

EMC UPDATE TEST REPORT

for

LCD MONITOR

Applicant: CHINA GREAT-WALL COMPUTER SHENZHEN CO., LTD.

Model Number : *NV721CF

Trade Name : Great -Wall; Wescom;
KDS; Hansol; Daewoo;
Daytek; Versus; Marvin; e-life; iiyama

Revision : 01

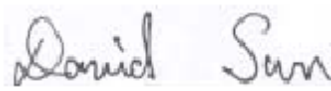
Date of test : September 28~October 08, 2003

Reference Standard : ANSI C63.4: 2000
(FCC Class B (DoC))

Description of Rev.01:

1. Applicant adds two inductances (T3, T4) on the inverter.
2. Applicant adds a new plastic enclosure and add "F" at the model name NV721C. The detail description please refer the product information. (Please refer have * mark items on this report)
3. Applicant adds a new adapter: *up05071120.
4. About other information, please refer to the Rev.00 (SZ0303009) and this (Rev.01) test report.

Approved by:



David Sun/Q.A. Manager

VERIFICATION OF COMPLIANCE

Equipment Under Test: LCD MONITOR

Trade Name: Great –Wall; Wescom;KDS; Hansol; Daewoo;
Daytek; Versus; Marvin; e-life; iiyama

Model Number: *NV721CF

Serial Number: N/A

Applicant: CHINA GREAT-WALL COMPUTER SHENZHEN CO., LTD.
GREAT-WALL BLDG. SCIENCE & INDUSTRY PARK,
SHENZHEN, CHINA

Manufacturer: CHINA GREAT-WALL COMPUTER SHENZHEN CO., LTD.
SHIYAN BRANCH, MONITOR DIVISION
GREAT-WALL COMPUTER INDUSTRY PARK, BAOSHI EAST RD.
SHIYAN COUNTRY, BAOAN, SHENZHEN, P.R. CHINA

Type of Test: FCC Class B (DoC)

Measurement Procedure: ANSI C63.4: 2000

File Number: SZ0309030

Date of test: September 28~October 08, 2003

Deviation: None

Condition of Test Sample: Normal

Final Result: Pass

The above equipment was tested by Compliance Certification Services (Shenzhen) Inc. for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, Subpart B and the measurement procedure according to ANSI C63.4. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.

PRODUCT INFORMATION

Housing Type : Plastic
EUT Power Rating : DC12V from Power Adapter
AC power during test : AC 120V/60Hz
Power Adapter Manufacturer : *POTRANS
Power Adapter Model Number : *up05071120
Power Adapter Power Rating : 100V~240VAC 47~63Hz 1.0AMAX
AC Power Cord Type : Unshielded, 1.8m
DC Power Cable Type : Unshielded, 1.5m
OSC/Clock Frequencies : 14.318MHz
LCD Panel Manufacturer: SAMSUNG Model : LTM170EU-L01
 AU Model : M170EN05

I/O Port of EUT:

I/O Port Type	Q'TY	Tested with
1) DC IN	1	1
2) VGA	1	1

SYSTEM DESCRIPTION

EUT Test Program:

1. EMC test program was loaded and executed in Windows 2000 mode.
2. Data was sent to EUT filling the screen with upper case of "H" patterns.
3. Test program sequentially exercised printer and modem, then sent "H" patterns to them individually.
4. Repeat 2 to 3. Test program is self-repeating throughout the test.

SUPPORT EQUIPMENT

No.	Equipment	Model #	Serial #	Trade Name	Data Cable	Power Cord
1)	PC	PC-2	N/A	N/A	N/A	Unshielded, 1.8m
2)	PS/2 Mouse	Mus9jn	298792-007	COMPAQ	Unshielded 1.8m	N/A
3)	Keyboard	E06333KUS221-C	D8597-63001	HP	Shielded 1.5m	N/A
4)	Modem	SUPERFAX 6.0	9013593	ACCEX	Shielded 1.5m	Unshielded 1.8m
5)	Printer	P310B	N/A	EPSON	Shielded 1.5m	Unshielded 1.8m

****Note:** All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

Grounding: Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.

TEST EQUIPMENT LIST

Instrumentation: The following list contains equipment used at Compliance Certification Services (Shenzhen) Inc. for testing. The equipment conforms to the CISPR 16-1 / ANSI C63.2 Specifications for Electromagnetic Interference and Field Strength Instrumentation from 10kHz to 1.0GHz or above.

Equipment used during the tests:

Open Area Test Site: G

Open Area Test Site G					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL. DUE
EMI Test Receiver	HP	8546A	3448A00232	05/31/2003	05/30/2004
AMPLIFIER	HP	8447D	2944A07999	05/31/2003	05/30/2004
ANTENNA	EMCO	3142	9910-1436	05/31/2003	05/30/2004
CABLE	TIME MICROWAVE	LMR-400	N-TYPE04	05/31/2003	05/30/2004

Conducted Emission Test Site: G

Conducted Emission Test Site G					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL. DUE
Spectrum Analyzer	ADVANTENT	R3132	N/A	05/31/2003	05/30/2004
EMI Test Receiver	HP	8546A	3448A00232	05/31/2003	05/30/2004
LISN(EUT)	EMCO	3825/2	1371	05/31/2003	05/30/2004
LISN	EMCO	3825/2	8901-1459	05/31/2003	05/30/2004

The calibrations of the measuring instruments, including any accessories that may effect such calibration, are checked frequently to assure their accuracy. Adjustments are made and correction factors applied in accordance with instructions contained in the manual for the measuring instrument.

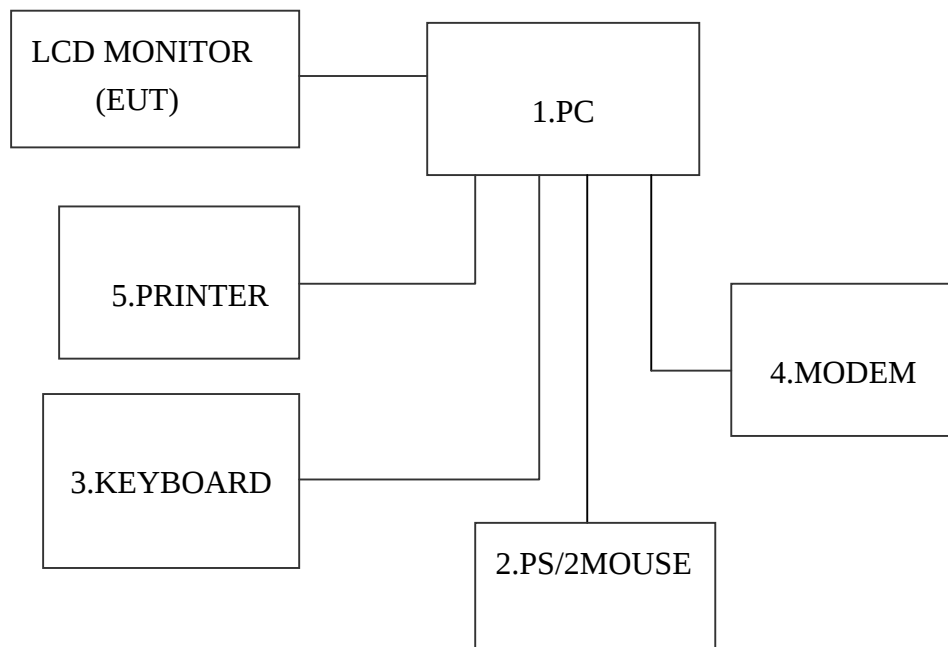
BLOCK DIAGRAM OF TEST SETUP

System Diagram of Connections between EUT and Simulators

EUT: LCD MONITOR

Trade Name: GREAT-WALL

Model Number: *NV721CF



EUT Configuration during of the test

1) Pre-scan modes:

1. 640*480/75Hz
2. 1024*768/75Hz
3. 1280*1024/75Hz

2) After pre-scan, found mode 3 producing the highest emission level for conducted and radiated, used the mode for final test.

SUMMARY DATA (LINE CONDUCTED TEST)

Model Number: *NV721CF

Location: G-site

Tested by: Fly

Test Mode: 1280*1024/75Hz

Test Results: Passed

Temperature: 25°C

Humidity: 55%RH

(The chart below shows the highest readings taken from the final data)

FREQ MHz	PEAK RAW dBuV	Q.P. RAW dBuV	AVG RAW dBuV	Q.P. Limit dBuV	AVG Limit dBuV	Q.P. Margin dB	AVG Margin dB	NOTE
0.153	57.67	---	44.76	65.89	55.89	-8.22	-11.13	L1
0.205	48.27	---	---	64.41	54.41	---	-6.14	L1
0.257	43.09	---	---	62.93	52.93	---	-9.84	L1
0.305	40.67	---	---	61.56	51.56	---	-10.89	L1
11.783	39.77	---	---	60.00	50.00	---	-10.23	L1
15.271	36.43	---	---	60.00	50.00	---	-13.57	L1
0.153	58.33	---	45.15	65.89	55.89	-7.56	-10.74	L2
0.205	48.79	---	---	64.41	54.41	---	-5.62	L2
0.255	43.47	---	---	62.99	52.99	---	-9.52	L2
0.310	39.69	---	---	61.40	51.40	---	-11.71	L2
9.399	35.64	---	---	60.00	50.00	---	-14.36	L2
11.783	43.45	---	---	60.00	50.00	---	-6.55	L2

L1 = Line One (Hot side) / L2 = Line Two (Neutral side)

****NOTE:** “---” denotes the emission level was or more than 2dB below the Average limit,
so no re-check anymore.

SUMMARY DATA

(RADIATED EMISSION TEST)

Model Number: *NV721CF

Location: G-site

Tested by: Fly

Polar: Vertical--10m

Test Mode: 1280*1024/75Hz

Test Results: Passed

Detector Function: Peak/QP

Temperature: 25°C

Humidity: 55%RH

(The chart below shows the highest readings taken from the final data)

Freq. (MHz)	Raw Data (dBuV/m)	Corr. Factor (dB)	Emiss. Level (dBuV/m)	Limits	Margin (dB)	Reading Type (P/Q)
94.125	14.20	10.50	24.70	30.00	-5.30	P
100.875	14.60	11.00	25.60	30.00	-4.40	P
197.400	9.20	15.28	24.48	30.00	-5.52	P
239.925	11.80	15.35	27.15	37.00	-9.85	P
485.500	4.90	21.96	26.86	37.00	-10.14	P
623.750	5.80	21.49	27.29	37.00	-9.71	P

SUMMARY DATA (RADIATED EMISSION TEST)

Model Number: *NV721CF

Location: G-Site

Tested by: Fly

Polar: Horizontal--10m

Test Mode: 1280*1024/75Hz

Test Results: Passed

Detector Function: Peak/QP

Temperature: 25°C

Humidity: 55%RH

(The chart below shows the highest readings taken from the final data)

Freq. (MHz)	Raw Data (dBuV/m)	Corr. Factor (dB)	Emiss. Level (dBuV/m)	Limits	Margin (dB)	Reading Type (P/Q)
100.200	12.80	11.00	23.80	30.00	-6.20	P
134.625	10.20	9.69	19.89	30.00	-10.11	P
234.525	10.70	16.60	27.30	37.00	-9.70	P
573.000	5.60	21.84	27.44	37.00	-9.56	P
665.750	6.20	21.32	27.52	37.00	-9.48	P
984.250	2.90	27.19	30.09	37.00	-6.91	P

APPENDIX 1

PHOTOGRAPHS OF TEST SETUP

(TEST SETUP OF LINE CONDUCTED EMISSION)

LINE CONDUCTED EMISSION TEST



APPENDIX 2

PHOTOGRAPHS OF TEST SETUP **(TEST SETUP OF RADIATED EMISSION)**

RADIATED EMISSION TEST



APPENDIX 3

PHOTOGRAPHS OF EUT

Front view of EUT

* The new plastic enclosure



Back view of EUT



Right view of EUT



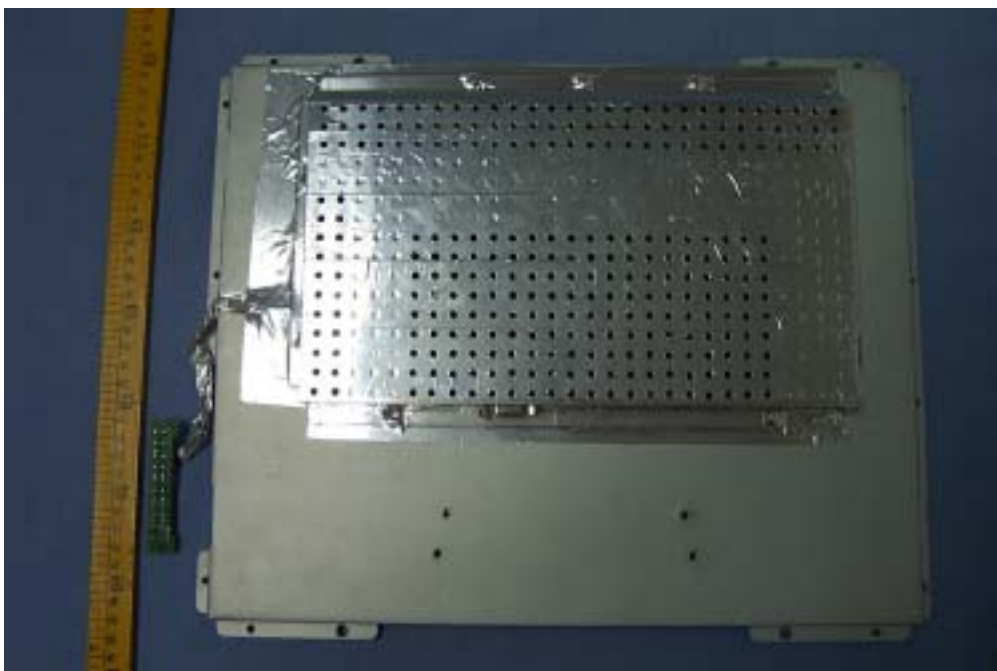
Left view of EUT

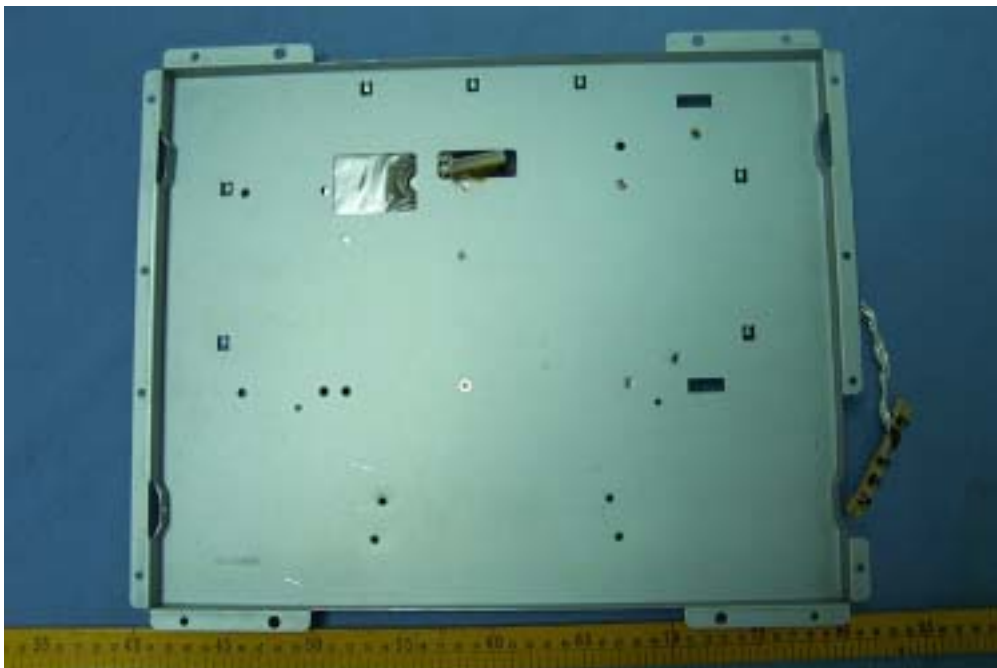
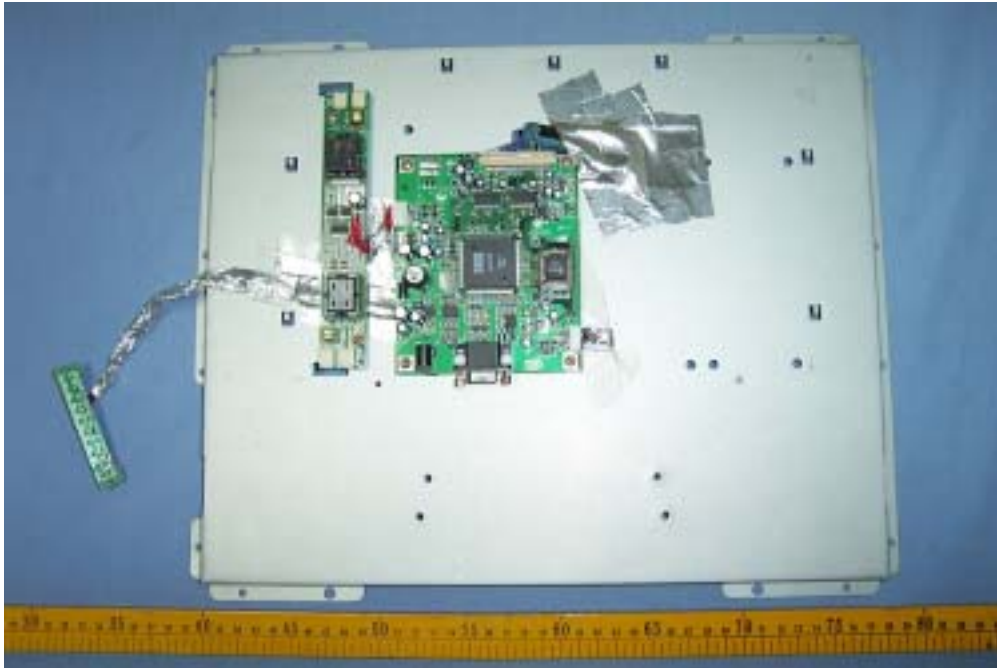


APPENDIX 4

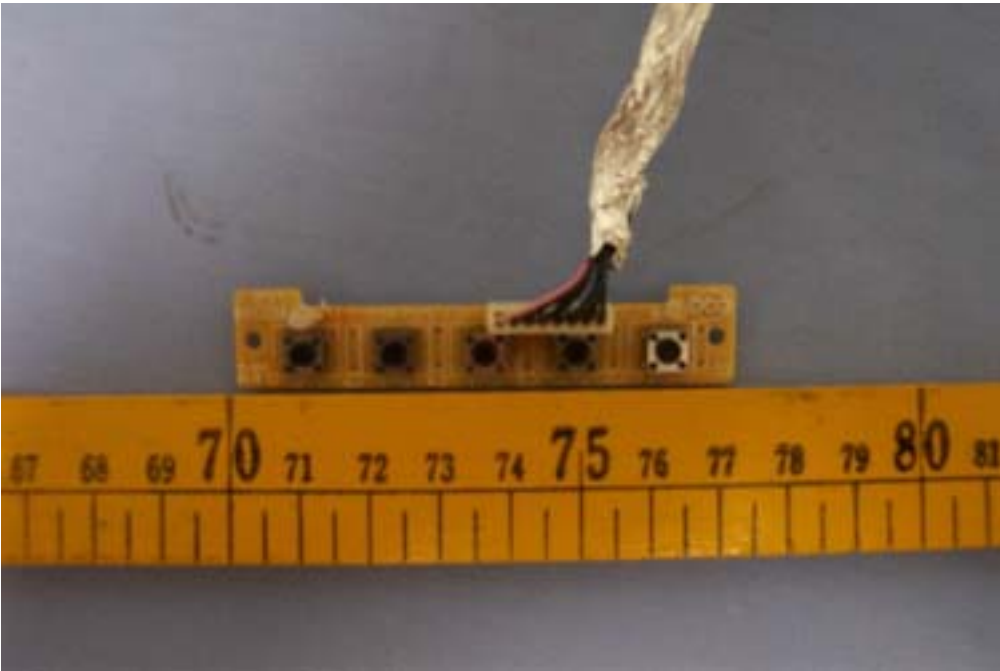
INTERNAL PHOTOS

The internal photos of LCD monitor









***THE INTERNAL PHOTOS OF ADAPTER**



