ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR FCC CLASS B CERTIFICATION

Test Report No.	**: E061R-017**
AGR No.	**: A05NA-098**
Applicant	**: KTV GLOBAL CORPORATION**
Address	**: 149, Gongdan 1-Dong, Gumi-City, Kyungbuk, 730-031, Korea**
Manufacturer	**: KTV GLOBAL CORPORATION**
Address	**: 149, Gongdan 1-Dong, Gumi-City, Kyungbuk, 730-031, Korea**
Type of Equipment	**: 19" LCD CCTV MONITOR**
FCC ID	**: BRFLCM19AA**
Model Name	**: LCM19AA**
Multiple Model Name	**: LCLM1901**
Serial number	**: N/A**
Total page of Report	**: 13 pages (including this page)**
Date of Incoming	**: November 02, 2005**
Date of Issuing	**: January 10, 2006**

SUMMARY

The equipment complies with the regulation; ***PART 15 SUBPART B, Class B Computing Device Peripherals.***

This test report contains only the result of a single test of the sample supplied for the examination.

It is not a general valid assessment of the features of the respective products of the mass-production

Prepared by:
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1. VERIFICATION OF COMPLIANCE

APPLICANT	: KTV GLOBAL CORPORATION
ADDRESS	: 149, Gongdan 1-Dong, Gumi-City, Kyungbuk, 730-031, Korea
CONTACT PERSON	: Mr. Eui-Yeun, Kim / Team Leader
TELEPHONE NO	: +82-54-467-3551
FCC ID	: BRFLCM19AA
MODEL NO/NAME	: LCM19AA
SERIAL NUMBER	: N/A
DATE	: January 10, 2006

EQUIPMENT CLASS	JBP - Peripheral Device for Class B Computing Device
E.U.T. DESCRIPTION	19" LCD CCTV MONITOR
THIS REPORT CONCERNS	ORIGINAL GRANT
MEASUREMENT PROCEDURES	ANSI C63.4: 2003
TYPE OF EQUIPMENT TESTED	PRE-PRODUCTION
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	CERTIFICATION
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	PART 15 SUBPART B, SECTION 15.101
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	Yes
FINAL TEST WAS CONDUCTED ON	3 METER OPEN AREA TEST SITE

-. This device has shown compliance with the conducted emissions limits in 15.107 adopted under FCC 02-107 (ET Docket 98-80). The device may be marketed after July 11, 2005 affected by the 15.37(j) transition provisions.

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

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2. GENERAL INFORMATION

2.1 Product Description

The KTV GLOBAL CORPORATION, Model LCM19AA (referred to as the EUT in this report) is a 19" LCD CCTV MONITOR. Product specification described herein was obtained from product data sheet or user's manual.

CHASSIS TYPE	Plastic
LIST OF EACH OSC. OR CRY. FREQ.(FREQ.>=1MHz)	24 MHz, 14.31818 MHz and 27 MHz on the Main Board
NUMBER OF LAYERS	4 Layers: Main Board, 1 Layer: Control Board
ELECTRICAL RATING	Input : AC100-240V, 50/60Hz, 1.5A, Output : DC 12V, 5.0A (AC/DC Adaptor)
EXTERNAL TERMINALS	BNC Jack, RCA Jack, Mini DIN Jack, D-Sub 15 Pins, DVI-D Jack

2.2 Model Differences

The difference(s) compared to the EUT is as follows:

	Model	Model Differences
Basic Model	LCM19AA	-
Multiple Model	LCLM1901	Only type designation and brand name according to the buyer's request.

2.3 Related Submittal(s) / Grant(s)

Original submittal only

2.4 Test System Details

The model numbers for all the equipments which were used in the tested system is:

Model	Manufacturer	FCC ID	Description	Connected to
LCM19AA	KTV GLOBAL CORPORATION	BRFLCM19AA	19" LCD CCTV MONITOR (EUT)	PC
0218B1260	Li Shin International Enterprise	N/A	AC/DC Adaptor (Inside of the EUT)	EUT
DHP	Dell Computer Corp	DoC	PC	-
SK-8110	Silitek	N/A	Keyboard	PC
JPC-2057	Hyundai-JPC	N/A	Mouse	PC
SHC-610NA	Samsung Aerospace	N/A	CCD Camera	EUT
DVD2000	Taeyoung Telstar	N/A	DVD Player	EUT
SAM-14M	Samsung	N/A	CCTV Monitor	EUT

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2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4: 2003. Radiated testing was performed at a distance of 3 meters from EUT to the antenna.

2.6 Test Facility

The open area test site and conducted measurement facilities are located on at 307-51, Daessangryung-Ri, Chowol-Eup, Kwangju-City, Kyunggi-Do, 464-080, Korea. Description details of test facilities were submitted to the Commission on April 04, 2003. (Registration Number: 340658)

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3. SYSTEM TEST CONFIGURATION

3.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	KTV	PLAM12	N/A
Inverter Board	P.I.S Corp.	AT07OSS	N/A
LCD Panel	Samsung	LTM190EX-L01	N/A
Control Board	KTV	PLAC03	N/A

3.2 EUT exercise Software

The following two modes were operated during compliance testing, but worst emissions were recorded in this report.

1) The windows program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. This program was included into HOST. Once loaded, this program sequentially exercises each system component in turn. The sequence used is: (1) series of "H" characters are printed on the monitor until the screen is completely full, (2) copy series of "H" characters to mass storage device (if one is used). The complete cycle is repeated continuously.
   The test was performed about each resolution from minimum resolution to maximum resolution for getting maximum noise level and the investigated maximum resolution mode of the EUT was 1280 x 1024, 75Hz.
2) The EUT was operated with CCTV monitor mode during the test.

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3.3 Cable Description

	Power Cord Shielded (Y/N)	I/O cable Shielded (Y/N)	Length (M)
19" LCD CCTV MONITOR	Y	Y	1.5(P), 1.5(D)
PC	N	-	1.5(P)
Keyboard	N/A	N	1.5(D)
Mouse	N/A	N	1.5(D)
CCD Camera	N	N	1.5(P), 1.5(D)
DVD Player	N	Y	1.5(P), 1.5(D)
CCTV Monitor	N	Y	1.5(P), 1.5(D)

* The marked "(P)" means the Power Cable and "(D)' means Signal Cable.

3.4 Noise Suppression Parts on Cable

	Ferrite Bead (Y/N)	Location	Metal Hood (Y/N)	Location
19" LCD CCTV MONITOR	Y	BOTH END	Y	BOTH END
PC	-	-	-	-
Keyboard	N	N/A	Y	PC END
Mouse	N	N/A	Y	PC END
CCD Camera	N	N/A	Y	BOTH END
DVD Player	N	N/A	Y	BOTH END
CCTV Monitor	N	N/A	Y	BOTH END

3.5 Equipment Modifications

-. The location of LVDS cable was changed to the bottom of chassis and two ground cables were removed.

-. The ferrite core was added to the control harness(11P, 12P).

-. The top of chassis that is connected between panel and LVDS cable was closed by EMI tape.

-. The EMI gasket was added between panel and chassis.

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3.6 Configuration of Test System

Line Conducted Test: The power of the EUT was connected to LISN. All supporting equipments were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.4: 2003 7.2.3 to determine the worse operating conditions.

Radiated Emission Test: Preliminary radiated emission test was conducted using the procedure in ANSI C63.4: 2003 8.3.1.1 to determine the worse operating conditions. Final radiated emission test was conducted at 3 meters open area test site.

4. PRELIMINARY TEST

4.1 AC Power line Conducted Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The Worse operating condition (Please check one only)
CCTV Monitor Mode	-
Peripheral device mode for Class B computing device (Resolution: 1280 x 1024)	X

4.2 Radiated Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The Worse operating condition (Please check one only)
CCTV Monitor Mode	-
Peripheral device mode for Class B computing device (Resolution: 1280 x 1024)	X

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5. FINAL RESULT OF MEASURMENT

Preliminary test was done in normal operation mode. And the final measurement was selected for the maximized emission level

5.1 Conducted Emission Test

Humidity Level : 41 % Temperature: 20 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.107(a)

Type of Test : CLASS B

Result : PASSED BY –10.06 dB at 0.15 MHz under peak mode

EUT : 19" LCD CCTV MONITOR Date: December 06, 2005

Operating Condition : Continuously displayed "H" characters on the screen of the EUT

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)

Resolution : 1280 x 1024, 75Hz

Frequency (MHz)	Line	Peak (dBuV)		Margin (dB)
		Emission level	Q.P Limits	
0.15	N	55.94	66.00	-10.06
0.16	H	54.38	65.46	-11.08
3.05	H	39.19	56.00	-16.81
7.11	H	45.72	60.00	-14.28
15.83	H	42.64	60.00	-17.36
16.45	N	43.59	60.00	-16.41
Frequency (MHz)	**Line**	**Average (dBuV)**		**Margin (dB)**
		Emission level	**Limits**	
0.15	N	22.00	56.00	-34.00
0.16	H	19.71	55.46	-35.75
7.11	H	37.79	50.00	-12.21
16.45	N	37.94	50.00	-12.06

Line Conducted Emission Tabulated Data

Remark : "H": Hot Line, "N": Neutral line

See next page for an overview sweep performed with peak and average detector.

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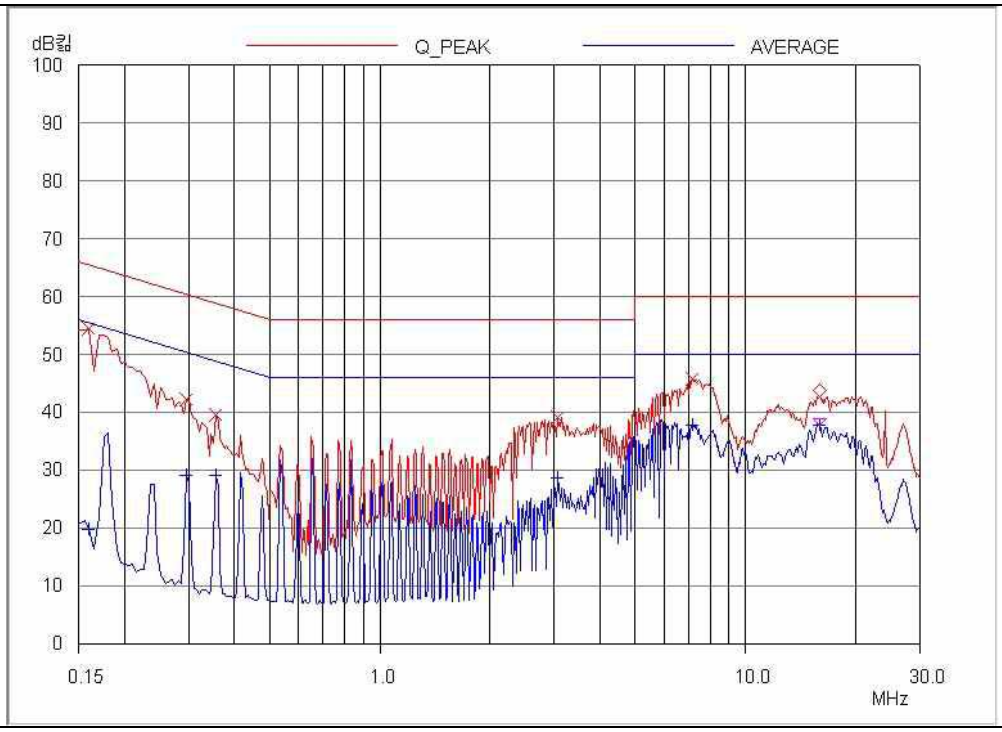
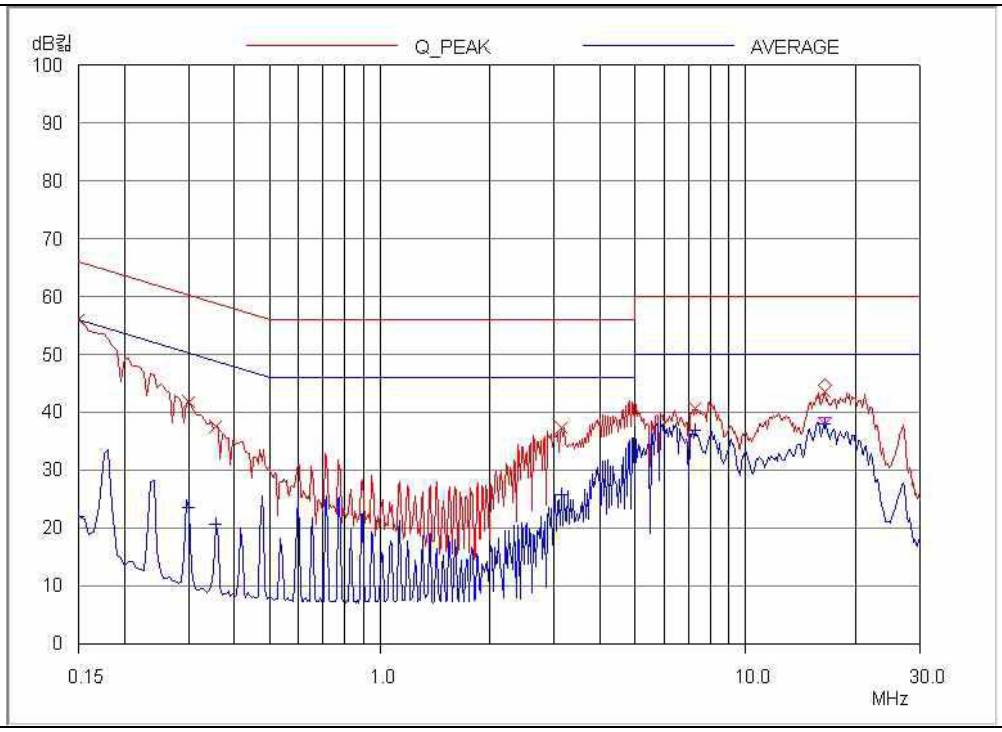


HOT LINE



NEUTRAL LINE

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5.2 Radiated Emission Test

The following table shows the highest levels of radiated emission on both polarizations of horizontal and vertical.

Humidity Level : 40 % Temperature: 17 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.109(a)

Type of Test : CLASS B

Result : PASSED BY –4.63dB at 611.80MHz

EUT : 19" LCD CCTV MONITOR Date: December 06, 2005

Operating Condition : Continuously displayed “H” characters on the screen of the EUT

Frequency range : 30MHz – 1000MHz

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)

Distance : 3 Meter

Resolution : 1280 x 1024, 75Hz

Radiated Emission		Ant	Correction Factors		Total	FCC Class B	
Freq. (MHz)	Amp. (dBuV)	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
53.78	19.35	V	9.40	1.42	30.17	40.00	-9.83
65.51	25.00	V	6.37	1.50	32.87	40.00	-7.13
165.98	17.00	H	15.51	2.40	34.91	43.52	-8.61
214.17	15.50	H	16.30	2.91	34.71	43.52	-8.81
329.88	23.00	H	14.10	4.04	41.14	46.02	-4.88
611.80	17.20	H	18.80	5.39	41.39	46.02	-4.63

Tested by: Do-Sub, Choi / Project Engineer

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6. FIELD STRENGTH CALCULATION

Meter readings are compared to the specification limit correcting for antenna and cable losses

+	Meter reading	(dBuV)
+	Cable Loss	(dB)
+	Antenna Factor (Loss)	(dB/meter)
=	Corrected Reading	(dBuV/meter)
-	Specification Limit	(dBuV/meter)
=	dB Relative to Spec	(+/- dB)

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7. LIST OF TEST EQUIPMENT

No.	EQUIPMENTS	MFR.	MODEL	SER. NO.	LAST CAL	DUE CAL	USE
1.	Test receiver	R/S	ESVS10	827864/005	DEC/05	12MONTH	■
2.	Test receiver	R/S	ESHS 10	834467/007	MAY/05	12MONTH	■
3.	Spectrum analyzer	HP	8566B	3407A08547	JUL/05	12MONTH	
4.	Spectrum analyzer	HP	85680B	3001A04955	APR/05	12MONTH	■
5.	RF preselector	HP	85685A	3107A01264	APR/05	12MONTH	■
6.	Quasi-Peak Adapter	HP	8574B	2811A01432	APR/05	12MONTH	■
7.	TRILOG Broadband Antenna	Schwarzbeck	VULB9163	VULB9163 166	APR/05	12MONTH	
8.	Biconical antenna	EMCO	3110	9003-1121	FEB/05	12MONTH	
		Schwarzbeck	VHA9103	91031852	JAN/05		■
9.	Log Periodic antenna	EMCO	3146	9001-2614	FEB/05	12MONTH	
		Schwarzbeck	9108-A(494)	62281001	FEB/05		■
10.	LISN	EMCO	3825/2	9109-1867	JUL/05	12MONTH	
				9109-1869	JUL/05		
		Schwarzbeck	NSLK 8126	8126-404	AUG/05		■
11.	Position Controller	HD GmbH	HD100	N/A	N/A	N/A	■
12.	Turn Table	HD GmbH	DS420S	N/A	N/A	N/A	■
13.	Antenna Master	HD GmbH	MA240	N/A	N/A	N/A	■

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