

FCC LABO

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94863

Test Exhibit 6

June 30, 1999
GTK99-F009
EA94863

Federal Communications Commission
Equipment Authorization Branch
7435 Oakland Mills Road, Columbia, MD 21046

Attn.: Ms. Linda Elliott, Legal Application Examiner

Subject: Supplement to Original Certification Application for Class B Computing Device
FCC ID: EUN5650 / Notebook Computer, Model DesignNote 5650 Series

Dear Ms. Elliott:

Please be advised First International Computer Inc.'s original application for equipment authorization dated June 26, 1999 was logged into your facility on July 7, 1999 and assigned 731 Confirmation Number EA94863.

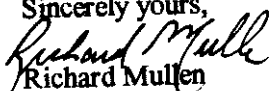
The original application reported Multimedia Notebook Computer would initially be marketed with features such as: (1) one-of-seven type Pentium II CPUs by Celeron types 266, -300, -333, -366 or Dixon types 300, -333, -366 with 66 MHz external clock frequency; (2) one-of-five type LCDs with maximum resolution 1024x768, Non-Interlaced; (3) one-of-twelve type hard disk drives and one-of-two type floppy disk drives; (4) one-of-two type CD-ROM Drives or one-of two type DVD ROM Drives; (5) LAN or Modem Card; (6) one-of-two type AC Adaptor by Delta type ADP-50MB or by Lite-On type PA-1480-19G, each provided DC cable with one bonded ferrite core; and (7) various other features and options.

This Supplement Report (Class II Permissive Change) is to report the use of alternate 12.1 TFT Color LCD Panel by Sanyo, type TM121SV-02L03A; and alternate Lite-On AC Adaptor, type PA-1510-19F1 provided DC cable with one bonded ferrite core.

This EUT was multimedia system tested again with alternate LCD and AC Adaptor with all available interface ports connected to suitable peripheral devices. Tests were performed in accordance with ANSI C63.4-1992 with radiated measurements performed up to 2 GHz to show compliance to FCC Part 15 Class B limits.

Kindly add this supplemental information into our filed original application. Should you have any questions or comments, please contact the undersigned. Thank you for your attention and cooperation in this matter.

Sincerely yours,


Richard Mullen

Manager

Safety & Compliance Consulting

GTK99-F009

Test Report
Application for Certification
*** Class II Premissive change**
On Behalf Of
First International Computer Inc.
Notebook PC

Model: Ruby 2.5+DESIGNote 5650
FCC ID:EUN5650

Prepared For:
First International Computer Inc.
6F., Formosa Plastics Rear Bldg 201, Tung-Hwa N. Road,
Taipei, Taiwan, R.O.C.



Report By : Global EMC Standard Tech. Corp.
No.3 Pau-Tou-Tsuo Valley, Chia-Pau
Tsuen, Lin Kou Hsiang, Taipei County,
Taiwan, R.O.C.
Tel : (02) 2603-5321
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Test results given in this report only relate to the specimen(s) tested, calibrated or measured.
This report shall not be reproduced other than in full without the written consent of Gestek.

* ORIGINAL APPLICATION GTK99-F007 DATED 6/26/99 WAS RECEIVED
AT FCC ON 7/7/99 & ASSIGNED CONFIRMATION EA 94863.

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GTK99-F009

2.1.1 Test Mode:

Mode	CPU	LCD	HDD	CD ROM	Battery	FDD	Adapter
1	Dixon 333MHz	* Sanyo 12.1" TFT TM121SV-02L03A	Fujitsu 4.3GB MHF2043AT	TEAC 24X M/N:CD-224E-92	Panasonic NiMH 3800mAh /9.6V	Mitsubishi M/N:MF355H-347MN	Liteon * PA-1510-19FI

SDRAM: 32M ,64M.**Keyboard:** JME, P/N:71-30411-00.**Lan Card:** PL3400018002, **Lan Connect Board:** 1V-094V-0**Modem Card:** 80-319V236-2A, **Modem Connect Board:** 80-319V237-2,**Touch Pad:** ALPS, M/N:56AAA1793B, **Botton Board:**Amber 2.5 A25GP Ver.0.2**Power Board:** Amber 2.5 A2.5DC Ver.0.3, **DC to DC Board:**Amber 2.5 A25CG Ver.0.3**Charger/ HDD I/O Board:** Amber 2.5 AIO Ver.0.3**Adaptor:** (1) Liteon, M/N: PA1480-19G, S/N:00000074, Main Board: 214002301.

(2) Delta, M/N:ADP-50MB, S/N:CTD9851015634, Main Board:N/A

Panel: LG 12.1", M/N:LP121S3-A, P/N:6091L-0036B.**Inverter:** DAC-10B005 with switch board: Amber 2.0 ALCLD Ver.0.3**Panel:** LG 14.1", M/N:LP141X5-A, P/N:6091L-0039A.**Inverter:**T90.003.00 AMBIT Rev.7**Panel:** Panasonic 14.1", M/N:EDTCB21-QAF.**Inverter:** AMBIT Rev.5**Panel:** LG 14.1", M/N:LP141X5-BINC, P/N:609IL-0039A.**Inverter:** AMBIT Rev.5

ORIGINAL APPLICATION GTK99-F007 DATED 6/26/99 WAS LOGGED-IN ON 7/7/99
AND ASSIGNED 731 CONFIRMATION NUMBER EA94863-

Note:

1. Each different CPU/PANEL has been investigated to find the maximum emission situation, and all the components listed at section 2.3 were investigated. During the performance of the testing, peripherals were connected to all available ports. The data shown in this test report reflects the worst-case data for each frequency/video resolution.
- * 2. The EUT internal configuration was identical with previous GesTek Report Number 995048 except it changed different from Panel & Adaptor.

LCD

ADD IF
CHANGE { ALTERNATE LCD PANEL BY SANYO 12.1 TFT Type TM121SV-02L03A
ALTERNATE DC ADAPTOR BY LITEON, TYPE PA-1510-19FI

2. General Information

2.1 Production Description

Description	:	Notebook PC
Model Number	:	Ruby 2.5+DESIGNote 5650
Serial Number	:	Prototype
FCC ID	:	EUN5650
Applicant	:	First International Computer Inc.
Address	:	6F., Formosa Plastics Rear Bldg 201, Tung-Hwa N. Road, Taipei, Taiwan, R.O.C.
Manufacturer	:	First International Computer Inc.
Address	:	6F., Formosa Plastics Rear Bldg 201, Tung-Hwa N. Road, Taipei, Taiwan, R.O.C.
Power Adaptor	:	Manufacturer: Delta, Liteon I/P : 100~240V, 50~60Hz, 98~135VA. O/P: DC 19V, 2.64A.

2.2 Results:

The EUT(s) **met** the FCC Part 15 Class B requirements.

This Class B digital apparatus complies with Canadian ICES-003.

The Worst Emission data was found as following,

	Worst Emission Frequency (MHz)	Emission Level	Limit	Height of Antenna, Angel of Turntable
Conduction Mode 1	22.7880	40.3dBuV Line 1, Q.P.	48.0dBuV	N/A
Radiation Mode 1	449.994	43.16[dB(uV/m)], Horizontal	46.00 [dB(uV/m)]	4M, 169°

GTR99-F009

2.3 Tested System Details

The FCC IDs/TYPES for all equipment, plus descriptions of all cables used in the tested system (including inserted cards, which have grants) are:

☒ Notebook PC (EUT), Ruby 2.5 KEYPARTS LIST

NO.	Category	Model No.	Vendor
* 1	12.1" TFT	TM121SV-02L03A	Sanyo
2	12.1" TFT	LP121S3-A	LG
3	14.1" TFT	LP141X5-BINC	LG
4	14.1" TFT	LP141X5-A	LG
5	14.1" TFT	EDTCB21-QAF	Panasonic
6	3.2GB HDD	MHH2032AT	Fujitsu
7	3.2GB HDD	DBCA-203240	IBM
8	4.3GB HDD	MHF2043AT	Fujitsu
9	4.3GB HDD	DK238A-43	Hitachi
10	4.8GB HDD	MHH2048AT	Fujitsu
11	4.8GB HDD	DBCA-204860	IBM
12	6.4GB HDD	DBCA-206480	IBM
13	6.4GB HDD	MHH2064AT	Fujitsu
14	6.4GB HDD	DK239A-65	Hitachi
15	10GB HDD	DCXA21000	IBM
16	10GB HDD	MHG2102AT	Fujitsu
17	10GB HDD	DK229A-10	Hitachi
18	AC Adaptor	ADP-50MB	Delta
* 19	AC Adaptor	PA-1480-19G ^{PA-1510-19F}	Lite-On
20	CD ROM 24X	CD-224E-92	TEAC
21	CD ROM 24X	XM-1902B	Toshiba
22	CPU Module	Celeron 266u PGA	Intel
23	CPU Module	Celeron 300u PGA	Intel
24	CPU Module	Celeron 333u PGA	Intel
25	CPU Module	Celeron 366u PGA	Intel
26	CPU Module	Dixon 300u PGA	Intel
27	CPU Module	Dixon 333u PGA	Intel
28	CPU Module	Dixon 366 PGA	Intel
29	DVD ROM Drive	SR-8171-C	MKE
30	DVD ROM Drive	SD-C2202	Toshiba
31	FDD	MF355H-347MN	Mitsubishi
32	FDD	FD-1238T-018	NEC
33	Glide Pad	KGDDGQ941A	ALPS
34	Ni-MH Battery	3800mAh 9.6V	Sanyo
35	Ni-MH Battery	3800mAh 9.6V	Panasonic
36	Li-Ion Battery	3200mAh/14.4V(2P4S)	Sanyo
37	Li-Ion Battery	2800mAh/14.4V(2P4S)	Panasonic
38	DRAM MODULE	32MB MSY323S-28KX	Kingmax
39	DRAM MODULE	64MB MSY643S-88KX	Kingmax
40	DRAM MODULE	64MB MDS-MOG08D08B2438	Mosel
41	DRAM MODULE	128MB MSYA83S-88TKX	Kingmax

* CLASS II CHANGE / ADD TO ORIGINAL APPLICATION NOT YET GRANTED

☒ Monitor M01-010

Model Number : SyncMaster 700p
Serial Number : H3MH903296Y
Manufacturer : SAMSUNG
FCC ID : A3LCGH760
BCIQ No. : 3872A230
Data Cable : Shielded, Undetachable, 1.5m
Power Cord : Shielded, Detachable, 1.5m

☒ Printer P01-013

Model Number : C2642A(DJ-400)
Serial Number : MY7851C521
FCC ID : B94C2642X
Manufacturer : HP
Adaptor, Power Cord : Non-Shielded, Detachable, 1.9m
Data Cable : Shielded, Detachable, 1.8m

☒ Modem M03-013

Model Number : 1414
Serial Number : 960018044
FCC ID : IFAXDM1414
Manufacturer : ACEEX
Adaptor, Power Cord : Non-Shielded, Detachable, 1.5m
Data Cable : Shielded, Detachable, 1.2m

☒ Cassette Player R02-010 ~014

Model Number : HS-GS162
Serial Number : LYJ1084567
FCC ID : N/A
Manufacturer : AIWA CO., LTD
Power Cord : N/A (Battery)
Data Cable : Non-Shielded, Detachable, 1.5m

☒ Headset&Microphone E01-018~ 027

Model Number : SX-M1
Serial Number : N/A
Manufacturer : TOKYO
Power Cord : N/A
Data Cable : Non-Shielded, Undetachable, 1.8 m

☒ Mouse M02-042 (USB)

Model Number : M-UB48
Serial Number : LZB81900215
FCC ID : DZL211137
Manufacturer : Logitech Inc..
Data Cable : Shielded, Undetachable, 1.5m
BCIQ ID : 4872A001

2.4 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4-1992.

Radiated testing was performed at an antenna to EUT distance of 3 meters.

2.5 Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	22-26
Humidity (%RH)	25-75	50-60
Barometric pressure (mbar)	860-1060	950-1000

FCC Site Description : Aug. 10, 1995/Aug. 25, 1998 File on

Federal Communication Commission

FCC Engineering Laboratory

7435 Oakland Mills Road

Columbia, MD 21046

Reference 31040/SIT1300F2

NVLAP Lab Code : 200085-0

United States Department of commerce

National Institute of Standards and Technology

National Voluntary Laboratory Accreditation Program

Name of firm : Global EMC Standard Tech. Corp.

Site location : No. 3 Pau-Tou Valley, Chia-Pau Tsuen, Lin Kou
Hsiang, Taipei County, Taiwan, R.O.C.

3. Conducted Emission Test

3.1 Test Equipments

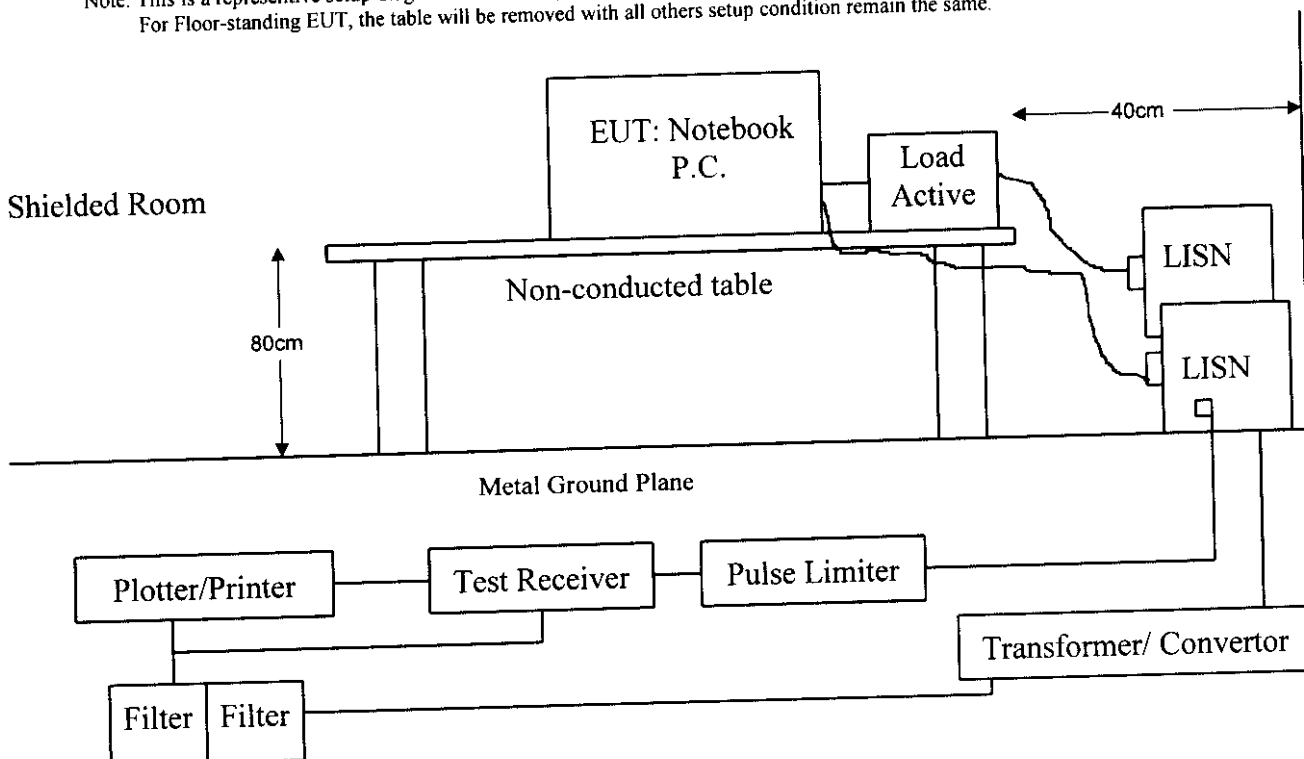
The following test equipments are used during the conducted power line tests:

Item	Instrument	Manufacturer	Type /Serial No.	Last Calibration	Location	C.E.
1	Test Receiver	Rohde & Schwarz	ESHS 30 / 828109/010	Dec. 15, 1998	Shield Room #1	✓
2	L.I.S.N.	Kyoritsu	KNW-407	Oct. 03, 1998	Shield Room #1	✓
3	L.I.S.N.	Solar	8012-50-R24 / 90038	May 20, 1999	Shield Room #1	
4	L.I.S.N.	Rohde & Schwarz	ESH3-Z5 / 840567/002	Oct. 02, 1998	Shield Room #1	✓
5	L.I.S.N.	Schwarzbeck	NNLK 8121/8121358	May 20, 1999	Shield Room #1	
6	Pulse Limiter	Rohde & Schwarz	ESH3-Z2/357.8810.52	Jun. 02, 1999	Shield Room #1	✓
7	Shielded Room	GesTek	GTK-RF-S04	Sep. 17, 1998	Shield Room #1	✓
8	RF CABLE	GesTek	GTK-RF-C07	Sep. 17, 1998	Shield Room #1	✓
9	50 Ohm Terminator	GesTek	GTK-RF-T01	Oct. 03, 1998	Shield Room #1	✓

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

3.2 Block Diagram of Test Setup

Note: This is a representative setup diagram for Table-top EUT.
For Floor-standing EUT, the table will be removed with all others setup condition remain the same.



3.3 Conducted Emission Limit

3.3.1 FCC Limits

Frequency	Maximum RF Line Voltage			
	Class A		Class B	
MHz	uV	dBuV	uV	dBuV
0.45 - 1.705	1000	60.0	250	48.0
1.705 - 30	3000	69.5	250	48.0

Remarks : 1. RF Line Voltage (dBuV) = 20 log RF Line Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3.3.2 CISPR Limits

Frequency	Maximum RF Line Voltage dB(uV)			
	Class A		Class B	
MHz	QUASI-PEAK	AVERAGE	QUASI-PEAK	AVERAGE
0.15 - 0.50	79	66	66-56	56-46
0.50-5.0	73	60	56	46
5.0 - 30	73	60	60	50

Remarks : In the Above Table, the tighter limit applies at the band edges.

3.4 EUT Configuration on Measurement

The equipments which is listed 3.2 are installed on Conducted Power Line Test to meet the Commission requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

The device under test, installed in a representative system as described in section 3.2, was placed on a non-conductive table whose total height equaled 80 CM. Powered from one LISN which signal output to receiver, and the other peripherals was powered from another LISN which signal output was terminated by 50Ω.

3.5 EUT Exercise Software

The EUT exercise program used during conducted testing was designed to exercise the EUT in a manner similar to a typical use. The exercise sequence is listed as below:

- 3.5.1 Setup the EUT and simulators as shown on 3.2.
- 3.5.2 Turn on the power of all equipments.
- 3.5.3 Boot the PC from Hard Disk and Enter to windows 98, exercise EMI.EXE test program to active all devices.
- 3.5.4 Play CD Disk audio in windows environment, read HDD and FDD data.
- 3.5.5 PC sent "H" Pattern to Both LCD Panel And Ext. Monitor.
- 3.5.6 PC sent "H" Pattern to Parallel (printer) port.
- 3.5.7 PC sent "H" Pattern to Serial port.
- 3.5.8 The EUT exchange the information with the GesTek Server via HUBS.
- 3.5.9 Repeat 3.5.4 to 3.5.8

3.6 Conducted Emission Data

The measurement range of conducted emission which is from **0.45 MHz to 30 MHz** was investigated. All readings are quasi-peak and average values with a resolution Bandwidth of 9 KHz, unless otherwise noted. The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range for all the test modes. The two different lines were each measured separately, and the worst modes datas were reported on the following data pages. The final measurement equal to Receiver reading plus Correction factor if available. When LISN insertion loss bigger than 0.5dB then the receiver will add correction factor to reading level automatically.

The total uncertainty for this test is as follows:

- Uncertainty in the field strength measured: $< \pm 2.0 \text{ dB}$

The uncertainty is calculated in accordance with NAMAS document NIS 81, and is given as 2 standard deviations.

CONDUCTED EMISSION DATA

Date of Test	:	June 23, 1999	Temperature	:	27.6 °C
EUT	:	Notebook PC	Humidity	:	46 %
Test Mode	:	Mode 1	Display Pattern	:	H Pattern

FREQUENCY	READING LEVEL				LIMIT
	LINE 1		LINE 2		
MHz	dBuV	uV	dBuV	uV	uV
0.45211	29.3	29.17	24.6	16.98	250
0.63350	27.0	22.39	23.5	14.96	250
1.71977	26.9	22.13	28.9	27.86	250
3.76123	33.4	46.77	32.7	43.15	250
12.68415	27.3	23.17	22.6	13.49	250
**22.77779	40.3	103.51	39.9	98.86	250

Remarks : 1. All readings are Quasi-peak.

2. " ** " means that this data is the worse case emission level.

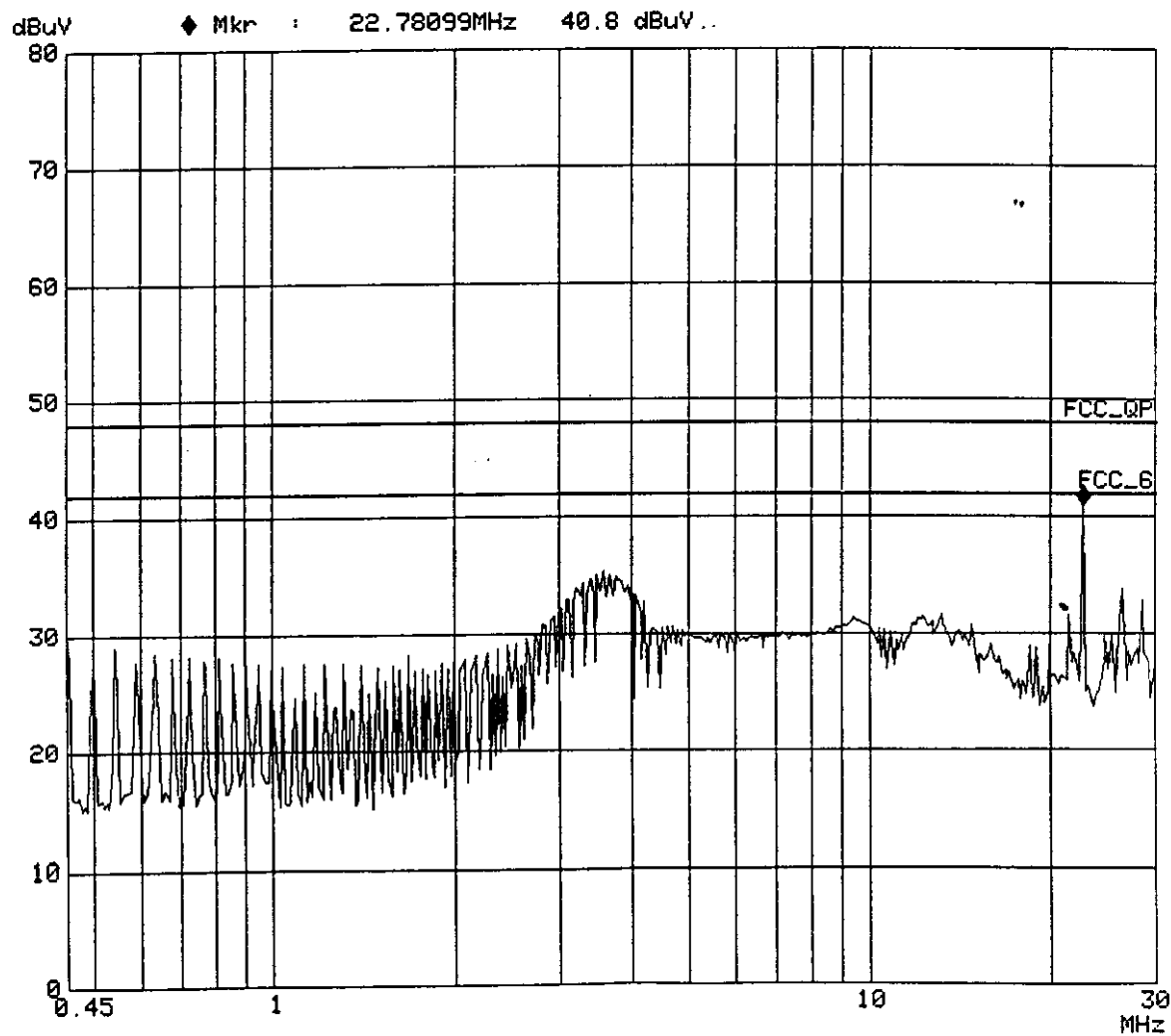
3. Deviations from the specifications: None.

4. Final measurement = (Receiver reading) + (Correction factor if available)

Attached 2 individual pages of peak scan curve data sheets.

ROHDE & SCHWARZ ESHS 30 GesTek, PowerLine Conducted Emission

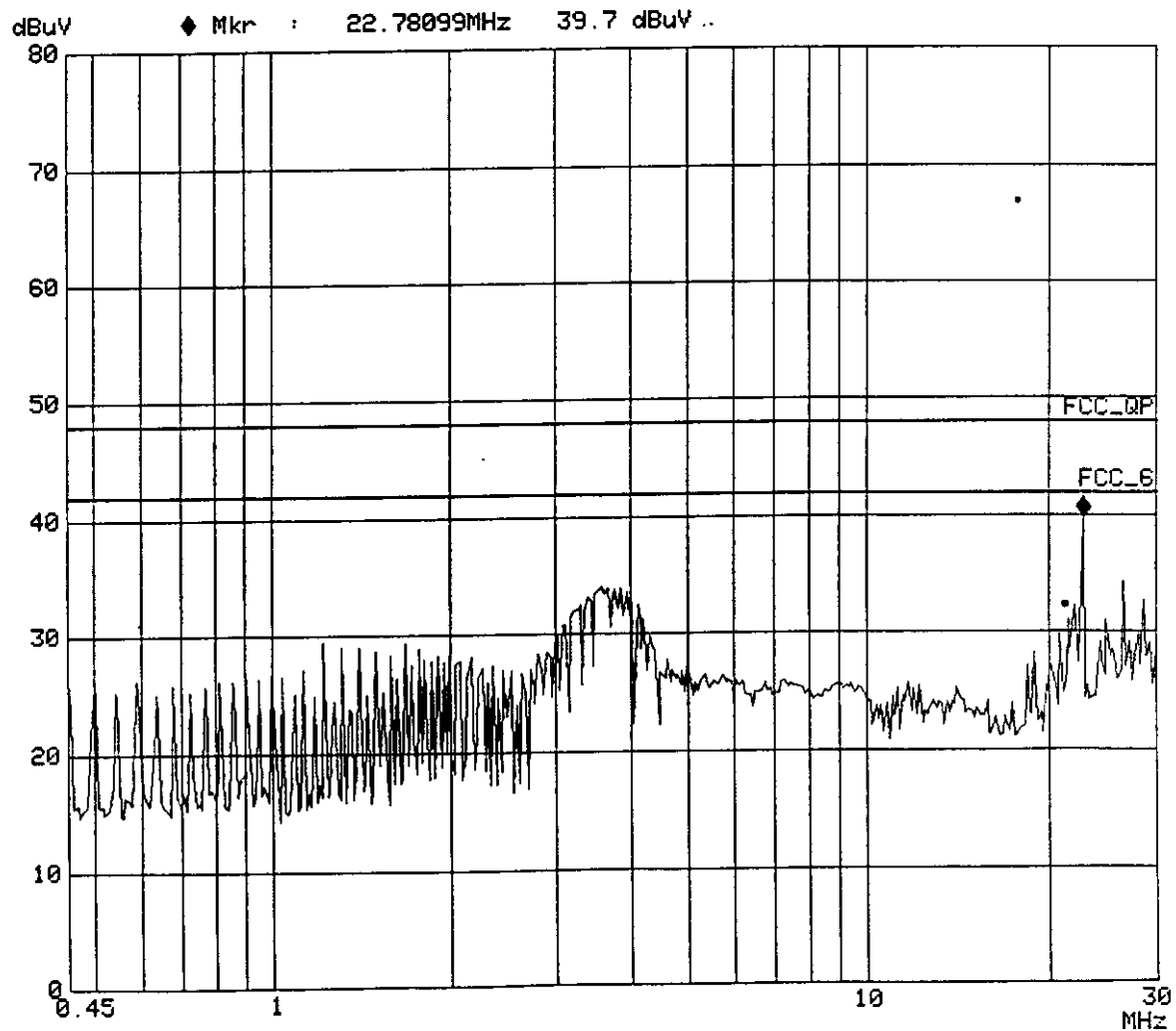
EUT: NOTEBOOK
Manuf: FIC
Op Cond: SANYO 12.1'
Operator: JEFF
Test Spec: FCC CLASS B
Comment: Line 1
M/N: RUBY 2.5
Date: 23. Jun 99 15:48



ROHDE & SCHWARZ ESHS 30

GesTek, PowerLine Conducted Emission

EUT: NOTEBOOK
Manuf: FIC
Op Cond: SANYO 12.1'
Operator: JEFF
Test Spec: FCC CLASS B
Comment: Line 2
M/N: RUBY 2.5
Date: 23. Jun 99 15:55



4. Radiation Emission Test

4.1 Test Equipment

The following test equipments are used during the radiated emission measures:

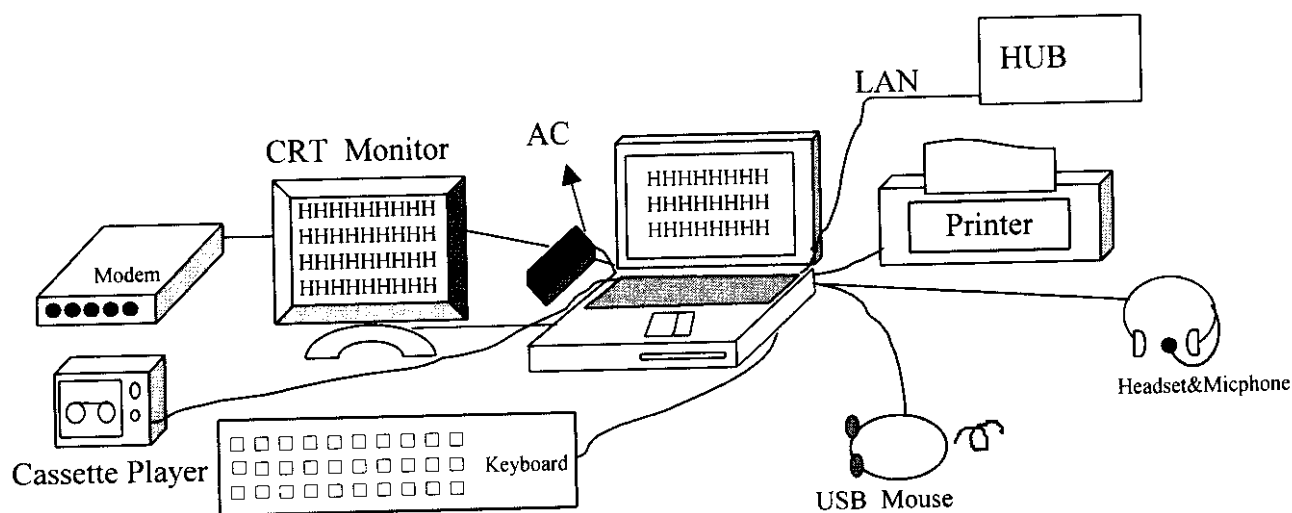
Radiated test was performed on : ☐ Site #1 ☒ Site #2

Item	Instrument	Manufacturer	Type /Serial No.	Last Cal.	Site #1	Site #2
1	Test Receiver	Rohde & Schwarz	ESVS 30 / 829007/014	Nov. 23,1998	✓	
2	Spectrum Analyzer	HP	8594E / 3543A02689	N/A	✓	
3	Pre-Amplifier	HP	8447D / 2944A08272	N/A	✓	
4	Test Receiver	Rohde & Schwarz	ESCS 30/825022/003	Jul. 08,1998		✓
5	Spectrum Analyzer	HP	8591E/3543A05040	N/A		✓
6	Pre Amplifier	HP	8447D/2944A08273	N/A		✓
7	BILOG ANTENNA	Chase	CBL6112B/2417	May. 15,1999	✓	
8	BILOG ANTENNA	Chase	CBL6112B/2416	May. 15,1999		✓
9	Pre Amplifier	HP	8347A/3307A01401	N/A	✓	✓
10	Open Site	GesTek	GTK-RF-S01	Jan. 05, 1999	✓	
11	Open Site	GesTek	GTK-RF-S02	Jan. 03, 1999		✓
12	RF Cable	GesTek	GTK-RF-C01	May. 15,1999	✓	
13	RF Cable	GesTek	GTK-RF-C02	May. 15,1999	✓	
14	RF Cable	GesTek	GTK-RF-C03	Mar. 26,1999		✓
15	Test Program Software	GesTek	GTK-RF-P01	N/A	✓	
16	Test Program Software	GesTek	GTK-RF-P02	N/A		✓

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

4.2 Test Setup

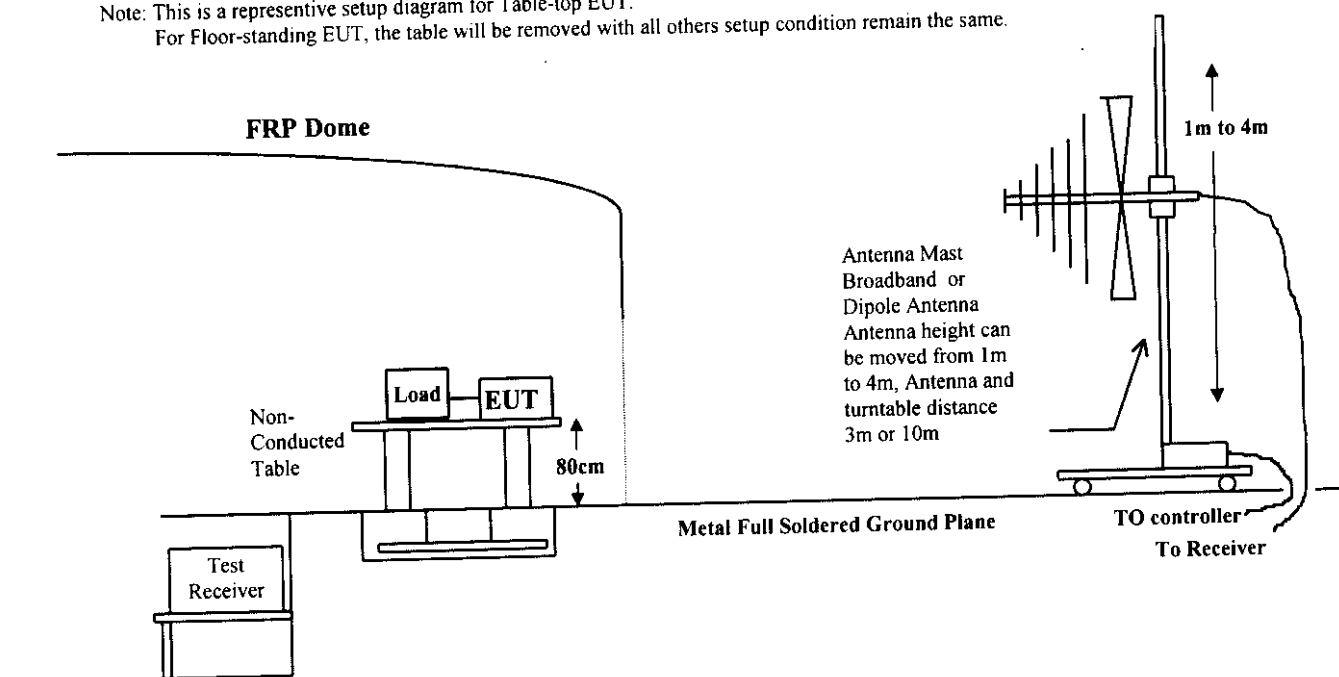
4.2.1 Block Diagram of Connections between EUT and simulators



4.2.2 Open Test Site Setup Diagram

Note: This is a representative setup diagram for Table-top EUT.

For Floor-standing EUT, the table will be removed with all others setup condition remain the same.



4.3 Radiated Emission Limit

4.3.1 FCC Class B Limits at 3m

Frequency	Distance	Field Strength	
MHz	Meter	uV/M	dBuV/M
30 - 88	3	100	40.0
88 - 216	3	150	43.5
216 -960	3	200	46.0
960 - 2000	3	500	54.0

4.3.2 CISPR Class B Limits at 10m

Frequency	Distance	Field Strength
MHz	Meter	dB(uV/M)
30 - 230	10	30
230 - 1000	10	37

- Remark :
1. The tighter limit shall apply at the edge between two frequency bands.
 2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.4 EUT Configuration

The equipments which is listed 2.3 are installed on Radiated Emission Test to meet the Commission requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

The device under test, installed in a representative system as described in section 4.2.2, was placed on a non-conductive table whose total height equaled 80 CM. This table can be rotated 360 degree. The measurement antenna was mounted to a non-conductive mast capable of moving the antenna vertically. Antenna height was varied from 1 meter to 4 meters and the system under test was rotated from 0 degree through 360 degrees relative to the antenna position and polarization (Horizontal and Vertical). Also the I/O cable position was investigated to find the maximum emission condition.

4.5 Operating Condition of EUT

Same as Conducted Power Line Test which is listed in 3.5.

4.6 Radiated Emission Data

Radiated emission were investigated over the frequency range of 30 MHz to 2 GHz. All readings below 1GHz are quasi-peak values with a resolution Bandwidth of 120 KHz, unless otherwise noted. From 1-2GHz was investigated use both peak and average detector use bandwidth 1MHz. The initial step in collecting radiated emission data is a spectrum analyzer peak scan of the measurement range for all the test modes. Then the worst modes reading was measured use a test receiver and reported in the following data pages.

The total uncertainty for this test is as follows:

- Uncertainty in the field strength measured (3m antenna distance): $< \pm 4.0$ dB
- Uncertainty in the field strength measured (10m antenna distance): $< \pm 4.0$ dB

The uncertainty is calculated in accordance with NAMAS document NIS 81, and is given as 2 standard deviations.

Radiated Emission Data

Date of Test :06-21,1999

Temperature :26 deg/C

EUT :NOTEBOOK PC

Humidity :54 %RH

Working Cond.:Mode 1

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Horizontal	Horizontal	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m)
66.814	0.90	6.08	17.12	24.10	16.03
108.254	1.23	11.77	17.85	30.85	34.88
152.343	1.52	10.47	17.44	29.43	29.62
167.085	1.64	9.75	17.39	28.78	27.48
180.401	1.70	9.40	20.24	31.34	36.90
192.433	1.88	9.87	17.16	28.91	27.89
200.442	2.00	10.20	21.23	33.43	46.94
214.760	2.06	10.92	14.83	27.82	24.60
266.754	2.33	12.85	15.95	31.12	35.99
334.321	2.83	14.20	19.89	36.93	70.20
400.833	3.30	17.00	8.45	28.75	27.38
424.995	3.37	17.19	18.92	39.48	94.19
474.994	3.52	17.91	13.82	35.26	57.92
499.994	3.60	18.39	21.18	43.16	143.89
535.258	3.90	18.73	11.10	33.74	48.62
668.341	4.84	20.00	6.55	31.39	37.13
735.180	5.20	20.27	3.96	29.43	29.61
774.991	5.45	20.66	10.95	37.06	71.25
868.520	5.80	21.58	4.38	31.76	38.72

Remarks: 1. All Readings below 1GHz are Quasi-Peak.

2. " * ", means this data is worse case emission level.

3. Emission Level = Reading Level + Antenna Factor + Cable loss

4. Deviations from the specifications: None.

Radiated Emission Data

Date of Test :06-21,1999

Temperature :26 deg/C

EUT :NOTEBOOK PC

Humidity :54 %RH

Working Cond.:Mode 1

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Vertical	Vertical	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)] (uV/m)	(uV/m)
68.144	0.90	6.14	20.46	27.50	23.70
112.255	1.25	12.09	17.52	30.86	34.90
167.387	1.64	9.75	12.92	24.31	16.43
184.253	1.76	9.56	14.48	25.80	19.49
200.392	2.00	10.20	18.49	30.69	34.24
208.472	2.03	10.56	16.41	29.00	28.20
220.489	2.09	11.20	15.35	28.63	27.02
268.562	2.34	12.89	13.87	29.10	28.52
333.640	2.83	14.20	14.33	31.37	37.01
374.996	3.12	15.78	11.74	30.64	34.06
424.995	3.37	17.19	16.24	36.80	69.18
474.994	3.52	17.91	15.14	36.58	67.43
*499.994	3.60	18.39	19.55	41.53	119.27
534.763	3.90	18.73	10.15	32.79	43.58
561.237	4.13	19.00	16.33	39.46	93.98
601.750	4.51	19.42	14.72	38.65	85.64
634.970	4.68	19.83	7.63	32.13	40.42
668.340	4.84	20.00	13.22	38.06	80.03
749.992	5.30	20.40	12.48	38.18	81.05
774.991	5.45	20.66	10.03	36.14	64.09
799.991	5.59	20.89	8.13	34.61	53.79

Remarks: 1. All Readings below 1GHz are Quasi-Peak.

2.“ * ”, means this data is worse case emission level.

3.Emission Level = Reading Level + Antenna Factor + Cable loss

4.Deviations from the specifications: None.

Radiated Emission Data

Date of Test :06-23,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:1

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit	
	Loss	Factor	Horizontal	Horizontal		
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m)	(uV/m)
1000.575	6.20	22.00	44.82	37.32	73.45	500 PK
1000.575	6.20	22.00	27.79	20.29	10.34	500 AV
1068.825	6.48	22.29	39.92	33.10	45.16	500 PK
1068.825	6.48	22.29	28.51	21.69	12.14	500 AV
1134.399	6.77	22.96	42.87	37.11	71.72	500 PK
1134.399	6.77	22.96	26.05	20.29	10.34	500 AV
1344.065	7.43	24.20	39.55	36.03	63.30	500 PK
1344.065	7.43	24.20	23.39	19.87	9.85	500 AV

- Remarks: 1. All Readings below 1GHz are Quasi-Peak, above are average value.
 2.“ * ”, means this data is worse case emission level.
 3.Emission Level = Reading Level + Antenna Factor + Cable loss
 -Amp Factor(35.70,35.59, 35.49, 35.15)
 4.Deviations from the specifications: None.

Date of Test :06-23,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:1

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
[MHz]	Loss	Factor	Vertical	Vertical	
	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m) (uV/m)
1002.550	6.21	22.00	45.62	38.13	80.64 500 PK
1002.550	6.21	22.00	25.42	17.93	7.88 500 AV
1069.690	6.48	22.29	41.59	34.77	54.75 500 PK
1069.690	6.48	22.29	30.32	23.50	14.96 500 AV
1136.140	6.78	22.97	40.57	34.83	55.17 500 PK
1136.140	6.78	22.97	26.07	20.33	10.39 500 AV
1269.890	7.24	23.89	41.12	36.98	70.62 500 PK
1269.890	7.24	23.89	24.92	20.78	10.94 500 AV
1329.160	7.38	24.08	40.37	36.65	68.03 500 PK
1329.160	7.38	24.08	25.69	21.97	12.55 500 AV

- Remarks: 1. All Readings below 1GHz are Quasi-Peak, above are average value.
 2. " * ", means this data is worse case emission level.
 3. Emission Level = Reading Level + Antenna Factor + Cable loss
 - Amp Factor(35.70,35.59,35.48, 35.27,35.17)
 4. Deviations from the specifications: None.