

FCC EVALUATION REPORT FOR CERTIFICATION

Manufacturer : KIMIN ELECTRONIC CO., LTD.

**293-4, Gongdan 2-Dong, Gumi-City,
Gyeongsangbuk-Do, 730-906, Korea**

Attn : Mr. Se-bong Jang, General Manager

Date of Issue : July 14, 2008

Test Report No. : GETEC-E3-08-033

**Test Site : Gumi College EMC Center
(Registration No.: 100749)**

FCC ID : TGE LT32U41H

Applicant : KIMIN ELECTRONIC CO., LTD.

Rule Part(s) : FCC Part 15 Subpart B

Equipment Class : Class B computing device peripheral (JBP)

EUT Type : 32" LCD TV/Monitor

Type of Authority : Certification

Model No. : LT32U41H (KIMIN), MT-SYKIT32E1AB (SOYO)

This equipment has been shown to be in compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-2003 / Canadian standard ICES-003

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Tested by,



**Hyoung Seop Kim, Associate Engineer
GUMI College EMC center**

Reviewed by,



**Tae-Sig Park, Technical Manager
GUMI College EMC center**

CONTENTS

1. GENERAL INFORMATION	3
2. INTRODUCTION	4
3. PRODUCT INFORMATION	5
3.1 DESCRIPTION OF EUT.....	5
3.2 SUPPORT EQUIPMENT / CABLES USED	6
3.3 MODIFICATION ITEM(S).....	7
4. DESCRIPTION OF TESTS	8
4.1 TEST CONDITION.....	8
4.2 CONDUCTED EMISSION	9
4.3 RADIATED EMISSION	10
5. CONDUCTED EMISSION.....	11
5.1 OPERATING ENVIRONMENT	11
5.2 TEST SET-UP.....	11
5.3 MEASUREMENT UNCERTAINTY	11
5.4 LIMIT	12
5.5 TEST EQUIPMENT USED	12
5.6 TEST DATA FOR POWER LINE CONDUCTED EMISSION	13
6. RADIATED EMISSION	16
6.1 OPERATING ENVIRONMENT	16
6.2 TEST SET-UP.....	16
6.3 MEASUREMENT UNCERTAINTY	16
6.4 LIMIT	17
6.5 TEST EQUIPMENT USED	17
6.6 TEST DATA FOR RADIATED EMISSION	18
7. SAMPLE CALCULATIONS.....	19
7.1 EXAMPLE 1 :	19
7.2 EXAMPLE 2 :	19
8. RECOMMENDATION & CONCLUSION.....	20

APPENDIX A – ATTESTATION STATEMENT

APPENDIX B – PLOTS OF CONDUCTED EMISSIONS

APPENDIX C – ID SAMPLE LABEL & LOCATION

APPENDIX D – BLOCK DIAGRAM

APPENDIX E – TEST SET-UP PHOTOGRAPHS

APPENDIX F – EXTERNAL PHOTOGRAPHS

APPENDIX G –INTERNAL PHOTOGRAPHS

APPENDIX H – USER'S MANUAL

Scope: Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and / or unintentional radiators for compliance with technical rules and regulations of the Federal Communications Commission.

1. General Information

Applicant: KIMIN ELECTRONIC CO., LTD.

Applicant Address: 293-4, Gongdan 2-dong, Gumi-city, Gyeongsangbuk-do, Korea

Manufacturer: KIMIN ELECTRONIC CO., LTD.

Manufacturer Address: 293-4, Gongdan 2-dong, Gumi-city, Gyeongsangbuk-do, Korea

Contact Person: Mr. Se-bong Jang, General Manager

Tel No.: +82-54-462-0100

Fax No.: +82-54-462-7500

- **FCC ID** TGELET32U41H
- **EUT Type** LCD Monitor
- **Model No.** LT32U41H, MT-SYKIT32E1AB
- **Serial No.** Prototype
- **Rule Part(s)** FCC Part 15 Subpart B
- **Type of Authority** Certification
- **Test Procedure(s)** ANSI C63.4 (2003) / Canadian standard ICES-003
- **Dates of Test** July 11, 2008
- **Place of Test** Gumi College EMC Center (FCC Registration No.: 100749)
407, Bugok-Dong, Gumi-si, Gyeongsangbuk-Do, Korea
- **Test Report No.** GETEC-E3-08-033
- **Dates of Issue** July 14, 2008

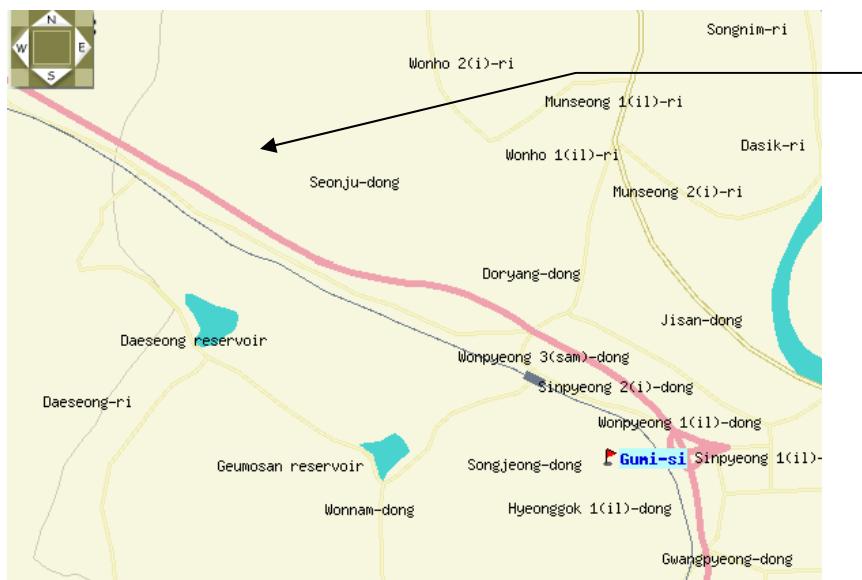
2. Introduction

The measurement procedure described in American National Standard for Methods of Measurement of Radio-Nose Emissions From Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz (ASNI C63.4-2003) was used in determining radiated and conducted emissions emanating from **KIMIN ELECTRONIC CO., LTD. 32" LCD TV/Monitor (Model No.: LT32U41H, MT-SYKIT32E1AB)**

These measurement tests were conducted at **Gumi College EMC Center**.

The site address is 407, Bugok-Dong, Gumi-si, Gyeongsangbuk-Do, Korea

This test site is one of the highest point of Gumi 1 college at about 200 km away from Seoul city and 40 km away from Daejeon city. It is located in the valley surrounded by mountains in all directions where ambient radio signal conditions are quiet and a favorable area to measure the radio frequency interference on open field test site for the computing and ISM devices manufactures. The detailed description of the measurement facility was found to be in compliance with the requirements of §2.948 according to ANSI C63.4 on October 19, 1992



GUMI COLLEGE EMC CENTER
 407, Bugok-Dong, Gumi-si,
 Gyeongsangbuk-Do 730-711, Korea
 Tel: +82-54-440-1195
 Fax: +82-54-440-1199

Fig 1. The map above shows the Gumi College in vicinity area.

3. Product Information

3.1 Description of EUT

The Equipment under Test (EUT) is the **KIMIN ELECTRONIC CO., LTD. 32" LCD TV/Monitor (Model No.: LT32U41H, MT-SYKIT32E1AB) FCC ID.: TGELT32U41H**

Model		MT-SYKIT32E1AB
Dimension	Horizontal	796.0 mm
	Height	583.0 mm
	Thickness	233.0 mm
Weight		14.3 kg
Contrast Ratio		1,000:1 typical
Brightness		500 cd/m ² typical
Panel Resolution		1366 (H) x 768 (V)
Display Color		16.7M colors
Audio Output		2.5W + 2.5W
Consumption		135W
External Port		<ul style="list-style-type: none"> • HDMI / DVI IN • RGB IN(PC) • COMPONENT IN • S-VIDEO IN • AV IN • AUDIO IN (RGB / DVI) • ANTENNA / CABLE IN • DIGITAL AUDIO OUT (COAXIAL) • AC IN

- LCD Panel : LC320WXN (LG Display)
- TV Tuner : DTV S205ER201A (SAMSUNG)

3.2 Support Equipment / Cables used

3.2.1 Used Support Equipment

Description	Manufacturer	Model No.	S/N & FCC ID
PC	Hewlett Packard	D530	S/N: CNG34800PY FCC ID: DoC
Video card	ATI	ATI RV360(9600)	S/N: SN0402017176 FCC ID: DoC
Printer	Hewlett Packard	970CXI	S/N: MY9B01F1FG FCC ID: DoC
Serial Mouse	LOGITECH	M-S69	S/N: 334684-108 FCC ID: JNZ211443
Key-board	COMPAQ	166516-AD6	S/N: B13BBOR391006D FCC ID: DoC
Joystick	Microsoft	X05-92626	S/N: 9262600296169 FCC ID: DoC
DVD player	LG Electronics Inc.	LC-954	S/N: 3850R-Z674K FCC ID: DoC
Digital TV pattern generator	PI International	TPG430B	S/N: 93.01.20.05.09.00.00.02 FCC ID: DoC
Low Cost 8-VSB Modulator	Telecommunication Inc.	VBS-ENC-150E	S/N: 2005-726 FCC ID: DoC

See "Appendix E – Test Setup Photographs" for actual system test set-up

3.2.2 Used Cable(s)

Cable No.	Condition	Description
Power cable	Connected to the EUT	1.8 m unshielded.
HDMI cable	Connected to the EUT and DVD player	1.2 m shielded.
RGB in (PC) cable	Connected to the EUT and PC	1.8 m shielded with two ferrite cores.
Component cable	Connected to the EUT and DVD player	3.0 m shielded with a ferrite core.
Component sound cable	Connected to the EUT and DVD player	3.0 m shielded with a ferrite core.
S-Video cable	Connected to the EUT and DVD player	1.8 m shielded with two ferrite cores.
AV in cable	Connected to the EUT and DVD player	3.0 m shielded with a ferrite core.
ANT cable	Connected to the EUT and TV signal generator	10 m shielded.
PC sound cable	Connected to the EUT and PC	1.8 m shielded with a ferrite core.
Digital audio cable	Open	1.8 m shielded.

3.3 Modification Item(s)

- None.

4. Description of tests

4.1 Test Condition

The EUT was installed, arranged and operated in a manner that is most representative of equipment as typically used. The measurements were carried out while varying operating modes and cable positions within typically arrangement to determine maximum emission level.

The representative and worst test mode(s) were noted in the test report.

- Test Voltage / Frequency : AC 120 V / 60 Hz
- Test Mode(s)
 - Monitor mode
 - Radiated emission : 1 024 * 768 / 60 Hz (Analog)
 - Conducted emission : 1 024 * 768 / 60 Hz (Analog), 800 * 600 / 60 Hz (Analog), 640 * 480 / 60 Hz (Analog)
- Operating test pattern
 - “H” character scrolling mode (Font size: 10)
 - Black background white character.
 - Brightness and contrast was adjusted as maximum level.
 - 1 kHz sound tone with winamp player.
- TV & AV portion of this equipment will be applied the “Verification” procedure.

4.2 Conducted Emission

The Line conducted emission test facility is inside a $4\text{ m} \times 8\text{ m} \times 2.5\text{ m}$ shielded enclosure.

The EUT was placed on a non-conducting 1.0 m by 1.5 m table, which is 0.8 m in height and 0.4 m away from the vertical wall of the shielded enclosure.

The EUT is powered from the Rohde & Schwarz LISN (ESH2-Z5) and the support equipment is powered from the Rohde & Schwarz LISN (ESH3-Z5). Powers to the LISN are filtered by high-current high insertion loss power line filter.

Sufficient time for EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition.

The RF output of the LISN was connected to the EMI test receiver (Rohde & Schwarz, ESCS30).

The EMI test receiver was scanned from 150 kHz to 30 MHz with 20ms sweep time to determine the frequency producing the maximum EME from the EUT. The frequency producing the maximum level was re-examined using Quasi-Peak mode of the EMI test receiver.

The bandwidth of Quasi-peak mode was set to 9 kHz. Each emission was maximized consistent with typical applications by varying the configuration of the test sample. Interface cables were connected to the available interface ports of the test unit. The effect of varying the position of cables was investigated to find the configuration that produces maximum diagram emission. Excess cable lengths were bundled at center with 30 cm– 40 cm.

Each EME reported was calibrated using the R/S signal generator

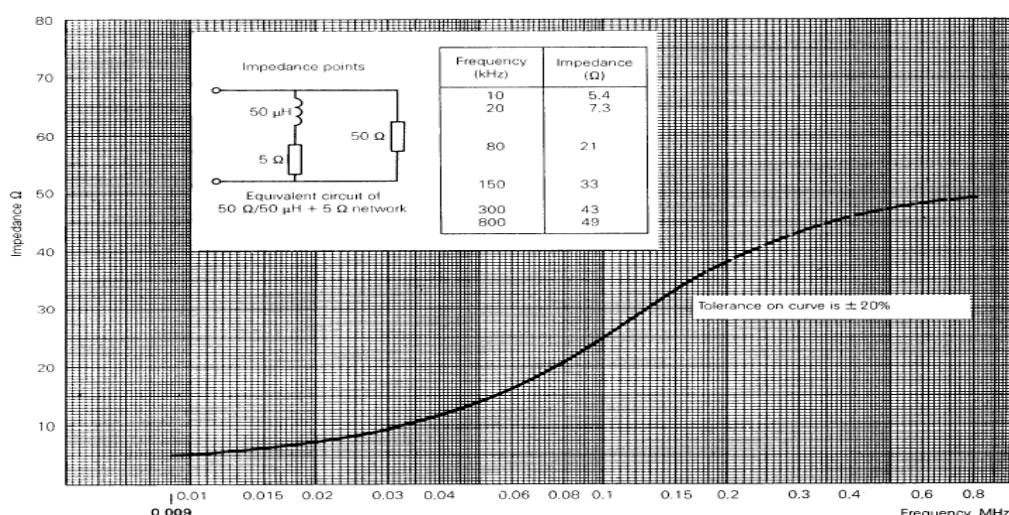


Fig 2. Impedance of LISN

4.3 Radiated Emission

Preliminary measurements were conducted 3 m semi anechoic chamber using broadband antennas to determine the frequency producing the maximum EME. Appropriate precaution was taken to ensure that all EME from the EUT were maximized and investigated. The technology configuration, mode of operation and turntable azimuth with respect to antenna was note for each frequency found.

The spectrum was scanned from 30 MHz to 1 000 MHz using bicornical log antenna (Schwarzbeck, VULB9160). Above 1 GHz, horn antenna (Schwarzbeck, BBHA9120D) was used.

Final measurements were made outdoors at 3 m/ 10 m-test range.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition.

Each frequency found during pre-scan measurements was re-examined and investigated using EMI test receiver. The detector function was set to CISPR quasi-peak mode average mode and the bandwidth of the receiver was set to 120 kHz or 1MHz depending on the frequency or type of signal.

The EUT, support equipment and interconnecting cables were reconfigured to the setup producing the maximum emission for the frequency and were placed on top of a 0.8 m high non-metallic 1.0 m×1.5 m table.

The turntable containing the test sample was rotated; the antenna height was varied 1 m to 4 m and stopped at the azimuth or height producing the maximum emission.

Each EME reported was calibrated using the R/S signal generator

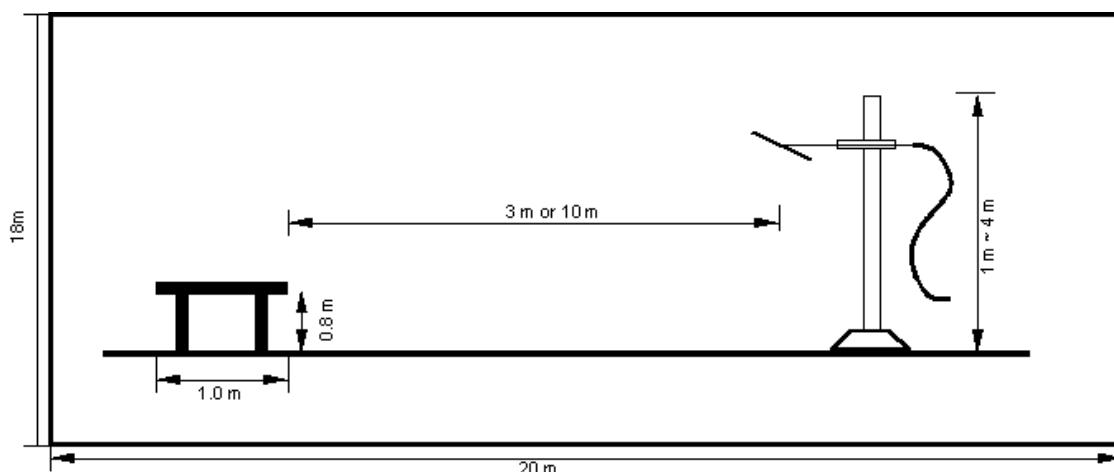


Fig 3. Dimensions of Open Site Test Area

5. Conducted Emission

5.1 Operating environment

Temperature : 21 °C
 Relative humidity : 47 % R.H.

5.2 Test set-up

The conducted emission measurements were performed in the shielded room.

The EUT was placed on wooden table, 0.8 m heights above the floor, 0.4 m from the reference ground plane (GRP) wall and 0.8 m from AMN.

AMN is bonded on horizontal reference ground plane.

The ground plane, which was electrically bonded to the shield room, ground system and all power lines entering the shield room, were filtered.

5.3 Measurement uncertainty

The measurement uncertainty was calculated in accordance with ISO “Guide to the expression of uncertainty in measurement”.

The measurement uncertainty was given with a confidence of 95 %.

Test items	Uncertainty	Remark
Conducted emission (9 kHz ~ 150 kHz)	± 2.97 dB	Confidence levels of 95 % (k=2)
Conducted emission (150 kHz ~ 30 MHz)	± 4.05 dB	Confidence levels of 95 % (k=2)

5.4 Limit

RFI Conducted	FCC Limit(dB) Class B	
Freq. Range	Quasi-Peak	Average
150kHz – 0.5MHz	66 – 56*	56 – 46*
0.5MHz – 5MHz	56	46
5MHz – 30MHz	60	50

*Limits decreases linearly with the logarithm of frequency.

5.5 Test equipment used

Model Number	Manufacturer	Description	Serial Number	Due to calibration
■ - ESCS30	Rohde & Schwarz	EMI test receiver	839809/003	12. 14. 2008
■ - ESH3-Z5	Rohde & Schwarz	Artificial mains network	838979/020	12. 13. 2008
■ - ESH2-Z5	Rohde & Schwarz	Artificial mains network	829991/009	12. 13. 2008

5.6 Test data for power line conducted emission

- Test Date : July 11, 2008
- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz

◆ Test resolution: 1 024 * 768 / 60 Hz (Analog)

Frequency (MHz)	Insertion Loss	Cable Loss	Line	Q.P[dB μ V]			A.V[dB μ V]			Margin[dB μ V]	
				Limit	Reading	Result	Limit	Reading	Result	Q.P	A.V
0.150	1.00	-0.14	L1	66.00	48.84	49.70	56.00	34.64	35.50	16.30	20.50
0.210	0.12	-0.22	L1	63.20	35.50	35.40	53.20	34.70	34.60	27.80	18.60
0.254	0.13	-0.20	N	61.62	33.37	33.30	51.62	33.07	33.00	28.32	18.62
0.282	0.13	-0.18	L1	60.75	41.05	41.00	50.75	34.45	34.40	19.75	16.35
0.306	0.14	-0.17	N	60.07	41.53	41.50	50.07	28.33	28.30	18.57	21.77
0.386	0.14	-0.13	L1	58.14	45.09	45.10	48.14	44.79	44.80	13.04	3.34
0.390	0.15	-0.13	N	58.06	44.48	44.50	48.06	44.08	44.10	13.56	3.96
0.434	0.14	-0.14	L1	57.17	23.70	23.70	47.17	21.10	21.10	33.47	26.07
11.742	0.44	0.00	L1	60.00	29.26	29.70	50.00	28.96	29.40	30.30	20.60
11.746	0.46	0.00	N	60.00	28.94	29.40	50.00	28.44	28.90	30.60	21.10
12.502	0.48	0.03	L1	60.00	25.09	25.60	50.00	22.59	23.10	34.40	26.90

*Comment : Line : L1(line 1), L2(line2), L3(line 3), N(neutral)

Q.P:Quasi-peak, A.V : Average

Insertion Loss : Insertion Loss of LISN

Cable Loss : Cable Loss + Pulse Limiter Insertion loss value

"<<" : The margin is more than 30 dB

◆ Test resolution: 800 * 600 / 60Hz (Analog)

Frequency (MHz)	Insertion Loss	Cable Loss	Line	Q.P[dB μ V]			A.V[dB μ V]			Margin[dB μ V]	
				Limit	Reading	Result	Limit	Reading	Result	Q.P	A.V
0.150	1.00	-0.14	L1	66.00	48.94	49.80	56.00	35.14	36.00	16.20	20.00
0.206	0.12	-0.23	N	63.36	33.21	33.10	53.36	32.81	32.70	30.26	20.66
0.210	0.12	-0.22	L1	63.20	35.40	35.30	53.20	34.70	34.60	27.90	18.60
0.250	0.13	-0.20	N	61.75	33.47	33.40	51.75	33.17	33.10	28.35	18.65
0.254	0.13	-0.20	L1	61.62	33.37	33.30	51.62	33.27	33.20	28.32	18.42
0.282	0.13	-0.18	N	60.75	39.65	39.60	50.75	34.15	34.10	21.15	16.65
0.298	0.13	-0.18	L1	60.29	40.55	40.50	50.29	34.25	34.20	19.79	16.09
0.310	0.13	-0.17	L1	59.97	41.54	41.50	49.97	27.94	27.90	18.47	22.07
0.386	0.15	-0.13	N	58.14	45.08	45.10	48.14	44.78	44.80	13.04	3.34
11.742	0.46	0.00	N	60.00	29.64	30.10	50.00	28.64	29.10	29.90	20.90
12.106	0.48	0.01	N	60.00	36.01	36.50	50.00	22.91	23.40	23.50	26.60
21.526	0.87	0.10	N	60.00	24.13	25.10	50.00	19.23	20.20	34.90	29.80

*Comment : Line : L1(line 1), L2(line2), L3(line 3), N(neutral)

Q.P:Quasi-peak, A.V : Average

Insertion Loss : Insertion Loss of LISN

Cable Loss : Cable Loss + Pulse Limiter Insertion loss value

"=<" : The margin is more than 30 dB

◆ Test resolution: 640 * 480 / 60 Hz (Analog)

Frequency (MHz)	Insertion Loss	Cable Loss	Line	Q.P[dB μ V]			A.V[dB μ V]			Margin[dB μ V]	
				Limit	Reading	Result	Limit	Reading	Result	Q.P	A.V
0.150	0.12	-0.14	N	66.00	49.82	49.80	56.00	35.92	35.90	16.20	20.10
0.210	0.12	-0.22	L1	63.20	35.30	35.20	53.20	34.50	34.40	28.00	18.80
0.214	0.12	-0.22	L1	63.04	34.40	34.30	53.04	34.20	34.10	28.74	18.94
0.254	0.13	-0.20	N	61.62	33.47	33.40	51.62	33.17	33.10	28.22	18.52
0.282	0.13	-0.18	L1	60.75	40.95	40.90	50.75	34.45	34.40	19.85	16.35
0.302	0.14	-0.17	N	60.18	41.93	41.90	50.18	28.23	28.20	18.28	21.98
0.310	0.13	-0.17	L1	59.97	41.74	41.70	49.97	27.94	27.90	18.27	22.07
0.386	0.14	-0.13	L1	58.14	45.29	45.30	48.14	44.79	44.80	12.84	3.34
11.734	0.44	0.00	L1	60.00	29.26	29.70	50.00	28.46	28.90	30.30	21.10
12.426	0.48	0.03	L1	60.00	25.19	25.70	50.00	22.69	23.20	34.30	26.80
12.842	0.50	0.05	L1	60.00	23.65	24.20	50.00	18.35	18.90	35.80	31.10
21.514	0.97	0.10	L1	60.00	23.43	24.50	50.00	22.13	23.20	35.50	26.80

*Comment : Line : L1(line 1), L2(line2), L3(line 3), N(neutral)

Q.P:Quasi-peak, A.V : Average

Insertion Loss : Insertion Loss of LISN

Cable Loss : Cable Loss + Pulse Limiter Insertion loss value

"=<" : The margin is more than 30 dB

6. Radiated Emission

6.1 Operating environment

Temperature : 34 °C
 Relative humidity : 48 % R.H.

6.2 Test set-up

A preliminary scan with peak mode was performed in the semi anechoic chamber and found frequency for open area test site.

The formal radiated emission was measured at 3 m/ 10 m-distance open area test site.

The EUT was placed on a non-conductive turntable approximately 0.8 m above the ground plane.

The turntable with EUT was rotated 360°, and the antenna was varied in height between 1.0 m and 4.0 m in order to determine the maximum emission levels.

This procedure was performed for both horizontal and vertical polarization of the receiving antenna.

6.3 Measurement uncertainty

The measurement uncertainty was calculated in accordance with ISO “Guide to the expression of uncertainty in measurement”.

The measurement uncertainty was given with a confidence of 95 %.

Test items	Uncertainty	Remark
Radiated emission (30 MHz ~ 300 MHz, 3 m, Vertical)	± 3.54 dB	Confidence levels of 95 % (k=2)
Radiated emission (30 MHz ~ 300 MHz, 3 m, Horizontal)	± 3.49 dB	Confidence levels of 95 % (k=2)
Radiated emission (300 MHz ~ 1 000 MHz, 3 m, Vertical)	± 3.85 dB	Confidence levels of 95 % (k=2)
Radiated emission (300 MHz ~ 1 000 MHz, 3 m, Horizontal)	± 3.76 dB	Confidence levels of 95 % (k=2)

6.4 Limit

Frequency (MHz)	FCC Limit @ 3 m. dB μ V/m	CISPR Limit @ 10 m. dB μ V/m
30 – 88	40.0	30.0
88 – 216	43.5	30.0
216 – 230	46.0	30.0
230 – 960	46.0	37.0
960 – 1 000	54.0	37.0
> 1 000	54.0	No Specified limit

6.5 Test equipment used

Model Number	Manufacturer	Description	Serial Number	Due to Calibration
■ - ESCI	Rohde & Schwarz	EMI test receiver	100237	12. 14. 2008
■ - ESCS30	Rohde & Schwarz	EMI test receiver	839809/003	12. 14. 2008
■ - HK116	Rohde & Schwarz	Biconical ANT	832639/007	12. 11. 2009
■ - HL223	Rohde & Schwarz	Log-periodic antenna	835998/004	12. 11. 2009
■ - HD100	HD GmbH	Position Controller	100/692/01	N/A
■ - DS415S	HD GmbH	Turntable	415/657/01	N/A
■ - MA240	HD GmbH	Antenna Mast	240/565/01	N/A

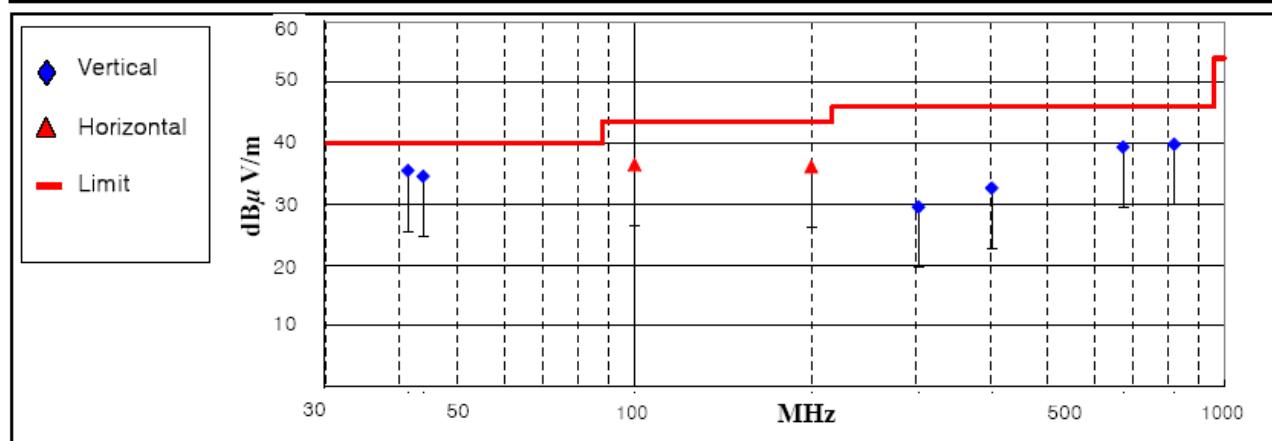
6.6 Test data for radiated emission

- Test Date : July 11, 2008
- Resolution bandwidth : 120 kHz
- Frequency range : 30 MHz ~ 1 000 MHz
- Measurement distance : 3 m

◆ Operating Condition: 1 024*768 / 60 Hz (Analog)

Detector mode: Quasi- peak detector mode

Frequency (MHz)	Measurement Level				Limit (dB μ V/m)	Margin (dB μ V/m)	Positioning System		
	Reading	Antenna	Cable	Test Result			Pol. (H/V)	Height (cm)	Angle ($^{\circ}$)
	Value(dB μ V)	Factor(dB)	Loss(dB)	(dB μ V/m)					
41.25	23.50	10.18	1.83	35.51	40.00	4.49	V	110	195
43.81	23.00	9.72	1.88	34.60	40.00	5.40	V	109	220
99.93	24.35	9.46	2.70	36.51	43.50	6.99	H	388	105
199.11	18.71	13.57	3.89	36.17	43.50	7.33	H	321	173
302.39	11.60	12.81	5.12	29.53	46.00	16.47	V	195	21
402.33	10.90	15.63	6.11	32.64	46.00	13.36	V	107	170
671.97	11.85	19.87	7.69	39.41	46.00	6.59	V	133	155
819.88	10.06	21.16	8.62	39.84	46.00	6.16	V	183	177



< Fig 4. Radiated emission result (30 MHz ~ 1 000 MHz)>

7. Sample Calculations

$$dB\mu V = 20 \log_{10}(\mu V/m)$$

$$dB\mu V = dBm + 107$$

$$\mu V = 10^{(dB\mu V/20)}$$

7.1 Example 1 :

■ 20.3 MHz

$$\begin{aligned} \text{Class B Limit} &= 250 \mu V &= 48 dB\mu V \\ \text{Reading} &= -67.8 dBm \text{(Calibrated level)} \\ \text{Convert to } dB\mu V &= -67.8 dBm + 107 = 39.2 dB\mu V \\ 10^{(39.2 dB\mu V/20)} &= 91.2 \mu V \\ \text{Margin} &= 39.2 - 48 = -8.8 \\ &= 8.8 \text{ dB below Limit} \end{aligned}$$

7.2 Example 2 :

■ 66.7 MHz

$$\begin{aligned} \text{Class B Limit} &= 100 \mu V/m &= 40.0 dB\mu V/m \\ \text{Reading} &= -76.0 dBm \text{(Calibrated level)} \\ \text{Convert to } dB\mu V/m &= -76.0 dBm + 107 = 31.0 dB\mu V/m \\ \text{Antenna Factor + Cable Loss} &= 5.8 \text{ dB} \\ \text{Total} &= 36.8 dB\mu V/m \\ \text{Margin} &= 36.8 - 40.0 = -3.2 \\ &= 3.2 \text{ dB below Limit} \end{aligned}$$

8. Recommendation & conclusion

The data collected shows that the **KIMIN ELECTRONIC CO., LTD. 32" LCD TV/Monitor (Model No.: LT32U41H, MT-SYKIT32E1AB)** was complies with §15.107 and 15.109 of the FCC Rules.