

3.4 Support Equipment List

Monitor: Compaq Computer Corporation
Model: Compaq
Serial number: 437A
FCC ID: A3KM043

Computer: Compaq Computer Corporation
Model: Deskpro 466
Serial number: 3501N4
FCC ID: CNT75MDACN4

Keyboard: Compaq Computer Corporation
Model : RT101
Serial number: 2120663-007A
FCC ID: AQ6-CYPRESSC15

Mouse: Compaq Computer Corporation
Model: M-S 34-6MD
Serial number: 141189-201
FCC ID: DZL210472

3.5 Cabling Configuration

Power Cords:

Unit EUT (TranScanner)
MFG Generic
Shielded? NO
Length 2 m

Unit CPU
MFG Generic
Shielded? NO
Length 2 m

UNIT MONITOR
MFG Generic
Shielded? NO
Length 2 m

I / O Cables External:

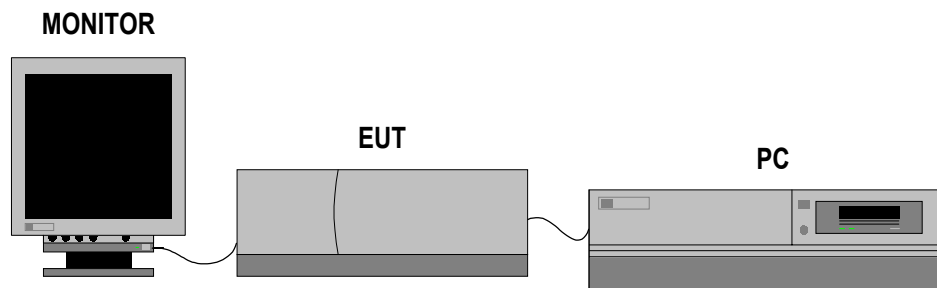
Connection Monitor to EUT
Connector DB15(SVGA)
MFG Infotel, Inc.
Shielded? YES

Connector: EUT to Computer
Connector DB15(RGBS Input)
MFG Space Shuttle (p / n: 387-765K)
Shielded? YES

Connection: Keyboard
Connector: DIN
MFG Compaq Computer Corporation
Shielded? YES

Connecton: Mouse
Connector: DIN
MFG Compaq Computer Corporation
Shielded? YES

Block Diagram Of Test Setup Operation



4.2 Procedure of Radiated Emissions Test

The EMC radiated test facility consists of a shielded semi-anechoic chamber with an attached shielded control room. The semi-anechoic chamber is approximately 18 feet wide by 28 feet long by 19 feet high. A hybrid absorber combines high performance anechoic polyurethane foam with a ferrite tile base to achieve high levels of absorption and power dissipation capability.

The test site is designed according to the ANSI 63.4 -1992 requirements and the anechoic treatment of the chamber is sufficient to achieve the requirements of CISPR 22 and ANSI C63.4. The site attenuation data has been filed with the FCC and a letter of compliance with the requirements of Section 2.948 of the FCC Rules was issued on June 12, 1995 by the FCC.

The EUT was tested in compliance with Section 12 of the ANSI C63.4 standard. All data was obtained via an HP 85876A EMI measurement software package using an HP 85462A Receiver.

The EUT was configured as a variable line multiplier, accepting the composite video signal from the computer's video card output. Then the modified and enriched video signal was transferred to the computer monitor. The test program `Mtest.bat` was running continuously for the test purposes.

After determination of the maximum emissions configuration the distance of the EUT to the scanning antenna was set to 3 meters as required by the standards. Radiated emissions were then monitored from the EUT over a frequency range of 30 MHz to 1000 MHz in horizontal polarization with the scanning antenna repeatedly moving from 1 to 4 meters in elevation while the turntable rotated through a 360 degree arc. This procedure was then repeated in vertical polarization to confirm the strongest signals and polarization orientation. This part of the test sequence the spectrum check is done in a manual mode.

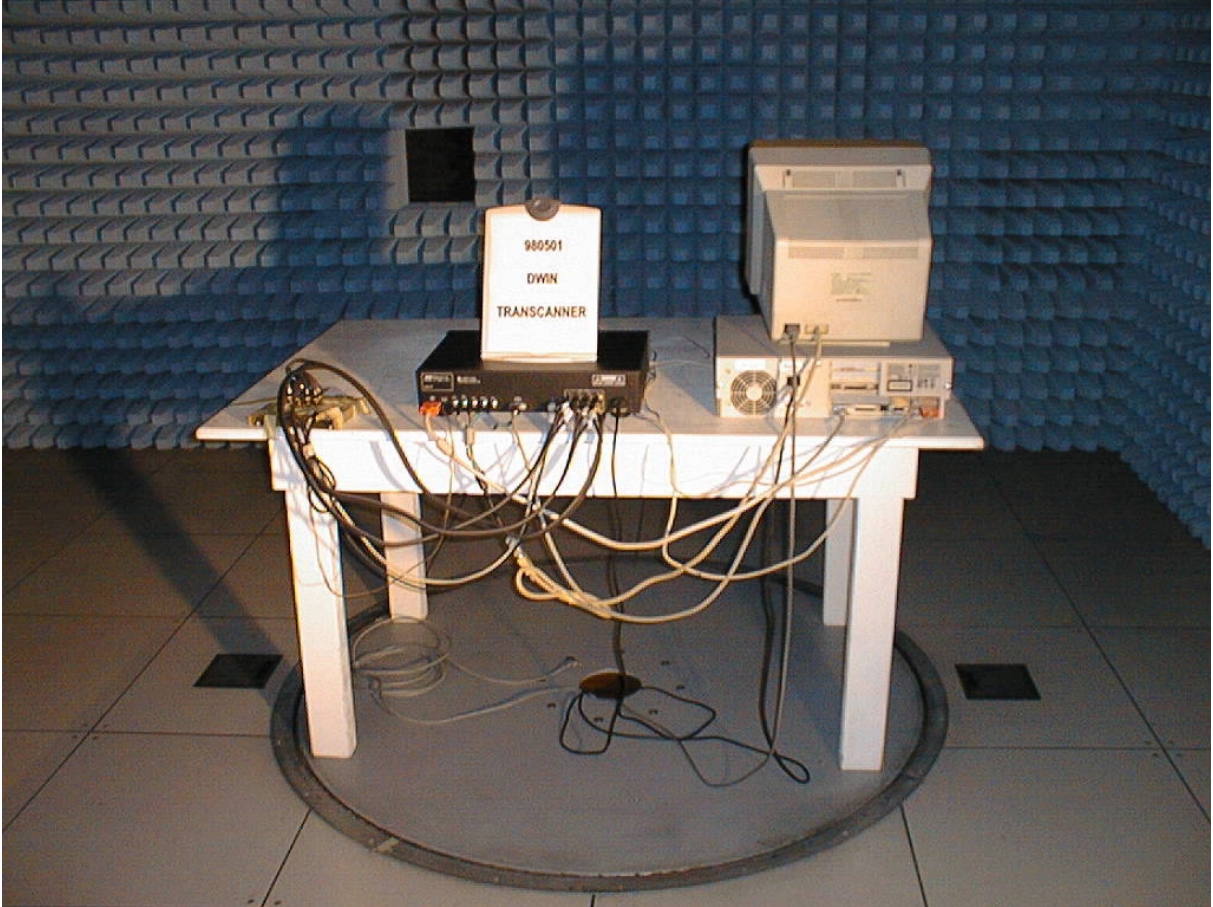
After it is determined by the results of the spectrum check scan that the article is compliant the EUT is then measured in completely automatic mode using a Hewlett-Packard 8546A EMI Receiver (9 kHz - 6.5 GHz) and HP 85876A EMI Measurement Software test system.

The HP Software, after scanning the EUT in Peak mode, automatically selects the strongest signal from the EUT and then Quasi-Peaks and Averages those strong signals to determine EUT compliance to the standards.

The measurement values are data reduced and then presented as both graphical results of the spectrum check and tabulated QP and Averages of the strongest signals in this report.



**Radiated emission test
(Front view)**



**Radiated emission test
(Rear view)**



Conducted emission test
(Front view)



**Conducted emission test
(Rear view)**

5.0 TEST RESULTS

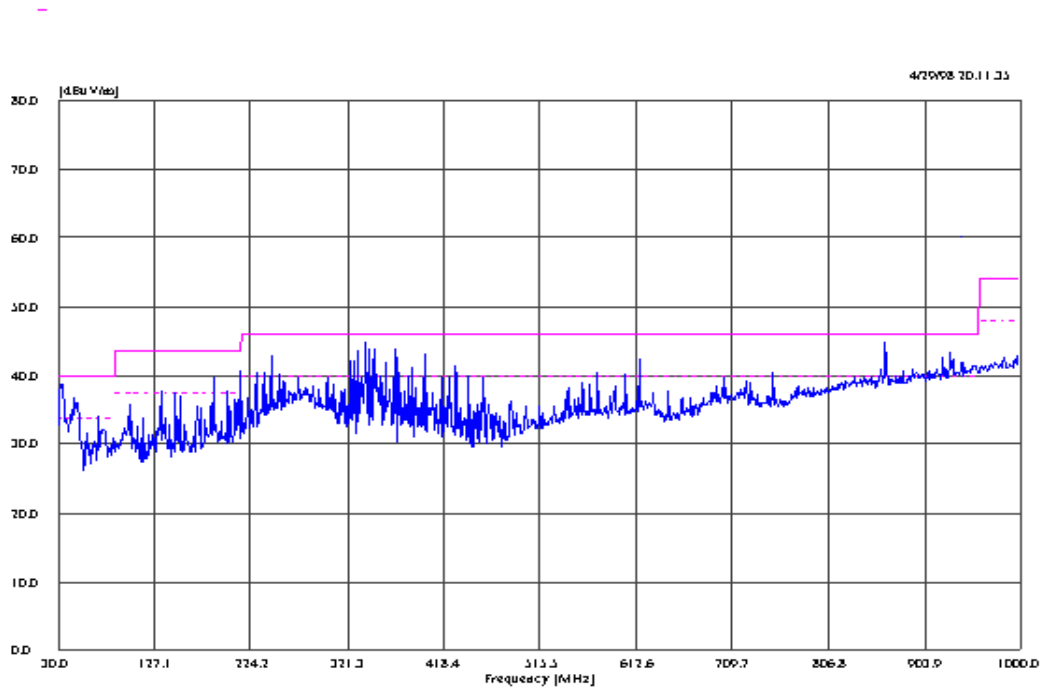
5.1 RADIATED EMISSION TEST

Below is the Quasi-Peak result of the highest value signals observed throughout the 30 MHz to 1000 MHz frequency range.

Frequency	Peak	QP Peak	Lmt	DelLim-QP	Pol	Hgt	Angle	Status
MHz	dBuV/m	dBuV/m	dBu	dB		cm	deg	
30.998513	39.44	35.24	40	-4.76	Vert	124	55	PASS
186.2707	40.87	38.02	43.5	-5.48	Vert	122	23	PASS
214.3941	40.07	37.38	43.5	-6.12	Vert	100	2	PASS
243.4097	45.53	42.66	46	-3.34	Vert	122	70	PASS
254.0106	40.99	39.2	46	-6.80	Vert	100	357	PASS
329.3181	42.7	40.34	46	-5.66	Vert	121	183	PASS
464.79278	35.85	32.47	46	-13.53	Vert	350	41	PASS
749.9965	43.07	39.61	46	-6.39	Vert	100	117	PASS
836.6619	38.35	31.22	46	-14.78	Horz	371	118	PASS
840.1422	38.23	31.15	46	-14.85	Horz	218	68	PASS
843.7596	37.78	31.34	46	-14.66	Horz	358	333	PASS
846.8108	37.7	31.17	46	-14.83	Vert	279	141	PASS
849.6743	38.12	31.13	46	-14.87	Vert	295	204	PASS
855.7067	38.83	31.09	46	-14.91	Horz	235	50	PASS
859.0100	43.01	38.71	46	-7.29	Vert	322	77	PASS
863.0829	45.08	39.5	46	-6.50	Horz	100	34	PASS

A composite (that is both horizontal and vertical polarization) spectrum trace of the magnitude of all the signals throughout the band may be seen below. In this graph

the magnitude of the largest signal is plotted for the configuration that produced the largest signal.

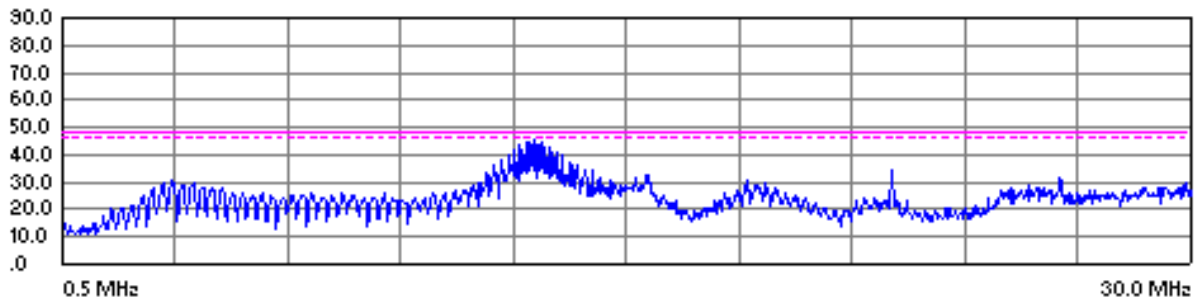


5.2 CONDUCTED EMISSION TEST

As may be seen in the graph below the conducted emissions are very low. The strongest signals are tabulated as indicative of the overall emission spectrum.

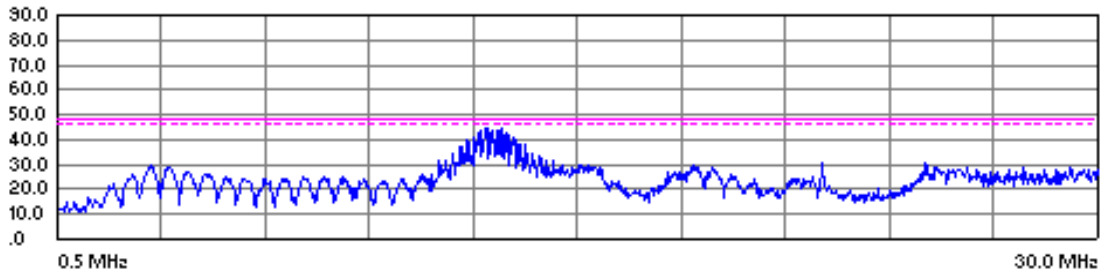
line1

Frequency	Peak	QP	QP Lmt	DelLim-Pk	Avg	Avg Lmt	DelLim-Avg	Status
MHz	dBuV/m	dBuV/m	dBuV/m	dB	dBuV/m	dBuV/m	dB	
11.9225	38.36	35.51	48	-9.64	25.68	48	-22.32	PASS
12.2705	43.61	39.68	48	-4.39	29.57	48	-18.43	PASS
12.36857	42.93	40.31	48	-5.07	28.37	48	-19.63	PASS
12.56664	44.58	41.79	48	-3.42	29.4	48	-18.6	PASS
12.66798	44.67	41.95	48	-3.33	29.88	48	-18.12	PASS
12.76696	45.62	42	48	-2.38	29.56	48	-18.44	PASS
12.86396	32.29	--	48	-15.71	--	48	--	PASS
12.96649	42.71	41.3	48	-5.29	29.89	48	-18.11	PASS
13.06785	31.03	--	48	-16.97	--	48	--	PASS
13.2138	41.12	39.48	48	-6.88	27.46	48	-20.54	PASS
13.36335	37.31	--	48	-10.69	--	48	--	PASS
13.51822	37.76	--	48	-10.24	--	48	--	PASS



Signature

Frequency	Peak	QP	QP Lmt	Avg	Avg Lmt	DelLim-QP	DelLim-Avg	Status
MHz	dBuV/m	dBuV/m	dBuV/m	dBuV/m	dBuV/m	dB	dB	
2.581004	26.02	24.63	48	23.86	48	-23.37	-24.14	PASS
2.958654	27.97	26.21	48	25.7	48	-21.79	-22.3	PASS
2.990251	28.64	27.44	48	26.93	48	-20.56	-21.07	PASS
3.053147	29.66	28.64	48	28.31	48	-19.36	-19.69	PASS
3.084669	29.82	28.69	48	28.34	48	-19.31	-19.66	PASS
3.115993	29.35	28.33	48	27.88	48	-19.67	-20.12	PASS
3.147665	28.78	27.56	48	27.09	48	-20.44	-20.91	PASS
3.493945	27.95	26.5	48	26.01	48	-21.5	-21.99	PASS
3.525499	28.57	27.37	48	26.81	48	-20.63	-21.19	PASS
3.556832	29.15	27.74	48	27.26	48	-20.26	-20.74	PASS
3.588163	29.17	27.97	48	27.58	48	-20.03	-20.42	PASS
3.651197	28.91	27.87	48	22.74	48	-20.13	-25.26	PASS
4.091102	27.98	26.81	48	26.23	48	-21.19	-21.77	PASS
4.154392	26.28	24.05	48	23.03	48	-23.95	-24.97	PASS
12.0715	40.82	36.92	48	33.02	48	-11.08	-14.98	PASS
12.36776	43.57	41.19	48	29.45	48	-6.81	-18.55	PASS
12.46762	45.18	41.78	48	31.18	48	-6.22	-16.82	PASS
13.06294	44.46	41.79	48	31.03	48	-6.21	-16.97	PASS
13.21253	43.13	40.84	48	28.91	48	-7.16	-19.09	PASS
15.84691	21.3	--	48	--	48	--	--	PASS
22.13049	25.24	--	48	--	48	--	--	PASS



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Client: DWIN Electronics,Inc.
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