HYUNDAI CALIBRATION & CERTIFICATION TECH. CO., LTD.

PRODUCT COMPLIANCE TEAM
SAN 136-1, AMI-RI , BUBAL-EUP, ICHEON-SI, KYOUNKI-DO, 467-701, KOREA
TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hctec.co.kr

CERTIFICATION

Manufacture;

MEGAVISION CO.,Ltd
Rm. 603, Youchunfactopia, 196 Anyang-7dong, Manan-gu, Anyang-shi, KYUNGGI-DO, 430-017,KOREA

MEGAVISION FRN : 0007464498

Date of Issue: JULY 26, 2002

Test Report No.: HCT-F02-0701

Test Site: HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.

HCT FRN : 0005-8664-21

FCC ID : **QJSMV150S**

MODEL / TYPE : **MV150S**

FCC Rule Part(s):	**Part 15 & 2; ET Docket 95-19**
Classification:	**FCC Class B Peripheral Device (JBP)**
Standard(s):	**FCC Class B: 1998 (CISPR 22)**
Equipment(EUT) Type:	**15” LCD Monitor**
Max Resolution:	**1024 X 768 (@60KHz/ 75Hz)**
Port/ Connector(s)	**15-pin D-sub VGA connector, AUDIO IN/OUT**
LCD PANEL	**HYUNDAI DISPLAY TECHNOLOGY.INC. (HT15X13-200)**

The device bearing the trade name and model specified above, has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-1992.(See Test Report if any modifications were made for compliance)

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.

HYUNDAI C-Tech. certifies that no party to application has been denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse of 1988,21 U.S.C.853(a).

Ki Soo Kim

Report prepared by : Ki-Soo Kim
Manager of EMC Tech. Part

TABLE OF CONTENTS

PAGE

HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
SAN 136-1, AMI-RI , BUBAL-EUP, ICHEON-SI,KYOUNKI-DO, 467-701,KOREA
TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hctec.co.kr

1. GENERAL INFORMATION

1.1 Product Description

The MEGAVISION CO., LTD. Model MV150S (referred to as the EUT in this report) is a 15" LCD Monitor HOR. Freq. 60KHz w/max. Resolution of 1024 X 768 . Product specification information described herein was obtained from product data sheet or user's manual.

CHASSIS TYPE	**PLASTIC**
LIST OF EACH OSC. OR XTAL. FREQ.(FREQ. 1MHz)	**12MHz, 14.318MHz**
POWER REQUIREMENT	**100-240V 50 / 60 Hz 0.8A**
MAX. RESOLUTION	**1024 X 768 (@60KHz/ 75 Hz)**
H-SYNC FREQUENCY RANGE	**31.0KHz 60.0KHz**
V-SYNC FREQUENCY RANGE	**56Hz 75Hz**
LCD TYPE	**15" (LCD Type NO : HT15X13-200)**

1.2 Related Submittal(s) / Grant(s)

ORIGINAL SUBMITTAL ONLY

HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
SAN 136-1, AMI-RI , BUBAL-EUP, ICHEON-SI,KYOUNKI-DO, 467-701,KOREA
TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hctec.co.kr

1.3 Tested System Details

The Model names for all equipment, plus descriptions used in the tested system (including inserted cards) are:

DEVICE TYPE	MANUFACTURER	MODEL NUMBER	FCC ID / DoC	CONNECTED TO
MONITOR (EUT)	MEGAVISION CO.,Ltd	MV150S	QJSMV150S	HOST
PC(HOST)	H/P	DTPC16	DoC	N/A
VIDEO CARD	NVIDIA	NVIDIA GeForce MX 200	DoC	HOST
KEY BOARD	H/P	SK2502C	DoC	HOST
MOUSE	Logitech	M-S34	DoC	HOST
PRINTER	H/P	C6410A	DoC	HOST
MODEM	3COM CORPORATION	56K FAX MODEM	DoC	HOST
HEADSET	Tsound	CAS08	DoC	EUT

1.4 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 10 meters.

1.5 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data are located at the 254-1,MAEKOK-RI,HOBUP-MYUN,ICHON-SI,KYOUNGKI-DO, 467-701,KOREA. The site is constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. Detailed description of test facility was submitted to the Commission and accepted dated July 24,2000(Confirmation Number: EA90661)

HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
SAN 136-1, AMI-RI , BUBAL-EUP, ICHEON-SI,KYOUNKI-DO, 467-701,KOREA
TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hctec.co.kr

2.SYSTEM TEST CONFIGURATION

2.1 EUT exercise Software

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. The software, contained on a 3-1/2 inch disc, was inserted into drive A and is auto starting on power-up. Once loaded, the program sequentially exercises each system component in turn. The sequence used is :(1) Display test, (2) RS 232 test (3) Key board test,(4) Printer test,(5) FDD test,(6) HDD test. The complete cycle takes about 20 seconds and is repeated continuously. As the keyboard and mouse are strictly input devices, no data is transmitted to them during test. They are however, continuously scanned for data input activity. The video resolution modes setup and change program was used during the radiated and conducted emission testing.

2.2 Cable Description

The marked "(D)" means the Data Cable and "(P)" means the Power Cable.

	Power Cord Shielded (Y/N)	I/O Cable Shielded (Y/N)	Length (M)
MONITOR(EUT)	N	Y	1.8(P), 1.5(D), 1.5(D)
PC(HOST)	N	N/A	1.5(P)
KEY BOARD	N/A	Y	1.5(D)
MOUSE	N/A	Y	1.5(D)
PRINTER	N	Y	2.0(P),1.8(D)
MODEM	N	Y	2.0(P),1.2(D)
HEADSET	N/A	N/A	1.5(P)

2.3 Noise Suppression Parts on Cable. (I/O CABLE)

	Ferrite Bead (Y/N)	Location	Metal Hood (Y/N)	Location
MONITOR(EUT)	Y	BOTH END	Y	BOTH END
PRINTER	Y	PC END	Y	BOTH END
KEY BOARD	Y	PC END	Y	PC END
MOUSE	N	N/A	Y	PC END
MODEM	Y	PC END	Y	BOTH END
HEADSET	N	N/A	Y	PC END

HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
SAN 136-1, AMI-RI , BUBAL-EUP, ICHEON-SI,KYOUNKI-DO, 467-701,KOREA
TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hctec.co.kr

2.4 Equipment Modifications

N/A

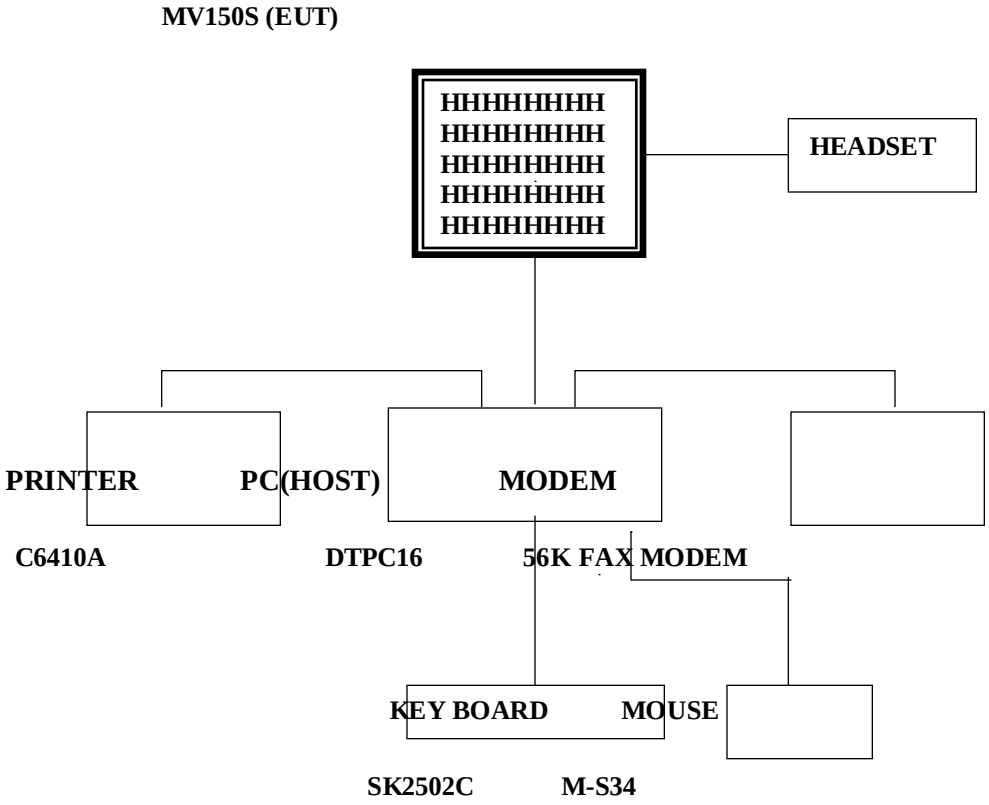
HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
SAN 136-1, AMI-RI , BUBAL-EUP, ICHEON-SI,KYOUNKI-DO, 467-701,KOREA
TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hctec.co.kr

2.5 Configuration of Test system

Line Conducted Test : EUT was connected to LISN, all other supporting equipment were connected to another LISN.
Preliminary Power line Conducted Emission tests were performed by using the procedure in ANSI C63.4/1992 7.2.3 to determine the worse operating conditions.

Radiated Emission Test : Preliminary Radiated Emissions tests were conducted using the procedure in ANSI C63.4/1992 8.3.1.1 to determine the worse operating condition. Final Radiated Emission tests were conducted at 10 meter open area test site.

[Configuration of Tested System]



HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
SAN 136-1, AMI-RI , BUBAL-EUP, ICHEON-SI,KYOUNKI-DO, 467-701,KOREA
TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hctec.co.kr

3. PRELIMINARY TESTS

3.1 AC Power line Conducted Emission Tests

During Preliminary Tests, the following operating mode were investigated

Processor Speed (MHz)	Video Resolution (w/max)	The worst operating condition
Pentium 1GHz	1024X768 (60KHz/75Hz)	X
	1024X768 (56.5KHz/70Hz)	
	800X600 (48.1KHz/72Hz)	
	800X600 (37.9 KHz/60Hz)	
	640X480 (31.5KHz/60Hz)	

3.2 Radiated Emission Tests

During Preliminary Tests, the following operating mode were investigated

Processor Speed (MHz)	Video Resolution (w/max)	The worst operating condition
Pentium 1GHz	1024X768 (60KHz/75Hz)	X
	1024X768 (56.5KHz/70Hz)	
	800X600 (48.1KHz/72Hz)	
	800X600 (37.9 KHz/60Hz)	
	640X480 (31.5KHz/60Hz)	

Tested by Kyoung-Houn SEO / Engineer **Date : JUNE 10, 2002**

HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
SAN 136-1, AMI-RI , BUBAL-EUP, ICHEON-SI,KYOUNKI-DO, 467-701,KOREA
TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hctec.co.kr

4. FINAL CONDUCETD AND RADIATED EMISSION TESTS SUMMARY

4.1 Conducted Emission Test

The following table shows the highest levels of conducted emissions on both polarization of hot and neutral line.

Humidity Level : 30 % Temperature : 19
Limit apply to : CISPR 22
Type of Tests : CLASS B
Date : JUNE 15, 2002
Result : PASSED BY -7.0 dB
EUT : 15" LCD MONITOR

Operating Condition : 1024 X 768 (Hf : 60KHz, Vf : 75Hz)
Detector : CISPR Quasi-Peak (6 dB Bandwidth : 9 KHz)
CISPR Average(6 dB Bandwidth : 9 KHz)

Line Conducted Emission Tabulated Data

Power Line Conducted Emissions			CISPR 22		
Frequency (MHz)	Amplitude (dBuV)	Conductor	Limit (dBuV)	Margin (dB)	Detector Mode
0.175	47.8	HOT	55.0	-7.0	Average
0.175	47.4	NEUTRAL	55.0	-7.3	Average
0.175	55.3	HOT	65.0	-9.4	Quasi-Peak
11.695	39.7	NEUTRAL	50.0	-10.3	Average

Measured by : Kyoung-Houn SEO / Engineer **Date : JUNE 15, 2002**

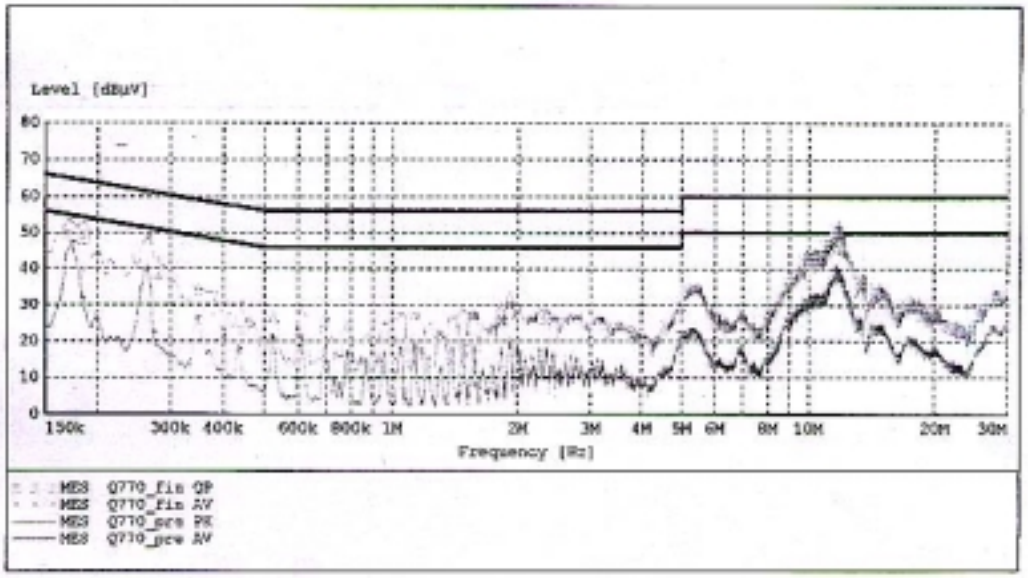
HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
SAN 136-1, AMI-RI , BUBAL-EUP, ICHEON-SI,KYOUNKI-DO, 467-701,KOREA
TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hctec.co.kr

HYUNDAI C-TECH. CO LTD.
EMC TEST LAB.

EUT:	MV150S
Manufacturer:	MEGAVISION
Operating Condition:	NORMAL
Test Site:	Shield Room
Operator:	JP HONG
Test Specification:	EN 55022 CLASS B
Comment:	N
Start of Test:	6/15/02 / 11:50:05AM

SCAN TABLE: "EN 55022 Voltage"
Short Description: EN 55022 Voltage

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	5.0 kHz	MaxPeak Average	10.0 ms	9 kHz	old-C/E FACTOR
500.0 kHz	5.0 MHz	5.0 kHz	MaxPeak Average	10.0 ms	9 kHz	old-C/E FACTOR



MEASUREMENT RESULT: "Q770_fin QP"
6/15/02 11:54AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.170000	49.50	0.1	65	15.4	1	---
0.185000	48.00	0.2	64	16.3	1	---
0.265000	48.10	0.2	61	13.1	1	---
0.280000	38.70	0.2	61	22.1	1	---
0.350000	33.70	0.2	59	25.2	1	---
0.445000	23.20	0.2	57	33.8	1	---
1.845000	26.20	0.3	56	29.8	1	---
1.860000	25.60	0.3	56	30.4	1	---
1.925000	30.30	0.3	56	25.7	1	---
1.990000	27.70	0.3	56	28.3	1	---
2.340000	26.00	0.3	56	30.0	1	---
5.000000	29.80	0.5	56	26.2	1	---
11.250000	45.00	0.7	60	15.0	1	---
11.390000	46.10	0.7	60	13.9	1	---

Page 1/2 6/15/02 11:55AM MV150S

MEASUREMENT RESULT "Q770_fin QP"
(continued)

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
11.550000	47.40	0.7	60	12.6	1	---
11.670000	47.90	0.7	60	12.1	1	---
12.035000	45.40	0.7	60	14.6	1	---
12.085000	44.40	0.7	60	15.6	1	---

MEASUREMENT RESULT: "Q770_fin AV"
6/15/02 11:54AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.175000	47.40	0.1	55	7.3	1	---
0.185000	32.00	0.2	54	22.3	1	---
0.265000	39.90	0.2	51	11.4	1	---
0.275000	22.70	0.2	51	28.3	1	---
0.350000	26.90	0.2	49	22.0	1	---
0.435000	18.10	0.2	47	29.1	1	---
0.525000	20.80	0.2	46	25.2	1	---
0.610000	21.70	0.2	46	24.3	1	---
1.135000	18.40	0.3	46	27.6	1	---
1.920000	18.90	0.3	46	27.1	1	---
2.010000	17.00	0.3	46	29.0	1	---
5.000000	22.90	0.5	46	23.1	1	---
5.000000	22.70	0.5	46	23.3	1	---
9.075000	25.80	0.6	50	24.2	1	---
11.695000	39.70	0.7	50	10.3	1	---
12.255000	34.30	0.7	50	15.7	1	---
14.925000	24.00	0.9	50	26.0	1	---
24.030000	29.80	1.2	50	20.2	1	---

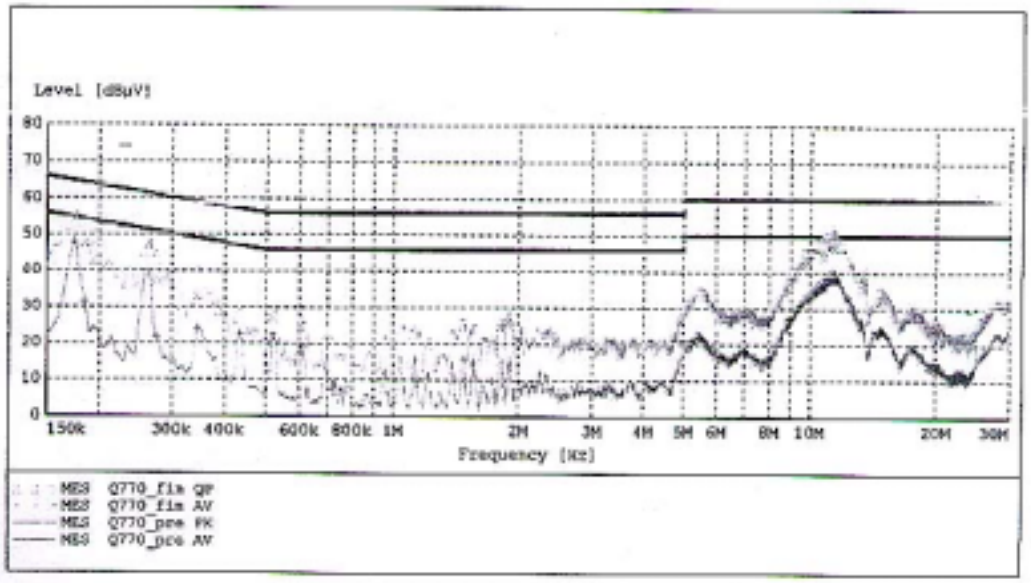
Page 2/2 6/15/02 11:55AM MV150S

HYUNDAI C-TECH. CO LTD.
EMC TEST LAB.

EUT:	MV150S
Manufacturer:	MEGAVISION
Operating Condition:	NORMAL
Test Site:	Shield Room
Operator:	JP HONG
Test Specification:	EN 55022 CLASS B
Comment:	H
Start of Test:	6/15/02 / 11:38:44AM

SCAN TABLE: "EN 55022 Voltage"
Short Description: EN 55022 Voltage

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	500.0 kHz	5.0 kHz	MaxPeak Average	10.0 ms	9 kHz	old-C/E FACTOR
500.0 kHz	5.0 MHz	5.0 kHz	MaxPeak Average	10.0 ms	9 kHz	old-C/E FACTOR



MEASUREMENT RESULT: "Q770_fin QP"
6/15/02 11:47AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.175000	55.30	0.1	65	9.4	1	---
0.185000	47.70	0.2	64	16.6	1	---
0.195000	43.00	0.2	64	20.8	1	---
0.265000	47.40	0.2	61	13.9	1	---
0.275000	38.10	0.2	61	22.8	1	---
0.345000	33.20	0.2	59	25.9	1	---
0.520000	27.30	0.2	56	28.7	1	---
0.605000	25.00	0.2	56	31.0	1	---
1.825000	25.00	0.3	56	31.0	1	---
1.900000	26.20	0.3	56	29.8	1	---
4.875000	22.50	0.4	56	33.5	1	---
4.970000	26.90	0.4	56	29.1	1	---
10.775000	44.40	0.7	60	15.6	1	---
10.800000	44.20	0.7	60	15.8	1	---

Page 1/2 6/15/02 11:47AM MV150S

MEASUREMENT RESULT "Q770_fin QP"
(continued)

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
11.190000	46.60	0.7	60	13.4	1	---
11.205000	47.00	0.7	60	13.0	1	---
11.310000	47.70	0.7	60	12.3	1	---
11.490000	47.00	0.7	60	13.0	1	---

MEASUREMENT RESULT: "Q770_fin AV"
6/15/02 11:47AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.175000	47.80	0.1	55	7.0	1	---
0.185000	31.50	0.2	54	22.8	1	---
0.265000	39.40	0.2	51	11.8	1	---
0.275000	21.80	0.2	51	29.2	1	---
0.345000	24.10	0.2	49	25.0	1	---
0.435000	22.90	0.2	47	24.3	1	---
0.520000	22.80	0.2	46	23.2	1	---
0.605000	17.90	0.2	46	28.1	1	---
1.130000	16.00	0.3	46	30.0	1	---
1.485000	15.90	0.3	46	30.1	1	---
1.560000	14.60	0.3	46	31.4	1	---
5.000000	21.20	0.5	46	24.8	1	---
5.000000	21.10	0.5	46	24.9	1	---
9.040000	27.60	0.6	50	22.4	1	---
11.385000	39.70	0.7	50	10.3	1	---
12.260000	33.30	0.7	50	16.7	1	---
14.840000	24.40	0.9	50	25.6	1	---
24.030000	29.50	1.2	50	20.5	1	---

4.2 Radiated Emissions Tests

The following table shows the highest levels of Radiated Emissions on both polarization of horizontal and vertical.

Humidity Level : 30 % Temperature : 19
Limit apply to : CISPR 22
Type of Tests : CLASS B
Date : JUNE 19, 2002
Result : PASSED BY -6.0dB

==========

EUT : 15" LCD MONITOR
Operating Condition : 1024 X 768 (Hf :60 kHz, Vf : 75 Hz)
Detector : CISPR Quasi-Peak (6 dB Bandwidth : 120 KHz)

Frequency MHz	Reading dBuV	Ant. Factor dB	Cable Loss dB	ANT POL (H/V)	Total dBuV/m	Limit dB	Margin dB
103.1	9.44	11.06	2.10	V	22.6	30.0	-7.4
120.0	8.19	13.41	2.40	H	24.0	30.0	-6.0
144.0	3.76	14.64	2.50	H	20.9	30.0	-9.1
157.3	5.73	14.77	2.60	H	23.1	30.0	-6.9
166.1	5.12	14.88	2.70	H	22.7	30.0	-7.3
200.5	4.62	15.78	3.00	H	23.4	30.0	-6.6
281.4	2.64	17.86	3.80	H	24.3	37.0	-12.7
300.1	9.49	15.61	3.80	H	28.9	37.0	-8.1
375.2	4.05	16.55	4.10	H	24.7	37.0	-12.3
450.2	6.72	17.68	4.70	H	29.1	37.0	-7.9
562.8	2.31	19.79	5.30	V	27.4	37.0	-9.6
675.3	0.63	22.27	6.00	H	28.9	37.0	-8.1

NOTE:
1.All video modes and resolutions were investigated and the worst-case emissions are reported.

Measured by Kyoung-Houn SEO / Engineer **Date : JUNE 19, 2002**

HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
SAN 136-1, AMI-RI , BUBAL-EUP, ICHEON-SI,KYOUNKI-DO, 467-701,KOREA
TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hctec.co.kr

5. Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor.
The basic equation with a sample calculation is as follows:

FS = RA + AF + CF

where FS = Field Strength

RA = Receiver Amplitude

AF = Antenna Factor

CF = Cable Attenuation Factor

Assume a receiver reading of 21.5 dBuV is obtained. The Antenna Factor of 7.4 and a Cable Factor of 1.1 is added. The 30 dBuV/m value was mathematically converted to its corresponding level in uV/m.

FS = 21.5 + 7.4 + 1.1 = 30 dBuV/m

Level in uV/m = Common Antilogarithm [(30 dBuV/m)/20] = 31.6 uV/m

HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
SAN 136-1, AMI-RI , BUBAL-EUP, ICHEON-SI,KYOUNKI-DO, 467-701,KOREA
TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hctec.co.kr

6. LIST OF TEST EQUIPMENT

TYPE	MANUFACTURE	MODEL	CAL. DATE
EMI Test Receiver	Rohde & Schwarz	ESH3	2002.6.29
EMI Test Receiver	Rohde & Schwarz	ESVP	2002.2.14
EMI Test Receiver	Rohde & Schwarz	ESI40	2001.11.5
EMI Test Receiver	Rohde & Schwarz	ESVS30	2002.3.6
Spectrum Monitor	Rohde & Schwarz	EZM	N.A
Graphic Plotter	Rohde & Schwarz	DOP2	N.A
Printer	Rohde & Schwarz	PDN	N.A
Spectrum Analyzer	H.P	8591EM	2002.7.11
LISN	EMCO	3825/2	2002.2.7
LISN	Rohde & Schwarz	ESH2-Z5	2001.8.12
Amplifier	Hewlett-Packard	8447E	2002.3.2
Dipole Antennas	Rohde & Schwarz	VHAP	2002.6.28
Dipole Antennas	Rohde & Schwarz	UHAP	2002.6.28
Biconical Antenna	Rohde & Schwarz	BBA-9106	2002.6.28
Log-Periodic Antenna	Rohde & Schwarz	UHALP-9107	2002.6.26
Antenna Position Tower	EMCO	1051-12	N.A
Turn Table	EMCO	1060-06	N.A
Line Filter	KEENE	ULW 2X30-60	N.A
Power Analyzer	Voltech	PM 3300	2002.2.20
Reference Network Impedance	Voltech	IEC 555	N.A
AC Power Source	PACIFIC	Magnetic Module	N.A
AC Power Source	PACIFIC	360AMX	N.A

HYUNDAI CALIBRATION & CERTIFICATION TECHNOLOGIES CO., LTD.
SAN 136-1, AMI-RI , BUBAL-EUP, ICHEON-SI,KYOUNKI-DO, 467-701,KOREA
TEL : +82 31 639 8518 FAX : +82 31 639 8525 www.hctec.co.kr