

FCC TEST REPORT

for

PART 15, SUBPART B CLASS B

EQUIPMENT : 19" COLOR MONITOR

MODEL NO. : M990

F C C I D : GKRM990

FILING TYPE : Class II Change

APPLICANT : **COMPAL ELECTRONICS, INC.**
7Fl., 319 Pateh Rd., Sec. 4,
Taipei, 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.

SPORTON INTERNATIONAL INC.

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

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FCC TEST REPORT

REPORT NO. : F880724

CERTIFICATE NO. : F880724

CERTIFICATE OF COMPLIANCE

for

FCC PART 15, SUBPART B CLASS B

EQUIPMENT : 19" COLOR MONITOR

MODEL NO. : M990

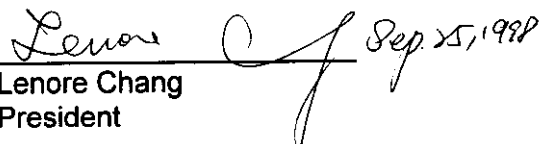
F C C I D : GKRM990

APPLICANT : COMPAL ELECTRONICS, INC.
7Fl., 319 Pateh Rd., Sec. 4,
Taipei, Taiwan R.O.C.

I HEREBY CERTIFY THAT :

The measurement shown in this report were made in accordance with the procedures given in **ANSI C63.4 -1992** and the energy emitted by this equipment was **passed** both radiated and conducted emissions **Class B** limits.

Testing was carried out on **Sep. 09, 1998** at **SPORTON International Inc.**


Lenore Chang
President

SPORTON INTERNATIONAL INC.

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

1. GENERAL DESCRIPTION OF EQUIPMENT UNDER TEST

1.1. APPLICANT

COMPAL ELECTRONICS, INC.

7Fl., 319 Pateh Rd., Sec. 4,

Taipei, Taiwan R.O.C.

1.2. MANUFACTURER

Same as 1.1

1.3. BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

EQUIPMENT : 19" COLOR MONITOR

MODEL NO. : M990

FCC ID : GKRM990

TRADE NAME : COMPAL

15-PIN D-TUB DATA CABLE : Shielded

BNC DATA CABLE : Shielded

(Remark: 1. Two ferrite cores were added on the 15-pin video data cable at two end.)

2. A ferrite core was added on the BNC data cable at PC end.)

POWER SUPPLY TYPE : Switching

POWER CORD : Non-shielded

1.4. FEATURE OF EQUIPMENT UNDER TEST

- **CRT** : 19", 0.26mm, 90 degree
- **Resolution** : 1600x1200 NI
- **Horizontal Sync.** : 31.5 to 95KHz
- **Vertical Sync.** : 60 to 85Hz
- **Reponse video** : 150Mhz nominal
- **Signal cable** : 15-pin D-type/BNC connector
- **Power input voltage frequency** : 110/230VAC, 60/50Hz

1.5 FCC CLASS II CHANGE DESCRIPTION

- a. The applicant would like to add one more equipment using the same FCC ID. The PCB layout, circuit and components of original EUT and of the EUT for this application are exactly the same. The only difference is as following two descriptions :
- 1). There are two pieces of metal on the CRT's left and right sides, which are cut as a half of the original.
 - 2). Four ground wires are added on the braided wire on the CRT.

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 DELL keyboard, GENIUS PS/2 mouse, HP printer, ACEEX modem, JOYTECH VGA card and EUT were connected to the FIC P.C.
- c. The following display resolution were investigated during the compliance test:
 1. Horizontal frequency (640 x 480 to 1600 x 1200, 31.5KHz to 94.7KHz)
 2. Vertical frequency (60Hz to 85Hz)
- d. According to the above tests, we listed the following display modes as the worst cases:
 1. 1280 x 1024 (non-interlaced 80KHz), refresh rate 75Hz.
 2. 1600 x 1200 (non-interlaced 94.7KHz), refresh rate 75Hz.
- e. Frequency range investigated: Conduction 450 KHz to 30 MHz, Radiation 30 MHz to 2000MHz.

2.2. DESCRIPTION OF TEST SYSTEM

Support Device 1. --- KEYBOARD (DELL)

FCC ID : GYUM92SK
Model No. : AT101 (DE8M)
Serial No. : SP1009
Data Cable : Shielded, 360 degree via metal backshells, 1.9m

Support Device 2. --- PRINTER (HP)

FCC ID : DSI6XU2225
Model No. : 2225C
Serial No. : SP0022
Data Cable : Shielded, 360 degree via metal backshells, 1.35m
Power Supply Type : Linear, AC Adapter
Power Cord : Non-shielded

Support Device 3. -- MODEM (ACEEX)

FCC ID : IFAXDM1414
Model No. : DM1414
Power Supply Type : Linear, AC Adapter
Power Cord : Non-shielded
Serial No. : SP1019
Data Cable : Shielded, 360 degree via metal backshells, 1.15m

Support Device 4. -- PS/2 MOUSE (GENIUS)

FCC ID : FSUGKZA8
Model No. : EASY TRACK
Serial No. : SP1012
Data Cable : Shielded, 360 degree via metal backshells, 1.4m

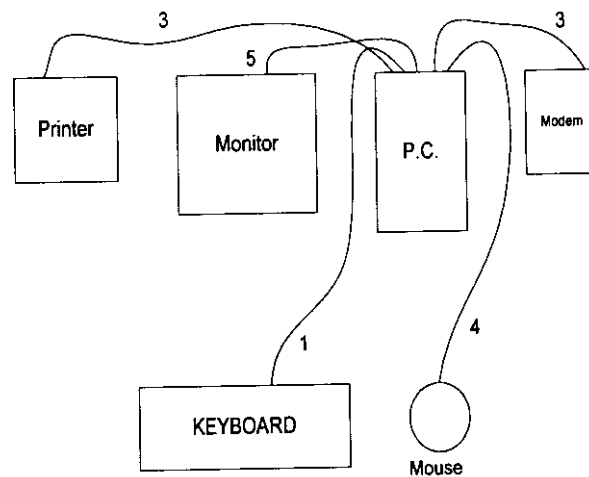
Support Device 5. -- VGA CARD (JOYTECH)

FCC ID : JDF-765PCI-001
Model No. : 988
Serial No. : SP1008
Data Cable : Shielded, 360 degree via metal backshells, 1.7m

Support Device 6. -- P.C. (FIC)

FCC ID : N/A
Model No. : P2L97
Serial No. : SP1005
Data Cable : Shielded
Power Cord : Non-shielded
Power Supply Type : Switching

(Remark : This support device was tested to comply with FCC standards and
authorized under a declaration of conformity.)

2.3. CONNECTION DIAGRAM OF TEST SYSTEM

1. The I/O cable is connected from PC to the support device 1.
2. The I/O cable is connected from PC to the support device 2.
3. The I/O cable is connected from PC to the support device 3.
4. The I/O cable is connected from PC to the support device 4.
5. The I/O cable is connected from PC to the EUT.

3. TEST SOFTWARE

An executive program, 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 monitor, and the monitor displays " H " patterns on the 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.

4. GENERAL INFORMATION OF TEST

4.1. TEST FACILITY

This test was carried out by SPORTON INTERNATIONAL INC.

Test Site Location : No. 30-1, 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

FCC PART 15, SUBPART B CLASS B

4.4. FREQUENCY RANGE INVESTIGATED

- a. Conduction : from 450 KHz to 30 MHz
- b. Radiation : from 30 MHz to 2000 MHz.

4.5. TEST DISTANCE

The test distance of radiated emission from antenna to EUT is 3M.

5. TEST OF CONDUCTED POWERLINE

Conducted Emissions were measured from 450 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 Figure 5-3. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

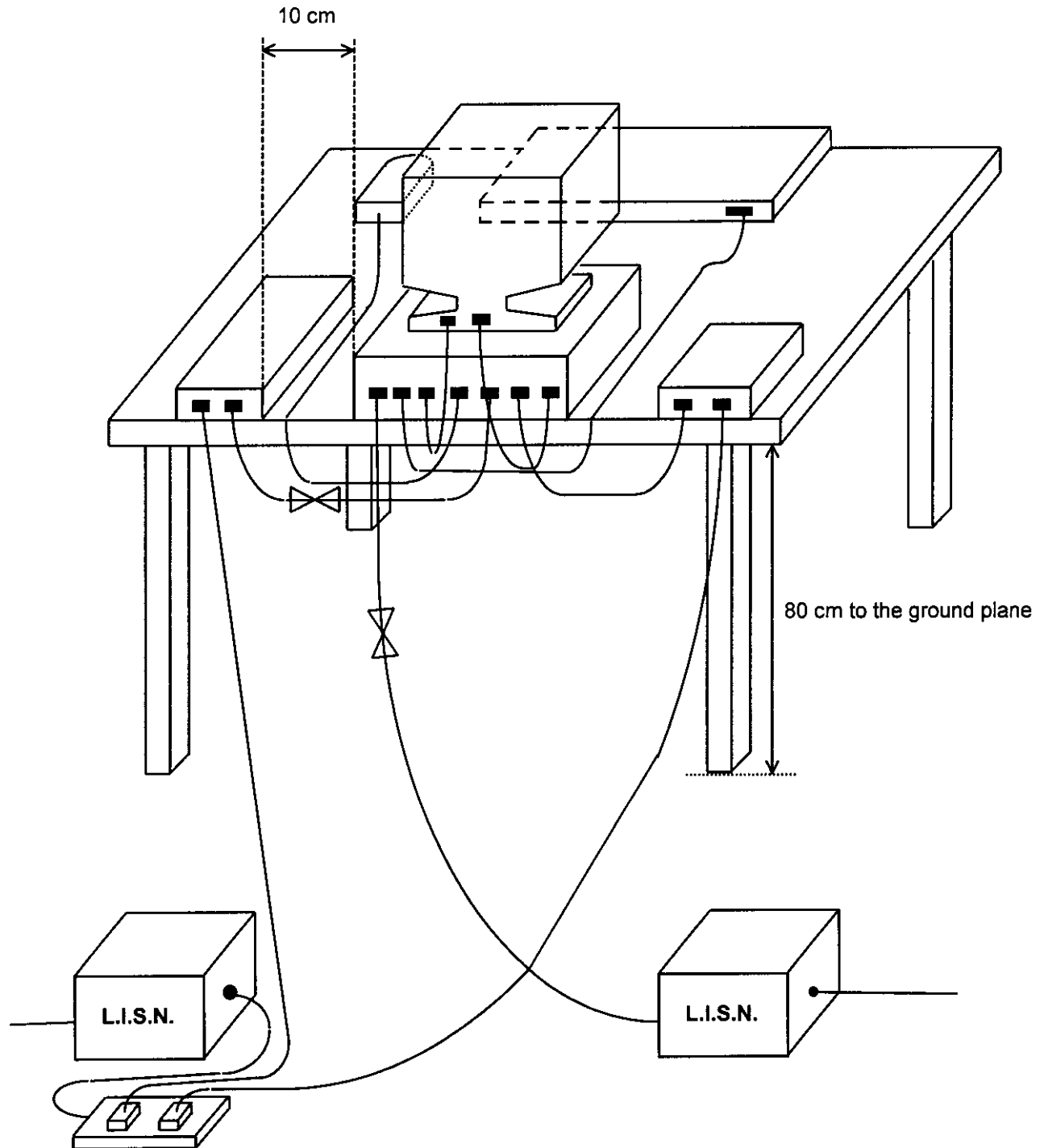
5.1. MAJOR MEASURING INSTRUMENTS

- Test Receiver (HP 8591EM)
 - Attenuation 0 dB
 - Start Frequency 0.45 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 and 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 450 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 on by one using the quasi-peak method and reported.

5.3. TYPICAL TEST SETUP LAYOUT OF CONDUCTED POWERLINE



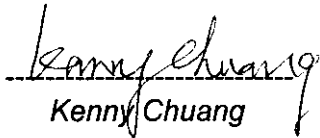
5.4. TEST RESULT OF AC POWERLINE CONDUCTED EMISSION

- Frequency Range of Test : from 0.45 MHz to 30 MHz
- All emissions not reported here are more than 10 dB below the prescribed limit.
- Temperature : 25°C
- Relative Humidity : 54 % RH
- Test Mode : **1600 x 1200, 75Hz, 94.7K; BNC**
- Test Date : Sep. 09, 1998

The Conducted Emission test was passed at **Neutral 1.28 MHz / 45.30 dBuV.**

Frequency (MHz)	Line / Neutral	Meter Reading		Limits		Margin (dB)
		(dBuV)	(uV)	(dBuV)	(uV)	
1.28	Line	40.60	107.15	48.00	251.19	-7.40
16.68	Line	42.80	138.04	48.00	251.19	-5.20
0.45	Neutral	42.40	131.83	48.00	251.19	-5.60
1.28	Neutral	45.30	184.08	48.00	251.19	-2.70
16.00	Neutral	41.00	112.20	48.00	251.19	-7.00
19.91	Neutral	43.60	151.36	48.00	251.19	-4.40

Test Engineer :


Kenny Chuang

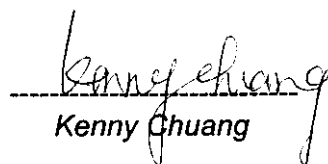
5.4.1. TEST RESULT OF AC POWERLINE CONDUCTED EMISSION

- Frequency Range of Test : from 0.45 MHz to 30 MHz
- All emissions not reported here are more than 10 dB below the prescribed limit.
- Temperature : 25°C
- Relative Humidity : 54 % RH
- Test Mode : **1280 x 1024, 75Hz, 80K; BNC**
- Test Date : Sep. 09, 1998

The Conducted Emission test was passed at Neutral 1.28 MHz / 45.30 dBuV.

Frequency (MHz)	Line / Neutral	Meter Reading		Limits		Margin
		(dBuV)	(uV)	(dBuV)	(uV)	(dB)
1.59	Line	42.50	133.35	48.00	251.19	-5.50
5.42	Line	45.00	177.83	48.00	251.19	-3.00
17.86	Line	43.30	146.22	48.00	251.19	-4.70
1.28	Neutral	45.30	184.08	48.00	251.19	-2.70
5.27	Neutral	44.80	173.78	48.00	251.19	-3.20
21.37	Neutral	44.60	169.82	48.00	251.19	-3.40

Test Engineer :


Kenny Chuang

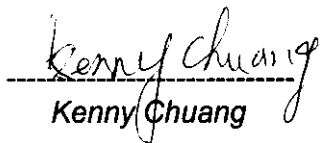
5.4.2. TEST RESULT OF AC POWERLINE CONDUCTED EMISSION

- Frequency Range of Test : from 0.45 MHz to 30 MHz
- All emissions not reported here are more than 10 dB below the prescribed limit.
- Temperature : 25°C
- Relative Humidity : 54 % RH
- Test Mode : 1600 x 1200, 75Hz, 94.7K; D-SUB
- Test Date : Sep. 09, 1998

The Conducted Emission test was passed at Neutral 1.28 MHz / 45.50 dBuV.

Frequency (MHz)	Line / Neutral	Meter Reading		Limits		Margin (dB)
		(dBuV)	(uV)	(dBuV)	(uV)	
16.01	Line	44.50	167.88	48.00	251.19	-3.50
0.45	Neutral	42.40	131.83	48.00	251.19	-5.60
1.28	Neutral	45.30	184.08	48.00	251.19	-2.70
16.00	Neutral	40.90	110.92	48.00	251.19	-7.10
19.91	Neutral	43.60	151.36	48.00	251.19	-4.40
23.07	Neutral	40.40	104.71	48.00	251.19	-7.60

Test Engineer :


Kenny Chuang

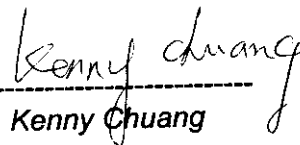
5.4.3. TEST RESULT OF AC POWERLINE CONDUCTED EMISSION

- Frequency Range of Test : from 0.45 MHz to 30 MHz
- All emissions not reported here are more than 10 dB below the prescribed limit.
- Temperature : 25°C
- Relative Humidity : 54 % RH
- Test Mode : **1280 x 1024, 75Hz, 80K; D-SUB**
- Test Date : Sep. 09, 1998

The Conducted Emission test was passed at **Neutral 1.28 MHz / 45.30 dBuV.**

Frequency (MHz)	Line / Neutral	Meter Reading		Limits		Margin (dB)
		(dBuV)	(uV)	(dBuV)	(uV)	
1.59	Line	43.20	144.54	48.00	251.19	-4.80
5.02	Line	41.80	123.03	48.00	251.19	-6.20
1.28	Neutral	45.50	188.36	48.00	251.19	-2.50
5.34	Neutral	41.50	118.85	48.00	251.19	-6.50
15.63	Neutral	41.90	124.45	48.00	251.19	-6.10
21.65	Neutral	44.70	171.79	48.00	251.19	-3.30

Test Engineer :


Kenny Chuang

6. TEST OF RADIATED EMISSION

Radiated emissions from 30 MHz to 2000 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 Figure 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 25 Db
 - Signal Input 10 MHz to 3 GHz

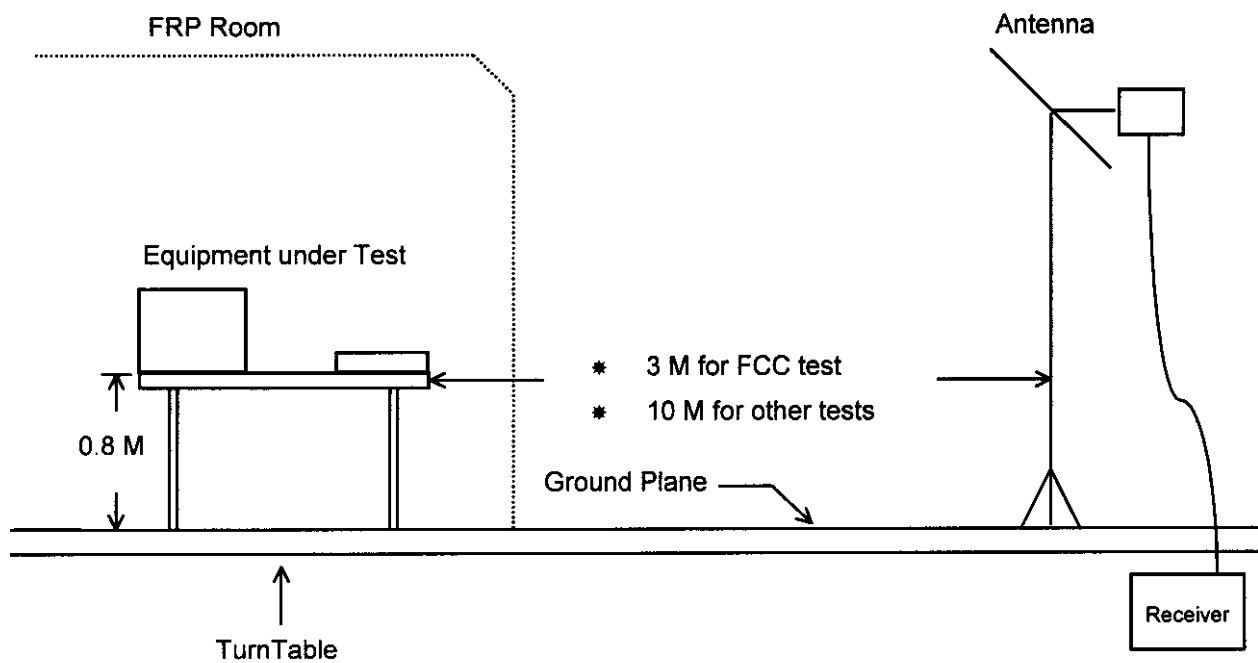
- Spectrum Analyzer (HP 8594A)
 - Attenuation 0 dB
 - Start Frequency 30 MHz
 - Stop Frequency 2000 MHz
 - Resolution Bandwidth 1 MHz
 - Video Bandwidth 1 MHz
 - Signal Input 9 KHz to 2.9 GHz

- Spectrum Analyzer (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 3 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

- Equipment meets the technical specifications of 15.109
- Frequency Range of Test : from 30 MHz to 2000 MHz
- Test Distance : 3 M
- Temperature : 32°C
- Relative Humidity : 54 % RH
- Test Mode : **1600 x 1200, 75Hz, 94.7K; BNC**
- Test Date : Aug. 11, 1998
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Sample Calculation at 73.09 MHz
Corrected Reading = 5.91 + 1.26 + 26.59 = 33.76 (dBuV/m)

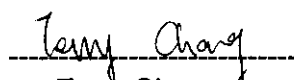
The Radiated Emission test was passed at

324.80 MHz / 42.28 dBuV (Vertical)

Antenna Height 2.0 Meter , Turntable Degree 211°.

Frequency	Antenna	Cable	Reading	Limits	Emission	Level	Margin		
Polarity	Factor	Loss							
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(uV/m)	(dBuV/m)	(uV/m)	(dB)	
73.09	V	5.91	1.26	26.59	40.00	100	33.76	48.75	-6.24
128.67	V	10.70	1.79	25.59	43.50	150	38.07	80.08	-5.43
176.38	V	12.73	2.27	23.07	43.50	150	38.07	80.08	-5.43
324.80	V	18.35	3.12	20.81	46.00	200	42.28	130.02	-3.72
405.60	V	22.30	3.62	14.86	46.00	200	40.78	109.40	-5.22
163.38	H	12.24	2.08	21.66	43.50	150	35.98	62.95	-7.52

Test Engineer :


Terry Chang

6.4.1. TEST RESULT OF RADIATED EMISSION

- Equipment meets the technical specifications of 15.109
- Frequency Range of Test : from 30 MHz to 2000 MHz
- Test Distance : 3 M
- Temperature : 32°C
- Relative Humidity : 54 % RH
- Test Mode : 1280 × 1024, 75Hz, 80K; BNC
- Test Date : Aug. 11, 1998
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Sample Calculation at 68.65 MHz
Corrected Reading = 5.47 + 1.20 + 18.74 = 25.41 (dBuV/m)

The Radiated Emission test was passed at

128.02 MHz / 32.06 dBuV (Vertical)

Antenna Height 1.2 Meter , Turntable Degree 61°.

Frequency	Antenna	Cable	Reading	Limits	Emission	Level	Margin		
Polarity	Factor	Loss							
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(uV/m)	(dBuV/m)	(uV/m)	(dB)	
68.65	V	5.47	1.20	18.74	40.00	100	25.41	18.64	-14.59
128.02	V	10.67	1.78	19.61	43.50	150	32.06	40.09	-11.44
176.03	V	12.70	2.26	13.69	43.50	150	28.66	27.10	-14.84
252.00	V	16.31	2.57	12.97	46.00	200	31.85	39.13	-14.15
405.60	V	22.30	3.62	4.65	46.00	200	30.57	33.77	-15.43
228.00	H	14.63	2.44	13.52	46.00	200	30.59	33.85	-15.41

Test Engineer :

Terry Chang
Terry Chang

6.4.2. TEST RESULT OF RADIATED EMISSION

- Equipment meets the technical specifications of 15.109
- Frequency Range of Test : from 30 MHz to 2000 MHz
- Test Distance : 3 M
- Temperature : 32°C
- Relative Humidity : 54 % RH
- Test Mode : **1600 × 1200, 75Hz, 94.7K; D-SUB**
- Test Date : Aug. 11, 1998
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Sample Calculation at 65.98 MHz
Corrected Reading = 5.23 + 1.20 + 30.12 = 36.55 (dBuV/m)

The Radiated Emission test was passed at

65.98 MHz / 36.55 dBuV (Vertical)

Antenna Height 1.0 Meter , Turntable Degree 180°.

Frequency	Antenna	Cable	Reading	Limits		Emission	Level	Margin	
Polarity	Factor	Loss							
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(uV/m)	(dBuV/m)	(uV/m)	(dB)	
65.98	V	5.23	1.20	30.12	40.00	100	36.55	67.22	-3.45
75.50	V	6.21	1.31	28.77	40.00	100	36.29	65.24	-3.71
123.94	V	10.54	1.74	23.93	43.50	150	36.21	64.64	-7.29
141.93	V	11.51	1.93	22.68	43.50	150	36.12	63.97	-7.38
324.94	V	18.35	3.12	20.72	46.00	200	42.20	128.82	-3.80
114.42	H	10.24	1.64	23.51	43.50	150	35.40	58.88	-8.10

Test Engineer :

Terry Chang
Terry Chang

6.4.3. TEST RESULT OF RADIATED EMISSION

- Equipment meets the technical specifications of 15.109
- Frequency Range of Test : from 30 MHz to 2000 MHz
- Test Distance : 3 M
- Temperature : 32°C
- Relative Humidity : 54 % RH
- Test Mode : 1280 x 1024, 75Hz, 80K; D-SUB
- Test Date : Aug. 11, 1998
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Sample Calculation at 57.16 MHz
Corrected Reading = 3.68 + 1.15 + 30.34 = 35.17 (dBuV/m)

The Radiated Emission test was passed at

335.30 MHz / 42.54 dBuV (Vertical)

Antenna Height 1.0 Meter , Turntable Degree 210°.

Frequency	Antenna	Cable	Reading	Limits	Emission	Level	Margin		
Polarity	Factor	Loss							
(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(uV/m)	(dBuV/m)	(uV/m)	(dB)	
57.16	H	3.68	1.15	30.34	40.00	100	35.17	57.35	-4.83
140.20	H	11.43	1.91	20.48	43.50	150	33.82	49.09	-9.68
57.16	V	3.68	1.15	30.47	40.00	100	35.30	58.21	-4.70
114.25	V	10.24	1.64	23.11	43.50	150	34.99	56.17	-8.51
335.30	V	18.89	3.18	20.48	46.00	200	42.54	133.97	-3.46
450.87	V	22.40	3.81	14.72	46.00	200	40.92	111.17	-5.08

Test Engineer :

Terry Chang
Terry Chang

7. ANTENNA FACTOR AND CABLE LOSS

Frequency (MHz)	Antenna Factor (dB)	Cable Loss (dB)
30	-1.91	0.90
35	-0.50	0.92
40	0.61	1.04
45	1.40	1.28
50	2.39	1.10
55	3.54	1.11
60	4.40	1.30
65	4.84	1.40
70	5.59	1.37
75	6.21	1.24
80	7.60	1.51
85	7.73	1.60
90	8.22	1.60
95	8.90	1.70
100	9.36	1.70
110	10.01	1.70
120	10.41	1.90
130	10.84	1.90
140	11.42	1.91
150	11.91	2.01
160	12.25	2.11
170	12.72	2.21
180	13.02	2.30
190	13.50	2.30
200	14.05	2.40
220	15.11	2.50
240	16.81	2.60
260	17.51	2.71
280	17.70	2.90
300	17.89	2.91
320	18.00	3.10
340	18.33	3.20
360	19.44	3.30
380	20.31	3.40
400	21.19	3.50
450	21.10	3.70
500	22.21	4.10
550	23.42	4.30
600	24.01	4.50
650	25.11	4.70
700	26.00	4.90
750	26.41	5.11
800	27.10	5.50
850	27.51	5.60
900	27.90	5.80
950	28.01	5.90
1000	28.80	6.00
2000	29.00	6.01

8. LIST OF MEASURING EQUIPMENT USED

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver (site 2)	HP	8591EM	3710A01187	9 KHz - 18 GHz	Sep. 29, 1997	Conduction
LISN (EUT) (site 2)	Telemeter	NNB-2/16Z	98009	50 ohm / 50 uH	Jan. 29, 1998	Conduction
LISN (Support Unit) (site 2)	EMCO	3810/2NM	9703-1839	50 ohm / 50 uH	July. 06, 1998	Conduction
Quasi-peak Adapter (site 5)	HP	85650A	2521A00821	9KHz -1 GHz	Nov 12, 1997	Radiation
Spectrum Analyzer (Site 5)	HP	8568B	2634A03000	100Hz - 1.5GHz	Nov. 12, 1997	Radiation
Amplifier (Site 5)	HP	8447D	2944A09073	0.1MHz -1.3GHz	Dec. 20, 1997	Radiation
Bilog Antenna (Site 5)	CHASE	CBL6112A	2287	30MHz -2GHz	Jan. 27, 1998	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