

Test Report

1/30

Report No.	S1115350
FCC ID	PN9TX-3
Specifications Test Method	FCC Part 15.109(g), CISPR 22, Class B ANSI C63.4 1992
Applicant Applicant address	SAINT SONG CORP. 4F, No. 14, Lane 270, Sec. 3, Pei Shen Road Shen Keng Hsiang, Taipei Hsien, Taiwan, R.O.C. 222
Items tested Model No.	Mini Book PC TX-3 (Sample # S11349)
Results Date	Compliance (As detailed within this report) 10/11/2001 (month / day / year)(Sample received) 11/21/2001 (month / day / year)(Tested)
Prepared by	project engineer _____
Authorized by	V.General Manager (Jacob Lin) _____
Issue date	(month / day / year)
Modifications	None
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NVLAP LAB CODE: 200174-0

Report No.: S1115350**Training Research Co., Ltd., TEL: 886-2-26461146, Fax: 886-2-26461778**

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Chapter 1 Introduction

Description of EUT:

The EUT is similar to a CD player. It weighs only 1.9 pounds. You can take it easily with you to the places you might work with. Cappuccino GX1 includes all the standard I/O ports like parallel port for connecting printers, and 2 USB ports for other devices.

This EUT included CPU Pentium III 650MHz, 64MB DRAM, 24X CD-ROM, 6GB HDD.
I/O port: VGA port x 1, Serial port x 1, LPT port x 1, MODEM RJ-11 port x 1, USB port x 4, Phone jack x 1, MIC jack x 1, LAN port x 1, Mouse port x 1, Keyboard port x 1, S-Video Out jack x 1, Video Out jack x 1, IEEE-1394 port x 2.

There are one CD-ROM (Quanta Storage Inc. SCR-242) and one Hard Disk (IBM, Travelstar, DJSA-205) also able to be used in this EUT. These two devices has been meet the requirements.)

Test method:

Pretest was found that the emission of operating mode is worse than standby mode. So, The final test is made at the operating mode.

Before test set the modem and LAN to transmit and receive data. For radiation pretest, there were three kinds displays applied as following:

(A) VGA mode: uses three different resolutions: (1) 1600 x 1200, (2) 1024 x 768, (3) 800 x 600.

The 1024 x 768 was the sorst case.

(B) Video Out mode: use 800 x 600 resolution.

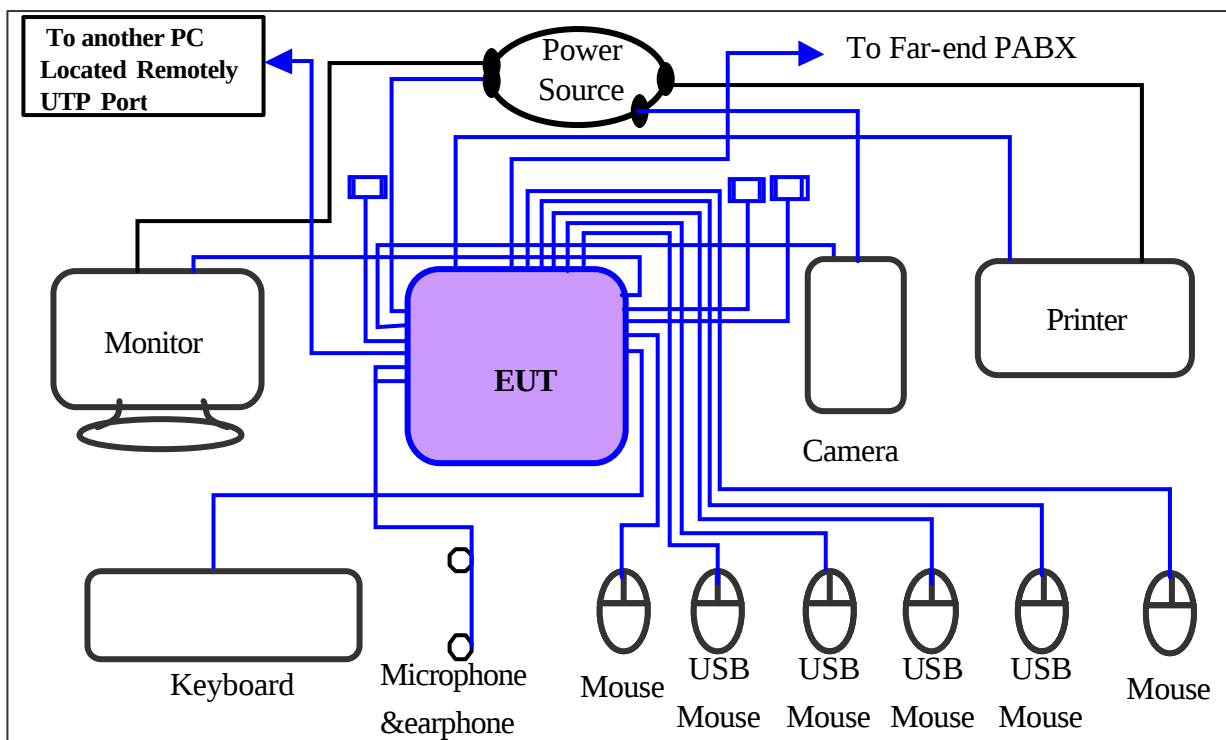
(C) S-Video Out mode: use 800 x 600 resolution.

This adaptor is a full range power voltage. After verifying the 110V and 230V, found that it is not much different during radiation test. But during the conduction test, there were 110V and 230V test data supplied. Each of the data was tested at three different resolutions as radiation.

During testing, the EUT was operated at “transmitting” and “receiving” mode simultaneously.

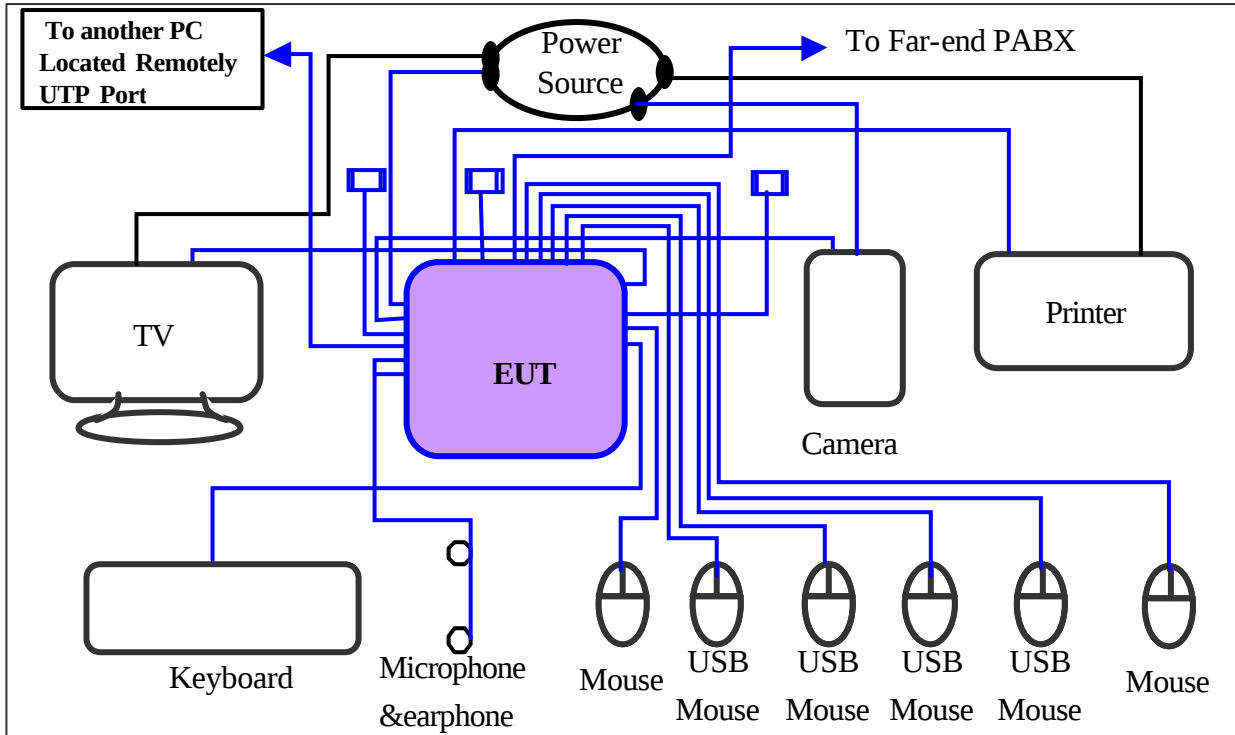
The test placement as the photographs showed is the worst case emission placed. (If the emission is close to the ambient, the resolution BW and view resolution will be reduced and the data will be recorded by detection of maximum hold peak mode.)

The testing configuration of test setup is showing in the next page.

Configuration of test setup (Test mode: VGA)**Connections:****EUT:**

- *Serial Port --- a mouse with 1.9m long, shielded and no ferrite bead data cable.
- *Monitor Port --- a monitor with 1.5m length data cable.
- *Keyboard Port --- a keyboard with 1.7m length data cable.
- *Mouse Port --- a mouse with 1.8m long of data cable.
- *Printer port --- a printer with 1.80m length data cable.
- *USB Port A --- a mouse with 1.5m long, shielded and no ferrite bead data cable.
- *USB Port B --- a mouse with 1.5m long, shielded and no ferrite bead data cable.
- *USB Port C --- a mouse with 1.5m long, shielded and no ferrite bead data cable.
- *USB Port D --- a mouse with 1.5m long, shielded and no ferrite bead data cable.
- *Speak-Out Jack --- a pairs of Microphone&Earphone with 1.2m long wire.
- *MIC Jack --- a pairs of Microphone&Earphone with 1.2m long wire.
- *S-Video Out Jack --- with a 2m long non-shielded cable that terminal.
- *Video Out jack --- with a 2m long non-shielded cable that terminal.
- *Line Jack --- via a 15m long, non-shielded, no ferrite bead, RJ-11C cable to the PABX located remotely.
- *LAN Port --- via a 15m long, non-shielded, no ferrite bead, RJ-45 cable to another LAN card that installed in another PC located in far-end.
- *Power jack --- via a power cable is 1.48m long, non-shielded, with a ferrite bead that connect with a power adapter (Trade name: ILAN ELEC. LTD., Model No.: F17003B, Input: AC100-240~ 50-60Hz, 1.8A, Output: DC 18V, 3A) that via a 1.75long, non-shielded, with a ferrite bead power cable connect the power source.

Configuration of test setup (Test mode: Video Out)

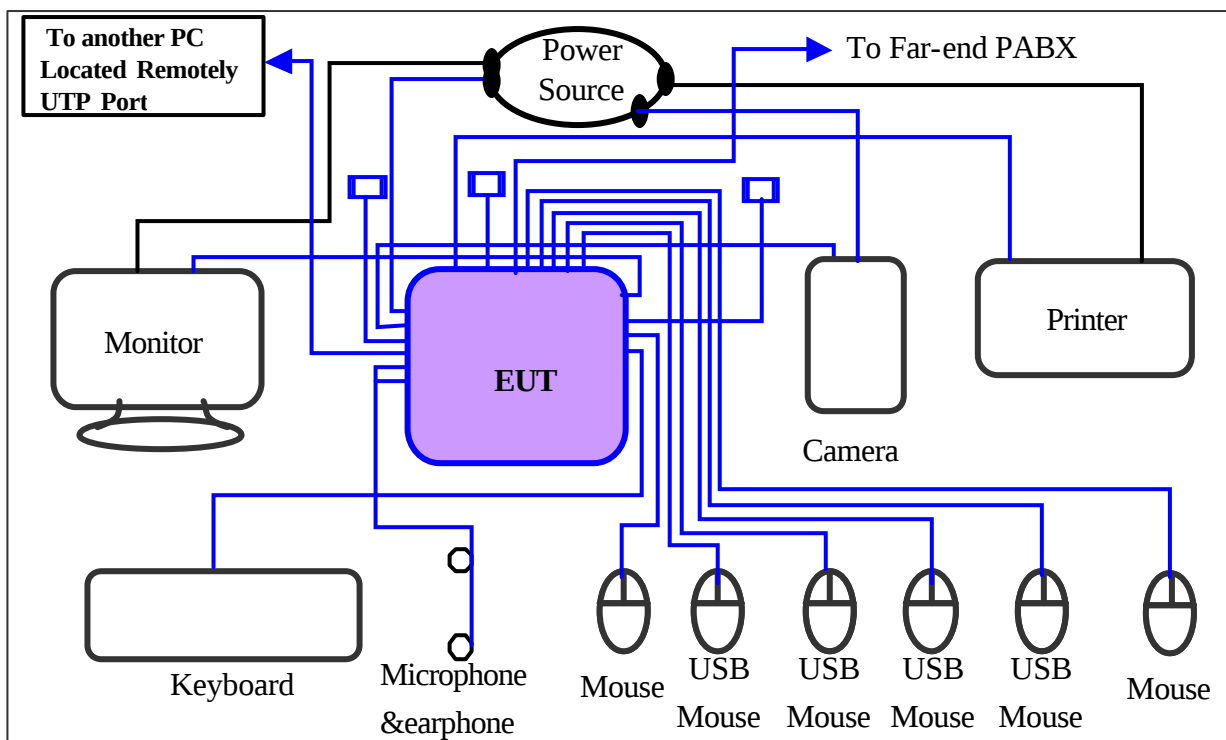


Connections:

EUT:

- *Serial Port --- a mouse with 1.9m long, shielded and no ferrite bead data cable.
- *Monitor Port --- with a 1.5m length data cable that terminal.
- *S-Video Out Jack --- with a 2m long non-shielded cable that terminal.
- *Video Out jack --- via a 2m long non-shielded cable to the Video-In jack of TV.
- *Keyboard Port --- a keyboard with 1.7m length data cable.
- *Mouse Port --- a mouse with 1.8m long of data cable.
- *Printer port --- a printer with 1.80m length data cable.
- *USB Port A --- a mouse with 1.5m long, shielded and no ferrite bead data cable.
- *USB Port B --- a mouse with 1.5m long, shielded and no ferrite bead data cable.
- *USB Port C --- a mouse with 1.5m long, shielded and no ferrite bead data cable.
- *USB Port D --- a mouse with 1.5m long, shielded and no ferrite bead data cable.
- *Speak-Out Jack --- a pairs of Microphone&Earphone with 1.2m long wire.
- *MIC Jack --- a pairs of Microphone&Earphone with 1.2m long wire.
- *Line Jack --- via a 15m long, non-shielded, no ferrite bead, RJ-11C cable to the PABX located remotely.
- *LAN Port --- via a 15m long, non-shielded, no ferrite bead, RJ-45 cable to another LAN card that installed in another PC located in far-end.
- *Power jack --- via a power cable is 1.48m long, non-shielded, with a ferrite bead that connect with a power adapter (Trade name: ILAN ELEC. LTD., Model No.: F17003B, Input: AC100-240~ 50-60Hz, 1.8A, Output: DC 18V, 3A) that via a 1.75long, non-shielded, with a ferrite bead power cable connect the power source.

Configuration of test setup (Test mode: S-Video Out)



Connections:

EUT:

- *Serial Port --- a mouse with 1.9m long, shielded and no ferrite bead data cable.
- *Monitor Port --- with a 1.5m length data cable that terminal.
- *S-Video Out Jack --- via a 2m long non-shielded cable to the S-Video-In jack of monitor.
- *Video Out jack --- with a 2m long non-shielded cable that terminal.
- *Keyboard Port --- a keyboard with 1.7m length data cable.
- *Mouse Port --- a mouse with 1.8m long of data cable.
- *Printer port --- a printer with 1.80m length data cable.
- *USB Port A --- a mouse with 1.5m long, shielded and no ferrite bead data cable.
- *USB Port B --- a mouse with 1.5m long, shielded and no ferrite bead data cable.
- *USB Port C --- a mouse with 1.5m long, shielded and no ferrite bead data cable.
- *USB Port D --- a mouse with 1.5m long, shielded and no ferrite bead data cable.
- *Speak-Out Jack --- a pairs of Microphone&Earphone with 1.2m long wire.
- *MIC Jack --- a pairs of Microphone&Earphone with 1.2m long wire.
- *Line Jack --- via a 15m long, non-shielded, no ferrite bead, RJ-11C cable to the PABX located remotely.
- *LAN Port --- via a 15m long, non-shielded, no ferrite bead, RJ-45 cable to another LAN card that installed in another PC located in far-end.
- *Power jack --- via a power cable is 1.48m long, non-shielded, with a ferrite bead that connect with a power adapter (Trade name: ILAN ELEC. LTD., Model No.: F17003B, Input: AC100-240~ 50-60Hz, 1.8A, Output: DC 18V, 3A) that via a 1.75long, non-shielded, with a ferrite bead power cable connect the power source.

List of support equipment

Conducted (Radiated) test:

Monitor : Viewsonic P775
Model No. : VCDTS21366
Serial No. : KP74620621
FCC ID : GSS17019
Power type : 110 ~ 240V 50/60 Hz, Switching
Power cord : Shielded, 1.8m long, No ferrite core
Data cable : Shielded, 1.50m long, with two ferrite cores (no ferrite core)

Keyboard : **HP**
Model No. : SK-2501K
Serial No. : MR80700789
FCC ID : GYUR38SK
Power type : By PC
Data cable : Shielded, 1.73m long, with ferrite core

Mouse : **HP**
Model No. : M-S34
Serial No. : LZB90714106
FCC ID : DZL211029
Power type : By PC
Power cord : Non-shielded, 1.88m long, No ferrite core

Mouse : **Logitech**
Model No. : M-M35
Serial No. : LZA71813927
FCC ID : DZL210365
Power type : By PC
Power cord : Non-shielded, 1.88m long, No ferrite core

USB Mouse : Logitech

Model No. : M-BB48
Serial No. : LZA00354614, LZA0054616, LZ94150069
FCC ID : Doc Approval
Power type : By PC
Power cord : Non-shielded, 1.88m long, No ferrite core

MIC. & earphone : KOKA

Model No. : N/A
Power type : Dynamic
Data cable : Non-shielded, 3m

Mouse : LOGITECH

Model No. : M-BA47
Serial No. : LZE92401324
FCC ID : DOC Approval
Power type : By PC
Power cord : Non-shielded, 1.90m long, No ferrite core

Printer : HP

Model No. : C2642A
Serial No. : SG69A196GV
FCC ID : B94C2642X
Power type : 230 VAC, 50Hz
Power cord : Non-shielded, 2m long, no ferrite core
Data cable : Shielded, 1.84m long, no ferrite core

Digital 8 : SONY

Model No. : DCR-TRV320
Serial No. : 59962
FCC ID : N/A
Power type : Powered by a AC Power Adaptor (input:AC100-240V 50/60Hz 23W ;
output: DC 8.4V 1.5A)
Power Cable : Shielded, 1.8M long, No ferrite bead data cable

PABX : King Design

Model No. : KD8705-A
Serial No. : GV101101186
Power type : 220 VAC 50Hz
Power cord : non-shielded, 1.8m long, no ferrite bead

Color TV : SANYO 20" COLOR TELEVISION

Model No. : ST-20S1
Serial No. : 0619202K92676
FCC ID : N/A
Power type : AC110V 60Hz 75W
Power cord : Non-shielded, 2.70m long, No ferrite core

Color Monitor: SONY 15" TRINITRON COLOR VIDEO MONITOR

Model No. : PVM-1344Q
Serial No. : 2010867
FCC ID : Verification
Power type : AC120V 60Hz 50/60Hz 99Wmax
Power cord : Non-shielded, 2.20m long, No ferrite core

Chapter 2 Conducted Emission Test

Test condition and setup:

All the equipment is placed and setup according to the ANSI C63.4 1992.

The EUT is assembled on a wooden table which is 80 cm high, is placed 40 cm from the back-wall which is a vertical conducting plane. One LISN is for EUT, the other LISN is for support equipment. They are all placed on the conductive ground. The EUT's LISN connect a line switch box for selecting L1 or L2, then connect to a preamplifier and spectrum.

The spectrum scans from 150KHz to 30MHz. Conducted emission levels are detected at max. peak mode . But if the max. peak mode failed or over average limit, it will be measured by average detection mode.

While testing, there is the worst-emission plot printed at peak detection mode, and there are more than 6 highest emissions relative to limit recorded. The plot is kept as the original data, not included in test report.

List of test Instrument :

Instrument Name	Model No.	Brand	Serial No.	<u>Calibration Date</u>	
				Last time	Next time
Spectrum analyzer	8594EM	H P	3710A00198	06/29/01	06/29/02
LISN (EUT)	3825/2	EMCO	9411-2284	06/10/01	06/10/02
LISN (Support E.)	3825/2	EMCO	9210-2007	05/31/01	05/31/02
Preamplifier	EQ3-006	TRC	- - - - -	05/15/01	05/15/02
Line switch box	EQ3-007	TRC	- - - - -	05/15/01	05/15/02

The level of confidence of 95% , the uncertainty of measurement of conducted emission is ± 2.4 dB .

Test Result: Pass (Appendix A)

Conducted Test Placement: (Photographs)(Test mode: VGA)



Conducted Test Placement: (Photographs)(Test mode: Video Out)



Conducted Test Placement: (Photographs)(Test mode: S-Video Out)



Chapter 3 Radiated emission test

Test condition and setup:

Pretest : Prior to the final test (OATS test) ,the EUT is placed in a shielded enclosure, and scan from 30MHz to 5GHz. This is done to ensure the radiation exactly emits form the EUT.

Final test: In the final radiation measurement, scan from 30MHz to 1GHz is made on a **10 – meter** open-field test site using broadband antenna and scan from 1GHz to 5GHz is made on a **3 – meter** open-field test site using Horn antenna. The EUT is placed on a nonconductive table that is 0.8m height, the top surface is 1.0 x 1.5 meter. The placement is according to ANSI C63.4 1992.

The emission is examined from 30 MHz to 5000 MHz measured by receiver and spectrum.

Measure more than six top marked frequencies generated form pretest by computer step by step at each frequency. The EUT is rotated 360 degrees, and antenna is raised and lowered from 1 to 4 meters to find the maximum emission levels. The antenna is used with both horizontal and vertical polarization.

Appropriated preamplifier that is made by TRC is used for improving sensitivity and precaution is taken to avoid overloading. The spectrum analyzer' s 6dB bandwidth is set to 120 KHz, and the EUT is measured at quasi-peak mode.

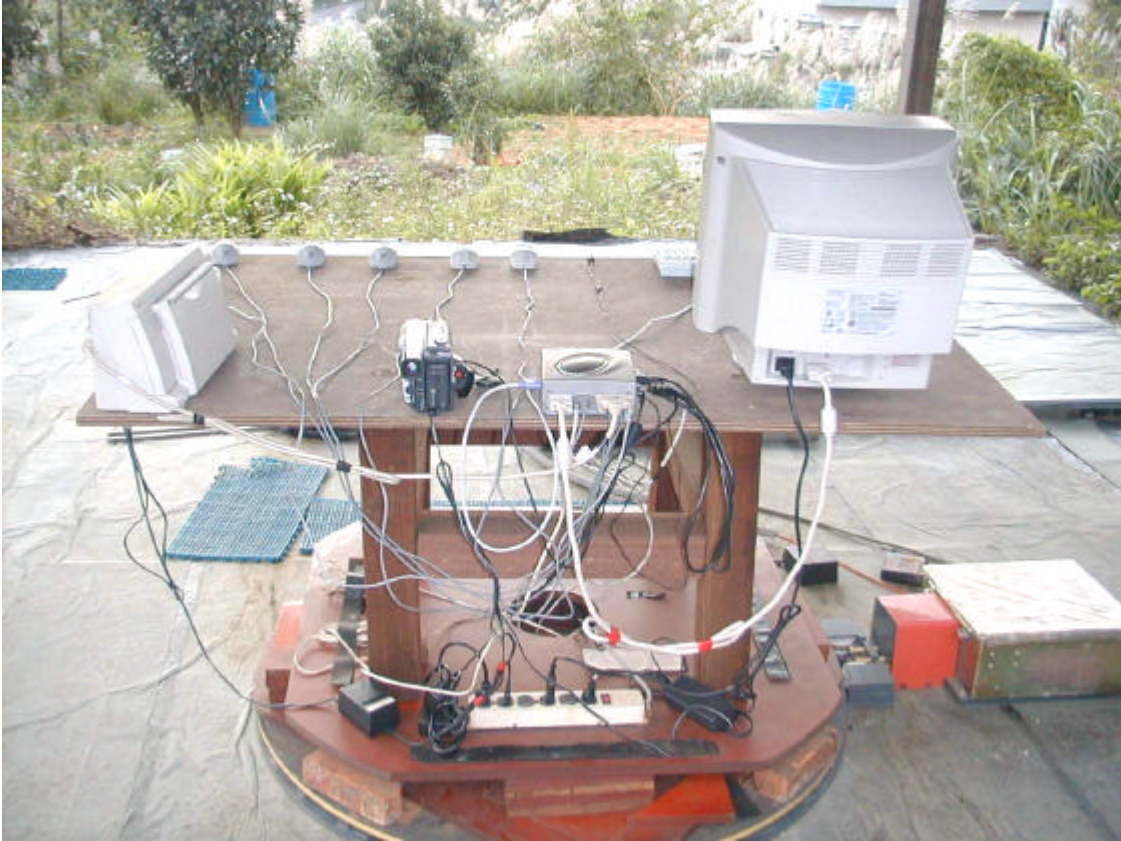
If the emission is close to the frequency band of ambient, the tester will recheck the data and the corrected data will be written in the test data sheet. If the emission is just within the ambient, the data from shield room will be taken as the final data.

List of test Instrument :

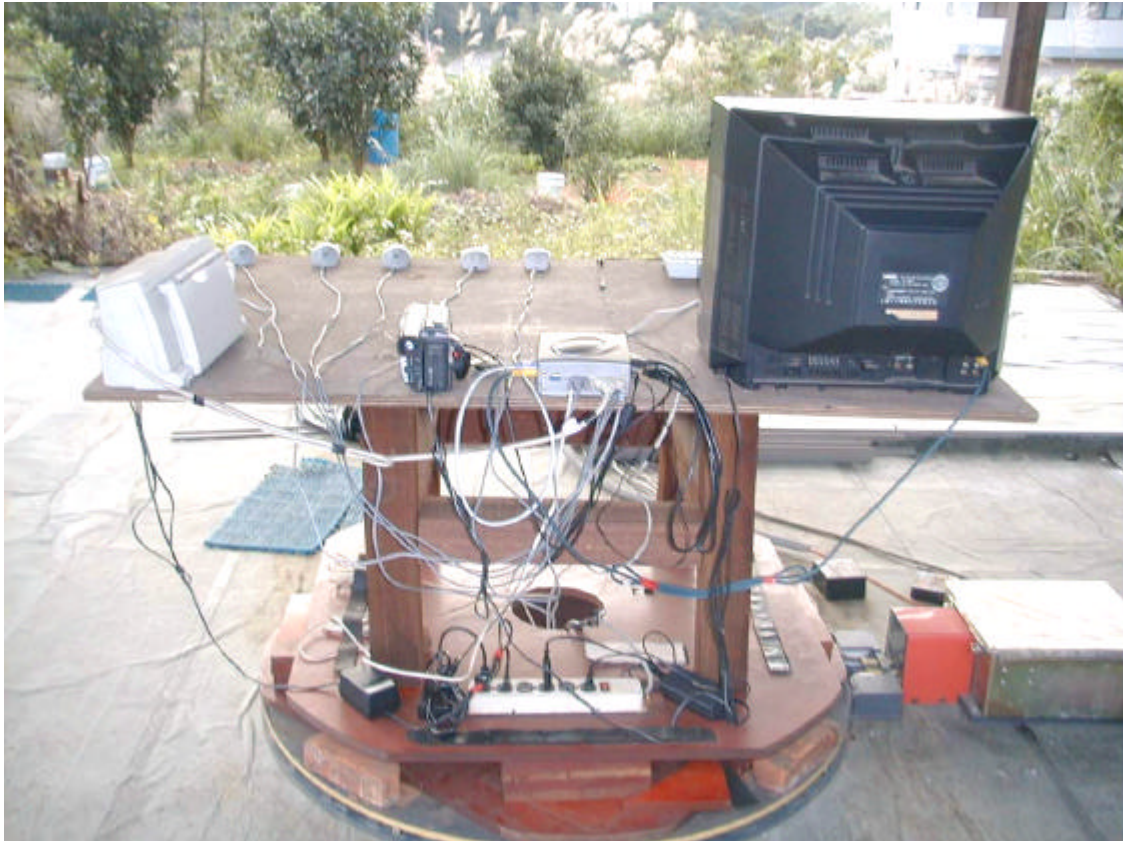
Instrument Name	Model No.	Brand	Serial No.	<u>Calibration Date</u>	
				Last time	Next time
RECEIVER	SCR3502	SCHAFFNER	210	12/01/01	12/01/02
Control Box	TWR95-4	TRC	C9001-2	12/01/01	12/01/02
Antenna	VULB 9160	M.E.	3063	06/26/01	06/23/02
Spectrum Analyzer	8564E	HP	US36433002	08/01/01	01/01/02
Horn Antenna	3115	EMCO	9704-5178	08/01/01	08/01/02
Open test side (Antenna, Amplify, cable calibrated together)				05/15/01	05/15/02

The level of confidence of 95% , the uncertainty of measurement of radiated emission is ± 4.96 dB .

Test Result: Pass (Appendix B)

Radiated Test Placement: (Photographs)(Test mode: VGA)

Radiated Test Placement: (Photographs)(Test mode: Video Out)



Radiated Test Placement: (Photographs)(Test mode: S-Video Out)

Appendix A

Conducted Emission Test Result: (Test Mode: VGA 800 x 600 DPI 230V)

Testing room:

Temperature : 23 ° C

Humidity : 72 % RH

Line 1

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
191.00	46.27	***.**	***.**	64.83	54.86	-8.56
512.00	33.98	***.**	***.**	56.00	46.00	-12.02
575.00	36.05	***.**	***.**	56.00	46.00	-9.95
1149.00	32.18	***.**	***.**	56.00	46.00	-13.82
1215.00	32.20	***.**	***.**	56.00	46.00	-13.80
1410.00	32.26	***.**	***.**	56.00	46.00	-13.74
1468.00	32.77	***.**	***.**	56.00	46.00	-13.23
1535.00	32.05	***.**	***.**	56.00	46.00	-13.95
1657.00	32.17	***.**	***.**	56.00	46.00	-13.83
3110.00	33.97	***.**	***.**	56.00	46.00	-12.03

Line 2

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
446.00	41.67	***.**	***.**	57.54	47.54	-5.88
512.00	39.13	***.**	***.**	56.00	46.00	-6.87
575.00	39.11	***.**	***.**	56.00	46.00	-6.89
637.00	41.36	***.**	***.**	56.00	46.00	-4.64
954.00	39.14	***.**	***.**	56.00	46.00	-6.86
1149.00	40.31	***.**	***.**	56.00	46.00	-5.69
1215.00	39.60	***.**	***.**	56.00	46.00	-6.40
1410.00	40.01	***.**	***.**	56.00	46.00	-5.99
1593.00	38.91	***.**	***.**	56.00	46.00	-7.09
1736.00	39.20	***.**	***.**	56.00	46.00	-6.80

* The reading amplitudes are all under limit.

Conducted Emission Test Result: (Test Mode: VGA 1024 x 768 DPI 230V)

Testing room: Temperature : 23 ° C Humidity : 72 % RH

Line 1

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
192.00	46.12	***.**	***.**	64.80	54.80	-8.68
512.00	33.77	***.**	***.**	56.00	46.00	-12.23
579.00	36.05	***.**	***.**	56.00	46.00	-9.95
641.00	32.65	***.**	***.**	56.00	46.00	-13.35
1349.00	32.80	***.**	***.**	56.00	46.00	-13.20
1602.00	32.61	***.**	***.**	56.00	46.00	-13.39
1792.00	32.52	***.**	***.**	56.00	46.00	-13.48
1987.00	32.62	***.**	***.**	56.00	46.00	-13.38
4050.00	32.67	***.**	***.**	56.00	46.00	-13.33
4350.00	35.42	***.**	***.**	56.00	46.00	-10.58

Line 2

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
449.00	40.80	***.**	***.**	57.46	47.46	-6.66
512.00	40.11	***.**	***.**	56.00	46.00	-5.89
641.00	41.45	***.**	***.**	56.00	46.00	-4.55
705.00	39.73	***.**	***.**	56.00	46.00	-6.27
898.00	39.96	***.**	***.**	56.00	46.00	-6.04
966.00	39.91	***.**	***.**	56.00	46.00	-6.09
1156.00	40.53	***.**	***.**	56.00	46.00	-5.47
1224.00	39.41	***.**	***.**	56.00	46.00	-6.59
1468.00	39.54	***.**	***.**	56.00	46.00	-6.46
1668.00	39.25	***.**	***.**	56.00	46.00	-6.75

* The reading amplitudes are all under limit.

Conducted Emission Test Result: (Test Mode: VGA 1600 x 1200 DPI 230V)

Testing room: Temperature : 23 ° C Humidity : 72 % RH

Line 1

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
192.00	46.42	***.**	***.**	64.80	54.80	-8.38
512.00	33.45	***.**	***.**	56.00	46.00	-12.55
579.00	36.30	***.**	***.**	56.00	46.00	-9.70
833.00	32.69	***.**	***.**	56.00	46.00	-13.31
1156.00	32.25	***.**	***.**	56.00	46.00	-13.75
1224.00	32.23	***.**	***.**	56.00	46.00	-13.77
1736.00	32.42	***.**	***.**	56.00	46.00	-13.58
3730.00	32.95	***.**	***.**	56.00	46.00	-13.05
3840.00	33.78	***.**	***.**	56.00	46.00	-12.22
3970.00	32.83	***.**	***.**	56.00	46.00	-13.17

Line 2

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
449.00	41.53	***.**	***.**	57.46	47.46	-5.93
641.00	41.64	***.**	***.**	56.00	46.00	-4.36
904.00	39.63	***.**	***.**	56.00	46.00	-6.37
966.00	39.26	***.**	***.**	56.00	46.00	-6.74
1156.00	40.28	***.**	***.**	56.00	46.00	-5.72
1224.00	39.50	***.**	***.**	56.00	46.00	-6.50
1419.00	39.78	***.**	***.**	56.00	46.00	-6.22
1478.00	40.00	***.**	***.**	56.00	46.00	-6.00
1747.00	39.99	***.**	***.**	56.00	46.00	-6.01
4110.00	39.54	***.**	***.**	56.00	46.00	-6.46

* The reading amplitudes are all under limit.

Conducted Emission Test Result: (Test Mode: Video Out 230V)

Testing room: Temperature : 23 ° C Humidity : 72 % RH

Line 1

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
189.00	44.50	***.**	***.**	64.89	54.89	-10.38
253.00	39.40	***.**	***.**	63.06	53.06	-13.66
505.00	36.06	***.**	***.**	56.00	46.00	-9.94
568.00	35.27	***.**	***.**	56.00	46.00	-10.73
633.00	31.40	***.**	***.**	56.00	46.00	14.60
692.00	31.60	***.**	***.**	56.00	46.00	-14.40
1009.00	31.13	***.**	***.**	56.00	46.00	-14.87
3540.00	31.70	***.**	***.**	56.00	46.00	-14.30
4540.00	31.58	***.**	***.**	56.00	46.00	-14.42
12890.00	41.53	***.**	***.**	60.00	50.00	-8.47

Line 2

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
441.00	40.57	***.**	***.**	56.00	46.00	-7.12
505.00	38.00	***.**	***.**	56.00	46.00	-8.00
568.00	39.60	***.**	***.**	56.00	46.00	-6.40
633.00	40.65	***.**	***.**	56.00	46.00	-5.35
697.00	38.96	***.**	***.**	56.00	46.00	-7.04
880.00	39.82	***.**	***.**	56.00	46.00	-6.18
947.00	38.25	***.**	***.**	56.00	46.00	-7.75
1142.00	39.77	***.**	***.**	56.00	46.00	-6.23
1207.00	39.22	***.**	***.**	56.00	46.00	-6.78
1390.00	39.13	***.**	***.**	56.00	46.00	-6.87

* The reading amplitudes are all under limit.

Conducted Emission Test Result: (Test Mode: S-Video Out 230V)

Testing room: Temperature : 23 ° C Humidity : 72 % RH

Line 1

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
189.00	46.89	***.***	***.***	64.89	54.89	-7.99
508.00	34.49	***.***	***.***	56.00	46.00	-11.51
571.00	35.64	***.***	***.***	56.00	46.00	-10.36
637.00	32.88	***.***	***.***	56.00	46.00	-13.12
823.00	32.97	***.***	***.***	56.00	46.00	-13.03
1142.00	32.39	***.***	***.***	56.00	46.00	-13.61
1458.00	32.47	***.***	***.***	56.00	46.00	-13.53
1583.00	32.35	***.***	***.***	56.00	46.00	-13.65
1780.00	32.33	***.***	***.***	56.00	46.00	-13.67
4380.00	33.80	***.***	***.***	56.00	46.00	-12.20

Line 2

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
444.00	41.39	***.***	***.***	57.60	47.60	-6.21
508.00	38.53	***.***	***.***	56.00	46.00	-7.47
637.00	41.29	***.***	***.***	56.00	46.00	-4.71
886.00	38.73	***.***	***.***	56.00	46.00	-7.27
954.00	38.98	***.***	***.***	56.00	46.00	-7.02
1015.00	38.49	***.***	***.***	56.00	46.00	-7.51
1215.00	39.60	***.***	***.***	56.00	46.00	-6.40
1400.00	39.50	***.***	***.***	56.00	46.00	-6.50
1468.00	39.75	***.***	***.***	56.00	46.00	-6.25
1657.00	38.86	***.***	***.***	56.00	46.00	-7.14

* The reading amplitudes are all under limit.

Conducted Emission Test Result: (Test Mode: VGA 800 x 600 DPI 110V)

Testing room: Temperature : 23 ° C Humidity : 72 % RH

Line 1

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
184.00	42.97	***.**	***.**	65.03	55.03	-12.06
502.00	33.84	***.**	***.**	56.00	46.00	-12.16
749.00	33.13	***.**	***.**	56.00	46.00	-12.87
813.00	33.29	***.**	***.**	56.00	46.00	-12.71
1003.00	33.28	***.**	***.**	56.00	46.00	-12.72
1249.00	32.97	***.**	***.**	56.00	46.00	-13.03
1316.00	33.41	***.**	***.**	56.00	46.00	-12.59
1374.00	33.19	***.**	***.**	56.00	46.00	-12.81
1439.00	33.62	***.**	***.**	56.00	46.00	-12.38
1564.00	33.10	***.**	***.**	56.00	46.00	-12.90

Line 2

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
688.00	38.23	***.**	***.**	56.00	46.00	-7.77
935.00	37.95	***.**	***.**	56.00	46.00	-8.05
1184.00	38.78	***.**	***.**	56.00	46.00	-7.22
1249.00	37.98	***.**	***.**	56.00	46.00	-8.02
1316.00	38.76	***.**	***.**	56.00	46.00	-7.24
1374.00	38.12	***.**	***.**	56.00	46.00	-7.88
1439.00	37.91	***.**	***.**	56.00	46.00	-8.09
1635.00	37.90	***.**	***.**	56.00	46.00	-8.10
3950.00	38.73	***.**	***.**	56.00	46.00	-7.27
4240.00	38.66	***.**	***.**	56.00	46.00	-7.34

* The reading amplitudes are all under limit.

Conducted Emission Test Result: (Test Mode: VGA 1024 x 768 DPI 110V)

Testing room:

Temperature : 23 ° C

Humidity : 72 % RH

Line 1

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
188.00	45.30	***.**	***.**	64.91	54.91	-9.61
941.00	32.82	***.**	***.**	56.00	46.00	-13.18
1003.00	32.98	***.**	***.**	56.00	46.00	-13.02
1390.00	33.00	***.**	***.**	56.00	46.00	-13.00
1574.00	32.61	***.**	***.**	56.00	46.00	-13.39
1758.00	32.56	***.**	***.**	56.00	46.00	-13.44
3560.00	33.66	***.**	***.**	56.00	46.00	-12.34
3680.00	34.65	***.**	***.**	56.00	46.00	-11.35
3890.00	34.61	***.**	***.**	56.00	46.00	-11.39
4240.00	34.08	***.**	***.**	56.00	46.00	-11.92

Line 2

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
692.00	38.42	***.**	***.**	56.00	46.00	-7.58
1070.00	38.70	***.**	***.**	56.00	46.00	-7.30
1135.00	38.73	***.**	***.**	56.00	46.00	-7.27
1192.00	39.04	***.**	***.**	56.00	46.00	-6.96
1324.00	39.20	***.**	***.**	56.00	46.00	-6.80
1382.00	38.92	***.**	***.**	56.00	46.00	-7.08
1516.00	39.26	***.**	***.**	56.00	46.00	-6.74
1574.00	38.98	***.**	***.**	56.00	46.00	-7.02
1691.00	38.99	***.**	***.**	56.00	46.00	-7.01
1896.00	38.64	***.**	***.**	56.00	46.00	-7.36

* The reading amplitudes are all under limit.

Conducted Emission Test Result: (Test Mode: VGA 1600 x 1200 DPI 110V)

Testing room: Temperature : 23 ° C Humidity : 72 % RH

Line 1

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
186.00	44.23	***.**	***.**	64.97	54.97	-10.74
505.00	32.46	***.**	***.**	56.00	46.00	-13.54
941.00	32.15	***.**	***.**	56.00	46.00	-13.85
1199.00	32.41	***.**	***.**	56.00	46.00	-13.59
1324.00	33.58	***.**	***.**	56.00	46.00	-12.42
1574.00	32.14	***.**	***.**	56.00	46.00	-13.86
1825.00	32.33	***.**	***.**	56.00	46.00	-13.67
4270.00	32.39	***.**	***.**	56.00	46.00	-13.61
4420.00	32.60	***.**	***.**	56.00	46.00	-13.40
16690.00	37.34	***.**	***.**	56.00	46.00	-12.66

Line 2

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
568.00	38.55	***.**	***.**	56.00	46.00	-7.45
692.00	38.59	***.**	***.**	56.00	46.00	-7.41
818.00	38.82	***.**	***.**	56.00	46.00	-7.18
947.00	38.52	***.**	***.**	56.00	46.00	-7.48
1009.00	38.37	***.**	***.**	56.00	46.00	-7.63
1070.00	39.24	***.**	***.**	56.00	46.00	-6.76
1199.00	38.55	***.**	***.**	56.00	46.00	-7.45
1257.00	38.07	***.**	***.**	56.00	46.00	-7.93
1448.00	38.10	***.**	***.**	56.00	46.00	-7.90
1583.00	38.70	***.**	***.**	56.00	46.00	-7.30

* The reading amplitudes are all under limit.

Conducted Emission Test Result: (Test Mode: Video Out 110V)

Testing room: Temperature : 23 ° C Humidity : 72 % RH

Line 1

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
190.00	42.46	***.**	***.**	64.86	54.86	-12.40
1149.00	32.58	***.**	***.**	56.00	46.00	-13.42
1215.00	32.32	***.**	***.**	56.00	46.00	-13.68
1410.00	33.12	***.**	***.**	56.00	46.00	-12.88
1468.00	32.87	***.**	***.**	56.00	46.00	-13.13
1713.00	32.49	***.**	***.**	56.00	46.00	-13.51
3560.00	33.43	***.**	***.**	56.00	46.00	-12.57
3810.00	35.58	***.**	***.**	56.00	46.00	-10.42
4240.00	34.38	***.**	***.**	56.00	46.00	-11.62
4510.00	32.86	***.**	***.**	60.00	50.00	-13.14

Line 2

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
833.00	38.23	***.**	***.**	56.00	46.00	-7.77
898.00	38.63	***.**	***.**	56.00	46.00	-7.37
954.00	38.77	***.**	***.**	56.00	46.00	-7.23
1149.00	38.32	***.**	***.**	56.00	46.00	-7.68
1215.00	39.13	***.**	***.**	56.00	46.00	-6.87
1340.00	39.22	***.**	***.**	56.00	46.00	-6.78
1410.00	39.69	***.**	***.**	56.00	46.00	-6.31
1468.00	38.52	***.**	***.**	56.00	46.00	-7.48
1535.00	38.27	***.**	***.**	56.00	46.00	-7.73
1593.00	38.96	***.**	***.**	56.00	46.00	-7.04

* The reading amplitudes are all under limit.

Conducted Emission Test Result: (Test Mode: S-Video Out 110V)

Testing room: Temperature : 23 ° C Humidity : 72 % RH

Line 1

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
189.00	43.53	***.**	***.**	64.89	54.89	-11.35
754.00	32.58	***.**	***.**	56.00	46.00	-13.42
1009.00	33.32	***.**	***.**	56.00	46.00	-12.68
1070.00	32.47	***.**	***.**	56.00	46.00	-13.53
1135.00	32.30	***.**	***.**	56.00	46.00	-13.70
1207.00	32.81	***.**	***.**	56.00	46.00	-13.19
1324.00	32.73	***.**	***.**	56.00	46.00	-13.27
1390.00	32.33	***.**	***.**	56.00	46.00	-13.67
3660.00	36.48	***.**	***.**	56.00	46.00	-9.52
4160.00	35.83	***.**	***.**	56.00	46.00	-10.17

Line 2

Frequency (KHz)	READING AMPLITUDE			LIMIT		Margin (dB)
	Peak (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	Quasi-Peak (dBmV/m)	Average (dBmV/m)	
568.00	38.14	***.**	***.**	56.00	46.00	-7.86
692.00	38.04	***.**	***.**	56.00	46.00	-7.96
828.00	38.73	***.**	***.**	56.00	46.00	-7.27
947.00	38.06	***.**	***.**	56.00	46.00	-7.94
1207.00	38.12	***.**	***.**	56.00	46.00	-7.88
1266.00	38.81	***.**	***.**	56.00	46.00	-7.19
1332.00	39.08	***.**	***.**	56.00	46.00	-6.92
1583.00	38.70	***.**	***.**	56.00	46.00	-7.30
1646.00	38.47	***.**	***.**	56.00	46.00	-7.53
1780.00	38.69	***.**	***.**	56.00	46.00	-7.31

* The reading amplitudes are all under limit.

Appendix B

Radiated Emission Test Result: (Test Mode: VGA 1024 x 768 DPI)

Test Conditions:

Testing site : Temperature : 27 ° C Humidity : 88 % RH

Frequency	Reading Amplitude	Ant. Height	Table	Correction Factors	Corrected Amplitude	Class B Limit	Margin
MHz	DB μ V	m	degree	dB/m	dB μ V/m	dB μ V/m	dB

Horizontal

31.9998	32.15	4.00	83	-5.20	26.95	30.00	-3.05
37.8580	31.45	4.00	75	-6.30	25.15	30.00	-4.85
86.0135	33.36	4.00	40	-7.98	25.38	30.00	-4.62
110.5938	29.44	4.00	282	-6.13	23.31	30.00	-6.69
624.0395	20.14	4.00	259	13.54	33.68	37.00	-3.32
720.0445	17.14	4.00	19	16.42	33.56	37.00	-3.44

Vertical

31.9995	30.51	1.01	220	-5.20	25.31	30.00	-4.69
135.1720	28.36	3.99	84	-1.69	26.67	30.00	-3.33
149.9996	24.74	1.01	242	-3.37	21.37	30.00	-8.63
643.4100	10.14	1.01	108	14.53	24.67	37.00	-12.33

Note:

1. Margin = Amplitude - limit, *if margin is minus means under limit.*
2. Corrected Amplitude = Reading Amplitude + Correction Factors
3. Correction factor = Antenna factor + (Cable Loss - Amplitude gain)
(For example : 30MHz correction factor = 15.5 + (-15.26) = 0.24 dB/m)

Radiated Emission Test Result: (Test Mode: Video Out)

Test Conditions:

Testing site : Temperature : 19 ° C Humidity : 80 % RH

Frequency	Reading Amplitude	Ant. Height	Table	Correction Factors	Corrected Amplitude	Class B Limit	Margin
MHz	DB μ V	m	degree	dB/m	dB μ V/m	dB μ V/m	dB

Horizontal

37.8060	29.89	3.99	251	-6.29	23.60	30.00	-6.40
86.0126	30.04	3.99	289	-7.98	22.06	30.00	-7.94

Vertical

86.0140	32.39	1.00	244	-7.98	24.41	30.00	-5.59
150.0000	21.70	1.00	168	-3.37	18.33	30.00	-11.67
200.0175	31.54	1.00	349	-6.21	25.33	30.00	-4.67
624.0373	20.46	2.49	55	13.54	34.00	37.00	-3.00
720.0426	17.10	1.00	85	16.42	33.52	37.00	-3.48

Note:

1. Margin = Amplitude - limit, *if margin is minus means under limit.*
2. Corrected Amplitude = Reading Amplitude + Correction Factors
3. Correction factor = Antenna factor + (Cable Loss - Amplitude gain)
(For example : 30MHz correction factor = 15.5 + (-15.26) = 0.24 dB/m)

Radiated Emission Test Result: (Test Mode: S-Video Out)

Test Conditions:

Testing site : Temperature : 19 ° C Humidity : 80 % RH

Frequency	Reading Amplitude	Ant. Height	Table	Correction Factors	Corrected Amplitude	Class B Limit	Margin
MHz	DBμV	m	degree	dB/m	dBμV/m	dBμV/m	dB

Horizontal

32.0000	32.16	3.99	215	-5.20	26.96	30.00	-3.04
38.4825	28.68	3.99	251	-6.32	22.36	30.00	-7.64
86.0185	31.14	3.99	298	-7.98	23.16	30.00	-6.84

*The other emissions are under more than limit 10dB.

Vertical

31.9987	31.98	1.00	297	-5.20	26.78	30.00	-3.22
149.9997	24.57	1.00	106	-3.37	21.20	30.00	-8.80
159.7478	25.71	4.00	199	-5.26	20.45	30.00	-9.55
200.0180	31.03	2.49	113	-6.21	24.82	30.00	-5.18
624.0400	20.12	1.00	131	13.54	33.66	37.00	-3.34
720.0463	17.24	4.00	327	16.42	33.66	37.00	-3.34

*The other emissions are under more than limit 10dB.

Note:

1. Margin = Amplitude - limit, *if margin is minus means under limit.*
2. Corrected Amplitude = Reading Amplitude + Correction Factors
3. Correction factor = Antenna factor + (Cable Loss - Amplitude gain)
(For example : 30MHz correction factor = 15.5 + (-15.26) = 0.24 dB/m)