

FCC TEST REPORT

for

CISPR PUB. 22 Class B

Equipment : NOTEBOOK PC

Model No. : 3XXXX (X=0~9, A~Z)

FCC ID : L4PK3100CX13

Filing Type : Original Grant

Applicant : **KAPOK COMPUTER CO.**
No. 2-66, Sec. 2, Kwang-Fu Rd., Sun Chung City,
Taipei Hsien, Taiwan, R.O.C.

- The test result refers exclusively to the test presented test model / sample.
- Without the written authorization of the test lab., the Test Report may not be copied.
- **Certificate or Test Report must not be used by the applicant to claim the product in this test report endorsement by NVLAP or any agency of U.S. government.**

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

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CERTIFICATE OF COMPLIANCE

for

CISPR PUB. 22 Class B

Equipment : NOTEBOOK PC

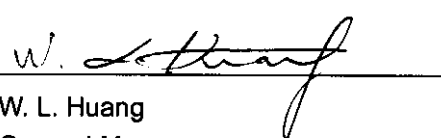
Model No. : 3XXXX (X=0~9, A~Z)

FCC ID : L4PK3100CX13

Applicant : **KAPOK COMPUTER CO.**
No. 2-66, Sec. 2, Kwang-Fu Rd., Sun Chung City,
Taipei Hsien, Taiwan, R.O.C.

I HEREBY CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 - 1992** and the energy emitted by this equipment was **passed CISPR PUB. 22** both radiated and conducted emission class B limits. Testing was carried out on Mar. 12, 1999 at **SPORTON International Inc. LAB.** in Lin Kou.


W. L. Huang
General Manager

Mar 30, 99'

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

1. General Description of Equipment under Test

1.1. Applicant

KAPOK COMPUTER CO.
No. 2-66, Sec. 2, Kwang-Fu Rd., Sun Chung City,
Taipei Hsien, Taiwan, R.O.C.

1.2. Manufacturer

Same as 1.1.

1.3. Basic Description of Equipment under Test

Equipment : NOTEBOOK PC
Model No. : 3XXXX (X=0~9, A~Z)
FCC ID : L4PK3100CX13
Trade Name : KAPOK
Data Cable : Shielded
Microphone, Stereo Cassette Player, Earphone DATA CABLE : Non-shielded
POWER SUPPLY TYPE : Switching
INPUT POWER CORD : Non-shielded, 1.8M, 3PIN
OUTPUT POWER CORD : Shielded, 1.3M, 4PIN

1.4. Feature of Equipment under Test

CPU: Intel® Celeron™ processors 333MHz, whit 128KB integrated full speed L2 cache.
Memory:

- Provide 64-bit data bus system memory
- Two 144 pins SODIMM sockets , support 3.3V EDO, Sync DRAM SODIMM EDO DIMM: must use 60ns or faster, Sync DRAM SODIMM: must use 75 MHz OR FASTER
- Expandable memory up to 64MB SODIMM Module

System BIOS:

- One 256KB Flash ROM
- SystemSoft BIOS with Smart Battery
- Plug and Play (1.0a)
- ACPI 1.0 256KB Flash ROM

Display:

- XGA TFT flat panel 13.3"
- AGP 2X
- Complete 64-bit hardware 2D/3D Accelerator Graphics Engine
- Motion Compensation
- 4MB display memory SGRAM type (100MHz)
- Support TFT panel resolution up to 1024x768x16M
- CRT resolution up to 1280x1024x16M (non-interlaced)

Storage:

- One removable intelligent bay for 3.5" 3-mode FDD/12.7 mm(h) LS-120/2.5" 12.7mm(h) 2nd HDD/2nd Battery
- One easy change bay for CD-ROM(24X speed or up)
- Removable 2.5" 12.7mm(h) HDD, support LBA mode
- Support DMA mode 2/PIO mode 4/ATA-33 (Ultra DMA) IDE

Audio:

- 3D stereo enhancement sound system
- Dull duplex support
- Compatible with Sound-Blaster PRO™ version 3.01
- Built in microphone
- Wavetable Download

PC Card Sockets:

- Two (PCI) PCMCIA 3.3V/5V sockets, type II x2
- Support Zoom Video Port (Socket A)
- CardBus (PC Card95)

Input/Output:

- Built in Trackpad (PS/2)
- Dual USB ports
- One serial port
- One parallel port (LPT1)
- One Infrared (FIR) file transfer
- One external CRT monitor
- One External keyboard / Mouse (PS/2 type) port
- One line-in jack
- One headphone jack
- One (120 pins) connector for Port Replicator
- DC-in jack

Power:

- Full Range AC adapter-AC in 100~240V, 47~63Hz
- Support two packs, removable Lithium-Ion Battery or Ni-MH Battery

2. Test Configuration of Equipment under Test

2.1. Test Manner

- a. The EUT has been associated with personal computer and peripherals pursuant to ANSI C63.4-1992 and configuration operated in a manner which tended to maximize its emission characteristics in a typical application.
- b. The SONY Monitor, DELL PS/2 Keyboard, WINIC Mouse, HP Printer, ACEEX Modem, GALLANT Microphone, AIWA Stereo Cassette Player and J&S Earphone were connected to the EUT for EMI test.
- c. The following display resolution were investigated during the compliance test:
 1. CRT and LCD display (from 640x480 mode to 1,024x768 48KHz resolution)
 2. CRT display only (from 640x480 to 1,280x1,024 80KHz)
- d. According to the above tests, we listed the following modes as the worst cases:
 1. The EUT is installed with TFT color 13.3" LCD panel, CPU (Pentium 333) running at 333 MHz while the LCD and CRT display at same time (800x600 48KHz).
 2. The EUT is installed with TFT color 13.3" LCD panel, CPU (Pentium 333) running at 333 MHz while the CRT display only (1,280x1,024 non-interlaced 80 KHz).
 3. The EUT is installed with TFT color 13.3" LCD panel, CPU (Pentium 333) running at 333 MHz while the CRT and LCD display (1024x768 48 KHz).
- e. Frequency range investigated: conduction 150 KHz to 30 MHz, radiation 30 MHz to 2,000 MHz.

2.2. Description of Test System

Support Unit 1. -- Monitor (SONY)

FCC ID	: AK8GDM17SE2T
Model No.	: GDM-17SE2T
Power Supply Type	: Switching
Power Cord	: Non-Shielded
Serial No.	: SP0013
Data Cable	: Shielded, 360 degree via metal backshells, 1.7m

Support Unit 2. -- PS/2 Keyboard (DELL)

FCC ID	: GYUM92SK
Model No.	: AT101(DE8M)
Serial No.	: SP0054
Data Cable	: Shielded, 360 degree via metal backshells, 1.9m

FCC TEST REPORT**Report No. : F930231****Support Unit 3. -- Mouse (WINIC)**

FCC ID : F4ZFDM-A50
Model No. : FDM-A50
Serial No. : SP0088
Data Cable : Shielded, 360 degree via metal backshells, 1.5m

Support Unit 4. -- Printer (HP)

FCC ID : B94C2642X
Model No. : DeskJet 400
Power Supply Type : Linear
Power Cord : Non-Shielded
Serial No. : SP0048
Data Cable : Braided-Shielded, 360 degree via metal backshells, 1.35m

Support Unit 5. -- Modem (ACEEX)

FCC ID : IFAXDM1414
Model No. : DM1414
Power Supply Type : Linear
Power Cord : Non-Shielded
Serial No. : SP0015
Data Cable : Shielded, 360 degree via metal backshells, 1.75m

Support Unit 6. -- Microphone (GALLANT)

Model No. : Dynamic 600
Serial No. : SP0093
Data Cable : Non-Shielded, 2.9m

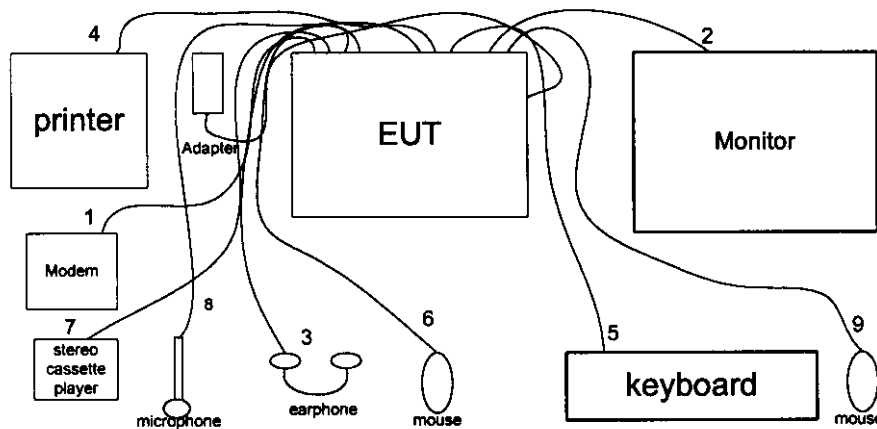
Support Unit 7. -- Stereo Cassette Player (AIWA)

FCC ID : N/A
Model No. : HS-J36
Serial No. : SP0032
Data Cable : Non-Shielded, 1.7m

Support Unit 8. -- Earphone (J&S)

Model No. : HS-102
Serial No. : SP0123
Data Cable : Non-Shielded, 1.2m

2.3. Connection Diagram of Test System



1. The I/O cable is connected from PC to the support unit 5.
2. The I/O cable is connected from PC to the support unit 1.
3. The I/O cable is connected from PC to the support unit 8.
4. The I/O cable is connected from PC to the support unit 4.
5. The I/O cable is connected from PC to the support unit 2.
6. The I/O cable is connected from PC to the support unit 3.
7. The I/O cable is connected from PC to the support unit 7.
8. The I/O cable is connected from PC to the support unit 6.
9. The I/O cable is connected from PC to the support unit 3.

3. Test Software

Two executive program, EMITEST.EXE & WINFCC.EXE under WIN 98, which generates a complete line of continuously repeating " H " pattern was used as the test software.

The program was executed as follows :

- a. Turn on the power of all equipment.
- b. The PC reads the test program from the floppy disk drive and runs it.
- c. The PC sends " H " messages to the LCD and monitor, and the monitor and LCD displays " H " patterns on screen.
- d. The PC sends " H " messages to the printer, then the printer prints them on the paper.
- e. The PC sends " H " messages to the modem.
- f. The PC sends " H " messages to the internal Hard Disk, and the Hard Disk reads and writes the message.
- g. Repeat the steps from b to f.

An executive programs, CD Player Program under WIN98, were used as the test software.

4. General Information of Test

4.1. Test Facility

This test was carried out by SPORTON International Inc. in an openarea test site.
Openarea Test Site Location : No. 30-2, Lin 6, Diing-Fwu Tsuen, Lin-Kou-Hsiang,
Taipei Hsien, Taiwan, R.O.C.
TEL : 886-2-2601-1640
FAX : 886-2-2601-1695

4.2. Standard for Methods of Measurement

ANSI C63.4-1992

4.3. Test in Compliance with

CISPR PUB. 22 Class B

4.4. Frequency Range Investigated

- a. Conduction: from 150 kHz to 30 MHz
- b. Radiation : from 30 MHz to 2,000 MHz

4.5. Test Distance

The test distance of radiated emission from antenna to EUT is 10 M.

5. Test of Conducted Powerline

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 115 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-1992 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 5.3. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

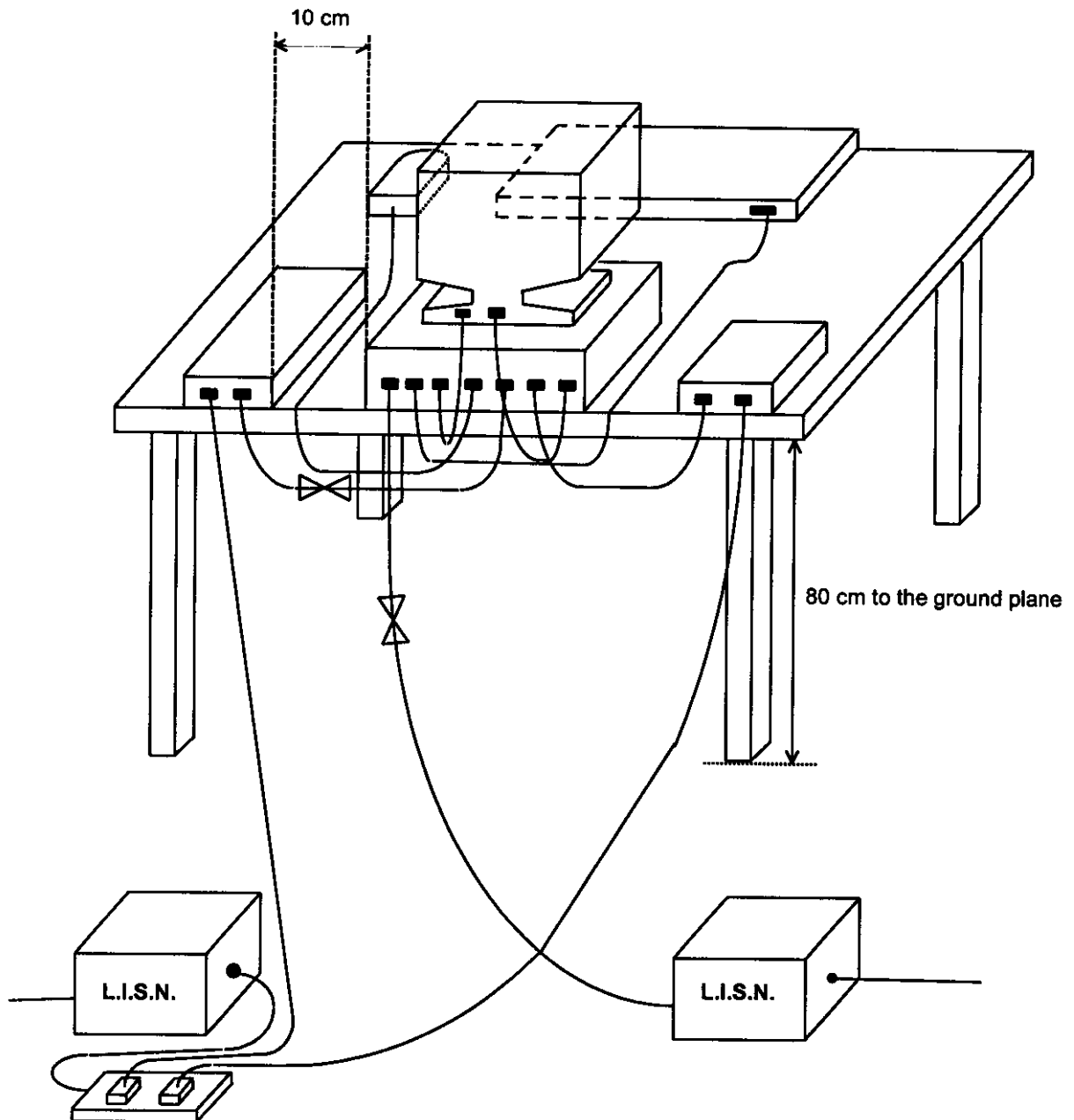
5.1. Major Measuring Instruments

Test Receiver	HP 8591EM
Attenuation	0 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
Step MHz	0.007 MHz
IF Bandwidth	9 kHz

5.2. Test Procedures

- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- c. All the support units are connect to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- i. If the emission level of the EUT in peak mode was 6 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 6 dB margin will be retested one by one using the quasi-peak method and reported.

5.3. Typical Test Setup Layout of Conducted Powerline



5.4. Test Result of AC Powerline Conducted Emission

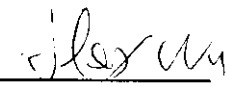
5.4.1. Test mode : 800x600 48K/60Hz (CRT+LCD)

- Temperature : 20°C
- Relative Humidity : 65 %
- Test Date : Mar. 12, 1999

The Conducted Emission test was passed at minimum margin**NEUTRAL 4.119 MHz / 46.00 dBuV.**

Freq. (MHz)	Line or Neutral	Meter Reading				Limits				Margin	
		Q.P. (dBuV)	A.V. (dBuV)	Q.P. (uV)	A.V. (uV)	Q.P. (dBuV)	A.V. (dBuV)	Q.P. (uV)	A.V. (uV)	Q.P. (dB)	A.V. (dB)
0.443	L	42.80	41.40	138.04	117.49	57.00	47.00	707.63	223.77	-14.20	-5.60
2.473	L	40.50	35.40	105.93	58.88	56.00	46.00	630.96	199.53	-15.50	-10.60
3.997	L	44.40	38.90	165.96	88.10	56.00	46.00	630.96	199.53	-11.60	-7.10
4.185	L	44.90	39.50	175.79	94.41	56.00	46.00	630.96	199.53	-11.10	-6.50
0.444	N	43.00	42.20	141.25	128.82	56.99	46.99	706.85	223.53	-13.99	-4.79
4.119	N	46.00	41.00	199.53	112.20	56.00	46.00	630.96	199.53	-10.00	-5.00

Test Engineer :


ALEX WU

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Report No. : F930231

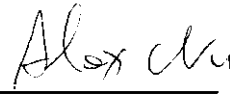
5.4.2. Test mode : 1280x1024 80K/75Hz (CRT ONLY)

- Temperature : 20°C
- Relative Humidity : 65 %
- Test Date : Mar. 12, 1999

The Conducted Emission test was passed at minimum margin**LINE 4.131 MHz / 43.30 dBuV.**

Freq. (MHz)	Line or Neutral	Meter Reading				Limits				Margin	
		Q.P. (dBuV)	A.V. (dBuV)	Q.P. (uV)	A.V. (uV)	Q.P. (dBuV)	A.V. (dBuV)	Q.P. (uV)	A.V. (uV)	Q.P. (dB)	A.V. (dB)
0.255	L	48.10	45.50	254.10	188.36	61.60	51.60	1202.65	380.31	-13.50	-6.10
0.381	L	43.80	42.50	154.88	133.35	58.26	48.26	818.65	258.88	-14.46	-5.76
4.131	L	43.30	38.60	146.22	85.11	56.00	46.00	630.96	199.53	-12.70	-7.40
0.382	N	42.20	38.40	128.82	83.18	58.23	48.23	815.78	257.97	-16.03	-9.83
1.590	N	39.60	37.00	95.50	70.79	56.00	46.00	630.96	199.53	-16.40	-9.00
3.944	N	42.50	37.90	133.35	78.52	56.00	46.00	630.96	199.53	-13.50	-8.10

Test Engineer :


ALEX WU

FCC TEST REPORT

Report No. : F930231

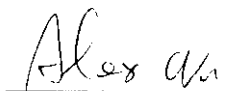
5.4.3. Test mode : 1024x768 48K/60Hz (CRT+LCD)

- Temperature : 20°C
- Relative Humidity : 65 %
- Test Date : Mar. 12, 1999

The Conducted Emission test was passed at minimum margin**NEUTRAL 3.979 MHz / 46.10 dBuV.**

Freq. (MHz)	Line or Neutral	Meter Reading				Limits				Margin	
		Q.P. (dBuV)	A.V. (dBuV)	Q.P. (uV)	A.V. (uV)	Q.P. (dBuV)	A.V. (dBuV)	Q.P. (uV)	A.V. (uV)	Q.P. (dB)	A.V. (dB)
0.253	L	47.80	43.40	245.47	147.91	61.65	51.65	1208.96	382.31	-13.85	-8.25
4.044	L	44.80	40.80	173.78	109.65	56.00	46.00	630.96	199.53	-11.20	-5.20
4.106	L	45.80	41.50	194.98	118.85	56.00	46.00	630.96	199.53	-10.20	-4.50
0.443	N	43.50	42.40	149.62	131.83	57.01	47.01	708.99	224.20	-13.51	-4.61
3.979	N	46.10	42.00	201.84	125.89	56.00	46.00	630.96	199.53	-9.90	-4.00
4.042	N	45.60	41.30	190.55	116.14	56.00	46.00	630.96	199.53	-10.40	-4.70

Test Engineer :



ALEX WU

6. Test of Radiated Emission

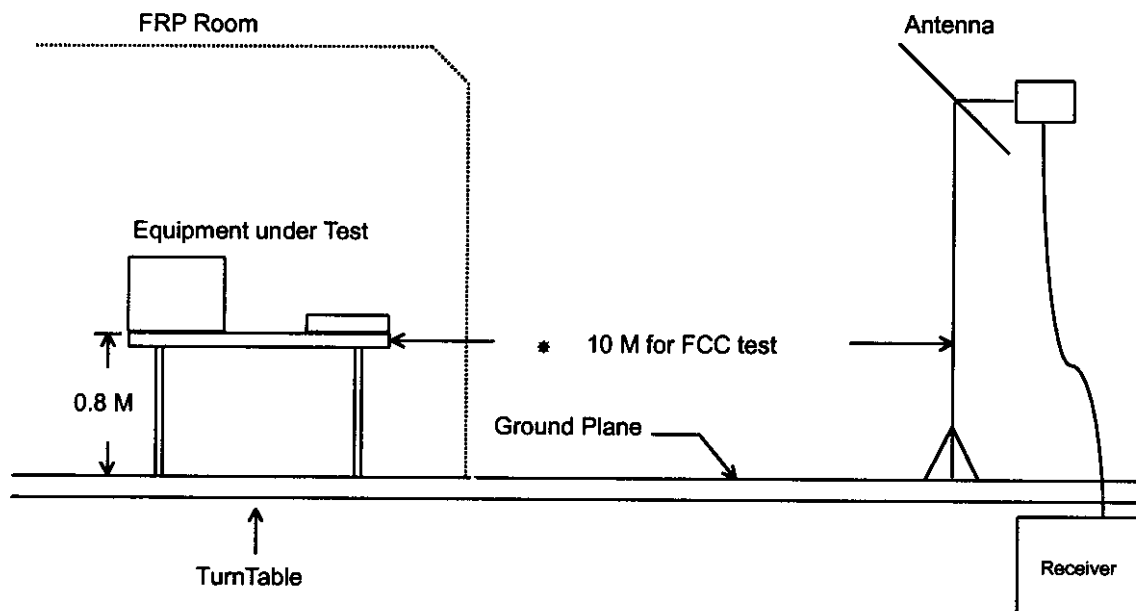
Radiated emissions from 30 MHz to 2,000 MHz were measured with a bandwidth of 120 kHz according to the methods defines in ANSI C63.4-1992. The EUT was placed on a nonmetallic stand in the open-field site, 0.8 meter above the ground plane, as shown in section 6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

6.1. Major Measuring Instruments

Amplifier	(HP 87405A)
Attenuation	0 dB
RF Gain	20 dB
Signal Input	10 MHz to 3 GHz
Spectrum Analyzer	(HP 8594A)
Attenuation	0 dB
Start Frequency	30 MHz
Stop Frequency	2,000 MHz
Resolution Bandwidth	1 MHz
Video Bandwidth	1 MHz
Signal Input	9 KHz to 2.9 GHz
Quasi-Peak Adapter	(HP 8594A)
Resolution Bandwidth	120 KHz
Frequency Band	30 MHz to 1 GHz
Quasi-Peak Detector	ON for Quasi-Peak Mode OFF for Peak Mode

6.2. Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 10 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 6 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 6 dB margin will be repeated one by one using the quasi-peak method and reported.

6.3. Typical Test Setup Layout of Radiated Emission

6.4. Test Result of Radiated Emission

6.4.1. Test mode : 800x600 48K/60Hz (CRT+LCD)

- Test Distance : 10 M
- Temperature : 22°C
- Relative Humidity : 76 %
- Test Date : Mar. 2, 1999
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading : Antenna Factor + Cable Loss + Reading = Emission

The Radiated Emission test was passed at minimum margin

600.141 MHz / 33.96 dBuV (HORIZONTAL) Antenna Height 2.7 Meter, Turntable Degree 162 °.

Frequency (MHz)	Polarity	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Limits		Emission (dBuV/m)	Level (uV/m)	Margin (dB)
					(dBuV/m)	(uV/m)			
248.000	V	12.90	1.85	19.15	37.00	70.79	33.90	49.55	-3.10
443.200	V	16.32	2.29	15.00	37.00	70.79	33.61	47.92	-3.39
651.455	V	20.01	2.80	11.10	37.00	70.79	33.91	49.60	-3.09
200.457	H	8.86	1.40	16.41	30.00	31.62	26.67	21.55	-3.33
272.800	H	13.19	1.70	19.00	37.00	70.79	33.89	49.49	-3.11
600.141	H	19.32	2.60	12.04	37.00	70.79	33.96	49.89	-3.04

Test Engineer : Terry Chang
Terry Chang

6.4.2. Test mode : 1280x1024 80K/75Hz (CRT ONLY)

- Test Distance : 10 M
- Temperature : 22°C
- Relative Humidity : 76 %
- Test Date : Mar. 2, 1999
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading : Antenna Factor + Cable Loss + Reading = Emission

The Radiated Emission test was passed at minimum margin

324.500 MHz / 34.00 dBuV (VERTICAL) Antenna Height 2 Meter, Turntable Degree 249 °.

Frequency (MHz)	Polarity	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Limits		Emission (dBuV/m)	Level (uV/m)	Margin (dB)
					(dBuV/m)	(uV/m)			
324.500	V	13.39	1.90	18.71	37.00	70.79	34.00	50.12	-3.00
401.600	V	15.58	2.20	16.11	37.00	70.79	33.89	49.49	-3.11
572.000	V	19.55	2.71	11.70	37.00	70.79	33.96	49.89	-3.04
600.140	V	19.32	2.60	12.08	37.00	70.79	34.00	50.12	-3.00
620.000	V	19.59	2.68	11.65	37.00	70.79	33.92	49.66	-3.08
640.000	V	19.88	2.76	11.30	37.00	70.79	33.94	49.77	-3.06

Test Engineer : Terry Chang
Terry Chang

FCC TEST REPORT

Report No. : F930231

6.4.3. Test mode : 1024x768 48K/60Hz (CRT+LCD)

- Test Distance : 10 M
- Temperature : 22°C
- Relative Humidity : 76 %
- Test Date : Mar. 2, 1999
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading : Antenna Factor + Cable Loss + Reading = Emission

The Radiated Emission test was passed at minimum margin**600.139 MHz / 33.95 dBuV (HORIZONTAL) Antenna Height 2.8 Meter, Turntable Degree 177 °.**

Frequency (MHz)	Polarity	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Limits		Emission (dBuV/m)	Level (uV/m)	Margin (dB)
					(dBuV/m)	(uV/m)			
114.005	V	12.27	1.10	13.52	30.00	31.62	26.89	22.11	-3.11
561.600	V	19.64	2.75	11.51	37.00	70.79	33.90	49.55	-3.10
570.030	V	19.57	2.72	11.60	37.00	70.79	33.89	49.49	-3.11
200.456	H	8.86	1.40	16.58	30.00	31.62	26.84	21.98	-3.16
344.000	H	13.43	1.98	18.50	37.00	70.79	33.91	49.60	-3.09
600.139	H	19.32	2.60	12.03	37.00	70.79	33.95	49.83	-3.05

Test Engineer :


Terry Chang

7. Antenna Factor & Cable Loss

Frequency (MHz)	Antenna Factor (dB)	Cable Loss (dB)
30	17.9	0.8
35	16.1	0.8
40	14.0	0.8
45	10.5	0.8
50	7.9	0.7
55	6.7	0.8
60	5.5	0.9
65	5.5	0.8
70	5.6	0.9
75	6.5	1.0
80	7.5	0.9
85	8.5	1.0
90	9.4	1.0
95	10.4	1.0
100	11.5	1.1
110	12.1	1.1
120	12.6	1.1
130	12.0	1.3
140	11.6	1.2
150	10.5	1.3
160	10.5	1.3
170	9.8	1.4
180	9.2	1.5
190	9.0	1.4
200	8.8	1.4
220	10.5	1.5
240	12.2	1.7
260	13.1	1.7
280	13.2	1.7
300	13.4	1.8
320	13.4	1.9
340	13.4	2.0
360	13.9	2.0
380	14.9	2.1
400	15.6	2.2
450	16.4	2.3
500	16.6	2.4
550	19.7	2.8
600	19.3	2.6
650	20.0	2.8
700	19.5	2.8
750	18.5	3.1
800	17.8	3.4
850	18.3	3.1
900	20.5	3.3
950	21.4	3.7
1000	21.2	3.7
2000	31.57	6.2

LKOP5

8. List of Measuring Equipments Used

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver (site 2)	HP	8591EM	3710A01187	9 KHz - 18 GHz	Sep. 18, 1998	Conduction
LISN (EUT) (site 2)	Telemeter	NNB-2/16Z	98009	50 ohm / 50 uH	Jan. 22, 1999	Conduction
LISN (Support Unit) (site 2)	EMCO	3810/2NM	9703-1839	50 ohm / 50 uH	Jul. 06, 1998	Conduction
Amplifier (Site 5)	HP	87405A	3207A01437	10MHz -3.0GHz	June 26, 1998	Radiation
Spectrum Analyzer (Site 5)	HP	8594A	3051A00172	9KHz -2.9GHz	Apr. 17, 1998	Radiation
Bilog Antenna (Site 5)	CHASE	CBL6112A	2287	30MHz -2GHz	Jan. 07, 1999	Radiation
Half-wave dipole antenna (Site 5)	EMCO	3121C	9705-1285	28 M - 1GHz	May 19, 1998	Radiation
Turn Table (site 5)	EMCO	2080	9711-2021	0 ~ 360 degree	N/A	Radiation
Antenna Mast (site 5)	EMCO	2075	9711-2115	1 m- 4 m	N/A	Radiation