FCC TEST REPORT

for

Part 15, Subpart B Class B

Equipment	:	LCD Monitor
Model No.	:	150TXA, 138TXA
FCC ID	:	OKTLM150138
Filing Type	:	Original Grant
Applicant	:	**Grandview Technology Inc.** No. 780-1, Chung Cheng Rd., Chung Ho 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 No. : F940902

CERTIFICATE OF COMPLIANCE

for

FCC Part 15, Subpart B Class B

Equipment : LCD Monitor

Model No. : 150TXA, 138TXA

FCC ID : OKTLM150138

Applicant : **Grandview Technology Inc.**
No. 780-1, Chung Cheng Rd., Chung Ho 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*** both radiated and conducted emission class B limits. Testing was carried out on July 01, 1999 at **SPORTON International Inc.** LAB.

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W. L. Huang
General Manager

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

Grandview Technology Inc.
No. 780-1, Chung Cheng Rd., Chung Ho City,
Taipei Hsien, Taiwan, R.O.C.

1.2. Manufacturer

Same as 1.1.

1.3. Basic Description of Equipment under Test

EQUIPMENT : LCD Monitor
MODEL NO. : 150TXA, 138TXA
FCC ID : OKTLM150138
TRADE NAME : Grandview
USB CABLE : Shielded
VGA CABLE : Shielded
AUDIO OUT CABLE : Non-shielded
S-VIDEO DATA CABLE : Shielded
AV-VIDEO DATA CABLE : Non-shielded
POWER SUPPLY TYPE : Switching
POWER CORD : Non-shielded

1.4. Feature of Equipment under Test

Panel	Type	Color TFT
	Size	Diagonal 15”
	Max. Pixel Rate	80MHz
	Resolution	1024×768
	Horizontal Frequency	31.5~60KHz
	Vertical Frequency	60~75Hz
	Input Signal	Analog RGB (0.7 Vp-p, 75ohms)
	Input Terminal	D-sub mini 15pin
Power Consumption	On-Working	36Watts (Max.)
	On-Standby	4Watts
	Input Voltage	AC 90~264V, 50~60Hz
	Output	DC 12V/3A

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, PRIMAX PS2 mouse, HP printer, ACEEX modem, PIONEER DVD CD player and EUT were connected to the F.I.C. P.C. for EMI test.

c. The following display resolution were investigated during the compliance test:
   1. Horizontal frequency (640 x 480 to 1024 x 768, 31.47Khz to 60KHz)
   2. Vertical frequency (60Hz to 75Hz)
   3. S-VIDEO MODE
   4. AV-VIDEO MODE

d. According to the above tests, we listed the flowing display modes as the worst cases:
   1. 1024 x 768 (non-interlaced 60KHz), refresh rate 75Hz.
   2. AV-VIDEO MODE

e. Frequency range investigated: Conduction 450 KHz to 30 MHz, Radiation 30 MHz to 1000 MHz.

2.2. Description of Test System

Support Device 1. --- P.C. (FIC)

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

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

Support Device 2. --- KEYBOARD (DELL)

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

Support Device 3. -- PS/2 MOUSE (PRIMAX)

FCC ID	: EMJMUSJQ
Model No.	: MUS9J
Serial No.	: SP1012
Data Cable	: Shielded, 1.7m

Support Device 4. --- PRINTER (HP)

FCC ID	: DSI6XU2225
Model No.	: 2225C
Serial No.	: SP1015
Data Cable	: Shielded, 360 degree via metal backshells, 1.35m
Power Supply Type	: Linear

Support Device 5. -- MODEM (ACEEX)

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

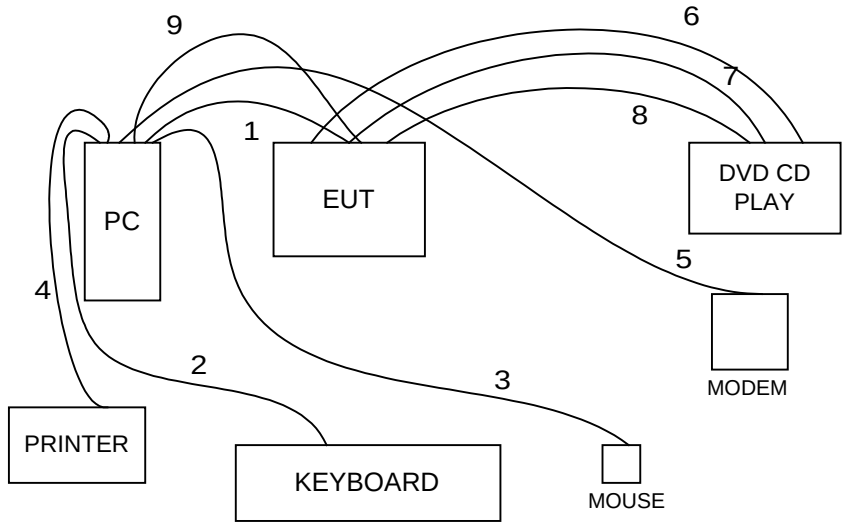
Support Device 6. – DVD CD PLAY (PIONEER)

FCC ID	: N/A
Model No.	: DV-505
Serial No.	: SP1039

Support Device 7. -- VGA CARD (GAINWARD)

FCC ID	: ICUVGA-GW710
Model No.	: GW710
Serial No.	: SP1039
Data Cable	: Shielded

2.3. Connection Diagram of Test System



1. The USB cable is connected from the EUT to the support device 1.
2. The I/O cable is connected to the support device 2.
3. The I/O cable is connected to the support device 3.
4. The I/O cable is connected to the support device 4.
5. The I/O cable is connected to the support device 5.
6. The AV-VIDEO cable is connected from the EUT to the support device 6.
7. The S-VIDEO cable is connected from the EUT to the support device 6.
8. The AUDIO OUT cable is connected from the EUT to the support device 6.
9. The VGA cable is connected from the EUT to the support device 1.

3. Test Software

An executive program, WINFCC.EXE under WIN98, 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 DVD CD PLAY sends " VIDEO MOTION " messages to the monitor, and the monitor displays "VIDEO MOTION " on the screen. (for VIDEO MOTION mode)
e. The PC sends " H " messages to the printer, then the printer prints them on the paper.
f. The PC sends " H " messages to the modem.
g. The PC sends " H " messages to the internal Hard Disk, and the Hard Disk reads and writes the message.
h. 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. 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

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 1,000 MHz

4.5. Test Distance

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

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 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

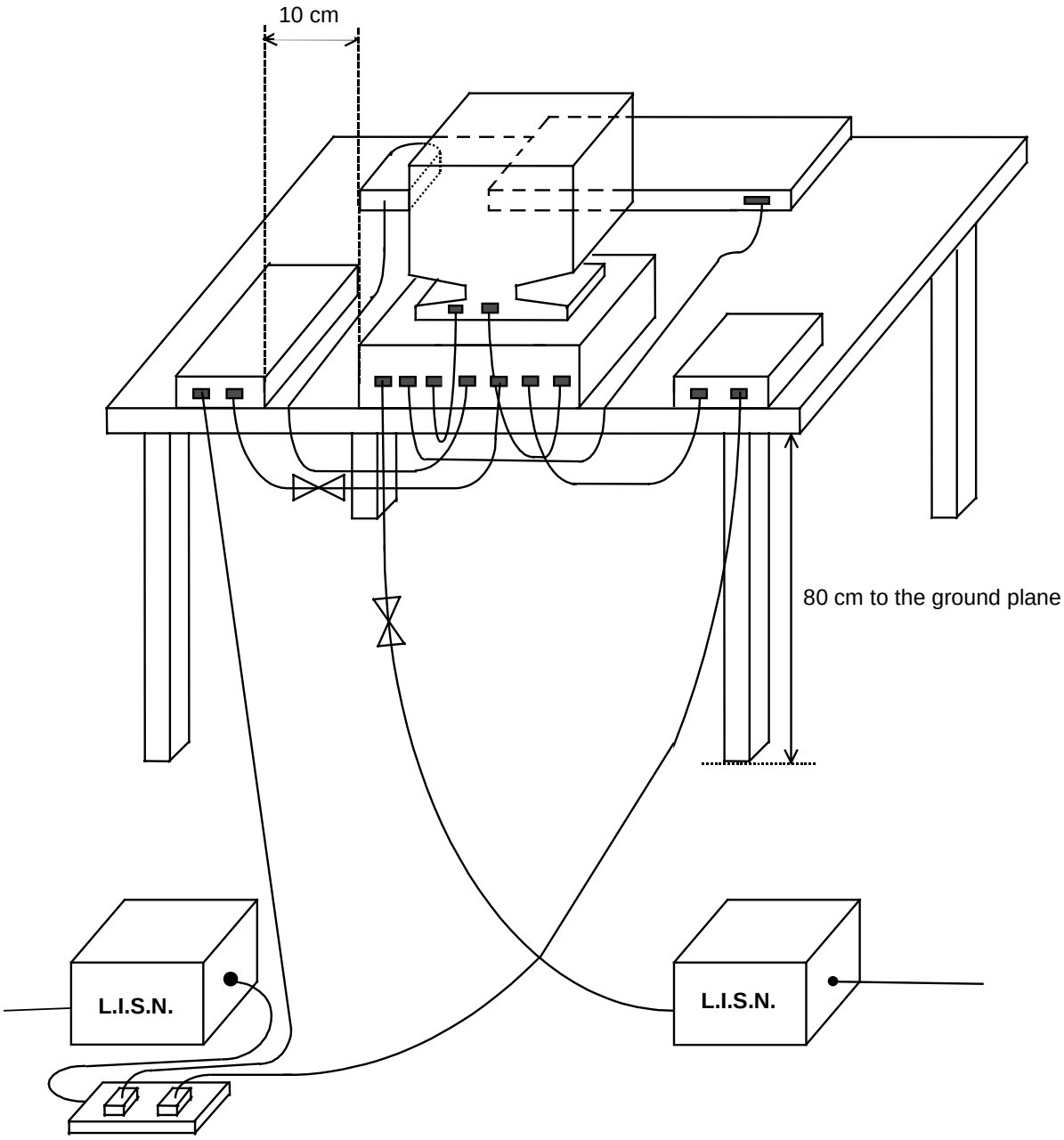
- Test Receiver (HP 85462A)

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 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 one by one using the quasi-peak method and reported.

1.3. 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
- Temperature : 27
- Relative Humidity : 59% RH
- Test Mode : 1024x768, 75Hz
- All emissions not reported here are more than 10 dB below the prescribed limit.
- Test Date : July 01, 1998

The Conducted Emission test was passed at minimum margin

Line 6.47 MHz/ 41.40 dBuV.

Frequency	Line / Neutral	Meter Reading		Limits		Margin
(MHz)		(dBuV)	(uV)	(dBuV)	(uV)	(dB)
6.14	L	40.40	104.71	48.00	251.19	-7.60
6.47	L	41.40	117.49	48.00	251.19	-6.60
6.79	L	41.20	114.82	48.00	251.19	-6.80
3.81	N	39.80	97.72	48.00	251.19	-8.20
6.47	N	39.20	91.20	48.00	251.19	-8.80
6.79	N	38.80	87.10	48.00	251.19	-9.20

Test Engineer :

BRUCE HUANG

- Frequency Range of Test : from 0.45 MHz to 30 MHz
- Temperature : 27
- Relative Humidity : 59% RH
- Test Mode : AV-VIDEO
- All emissions not reported here are more than 10 dB below the prescribed limit.
- Test Date : July 01, 1998

The Conducted Emission test was passed at minimum margin

Line 6.47 MHz/ 41.40 dBuV.

Frequency	Line / Neutral	Meter Reading		Limits		Margin
(MHz)		(dBuV)	(uV)	(dBuV)	(uV)	(dB)
3.57	L	40.20	102.33	48.00	251.19	-7.80
4.09	L	39.80	97.72	48.00	251.19	-8.20
6.81	L	40.90	110.92	48.00	251.19	-7.10
3.57	N	39.30	92.26	48.00	251.19	-8.70
4.09	N	39.50	94.41	48.00	251.19	-8.50
6.81	N	39.80	97.72	48.00	251.19	-8.20

Test Engineer :

BRUCE HUANG

5.5. Photographs of Counducted Powerline Test Configuration

- The photographs show the configuration that generates the maximum emission.

FRONT VIEW

REAR VIEW

SIDE VIEW

6. Test of Radiated Emission

Radiated emissions from 30 MHz to 1,000 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

- RF Preselector

Attenuation	0 dB
RF Gain	20 dB
Signal Input	Input 2 (for 20 MHz to 2 GHz)

- Spectrum Analyzer 8568B

Attenuation	0 dB
Start Frequency	30 MHz
Stop Frequency	1000 MHz
Resolution Bandwidth	1 MHz
Video Bandwidth	1 MHz
Signal Input	Input 1 (for 100Hz to 1500KHz)

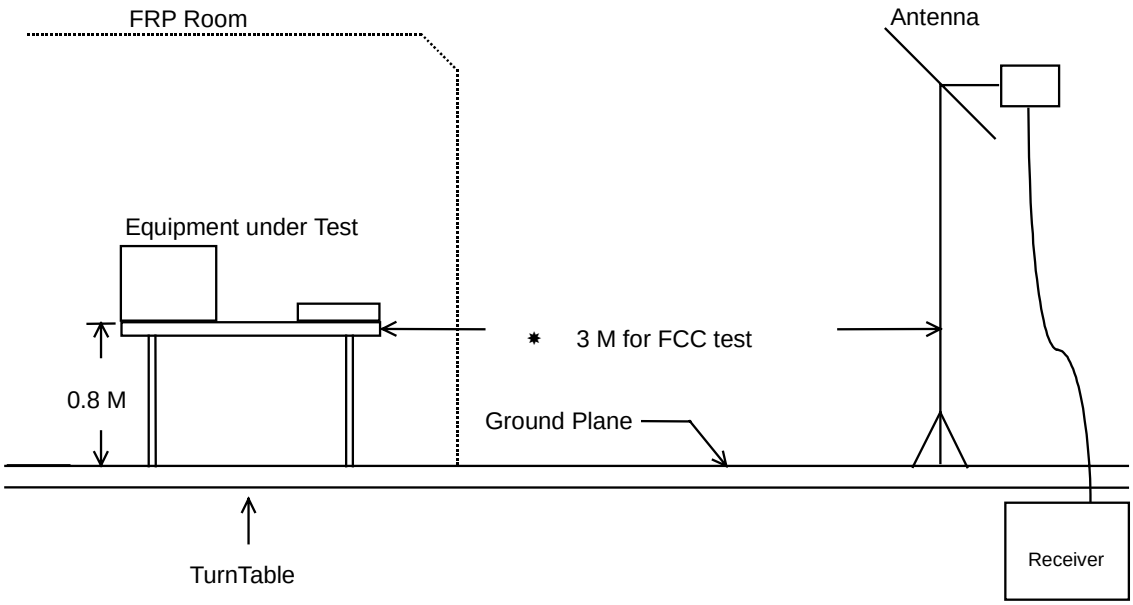
- Quasi-Peak Adapter

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 1000 MHz
- Test Distance : 3 M
- Temperature : 28
- Relative Humidity : 55 % RH
- Test Mode : 1024x768 75Hz
- Test Date : June 26, 1998

- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Sample Calculation at 156.81 MHz
  Corrected Reading = 12.14 + 2.01 + 20.42 = 34.57 (dBuV/m)

The Radiated Emission test was passed at minimun margin

Vertical 130.00 MHz / 38.67 dBuV

Antenna Height 1.0 Meter , Turntable Degree 298°

Frequency	Polarity	Antenna Factor	Cable Loss	Reading	Limits		Emission	Level	Margin
(MHz)		(dB)	(dB)	(dBuV)	(dBuV)	(uV)	(dBuV)	(uV)	(dB)
156.81	H	12.14	2.01	20.42	43.50	150	34.57	53.52	-8.93
200.23	H	14.05	2.40	18.93	43.50	150	35.38	58.75	-8.12
130.00	V	10.74	1.80	26.13	43.50	150	38.67	85.80	-4.83
157.33	V	12.16	2.01	22.14	43.50	150	36.31	65.39	-7.19
162.35	V	12.24	2.06	20.43	43.50	150	34.73	54.51	-8.77
199.71	V	14.03	2.40	17.35	43.50	150	33.78	48.87	-9.72

Test Engineer :
PETER WANG

- Equipment meets the technical specifications of 15.109
- Frequency Range of Test : from 30 MHz to 1000 MHz
- Test Distance : 3 M
- Temperature : 28
- Relative Humidity : 55 % RH
- Test Mode : AV-VIDEO
- Test Date : June 26, 1998

- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Sample Calculation at 156.81 MHz
  Corrected Reading = 12.14 + 2.01 + 20.42 = 34.57 (dBuV/m)

The Radiated Emission test was passed at minimun margin

Vertical 600.00 MHz / 42.10 dBuV

Antenna Height 1.0 Meter , Turntable Degree 182°

Frequency (MHz)	Polarity	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Limits (dBuV/m)	Limits (uV/m)	Emission (dBuV/m)	Level (uV/m)	Margin (dB)
140.29	V	11.43	1.91	19.27	43.50	150	32.62	42.76	-10.88
184.33	V	13.23	2.30	16.13	43.50	150	31.66	38.28	-11.84
466.40	V	22.37	3.90	12.60	46.00	200	38.87	87.80	-7.13
600.00	V	24.01	4.60	13.49	46.00	200	42.10	127.35	-3.90
134.95	H	11.08	1.85	20.25	43.50	150	33.18	45.60	-10.32
216.80	H	14.27	2.40	16.15	46.00	200	32.82	43.75	-13.18

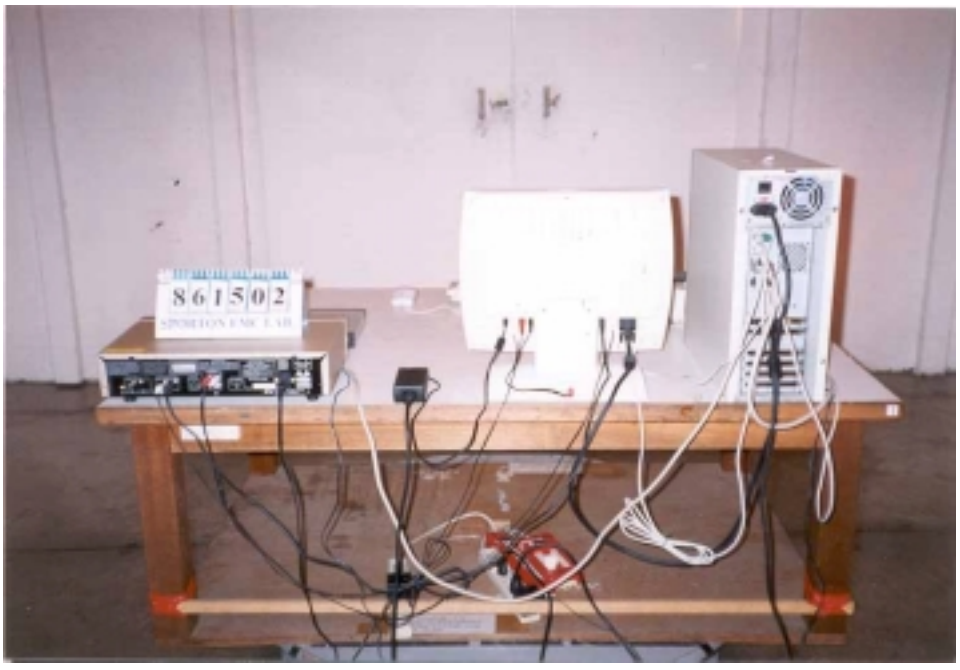
Test Engineer :
PETER WANG

6.5. PHOTOGRAPHS OF RADIATED EMISSION TEST CONFIGURATION

- The photographs show the configuration that generates the maximum emission.

FRONT VIEW

REAR VIEW



7. Antenna Factor & Cable Loss

Frequency (MHz)	Antenna Factor (dB)	Cable Loss (dB)
30	-2.20	0.80
35	-0.70	0.82
40	0.51	0.94
45	1.30	1.00
50	2.39	1.00
55	3.14	1.11
60	4.40	1.20
65	5.14	1.20
70	5.59	1.20
75	6.11	1.30
80	7.10	1.40
85	7.53	1.40
90	8.22	1.40
95	8.80	1.40
100	9.36	1.50
110	10.11	1.60
120	10.41	1.70
130	10.74	1.80
140	11.42	1.91
150	11.91	2.01
160	12.25	2.01
170	12.22	2.21
180	13.02	2.30
190	13.50	2.30
200	14.05	2.40
220	14.31	2.40
240	15.11	2.50
260	17.11	2.61
280	17.50	2.70
300	17.99	3.11
320	18.10	3.10
340	19.13	3.20
360	20.14	3.30
380	21.81	3.40
400	22.29	3.60
450	22.40	3.80
500	22.31	4.10
550	23.42	4.40
600	24.01	4.60
650	25.11	5.00
700	26.00	5.30
750	26.51	5.51
800	27.10	5.70
850	27.51	5.90
900	27.90	6.20
950	30.01	6.30
1000	29.00	6.40

8. List of Measuring Equipments Used

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Receiver RF section (site 1)	HP	85462A	3325A00108	9 KHz - 6.5 GHz	Oct. 22, 1997	Conduction
RF Filter section (site 1)	HP	85460A	3308A00104	9 KHz - 6.5 GHz	Oct. 22, 1997	Conduction
LISN (EUT) (site 1)	EMCO	3850/2	1035	50 ohm / 50 uH	Oct. 27, 1997	Conduction
LISN (Support Unit) (site 1)	KYORITSU	KNW-407	8-693-10	50 ohm / 50 uH	Oct. 04, 1997	Conduction
EMI Filter (site 1)	CORCOM	MRI-2030	N/A	480 VAC / 30 A	N/A	Conduction
Amplifier (Site 1)	HP	8447D	2944A08291	0.1MHz -1.3GHz	Nov. 12, 1997	Radiation
Quasi-Peak Adapter (site 1)	HP	85650A	2811A01116	9KHz - 1000KHz	Jun. 17, 1998	Radiation
Spectrum Analyzer (site 1)	HP	8568B	2732A04100	100Hz - 1500KHz	Jun. 17, 1998	Radiation
Bilog Antenna (Site 1)	CHASE	CBL6111	1378	30MHz -1 GHz	Aug. 11, 1997	Radiation
Half-wave dipole antenna (site 1)	EMCO	3121C	9705-1285	28 M - 1GHz	May 19, 1998	Radiation
Turn Table (site 1)	EMCO	1060-1.211	9507-1805	0 ~ 360 degree	N/A	Radiation
Antenna Mast (site 1)	EMCO	1051-1.2	9502-1868	1 m - 4 m	N/A	Radiation