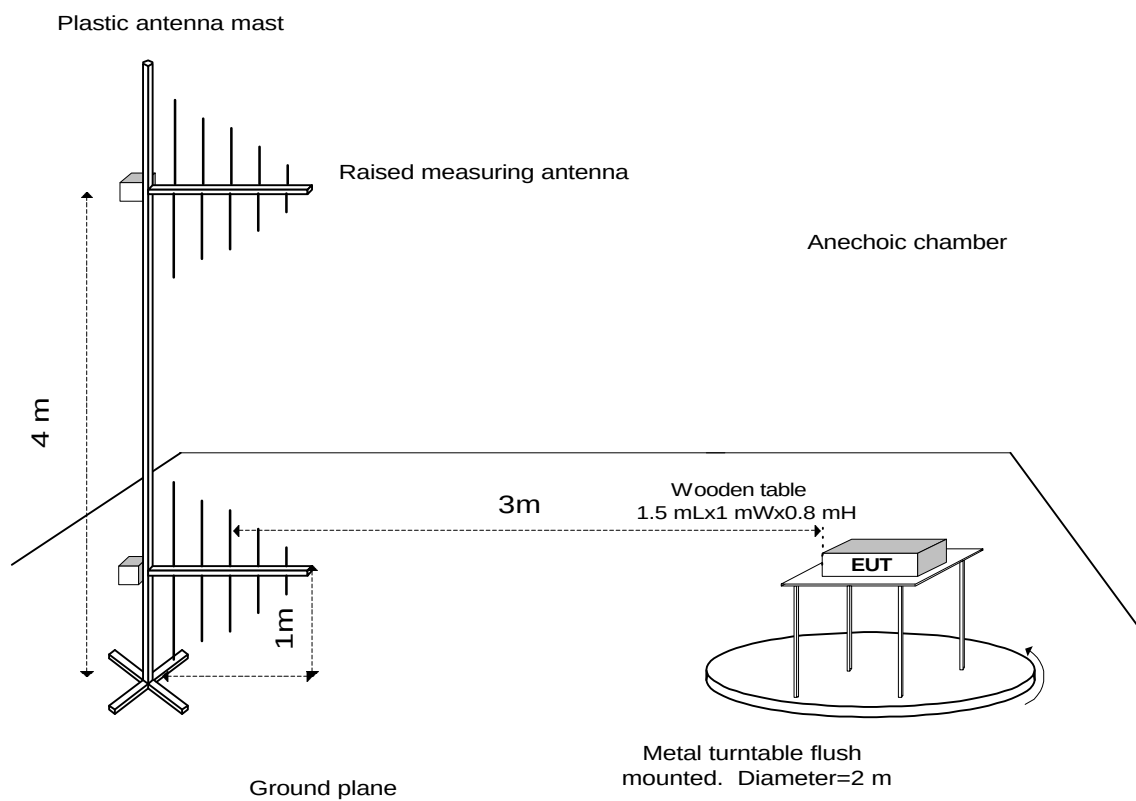


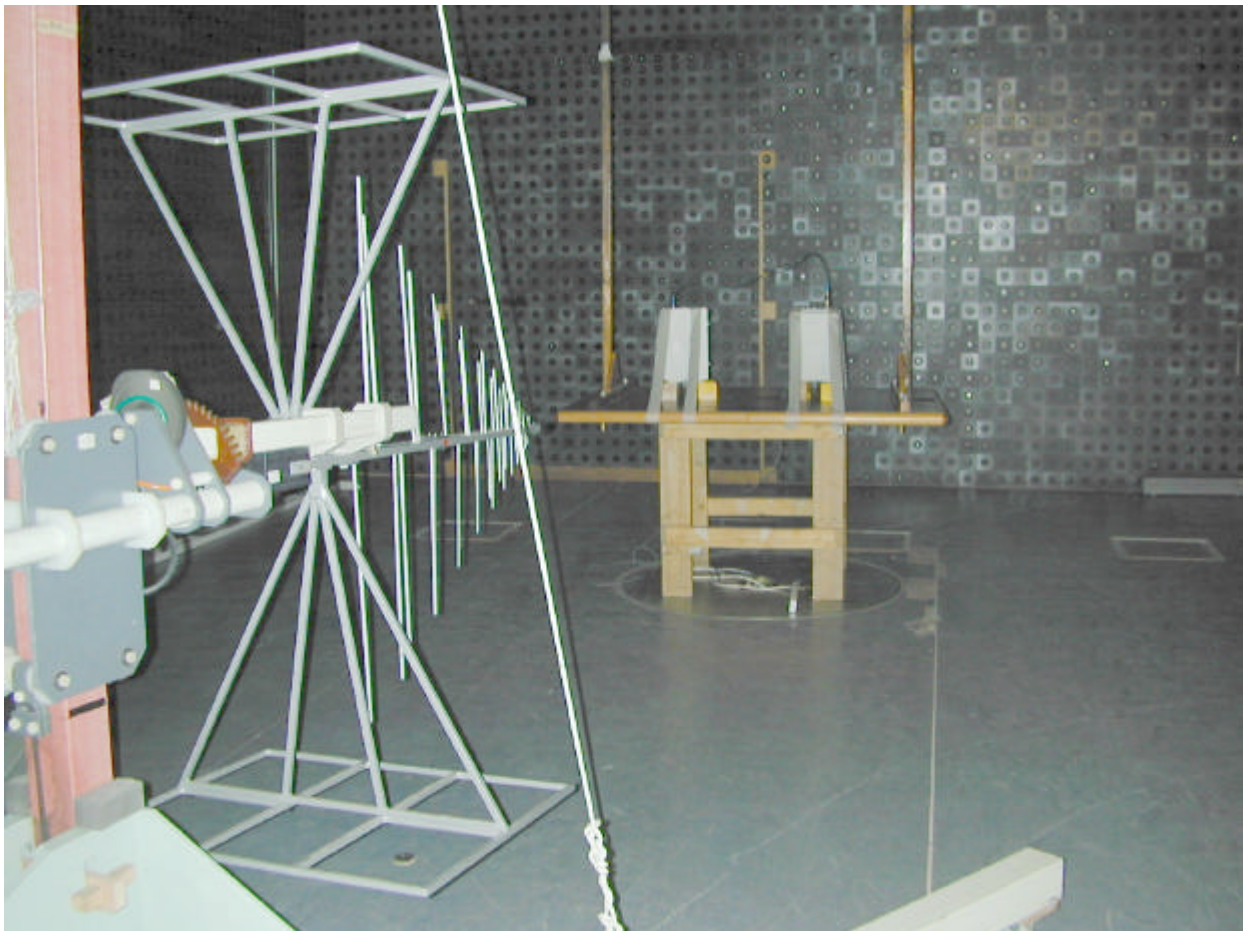


Figure 4.6.1
Radiated emission test setup



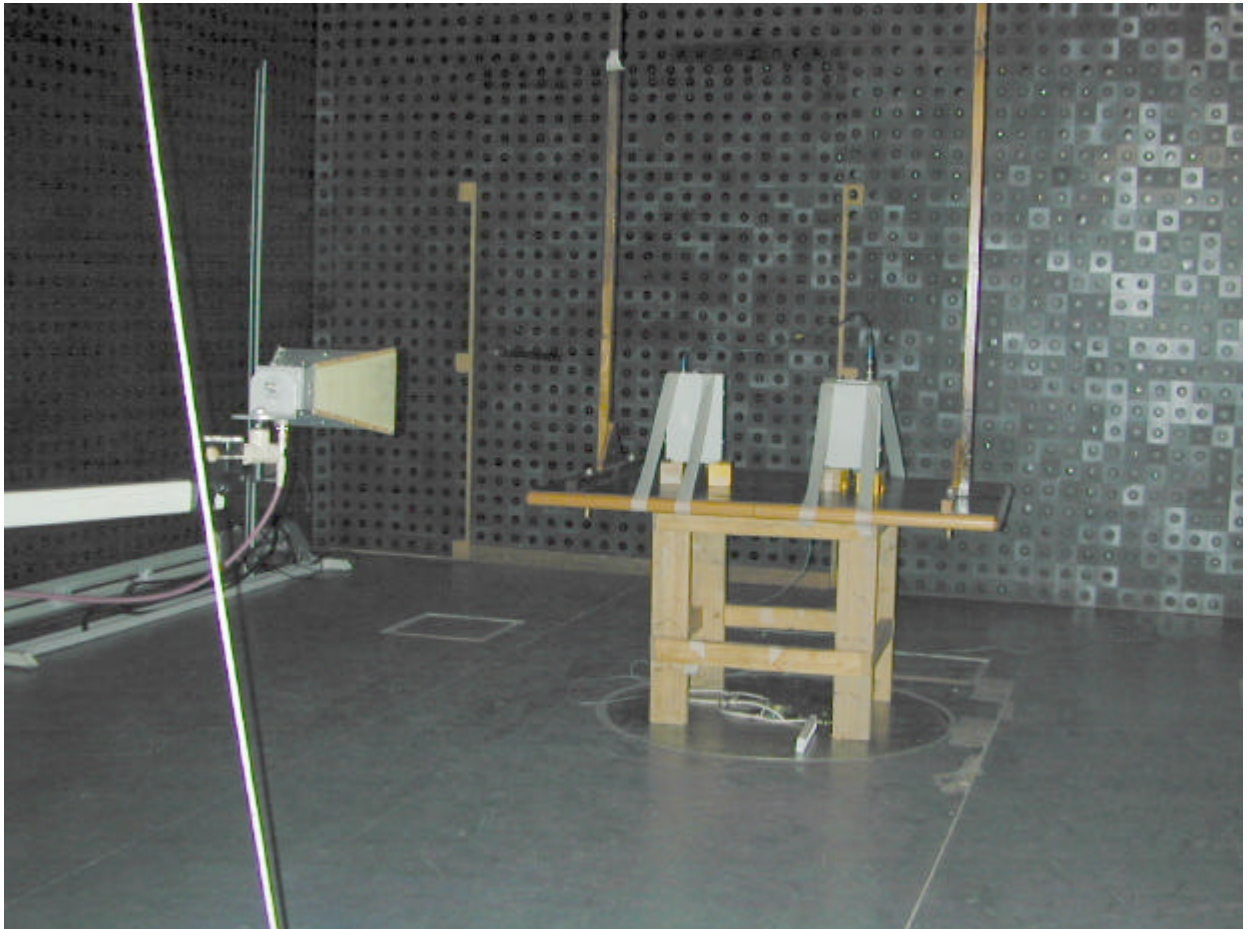


Photograph 4.6.1
Radiated emission test setup





Photograph 4.6.2
Radiated emission test setup





APPENDIX A – Test equipment and ancillaries used for tests

HL Serial No.	Serial No.	Description	Manufacturer	Model No.	Due Calibr.
0025	5837	Spectrum analyzer, 10 kHz-23 GHz	Anritsu	MS-710C	8/00
0027	4838	Spectrum analyzer, 50 Hz-2 GHz	Anritsu	MS-611A	10/00
0034	1988	Log periodic antenna, 200 - 1000 MHz	Electro-Metrics	LPA 25/30	3/00
0038	028	Antenna mast, 1-4 m	Hermon Labs	AM-1	2/00 Check
0041	2811	Ridged guide horn antenna, 1-18 GHz	Electro-Metrics,	RGA 50/60	7/00
0275	040	Table non-metallic, adjustable height, 1.5 x 1.0 x 0.8 m	Hermon Labs	TNM	3/00 Check
0412	8769	Cable coax, microwave, DC- 18 GHz, N-N, 3 m	Gore	36Q01Q01118 .2	9/00
0465	023	Anechoic chamber 9 (L) x 6.5 (W) x 5.5 (H) m	Hermon Labs	AC-1	10/00
0466	024	Shielded room 3 (L) x 3 (W) x 2.4 (H) m	Hermon Labs	SR-1	5/02 Check
0521	0319	Spectrum analyzer with RF filter section (EMI receiver 9 kHz - 6.5 GHz)	Hewlett Packard	8546A	7/00
0554	4300	Amplifier, RF, 2-18 GHz	Miteq	AFD4	12/00
0557	080	Signal generator, 9 kHz – 1.2 GHz	Marconi Instruments	52023-002E	11/00
0589	589	Cable coaxial, GORE A2POL118.2, 3m	Hermon Labs	GORE-3	11/00
0593	101	Antenna mast, 1-4 m/ 1-6 m Pneumatic	Hermon Labs	AM-F1	4/00 check
0594	102	Turntable for anechoic chamber, flush mounted, d=1.2 m, pneumatic	Hermon Labs	WDC1	11/00
0604	9611- 1011	Antenna biconilog log- periodic/T bow-tie, 26 - 2000 MHz	EMCO	3141	7/00
0614	334	Antenna dipole tunable 200 –1000 MHz	Electro-Metrics	TDS 30-1/30-2	2/02
0768	110	Antenna standard gain horn 18-26.5 GHz, WR-42, K- band, gain – 25 dB	Quinstar Technology	QWH-4200- BA	07/01
0813	149	Cable, coax, RG-214, 12 m, N-type connectors	Hermon Labs	C214-12	8/00
0815	151	Cable, coax, RG-214, 7.3 m, N-type connectors, inside anechoic chamber	Hermon Labs	C214-7	8/00
0816	152	Cable, coax, RG-214, 8 m, N-type connectors, outside anechoic chamber	Hermon Labs	C214-8	8/00
1175		Microwave 5 m cable	Gore	84C01C02245. 2	2/00

**APPENDIX B-Test equipment correction factors****Antenna factor
Double ridged guide antenna
Electro-Metrics, model RGA-50/60
Ser.No.2811**

Frequency, MHz	Antenna Factor, dB(1/m)	Frequency, MHz	Antenna Factor, dB(1/m)
1000	24.3	10,000	38.2
1500	25.4	10,500	38.5
2000	28.4	11,000	39.0
2500	29.2	11,500	40.1
3000	30.5	12,000	40.2
3500	31.6	12,500	39.3
4000	33.7	13,000	39.9
4500	32.2	13,500	40.6
5000	34.5	14,000	41.1
5500	34.5	14,500	40.5
6000	34.6	15,000	39.9
6500	35.3	15,500	37.8
7000	35.5	16,000	39.1
7500	35.9	16,500	41.1
8000	36.6	17,000	41.7
8500	37.3	17,500	45.1
9000	37.7	18,000	44.3
9500	37.7		

Antenna factor dB(1/m) is to be added to receiver meter reading in dB(μ V) to convert to field intensity in dB(μ V/meter)

**Antenna factor
Log periodic antenna
Electro-Metrics, model LPA-25/30
Ser.No.1988**

Frequency MHz	Antenna Factor dB(1/m)	Frequency MHz	Antenna Factor dB(1/m)
200	15.1	625	25.3
225	15.0	650	25.9
250	16.3	675	27.2
275	17.3	700	27.5
300	18.5	725	28.1
325	19.1	750	28.0
350	19.4	775	28.3
375	20.0	800	28.5
400	20.8	825	29.1
425	21.3	850	29.5
450	22.0	875	29.9
475	22.8	900	30.3
500	23.4	925	30.3
525	23.8	950	30.6
550	24.2	975	31.2
575	24.6	1000	31.8
600	24.8		

Antenna factor is to be added to receiver meter reading in dB(μ V) to convert to field intensity in dB(μ V/meter)



Antenna factor at 3m calibration
Biconilog antenna EMCO model 3141
Ser.No.1011

Frequency, MHz	Antenna Factor, dB(1/m)	Frequency, MHz	Antenna Factor, dB(1/m)
26	7.8	940	24.0
28	7.8	960	24.1
30	7.8	980	24.5
40	7.2	1000	24.9
60	7.1	1020	25.0
70	8.5	1040	25.2
80	9.4	1060	25.4
90	9.8	1080	25.6
100	9.7	1100	25.7
110	9.3	1120	26.0
120	8.8	1140	26.4
130	8.7	1160	27.0
140	9.2	1180	27.0
150	9.8	1200	26.7
160	10.2	1220	26.5
170	10.4	1240	26.5
180	10.4	1260	26.5
190	10.3	1280	26.6
200	10.6	1300	27.0
220	11.6	1320	27.8
240	12.4	1340	28.3
260	12.8	1360	28.2
280	13.7	1380	27.9
300	14.7	1400	27.9
320	15.2	1420	27.9
340	15.4	1440	27.8
360	16.1	1460	27.8
380	16.4	1480	28.0
400	16.6	1500	28.5
420	16.7	1520	28.9
440	17.0	1540	29.6
460	17.7	1560	29.8
480	18.1	1580	29.6
500	18.5	1600	29.5
520	19.1	1620	29.3
540	19.5	1640	29.2
560	19.8	1660	29.4
580	20.6	1680	29.6
600	21.3	1700	29.8
620	21.5	1720	30.3
640	21.2	1740	30.8
660	21.4	1760	31.1
680	21.9	1780	31.0
700	22.2	1800	30.9
720	22.2	1820	30.7
740	22.1	1840	30.6
760	22.3	1860	30.6
780	22.6	1880	30.6
800	22.7	1900	30.6
820	22.9	1920	30.7
840	23.1	1940	30.9
860	23.4	1960	31.2
880	23.8	1980	31.6
900	24.1	2000	32.0
920	24.1		

Antenna factor is to be added to receiver meter reading in dB(μ V) to convert to field intensity in dB(μ V/meter).