Certificate

Issue Date: 2010/05/26
Ref. Report No. ISL-10LE178CE

Product Name:	:	Cheetah Racing Wheel
Model(s)	:	**WH3-2406V;WH-2401V;WH-2403V;WH2-2403V;GW500;64370**
Responsible Party	:	**Asia Games CORPATION**
Address	:	8FL-7, NO 14,Lane 609, SEC 5, CHUNG HSIN RD., SAN CHUNG CITY, TAIPEI Taiwan

We, **International Standards Laboratory**, hereby certify that:

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 European Council Directive- EMC Directive 2004/108/EC. The device was passed the test performed according to :

Standards:

EN 55022:2006 +A1:2007 / CISPR 22:2005 +A1:2005 / AS/NZS CISPR 22: 2006
EN 61000-3-2: 2006 and IEC 61000-3-2: 2005
EN 61000-3-3: 1995+A1: 2001+A2:2005 and IEC 61000-3-3: 1994+A1: 2001+A2: 2005
EN55024:1998+A1:2001+A2:2003 / CISPR 24:1997+A1:2001+A2:2002
EN 61000-4-2: 1995+A1: 1998+A2: 2001 and IEC 61000-4-2: 1995+A1: 1998+A2: 2000
EN 61000-4-3: 2006 and IEC 61000-4-3: 2006
EN 61000-4-4: 2004 and IEC 61000-4-4: 2004
EN 61000-4-5: 2006 and IEC 61000-4-5: 2005
EN 61000-4-6: 2007 and IEC 61000-4-6: 2003+A1:2004+A2: 2006
EN 61000-4-8: 1993+A1: 2001 and IEC 61000-4-8: 1993+A1: 2000
EN 61000-4-11: 2004 and IEC 61000-4-11: 2004

I attest to the accuracy of data and 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.

Jim Chu/ Director

International Standards laboratory
Lung-Tan LAB:
No. 120, Lane 180, San Ho Tsuen, Hsin Ho Rd.
Lung-Tan Hsiang, Tao Yuan County 325, Taiwan
Tel: 886-3-407-1718; Fax: 886-3407-1738
Hsi-Chih LAB:
No. 65, Gu Dai Keng St.. Hsichih, Taipei Hsien 22117, Taiwan.
Tel: 886-2-2646-2550; Fax: 886-2-2646-4641

CE MARK TECHNICAL FILE

AS/NZS EMC CONSTRUCTION FILE

of

Product Name

Cheetah Racing Wheel

Model

WH3-2406V;WH-2401V;WH-2403V; WH2-2403V;GW500;64370

Contains:

1. Declaration of Conformity
2. EN55022/CISPR 22, AS/NZS CISPR 22 EMI test report
3. EN55024/CISPR 24, EN61000-3-2 / IEC 61000-3-2, and EN61000-3-3 / IEC 61000-3-3 test report
4. Block Diagram and Schematics
5. Users' manual

Declaration of Conformity

Name of Responsible Party:	Asia Games CORPATION
Address of Responsible Party:	8FL-7, NO 14,Lane 609, SEC 5, CHUNG HSIN RD., SAN CHUNG CITY, TAIPEI Taiwan
Declares that product:	Cheetah Racing Wheel
Model:	WH3-2406V;WH-2401V;WH-2403V;WH2-2403V; GW500;64370
Assembled by:	Same as above
Address:	Same as above

Conforms to the EMC Directive 2004/108/EC as attested by conformity with the following harmonized standards:

EN 55022:2006 +A1:2007 / CISPR 22:2005 +A1:2005 / AS/NZS CISPR 22: 2006: Limits and methods of measurement of Radio Interference characteristics of Information Technology Equipment.
EN55024:1998+A1:2001+A2:2003 / CISPR 24:1997+A1:2001+A2:2002: Information technology equipment-Immunity characteristics-Limits and methods of measurement.

Standard	Description	Results	Criteria
EN 61000-4-2: 1995+A1: 1998+A2: 2001 IEC 61000-4-2: 1995+A1: 1998+A2: 2000	Electrostatic Discharge	Pass	B
EN 61000-4-3: 2006 IEC 61000-4-3: 2006	Radio-Frequency, Electromagnetic Field	Pass	A
EN 61000-4-4: 2004 IEC 61000-4-4: 2004	Electrical Fast Transient/Burst	Pass	B
EN 61000-4-5: 2006 IEC 61000-4-5: 2005	Surge	Pass	B
EN 61000-4-6: 2007 IEC 61000-4-6: 2003+A1:2004+A2: 2006	Conductive Disturbance	Pass	A
EN 61000-4-8: 1993+A1: 2001 IEC 61000-4-8: 1993+A1: 2000	Power Frequency Magnetic Field	Pass	A
EN 61000-4-11: 2004 IEC 61000-4-11: 2004	Voltage Dips / Short Interruption and Voltage Variation		
	>95% in 0.5 period	Pass	B
	30% in 25 period	Pass	C
	>95% in 250 period	Pass	C

<to be continued>

Standard	Description	Results
EN 61000-3-2: 2006 IEC 61000-3-2: 2005	Limits for harmonics current emissions	Pass
EN 61000-3-3: 1995+A1: 2001+A2:2005 IEC 61000-3-3: 1994+A1: 2001+A2: 2005	Limits for voltage fluctuations and flicker in low-voltage supply systems.	Pass

We, Asia Games CORPATION, hereby declare that the equipment bearing the trade name and model number specified above was tested conforming to the applicable Rules under the most accurate measurement standards possible, and that all the necessary steps have been taken and are in force to assure that production units of the same equipment will continue to comply with the requirements.

Asia Games CORPATION

Date: 2010/05/26

Declaration of Conformity

Name of Responsible Party:	Asia Games CORPATION
Address of Responsible Party:	8FL-7, NO 14,Lane 609, SEC 5, CHUNG HSIN RD., SAN CHUNG CITY, TAIPEI Taiwan
Declares that product:	Cheetah Racing Wheel
Model:	WH3-2406V;WH-2401V;WH-2403V;WH2-2403V; GW500;64370
Assembled by:	Same as above
Address:	Same as above

Conforms to the C-Tick Mark requirement as attested by conformity with the following standards:

EN 55022:2006 +A1:2007 / CISPR 22:2005 +A1:2005 / AS/NZS CISPR 22: 2006: Limits and methods of measurement of Radio Interference characteristics of Information Technology Equipment.
EN55024:1998+A1:2001+A2:2003 / CISPR 24:1997+A1:2001+A2:2002: Information technology equipment-Immunity characteristics-Limits and methods of measurement.

Standard	Description	Results	Criteria
EN 61000-4-2: 1995+A1: 1998+A2: 2001 IEC 61000-4-2: 1995+A1: 1998+A2: 2000	Electrostatic Discharge	Pass	B
EN 61000-4-3: 2006 IEC 61000-4-3: 2006	Radio-Frequency, Electromagnetic Field	Pass	A
EN 61000-4-4: 2004 IEC 61000-4-4: 2004	Electrical Fast Transient/Burst	Pass	B
EN 61000-4-5: 2006 IEC 61000-4-5: 2005	Surge	Pass	B
EN 61000-4-6: 2007 IEC 61000-4-6: 2003+A1:2004+A2: 2006	Conductive Disturbance	Pass	A
EN 61000-4-8: 1993+A1: 2001 IEC 61000-4-8: 1993+A1: 2000	Power Frequency Magnetic Field	Pass	A
EN 61000-4-11: 2004 IEC 61000-4-11: 2004	Voltage Dips / Short Interruption and Voltage Variation		
	>95% in 0.5 period	Pass	B
	30% in 25 period	Pass	C
	>95% in 250 period	Pass	C

<*to be continued*>

Standard	Description	Results
EN 61000-3-2: 2006 IEC 61000-3-2: 2005	Limits for harmonics current emissions	Pass
EN 61000-3-3: 1995+A1: 2001+A2:2005 IEC 61000-3-3: 1994+A1: 2001+A2: 2005	Limits for voltage fluctuations and flicker in low-voltage supply systems.	Pass

We, Asia Games CORPATION, hereby declare that the equipment bearing the trade name and model number specified above was tested conforming to the applicable Rules under the most accurate measurement standards possible, and that all the necessary steps have been taken and are in force to assure that production units of the same equipment will continue to comply with the requirements.

Asia Games CORPATION

Date: 2010/05/26

CE TEST REPORT

of

EN55022 / CISPR 22 / AS/NZS CISPR 22
Class B
EN55024 / CISPR 24 / IMMUNITY
EN61000-3-2 / EN61000-3-3

Product : **Cheetah Racing Wheel**

Model(s): **WH3-2406V;WH-2401V;WH-2403V; WH2-2403V;GW500;64370**

Applicant: **Asia Games CORPATION**

Address: **8FL-7, NO 14,Lane 609, SEC 5, CHUNG HSIN RD., SAN CHUNG CITY, TAIPEI Taiwan**

Test Performed by:

International Standards Laboratory
<Lung-Tan LAB>
*Site Registration No.
BSMI: SL2-IN-E-0013; TAF: 0997; IC: IC4067B-1;
VCCI: R-1435, C-1440, T-1676, G-17, R-2598, C-2845, T-1464, G-16
NEMKO: ELA 113B
*Address:
No. 120, Lane 180, San Ho Tsuen, Hsin Ho Rd.
Lung-Tan Hsiang, Tao Yuan County 325, Taiwan
*Tel : 886-3-407-1718; Fax: 886-3-407-1738

Report No.: **ISL-10LE178CE**
Issue Date : **2010/05/26**

Contents of Report

1. General

1.1 Certification of Accuracy of Test Data

Standards:	Please refer to 2.2
Equipment Tested:	Cheetah Racing Wheel
Model:	WH3-2406V;WH-2401V;WH-2403V;WH2-2403V;GW500;64370
Applicant:	Asia Games CORPATION
Sample received Date:	2010/05/18
Final test Date :	2010/05/24
Test Site:	Chamber 02; Conduction 03; LT Test Site
Test Result:	**PASS**
Report Engineer:	Lily L.C. Tseng
Test Engineer:	James Kuo

Approve & Signature

Jim Chu / Director

Test results given in this report apply only to the specific sample(s) tested under stated test conditions.
This report shall not be reproduced other than in full without the explicit written consent of ISL. This report totally contains 48 pages, including 1 cover page , 2 contents page, and 45 pages for the test description.

This test report accurately contains the test results of the above standards at the time of the test.
The results in this report apply only to the sample(s) tested.
This test report shall not be reproduced except in full, without the written approval of International Standards Laboratory.

2. Summary

2.1 Operation Environment

Test Distance	10M; 3M (above 1GHz) (EMI test)
Temperature Humidity:	refer to each site test data refer to each site test data
input power:	Conduction input power: AC 230 V / 50 Hz Radiation input power: AC 230 V / 50 Hz Immunity input power: AC 230 V / 50 Hz

2.2 Test Standards

The tests which this report describes were conducted by an independent electromagnetic compatibility consultant, International Standards Laboratory in accordance with the following

EN 55022:2006 +A1:2007 / CISPR 22:2005 +A1:2005 / AS/NZS CISPR 22: 2006: Class B: Limits and methods of measurement of Radio Interference characteristics of Information Technology Equipment.
EN55024:1998+A1:2001+A2:2003 / CISPR 24:1997+A1:2001+A2:2002: Information technology equipment-Immunity characteristics-Limits and methods of measurement.

Standard	Description	Results	Criteria
EN 61000-4-2: 1995+A1: 1998+A2: 2001 IEC 61000-4-2: 1995+A1: 1998+A2: 2000	Electrostatic Discharge	Pass	B
EN 61000-4-3: 2006 IEC 61000-4-3: 2006	Radio-Frequency, Electromagnetic Field	Pass	A
EN 61000-4-4: 2004 IEC 61000-4-4: 2004	Electrical Fast Transient/Burst	Pass	B
EN 61000-4-5: 2006 IEC 61000-4-5: 2005	Surge	Pass	B
EN 61000-4-6: 2007 IEC 61000-4-6: 2003+A1:2004+A2: 2006	Conductive Disturbance	Pass	A
EN 61000-4-8: 1993+A1: 2001 IEC 61000-4-8: 1993+A1: 2000	Power Frequency Magnetic Field	Pass	A
EN 61000-4-11: 2004 IEC 61000-4-11: 2004	Voltage Dips / Short Interruption and Voltage Variation		
	>95% in 0.5 period	Pass	B
	30% in 25 period	Pass	C
	>95% in 250 period	Pass	C

Standard	Description	Results
EN 61000-3-2: 2006 IEC 61000-3-2: 2005	Limits for harmonics current emissions	Pass
EN 61000-3-3: 1995+A1: 2001+A2:2005 IEC 61000-3-3: 1994+A1: 2001+A2: 2005	Limits for voltage fluctuations and flicker in low-voltage supply systems.	Pass

3. Description of EUT

EUT

Description:	Cheetah Racing Wheel
Condition:	Pre-Production
Model name:	WH3-2406V; WH-2401V; WH-2403V; WH2-2403V; GW500; 64370
Serial number:	N/A
USB＆PS2&PS3 cable:	one (2.0M)
Footboard control cable:	one (1.6M)
Power:	From personal computer USB port supply
Brand Name:	ASIA
Highest working frequency:	12MHz

The radiation test should be tested till 1GHz.

The I/O ports of EUT are listed below:

I/O Port Type	Quantity
Footboard control Port	one

Test configurations:

Configuration	Mode
1	WH3-2406V

Model different:

Model	Different mode
WH3-2406V	USB+PS2+PS3 cable
WH2-2403V	USB+PS2 cable
WH-2401V	USB cable
WH-2403V	These different model names are in order to different sale market.
GW500	
64370	

EMI noise source:
Crystal: 12MHz (B1)

EMI Solution:
1. Add two ferrite core on the Footboard control cable, (Please refer to the photo report red arrow 1.2 point in the Photo EUT-21)
2. Add one ferrite core on the USB＆PS2&PS3 cable, (Please refer to the photo report red arrow 3 point in the Photo EUT-21)

4. Description of Support Equipment

4.1 Description of Support Equipment

No	Unit	Model / Serial No.	Brand	Power Cord	FCC ID
1	Personal Computer	LX-TK4E63-5SS673 S/N: NA	Lemel	Non-shielded, Detachable	FCC DOC
2	24” LCD Monitor	2408FPW S/N: NA	DELL	Nonshielded Detachable	FCC DOC
3	DELL PS/2 Mouse	MO71KC S/N: NA	DELL	NA	FCC DOC
4	DELL PS/2 Keyboard	SK-8110 S/N: NA	DELL	NA	FCC DOC
5	Aceex Modem	DM1414 S/N: 0301000557	Aceex	Nonshielded Detachable	FCC DOC
6	HP Printer	C930 S/N: 3872H155	HP	Nonshielded Detachable	FCC DOC

4.2 Software for Controlling Support Unit

Test programs exercising various part of EUT were used. The programs were executed as follows:

1. PC run Game controller.exe to the EUT.

Filename	Issued Date
Game controller.exe	06/14/2009

4.3 I/O Cable Condition of EUT and Support Units

Description	Path	Cable Length	Cable Type	Connector Type
AC Power Cable	110V (~240V) to PC SPS	1.8M	Non-shielded, Detachable	Plastic Head
PS/2 Data Cable	PS/2 Mouse to PC PS/2 Port	1.8M	Shielded, Un-detachable	Metal Head
PS/2 Data Cable	PS/2 Keyboard to PC PS/2 Port	1.8M	Shielded, Un-detachable	Metal Head
Monitor Data Cable	Monitor D-SUB Port to PC D-SUB Port	1.8M	Shielded, Detachable (with core)	Metal Head
Modem Data Cable	Modem to PC Serial Port	1.8M	Shielded, Detachable	Metal Head
USB＆PS2&PS3 data cable	EUT USB＆PS2&PS3 cable to personal computer USB port	2.0M	Shielded, detachable (with core)	Plastic head
Footboard control data cable	EUT Footboard control port to Footboard control	1.6M	Shielded, detachable (with core)	Plastic head
Printer Data Cable	Print to PC Parallel Port	1.8M	Shielded, Detachable	Metal Head

5. Power Main Port Conducted Emissions

5.1 Configuration and Procedure

5.1.1 EUT Configuration

The EUT was set up on the non-conductive table that is 1.0 by 1.5 meter, 80cm above ground. The wall was 40cm to the rear of the EUT.

Power to the EUT was provided through the LISN. The impedance vs. frequency characteristic of the LISN is complied with the limit of standards used.

Both lines (neutral and hot) were connected to the LISN in series at testing. A coaxial-type connector which provides one 50 ohms impedance termination was connected to the test instrument. The excess length of the power cord was folded back and forth at the center of the lead to form a bundle 30cm to 40cm in length.

Any changes made to the configuration or modifications made to EUT during testing, are noted in the following test record.

If EUT has an extra auxiliary AC outlet which can provide power to an external monitor, all measurements will be made with the monitor power from EUT-mounted AC outlet and then from floor-mounted AC outlet.

5.1.2 Test Procedure

The system was set up as described above, with the EMI diagnostic software running. The main power line conducted EMI tests were run on both hot and neutral conductors of the power cord and the results were recorded. The effect of varying the position of the interface cables has been investigated to find the configuration that produces maximum emission.

At the frequencies where the peak values of the emissions were higher than 6dß below the applicable limits, the emissions were also measured with the quasi-peak detectors. At the frequencies where the quasi-peak values of the emissions were higher than 6dß below the applicable average limits, the emissions were also measured with the average detectors.

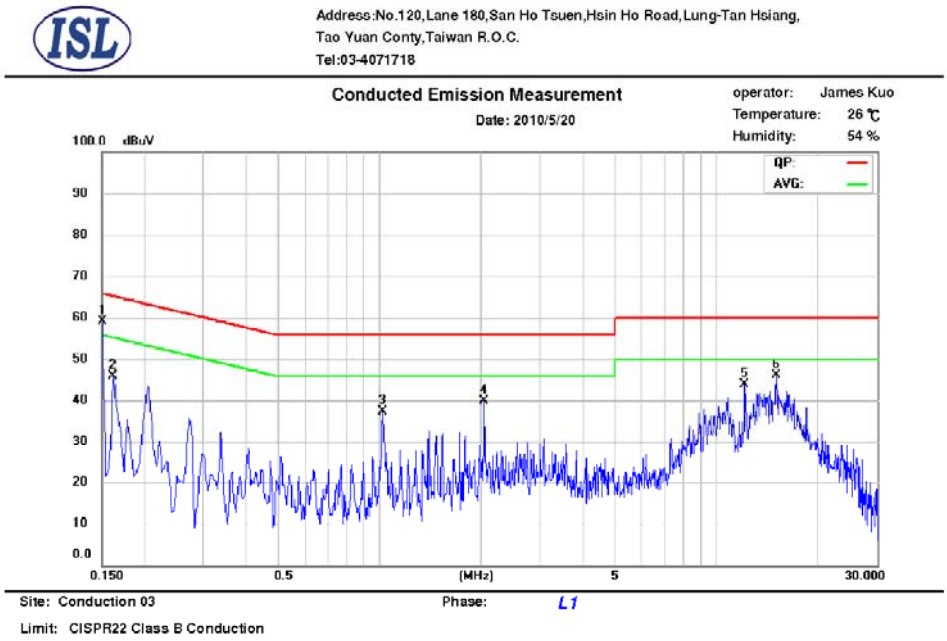
The highest emissions were analyzed in details by operating the spectrum analyzer in fixed tuned mode to determine the nature of the emissions and to provide information which could be useful in reducing their amplitude.

5.1.3 EMI Receiver/Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range:	150KHz--30MHz
Detector Function:	Quasi-Peak / Average Mode
Resolution Bandwidth:	9KHz

5.2 Conduction Test Data: Configuration 1

Table 5.2.1 Power Line Conducted Emissions (Hot)

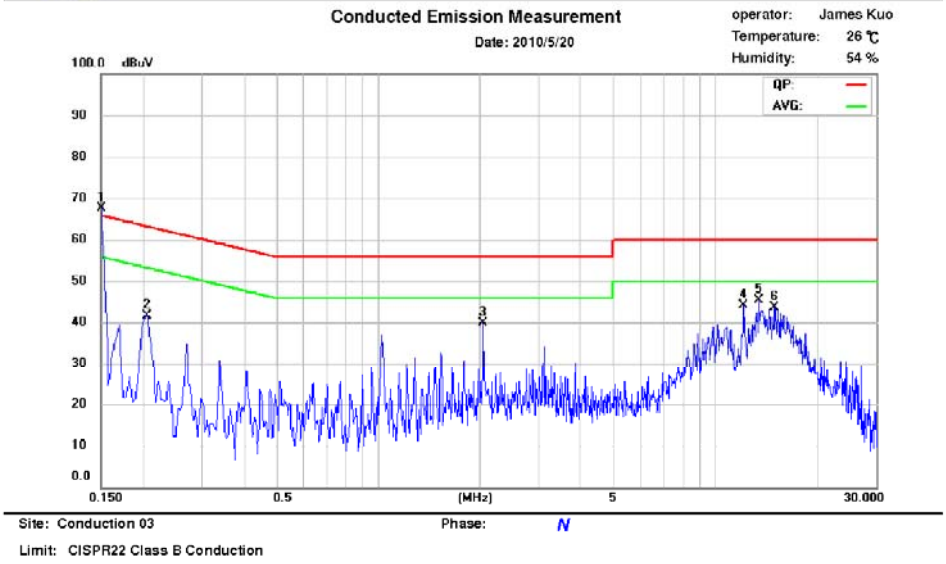


No.	Frequency MHz	LISN Loss dB	Cable Loss dB	QP Correct. dBuV	QP Limit dBuV	QP Margin dB	AVG Correct. dBuV	AVG Limit dBuV	AVG Margin dB	Note
1	0.1502	0.13	0.03	49.63	65.9	-16.3	26.32	55.9	-29.6	
2	0.1626	0.13	0.03	41.66	65.3	-23.6	34.17	55.3	-21.1	
3	1.0265	0.12	0.06	36.48	56.0	-19.5	35.37	46.0	-10.6	
4	2.0505	0.13	0.08	38.92	56.0	-17.0	37.99	46.0	-8.01	
5	12.1506	0.26	0.18	43.50	60.0	-16.5	43.35	50.0	-6.65	
6	15.1065	0.35	0.19	37.08	60.0	-22.9	25.64	50.0	-24.3	

Note:
Margin = Corrected Amplitude - Limit
Corrected Amplitude = Receiver Reading + LISN Loss + Cable Loss
A margin of -8dB means that the emission is 8dB below the limit
The frequency spectrum graph is for final peak graph, and the attached table is for QP/AVG test result.
If peak data can pass, it will be shown in "QP/AVG Correct" column, if not, QP/AVG data will instead.

Table 5.2.2 Power Line Conducted Emissions (Neutral)

Address:No.120,Lane 180,San Ho Tsuen,Hsin Ho Road,Lung-Tan Hsiang,
Tao Yuan Conty,Taiwan R.O.C.
Tel:03-4071718



No.	Frequency MHz	LISN Loss dB	Cable Loss dB	QP Correct. dBuV	QP Limit dBuV	QP Margin dB	AVG Correct. dBuV	AVG Limit dBuV	AVG Margin dB	Note
1	0.1502	0.11	0.03	50.25	65.9	-15.7	26.83	55.9	-29.1	
2	0.2065	0.1	0.03	40.72	63.3	-22.6	36.13	53.3	-17.2	
3	2.0510	0.09	0.08	39.23	56.0	-16.7	38.36	46.0	-7.64	
4	12.1495	0.27	0.18	43.29	60.0	-16.7	43.19	50.0	-6.81	
5	13.5506	0.33	0.18	38.38	60.0	-21.6	22.80	50.0	-27.2	
6	15.0263	0.4	0.19	37.22	60.0	-22.7	24.89	50.0	-25.1	

Note:
Margin = Corrected Amplitude - Limit
Corrected Amplitude = Receiver Reading + LISN Loss + Cable Loss
A margin of -8dB means that the emission is 8dB below the limit
The frequency spectrum graph is for final peak graph, and the attached table is for QP/AVG test result.
If peak data can pass, it will be shown in "QP/AVG Correct" column, if not, QP/AVG data will instead.

6. Telecommunication Port Conducted Emissions

6.1 Configuration and Procedure

6.1.1 EUT Configuration

The EUT was set up on the non-conductive table that is 1.0 by 1.5 meter, 80cm above ground. The wall was 40cm to the rear of the EUT. The excess length of the power cord was folded back and forth at the center of the lead to form a bundle 30cm to 40cm in length. The distance between EUT and CDN is 80cm. CDN is connected to the reference ground plane. Any changes made to the configuration, or modifications made to the EUT, during testing are noted in the following test record.

6.1.2 Test Procedure

The system was set up as described above, with the EMI diagnostic software running. The content of the software consist of both periodic and pseudo-random messages. The effect of varying the position of the interface cables has been investigated to find the configuration that produces maximum emission. The highest emissions were analyzed in details by operating the spectrum analyzer in fixed tuned mode to determine the nature of the emissions and to provide information which could be useful in reducing their amplitude.

6.1.3 EMI Receiver/Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range:	150KHz--30MHz
Detector Function:	Quasi-Peak / Average Mode
Resolution Bandwidth:	9KHz

****Remarks: It is not necessary to be tested in this item.**

7. Radiated Disturbance Emissions

7.1 Configuration and Procedure

7.1.1 EUT Configuration

The equipment under test was set up on a non-conductive table 80cm above ground, on open field or chamber. The excess length of the power cord was folded back and forth at the center of the lead to form a bundle 30cm to 40cm in length. Any changes made to the configuration, or modifications made to the EUT, during testing are noted in the following test record.

If EUT has an extra auxiliary AC outlet which can provide power to an external monitor, all measurements will be made with the monitor power from EUT-mounted AC outlet and then from floor-mounted AC outlet.

7.1.2 Test Procedure

The system was set up as described above, with the EMI diagnostic software running. The maximum emission was measured by varying the height of antenna and then by rotating the turntable. Both polarization of antenna, horizontal and vertical, were measured.

The highest emissions between 30 MHz to 1000 MHz were analyzed in details by operating the spectrum analyzer and/or EMI receiver in quasi-peak mode to determine the precise amplitude of the emissions. The highest emissions between 1 GHz to 6 GHz were analyzed in details by operating the spectrum analyzer in peak and average mode to determine the precise amplitude of the emissions. While doing so, the interconnecting cables and major parts of the system were moved around, the antenna height was varied between one and four meters, its polarization was varied between vertical and horizontal, and the turntable was slowly rotated, to maximize the emission.

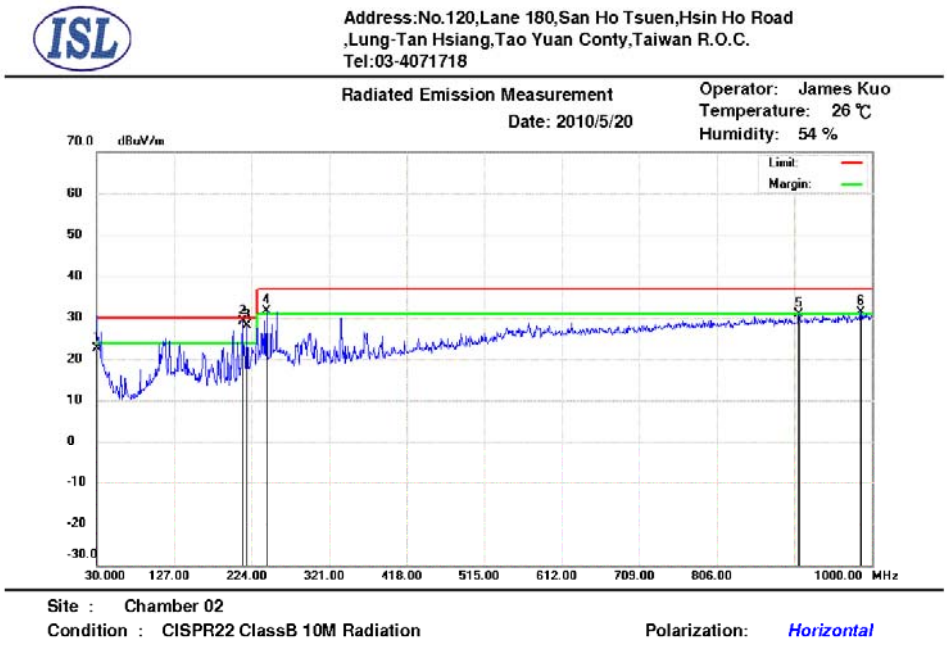
7.1.3 Spectrum Analyzer Configuration (for the frequencies tested)

Frequency Range:	30MHz--1000MHz
Detector Function:	Quasi-Peak Mode
Resolution Bandwidth:	120KHz

Frequency Range:	Above 1 GHz to 6 GHz
Detector Function:	Peak/Average Mode
Resolution Bandwidth:	1MHz

7.2 Radiation Test Data: Configuration 1

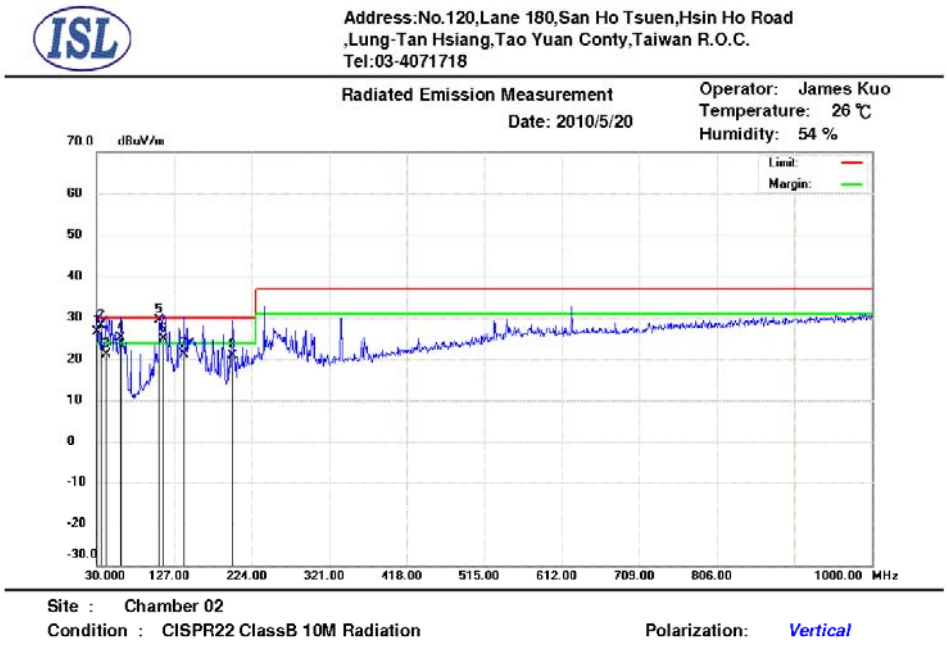
Table 7.2.1 Radiated Emissions (Horizontal)



No.	Frequency (MHz)	RX_R (dBuV/m)	Ant_F (dB)	Cab_L (dB)	PreAmp (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
1	30.2550	2.89	18.76	0.96	0	22.61	30.00	-7.39	135	176	QP
2	212.3600	17.80	9.12	2.31	0	29.23	30.00	-0.77	325	46	peak
3	218.1800	16.66	9.18	2.36	0	28.20	30.00	-1.80	347	178	peak
4	242.4300	17.35	11.72	2.55	0	31.62	37.00	-5.38	100	292	peak
5	908.8200	4.72	20.67	5.41	0	30.80	37.00	-6.20	252	222	peak
6	986.4200	4.41	21.29	5.66	0	31.36	37.00	-5.64	221	358	peak

* Note:
Margin = Corrected Amplitude – Limit
Corrected Amplitude = Radiated Amplitude + Antenna Correction Factor + Cable Loss – Pre-Amplifier Gain
A margin of -8dB means that the emission is 8dB below the limit
BILOG Antenna Distance: 10 meter, Frequency: under 1000MHz
Below 1GHz test, if the peak measured value meets the QP limit, it is unnecessary to perform the QP measurement.

Table 7.2.2 Radiated Emissions (Vertical)



No.	Frequency (MHz)	RX_R (dBuV/m)	Ant_F (dB)	Cab_L (dB)	PreAmp (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Ant.Pos (cm)	Tab.Pos (deg.)	Detector
1	30.5050	6.95	18.62	0.96	0	26.53	30.00	-3.47	281	305	QP
2	36.4440	12.03	15.2	1.01	0	28.24	30.00	-1.76	216	293	QP
3	42.4150	8.45	11.7	1.08	0	21.23	30.00	-8.77	143	269	QP
4	60.7470	17.49	6.39	1.27	0	25.15	30.00	-4.85	274	75	QP
5	109.3490	15.59	12.02	1.65	0	29.26	30.00	-0.74	114	31	QP
6	114.1800	10.95	12.14	1.69	0	24.78	30.00	-5.22	141	117	QP
7	139.8300	8.09	11.11	1.9	0	21.10	30.00	-8.90	147	320	QP
8	200.6800	9.34	9.29	2.26	0	20.89	30.00	-9.11	147	155	QP

* Note:
Margin = Corrected Amplitude – Limit
Corrected Amplitude = Radiated Amplitude + Antenna Correction Factor + Cable Loss – Pre-Amplifier Gain
A margin of -8dB means that the emission is 8dB below the limit
BILOG Antenna Distance: 10 meter, Frequency: under 1000MHz
Below 1GHz test, if the peak measured value meets the QP limit, it is unnecessary to perform the QP measurement.

8. Electrostatic discharge (ESD) immunity

8.1 Electrostatic discharge (ESD) immunity test

Port:	Enclosure
Basic Standard:	EN 61000-4-2/ IEC EN61000-4-2 (details referred to Sec 2.2)
Test Level:	Air +/- 2 kV, +/- 4 kV, +/- 8 kV Contact +/- 2 kV, +/- 4 kV
Criteria:	B
Test Procedure	refer to ISL QA T04-S03
Temperature:	24 °C
Humidity:	64%

Selected Test Point

Air: discharges were applied to slots, aperture or insulating surfaces. 10 single air discharges were applied to each selected points.

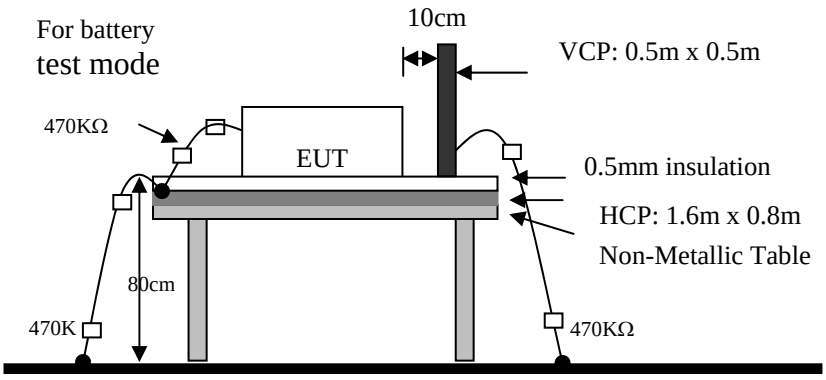
Contact: Total 200 discharges minimum were to the selected contact points.

Indirect Contact Points: 25 discharges were applied to center of one edge of VCP and each EUT side of HCP with 10 cm away from EUT.

For final test points, please refer to EUT 17 to EUT 18 of "Appendix: Photographs of EUT". Red arrow lines indicate the contact points, and blue arrow lines indicate the air points.

Test Setup

EUT is 1m from the wall and other metallic structure. When Battery test mode is needed, a cable with one 470KΩ resister at two rare ends is connected from metallic part of EUT and screwed to HCP.



Ground reference Plane

Test Result

Performance of EUT complies with the given specification.

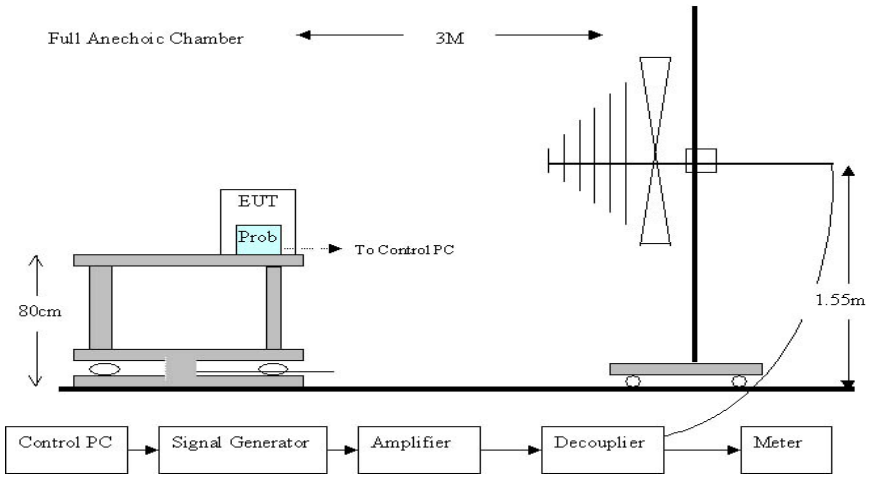
9. Radio-Frequency, Electromagnetic Field immunity

9.1 Radio-Frequency, Electromagnetic Field immunity test

Port:	Enclosure
Basic Standard:	EN 61000-4-3/ IEC EN61000-4-3 (details referred to Sec 2.2)
Test Level::	3 V/m
Modulation:	AM 1KHz 80%
Frequency range:	80 MHz~1 GHz
Frequency Step:	1% of last step frequency
Dwell time:	3s
Polarization:	Vertical and Horizontal
EUT Azimuth Angle	☒0° ☒90° ☒180° ☒270°
Criteria:	A
Test Procedure	refer to ISL QA T04-S107
Temperature:	24°C
Humidity:	63%

Test Setup

The field sensor is placed at one calibration grid point to check the intensity of the established fields on both polarizations. EUT is adjusted to have each side of EUT face coincident with the calibration plane. A CCD camera and speakers are used to monitor the condition of EUT for the performance judgment.



Test Result

Performance of EUT complies with the given specification.

10. Electrical Fast transients/burst immunity

10.1 Electrical Fast transient/burst immunity test

Port:	AC mains;
Basic Standard:	EN 61000-4-4/ IEC EN61000-4-4 (details referred to Sec 2.2)
Test Level:	**AC Power Port**: +/- 1 kV
Rise Time:	5ns
Hold Time:	50ns
Repetition Frequency:	5KHz
Criteria:	B
Test Procedure	refer to ISL QA T04-S05
Temperature:	23 °C
Humidity:	62%

Test Procedure

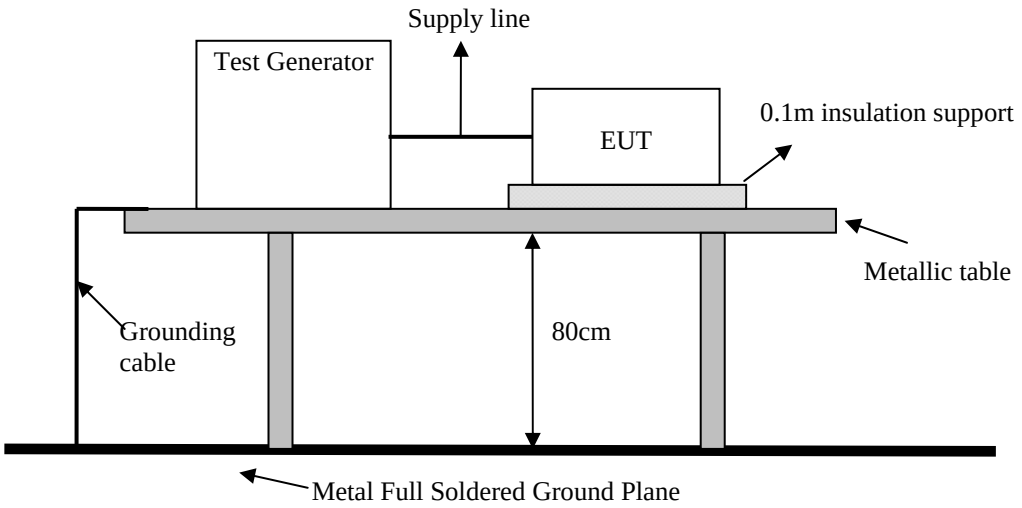
The EUT was setup on a nonconductive table 0.1 m above a reference ground plane.

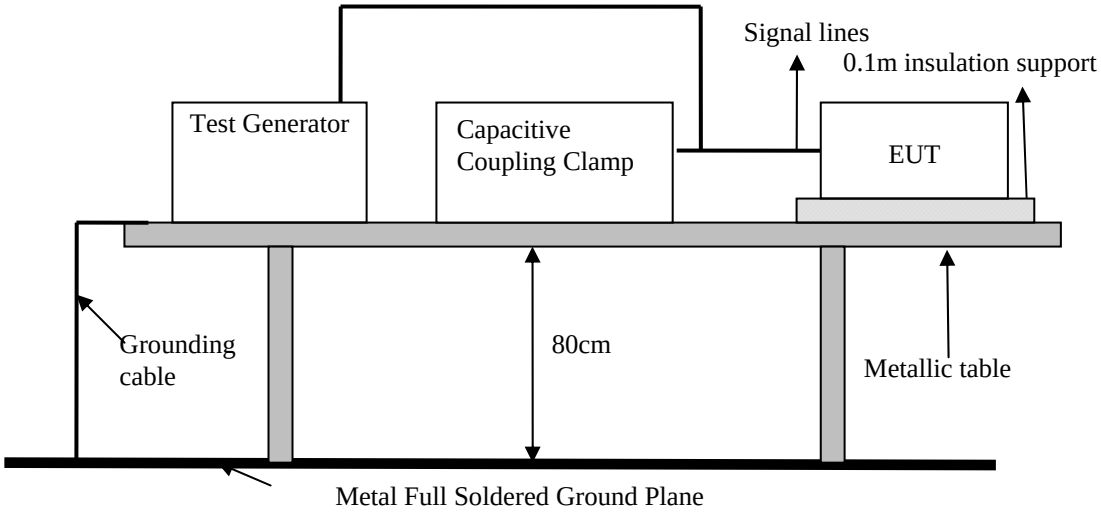
Test Points	Polarity	Result	Comment
Line	+	N	60 sec
	-	N	60 sec
Neutral	+	N	60 sec
	-	N	60 sec
Ground	+	N	60 sec
	-	N	60 sec
Line to Neutral	+	N	60 sec
	-	N	60 sec
Line to Ground	+	N	60 sec
	-	N	60 sec
Neutral to Ground	+	N	60 sec
	-	N	60 sec
Line to Neutral to Ground	+	N	60 sec
	-	N	60 sec

Note: 'N' means normal, the EUT function is correct during the test.

Test Setup

EUT is at least 50cm from the conductive structure.





Test Result

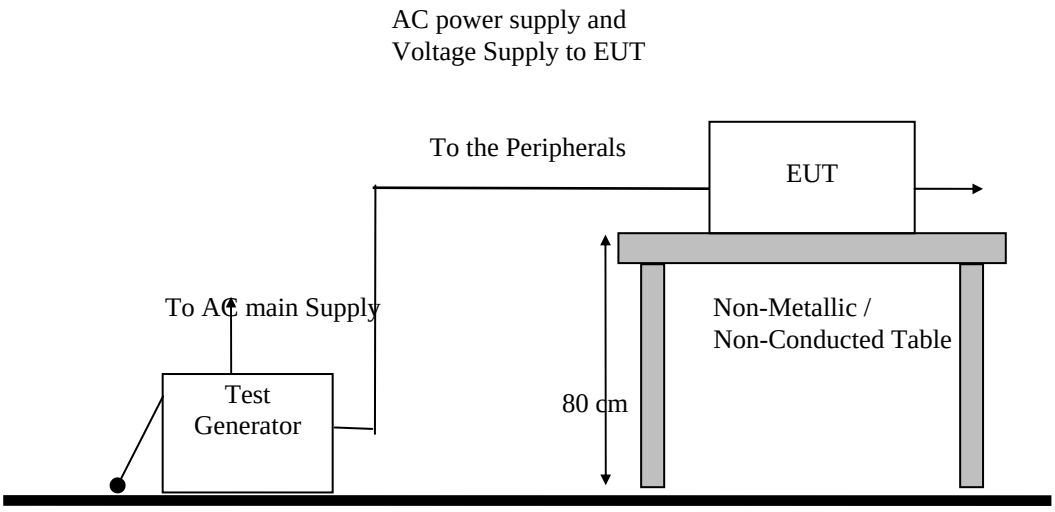
Performance of EUT complies with the given specification.

11. Surge Immunity

11.1 Surge immunity test

Port:	AC mains;
Basic Standard:	EN 61000-4-5/ IEC EN61000-4-5 (details referred to Sec 2.2)
Test Level:	**AC Power Port:** Line to Line: +/- 0.5 kV, +/- 1 kV Line to Earth: +/- 0.5 kV, +/- 1 kV, +/- 2kV
Rise Time:	1.2us
Hold Time:	50us
Repetition Rate:	30 second
Angle:	☒0° ☒90° ☒180° ☒270°
Criteria:	B
Test Procedure	refer to ISL QA T04-S04
Temperature:	24°C
Humidity:	62%

Test Setup



Metal Full Soldered Ground Plane

Test Result

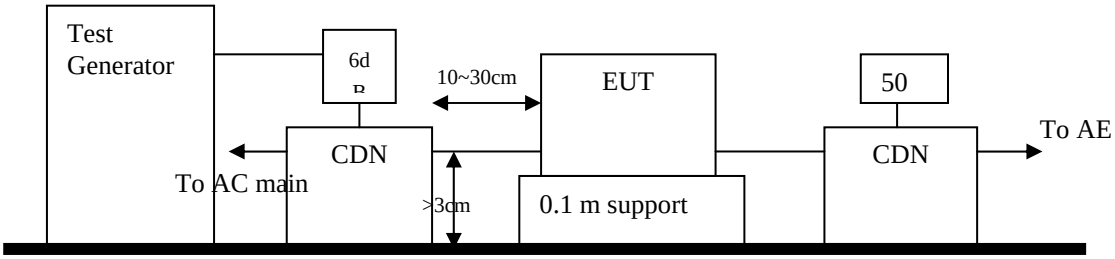
Performance of EUT complies with the given specification.

12. Immunity to Conductive Disturbance

12.1 Immunity to Conductive Disturbance

Port:	AC mains;
Basic Standard:	EN 61000-4-6/ IEC EN61000-4-6 (details referred to Sec 2.2)
Test Level::	3 V
Modulation:	AM 1KHz 80%
Frequency range:	0.15 MHz - 80MHz
Frequency Step:	1% of last Frequency
Dwell time:	3s
Criteria:	A
CDN Type:	CDN M2+M3, CDN T2, CDN T4, CDN T8, EM Clamp
Test Procedure	refer to ISL QA T04-S08
Temperature:	24°C
Humidity:	64%

Test Setup



Reference Ground Plane

Test Result

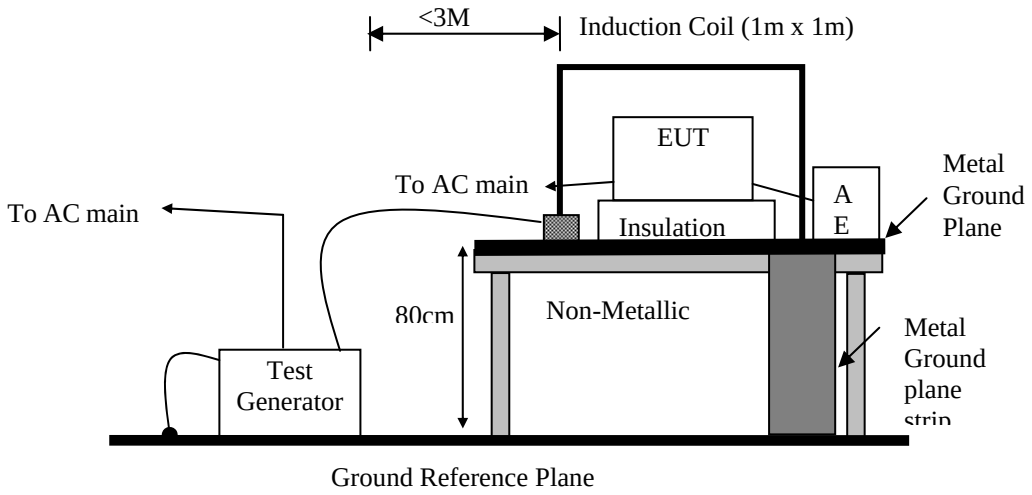
Performance of EUT complies with the given specification.

13. Power Frequency Magnetic Field immunity

13.1 Power Frequency Magnetic field immunity test

Port:	Enclosure
Basic Standard:	EN 61000-4-8/ IEC EN61000-4-8 (details referred to Sec 2.2)
Test Level:	1A/m
Polarization:	X, Y, Z
Criteria:	A
Test Procedure	refer to ISL QA T04-S02
Temperature:	23°C
Humidity:	65%

Test Setup



Test Result

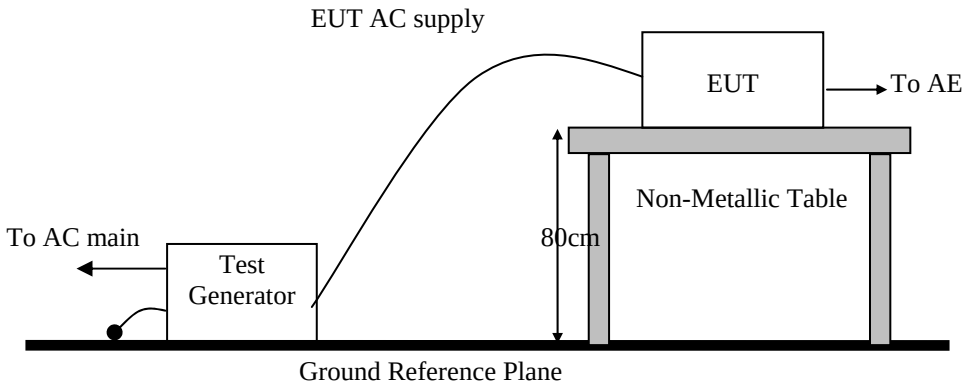
Performance of EUT complies with the given specification.

14. Voltage Dips, Short Interruption and Voltage Variation immunity

14.1 Voltage Dips, Short Interruption and Voltage Variation immunity test

Port:	AC mains
Basic Standard:	EN 61000-4-11/ IEC EN61000-4-11 (details referred to Sec 2.2)
Test Level: Criteria:	>95% in 0.5 period B
Test Level: Criteria:	30% in 25 period C
Test Level: Criteria:	>95% in 250 period C
Phase:	0°; 180°
Test intervals:	3 times with 10s each
Test Procedure	refer to ISL QA T04-S108
Temperature:	23°C
Humidity:	64%

Test Setup



Test Result

Performance of EUT complies with the given specification.

15. Harmonics

15.1 Harmonics test

Port:	AC mains
Active Input Power:	<75W
Basic Standard:	EN61000-3-2/IEC 61000-3-2 (details referred to Sec 2.2)
Test Duration:	2.5min
Class:	D
Test Procedure	refer to ISL QA T04-S32
Temperature:	25°C
Humidity:	64%

Test Procedure

The EUT is supplied in series with shunts or current transformers from a source having the same nominal voltage and frequency as the rated supply voltage and frequency of the EUT. The EUT is configured to its rated current with additional resistive load when the testing is performed.

Equipment having more than one rated voltage shall be tested at the rated voltage producing the highest harmonics as compared with the limits.

Result

Active input power under 75W, no limit apply, declare compliance

16. Voltage Fluctuations

16.1 Voltage Fluctuations test

Port:	AC mains
Basic Standard:	EN61000-3-3/IEC61000-3-3 (details referred to Sec 2.2)
Test Procedure	refer to ISL QA T04-S32
Observation period:	For Pst 10min
	For Plt 2 hours
Temperature:	25°C
Humidity:	64%

Test Procedure

The EUT is supplied in series with reference impedance from a power source with the voltage and frequency as the nominal supply voltage and frequency of the EUT.

Result

Performance of EUT complies with the given specification.

Test Data

Urms = 230.3V Freq = 50.000 Range: 1 A
Irms = 0.444A Ipk = 0.886A cf = 1.995
P = 93.85W S = 102.3VA pf = 0.917

Test - Time : 12 x 10min = 120min (10000 %)

Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED

Plt = 0.073

	Pst	P50s	P10s	P3s	P1s	P0.1s	Fli	Fli(m)	dmax [%]	dc [%]	dt>Lim [ms]	Fail
1	0.073	0.010	0.010	0.010	0.011	0.014	0.003	0.016	0.000	0.070	0.000	
2	0.073	0.010	0.010	0.010	0.011	0.014	0.003	0.017	0.000	0.080	0.000	
3	0.073	0.010	0.010	0.010	0.011	0.015	0.007	0.022	0.000	0.070	0.000	
4	0.074	0.010	0.010	0.010	0.012	0.018	0.006	0.022	0.000	0.070	0.000	
5	0.072	0.010	0.010	0.010	0.010	0.013	0.003	0.016	0.000	0.070	0.000	
6	0.073	0.010	0.010	0.010	0.011	0.016	0.004	0.019	0.000	0.060	0.000	
7	0.073	0.010	0.010	0.010	0.011	0.015	0.010	0.018	0.000	0.070	0.000	
8	0.073	0.010	0.010	0.010	0.012	0.014	0.004	0.018	0.000	0.050	0.000	
9	0.073	0.010	0.010	0.010	0.011	0.014	0.004	0.017	0.000	0.080	0.000	
10	0.073	0.010	0.010	0.010	0.011	0.014	0.004	0.018	0.000	0.050	0.000	
11	0.072	0.010	0.010	0.010	0.010	0.013	0.004	0.015	0.000	0.070	0.000	
12	0.073	0.010	0.010	0.010	0.011	0.016	0.007	0.024	0.000	0.050	0.000	

rms = 230.3V Freq = 50.000 Range: 2 A
Irms = 0.351A Ipk = 0.923A cf = 2.632
P = 98.27W S = 80.74VA pf = 1.217

Test - Time : 1 x 10min = 10min (100 %)

Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED

Plt = 0.073

	Pst	P50s	P10s	P3s	P1s	P0.1s	Fli	Fli(m)	dmax [%]	dc [%]	dt>Lim [ms]	Fail
1	0.073	0.010	0.010	0.010	0.010	0.014	0.009	0.020	0.000	0.070	0.000	

Appendix

16.2 Appendix A: Measurement Procedure for Main Power Port Conducted Emissions

The measurements are performed in a 3.5m x 3.4m x 2.5m shielded room, which referred as Conduction 01 test site, or a 3m x 3m x 2.3m test site, which referred as Conduction 02 test site. The EUT was placed on non-conduction 1.0m x 1.5m table, which is 0.8 meters above an earth-grounded.

Power to the EUT was provided through the LISN which has the Impedance (50ohm/50uH) vs. Frequency Characteristic in accordance with the standard. Power to the LISNs were filtered to eliminate ambient signal interference and these filters were bonded to the ground plane. Peripheral equipment required to provide a functional system (support equipment) for EUT testing was powered from the second LISN through a ganged, metal power outlet box which is bonded to the ground plane at the LISN.

If the EUT is supplied with a flexible power cord, the power cord length in excess of the distance separating the EUT from the LISN shall be folded back and forth at the center of the lead so as to form a bundle not exceeding 40cm in length. If the EUT is provided with a permanently coiled power cord, bundling of the cord is not required. If the EUT is supplied without a power cord, the EUT shall be connected to the LISN by a power cord of the type specified by the manufacturer which shall not be longer than 1 meter. The excess power cord shall be bundled as described above. If a non-flexible power cord is provided with the EUT, it shall be cut to the length necessary to attach the EUT to the LISN and shall not be bundled.

The interconnecting cables were arranged and moved to get the maximum measurement. Both the line of power cord, hot and neutral, were measured.

The highest emissions were analyzed in details by operating the spectrum analyzer in fixed tuned mode to determine the nature of the emissions and to provide information which could be useful in reducing their amplitude.

16.3 Appendix B: Measurement Procedure for Telecommunication Port Conducted Emissions

The measurements are performed in a 3.5m x 3.4m x 2.5m shielded room, which referred as Conduction 01 test site, or a 3m x 3m x 2.3m test site, which referred as Conduction 02 test site. The EUT was placed on non-conduction 1.0m x 1.5m table, which is 0.8 meters above an earth-grounded.

The EUT, any support equipment, and any interconnecting cables were arranged and moved to get the maximum measurement.

Power to the EUT was provided through the LISN which has the Impedance (50 Ohm/50uH) vs. Frequency Characteristic in accordance with the standard. Power to the LISN was filtered to eliminate ambient signal interference and this filter was bonded to ground. Peripheral equipment to provide a functional system (support equipment) for EUT testing was powered through a ganged, metal power outlet box bonded to the ground. AC input power for the auxiliary power outlets was obtained from the same filtered source that provides input power to the LISN.

If the EUT is supplied with a flexible power cord, if the power cord length in excess of 1 m, the excess cable shall be bundled at approximate center of the power cord with the bundles 30 cm to 40 cm in length. If the EUT is provided with a permanently coiled power cord, bundling of the cord is not required. If the EUT is supplied without a power cord, the EUT shall be connected to the LISN by a power cord of the type specified by the manufacturer which shall be 1 meter in length. If a non-flexible power cord is provided with the EUT, it shall be cut to the length necessary to attach the EUT to the LISN and shall not be bundled.

The highest emissions were analyzed in details by operating the spectrum analyzer in fixed tuned mode to determine the nature of the emissions and to provide information could be useful in reducing their amplitude.

16.4 Appendix C: Test Procedure for Radiated Emissions

Preliminary Measurements in the Anechoic Chamber

The radiated emissions are initially measured in the anechoic chamber at a measurement distance of 10 (or 3) meters. Desktop EUT are placed on a wooden stand 0.8 meter in height. The measurement antenna is 10 (or 3) meters from the EUT. The test setup in anechoic chamber is the same as open site. The turntable rotated 360°. The antenna height is varied from 1-2.5m. The primary objective of the radiated measurements in the anechoic chamber is to identify the frequency spectrum in the absence of the electromagnetic environment existing on the open test site. The frequencies can then be pre-selected on the open test site to obtain the corresponding amplitude. The initial scan is made with the spectrum analyzer in automatic sweep mode. The spectrum peaks are then measured manually to determine the exact frequencies.

Measurements on the Open Site or Chamber

The radiated emissions test will then be repeated on the open site or chamber to measure the amplitudes accurately and without the multiple reflections existing in the shielded room. The EUT and support equipment are set up on the turntable of one of 10 meter open field sites. Desktop EUT are set up on a wooden stand 0.8 meter above the ground.

For the initial measurements, the receiving antenna is varied from 1-4 meter height and is changed in the vertical plane from vertical to horizontal polarization at each frequency. The highest emissions between 30 MHz to 1000 MHz were analyzed in details by operating the spectrum analyzer and/or EMI receiver in quasi-peak mode to determine the precise amplitude of the emissions. The highest emissions between 1 GHz to 6 GHz were analyzed in details by operating the spectrum analyzer in peak and average mode to determine the precise amplitude of the emissions.

At the highest amplitudes observed, the EUT is rotated in the horizontal plane while changing the antenna polarization in the vertical plane to maximize the reading. The interconnecting cables were arranged and moved to get the maximum measurement. Once the maximum reading is obtained, the antenna elevation and polarization will be varied between specified limits to maximize the readings.

16.5 Appendix D: Test Equipment

16.5.1 Test Equipment List

Location	Equipment Name	Brand	Model	S/N	Last Cal. Date	Next Cal. Date
Conduction 03	Conduction 03 -1 Cable	WOKEN	CFD 300-NL	Conduction 03 -1	06/08/2009	06/08/2010
Conduction 03	EMI Receiver 11	ROHDE & SCHWARZ	ESCI	100568	06/09/2009	06/09/2010
Conduction 03	LISN 07	FCC Inc.	FCC-LISN-50-100-4-02	07040	05/11/2010	05/11/2011
Conduction 03	LISN 08	FCC Inc.	FCC-LISN-50-25-2-01	07039	06/12/2009	06/12/2010

Location	Equipment Name	Brand	Model	S/N	Last Cal. Date	Next Cal. Date
Radiation (Chamber02)	BILOG Antenna 08	Schaffner	CBL6112B	2756	07/02/2009	07/02/2010
Radiation (Chamber02)	Coaxial Cable Chmb 02-10M-02	MIYAZAKI	8D-FB	Chmb 02-10M-02	10/19/2009	10/19/2010
Radiation (Chamber02)	EMI Receiver 12	ROHDE & SCHWARZ	ESCI	100804	06/30/2009	06/30/2010

Location	Equipment Name	Brand	Model	S/N	Last Cal. Date	Next Cal. Date
EN61K-3-2/3	Harmonic/Flicker Test System 02	EMC PARTNER	HARMONICS -1000	143	03/25/2010	03/25/2011
EN61K-4-2	ESD Gun 05	EM TEST	Dito	V0640101838	03/10/2010	03/10/2011
EN61K-4-3	BILOG Antenna 06	Schaffner	CBL6112B	2754	N/A	N/A
EN61K-4-3	Horn Antenna 07 (Above 1GHz)	AR	AT40002A	311399	N/A	N/A
EN61K-4-3	Amplifier 80Mz~1GHz 250W	AR	250W1000A	312494	N/A	N/A
EN61K-4-3	Amplifier 800MHz~3.0GHz 60W	AR	60S1G3	312762	N/A	N/A
EN61K-4-3	Broadband coupler 10K~220Mhz	Amplifier Research	DC2500	19810	N/A	N/A
EN61K-4-3	Broadband Coupler 80M~1GHz	Amplifier Research	DC6180	20364	N/A	N/A
EN61K-4-3	Broadband Couplier 1~4GHz	Werlatone	C5291	6516	N/A	N/A
EN61K-4-3	Coaxial Cable Chmb 04-3M-2	Belden	RG-8/U	Chmb 04-3M-2	N/A	N/A
EN61K-4-3	Signal Generator 03	Anritsu	MG3642A	6200162550	03/18/2010	03/18/2011
EN61K-4-4	EFT and SURGE Test System	EM TEST	UCS-500 M6B	V0728102674	12/02/2009	12/02/2010
EN61K-4-5	CDN-UTP8	EMC-PARTNER	CDN-UTP8	017	04/27/2010	04/27/2011
EN61K-4-5	SURGE-TESTER	EMC Partner	MIG0603IN3	523	04/27/2010	04/27/2011
EN61K-4-6	CDN M2+M3 03	Frankonia	M2+M3	A3027007	07/06/2009	07/06/2010
EN61K-4-6	CDN T2 04	FCC Inc.	FCC-801-T2	02067	08/24/2009	08/24/2010
EN61K-4-6	CDN T4 04	FCC Inc.	FCC-801-T4	02069	08/24/2009	08/24/2010
EN61K-4-6	Coaxial Cable 4-6 02-1			4-6 02-1	N/A	N/A
EN61K-4-6	Conducted Immunity Test System	Frankonia	CIT-10/75	102C3119	01/20/2010	01/20/2011
EN61K-4-6	EM-Clamp	Schaffner	KEMZ-801	19215	N/A	N/A
EN61K-4-8	Magnetic Field Meter 10	Combinova	MFM-10	645	02/19/2010	02/19/2011
EN61K-4-8	Magnetic Field Immunity Loop	FCC	F-1000-4-8-L-1M	01037	N/A	N/A
EN61K-4-8	Magnetic Field Test Generator	FCC	F-1000-4-8-G-125A	01038	N/A	N/A
EN61K-4-11	Voltage Dip and UP Simulator	NoiseKen	VDS-2002	VDS0640162	09/01/2009	09/01/2010

PS: N/A => The equipment does not need calibration.

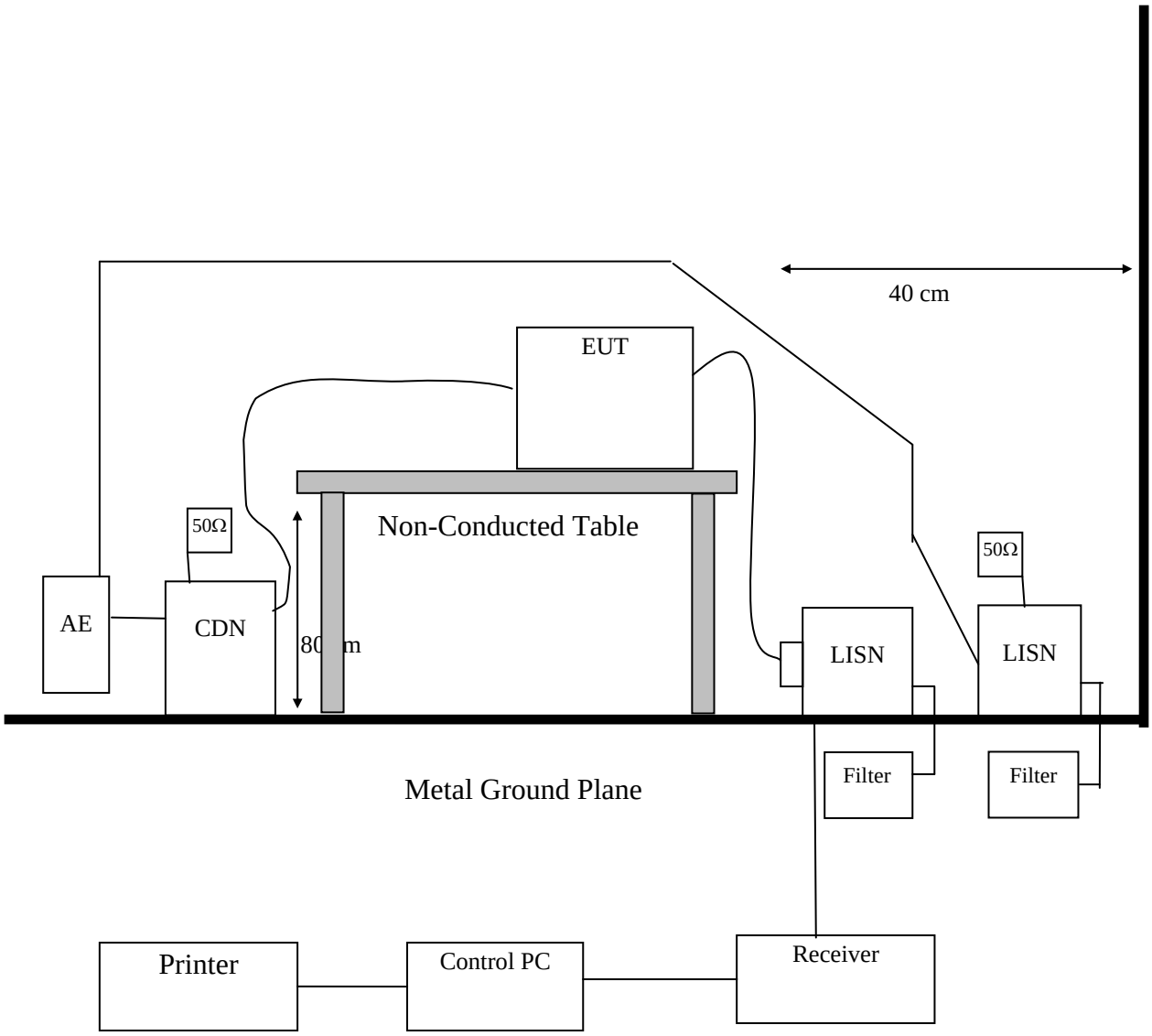
16.5.2 Software for Controlling Spectrum/Receiver and Calculating Test Data

Test Item	Filename	Version
EN61000-3-2	HARCS.EXE	4.14
EN61000-3-3	HARCS.EXE	4.14
EN61000-4-3	Tile.Exe	2.0.P
EN61000-4-6	EN61000-4-6 Application Software	1.13.e
EN61000-4-2	N/A	2.0
EN61000-4-4	Tema.EXE	1.69
EN61000-4-5	Tema.EXE	1.69
EN61000-4-8	N/A	
EN61000-4-11	VDS-2002Rs.EXE	2.00

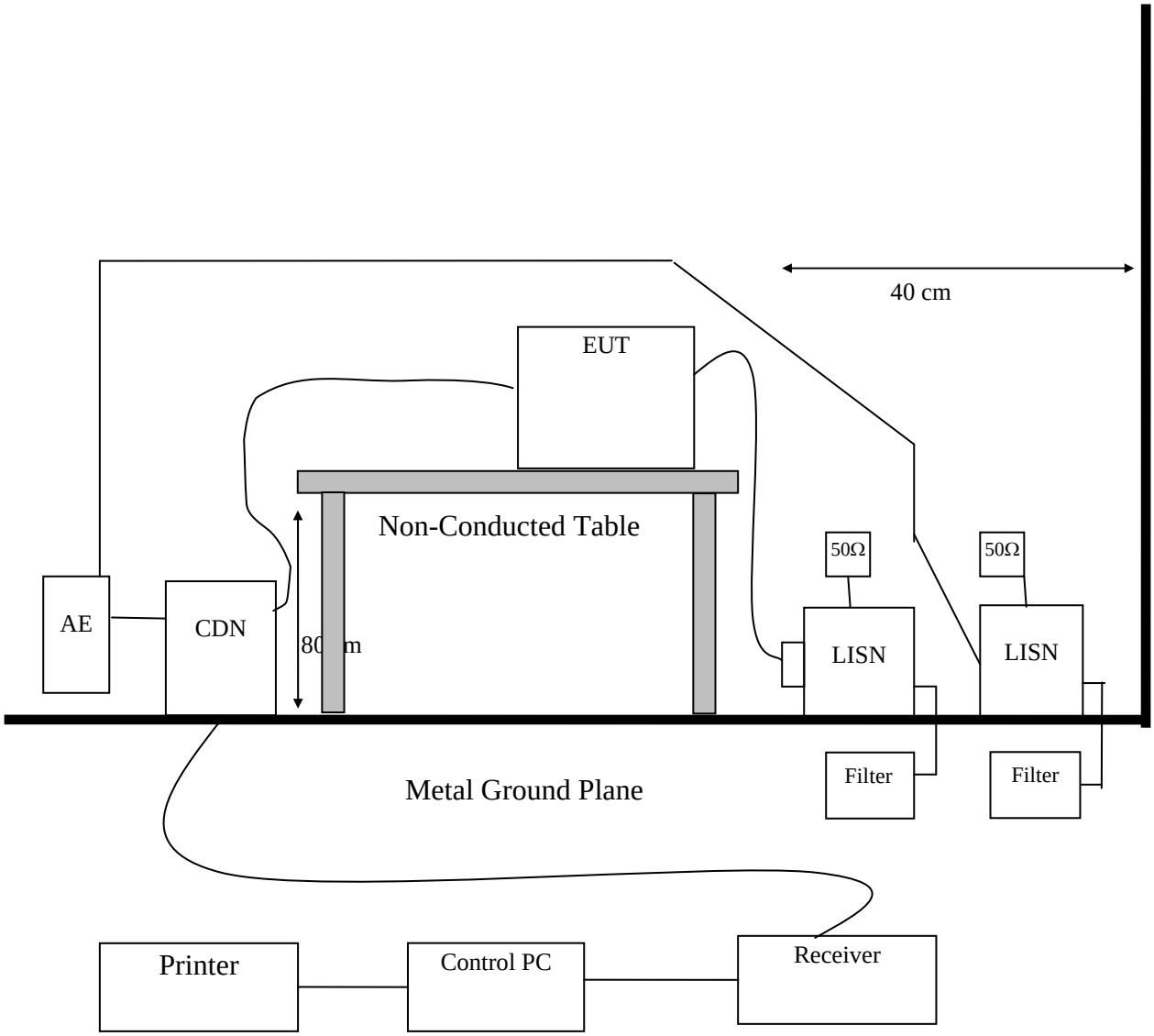
Radiation/Conduction	Filename	Version	Issued Date
Lung_Tan Conduction	EZ EMC	1.1.4.2	2/10/2007
Lung_Tan Radiation	EZ EMC	1.1.4.2	1/24/2007

16.6 Appendix E: Layout of EUT and Support Equipment

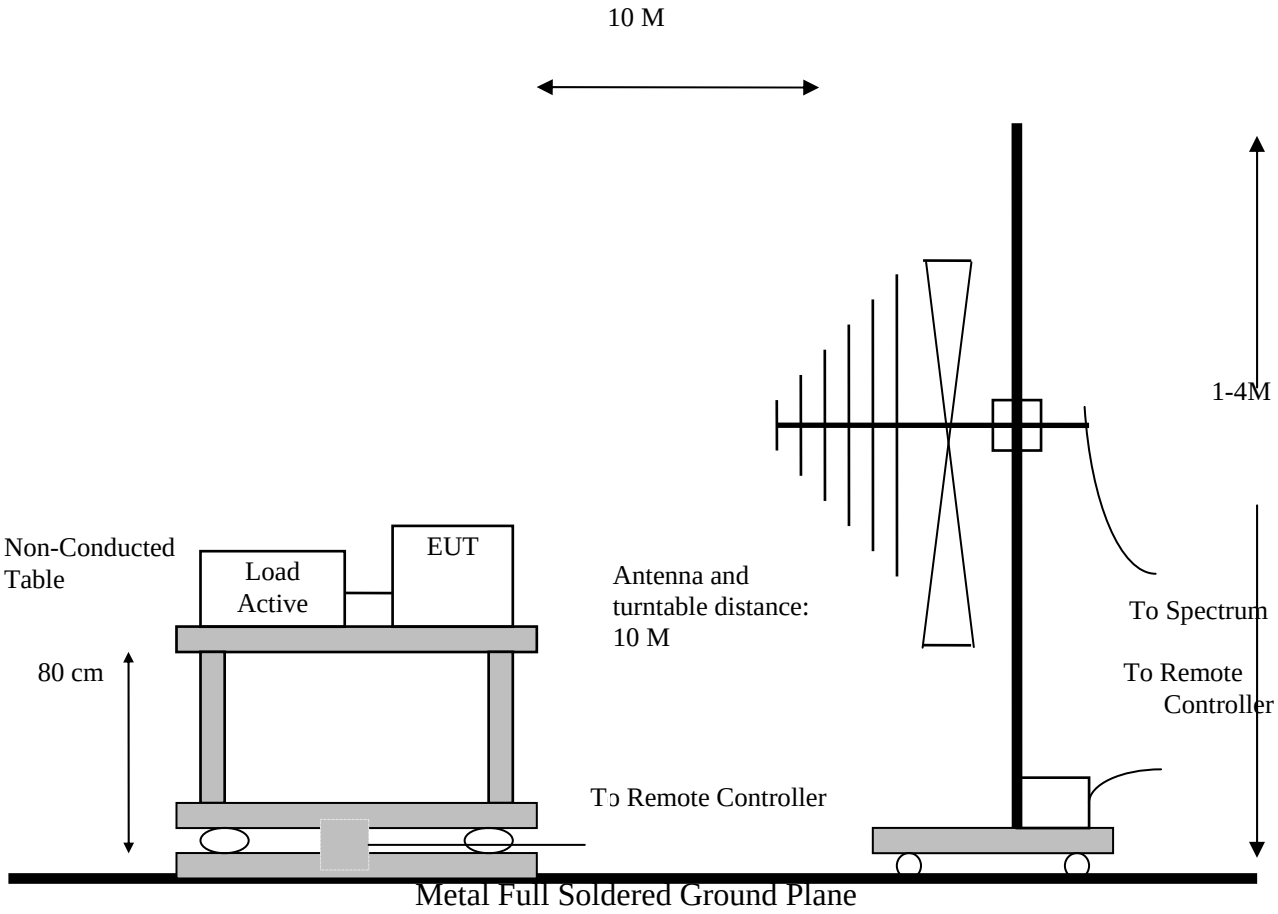
16.6.1 General Power Main Port Conducted Test Configuration

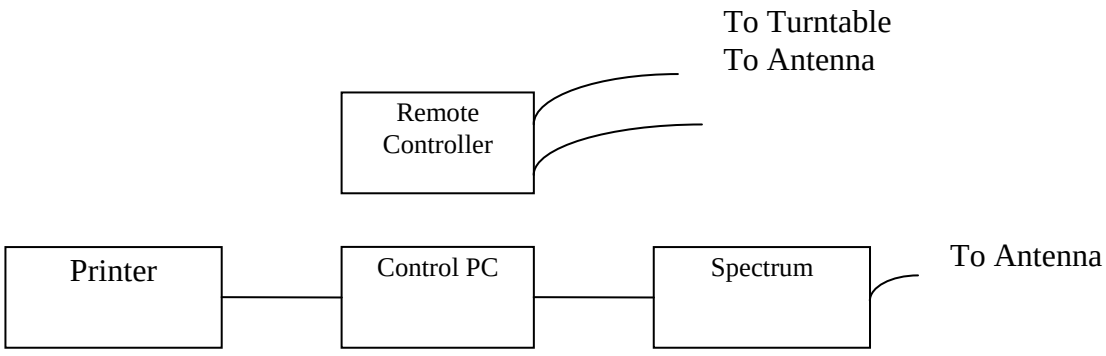


16.6.2 General Telecommunication Port Conducted Emission Test Configuration

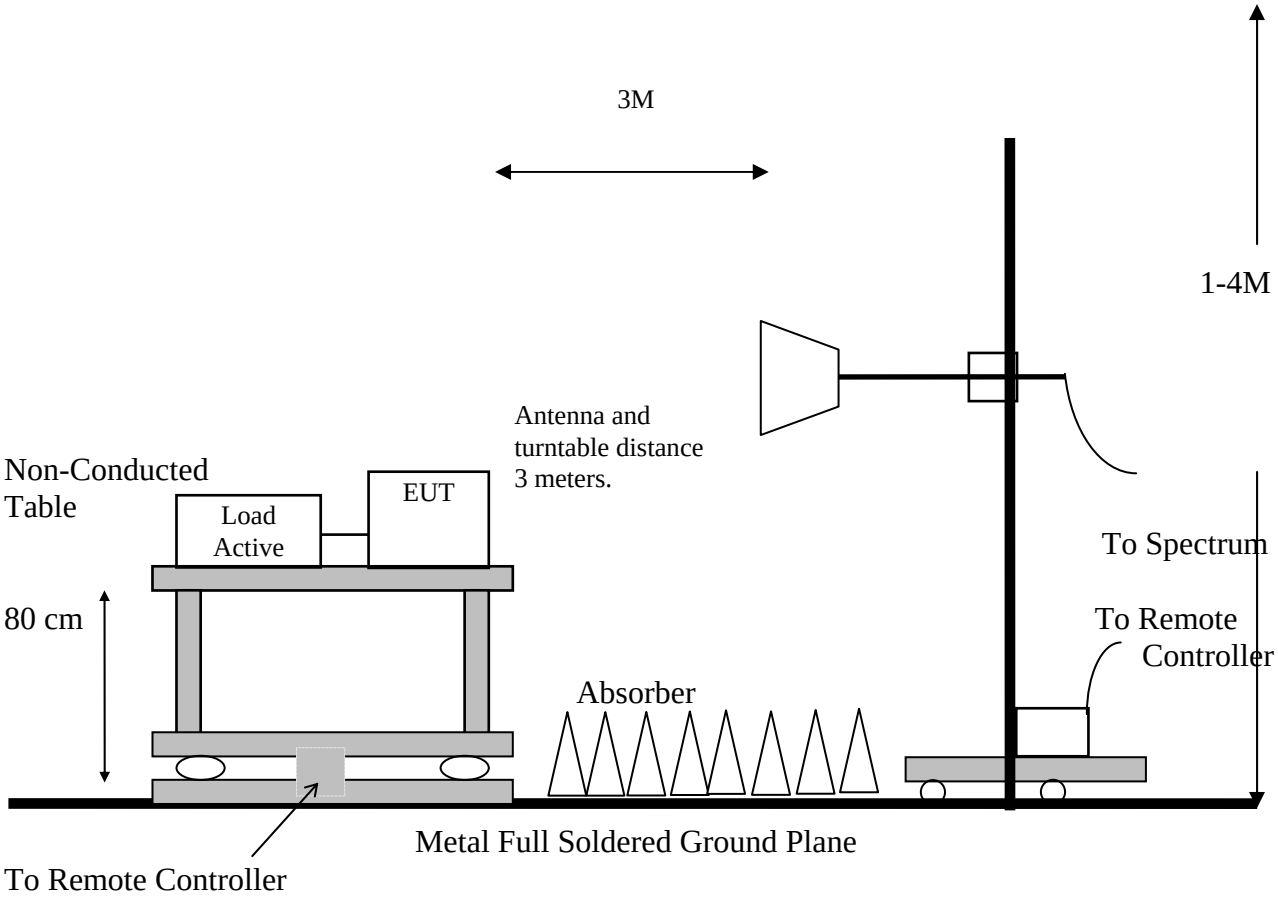


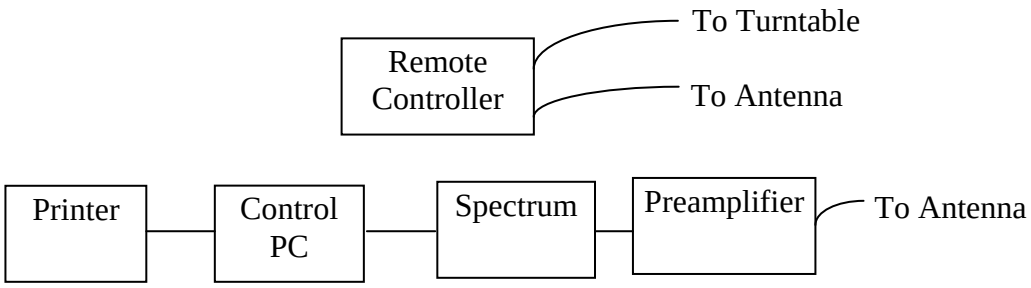
16.6.3 General Radiation Test Configuration <30MHz-1000MHz>





16.6.4 General Radiation Test Configuration <over 1GHz >





16.7 Appendix F: Uncertainty of Measurement

The measurement uncertainty refers to CISPR 16-4-2:2003. The coverage factor k = 2 yields approximately a 95 % level of confidence.

<Conduction 03>: ±3.551dB

<Chamber 02 (10M)>
Horizontal
30MHz~200MHz: ±4.251 dB
200MHz~1GHz: ±4.380 dB
Vertical
30MHz~200MHz: ±4.382 dB
200MHz~1GHz: ±4.384 dB

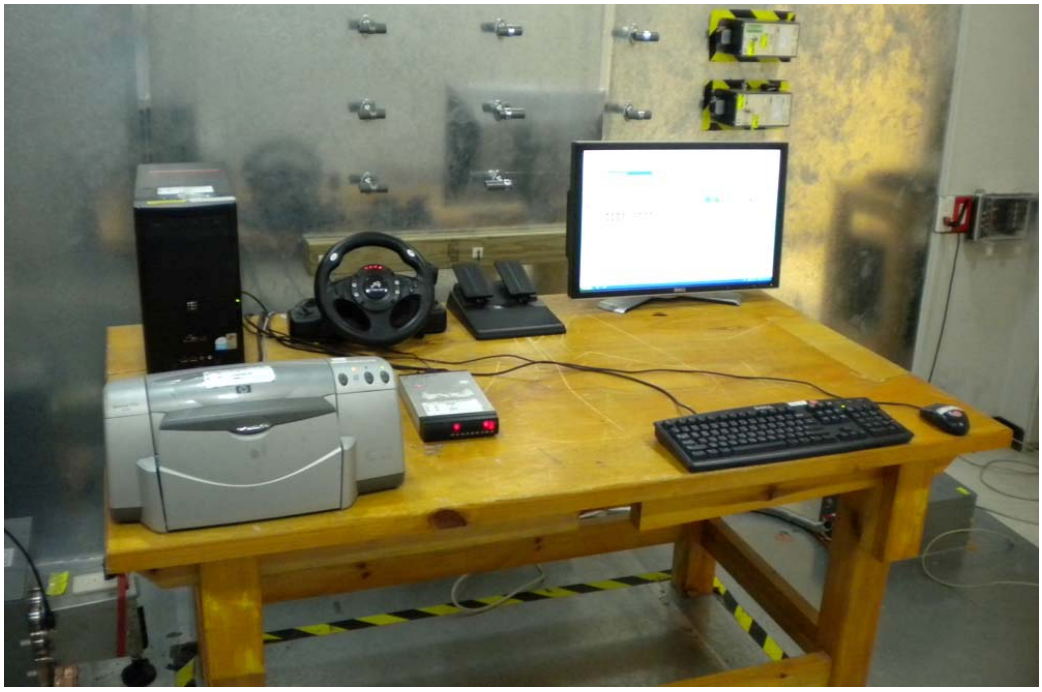
<Immunity 02>

Test item	Uncertainty
EN61000-4-2 (ESD)	
Voltage	±1.732%
First Peak current	±1.848%
current at 30ns	±1.85%
current at 60ns	±1.85%
EN61000-4-3 (RS)	±1.845 dB
EN61000-4-4 (EFT)	
Time	±3.233%
Voltage	±1.848%
Current	±1.848%
EN61000-4-5 (Surge)	
Time	±1.004%
Voltage	±1.414%
Current	±1.019%
EN61000-4-6 (CS)	±3.308dB
EN61000-4-8 (Magnetic)	±0.179%
EN61000-4-11 (Dips)	
Time	±2.8%
Voltage	±0.04%
Current	±3.646%
EN61000-3-2 (Harmonics)	±0.179 %
EN61000-3-3 (Fluctuations and Flicker)	±0.179 %

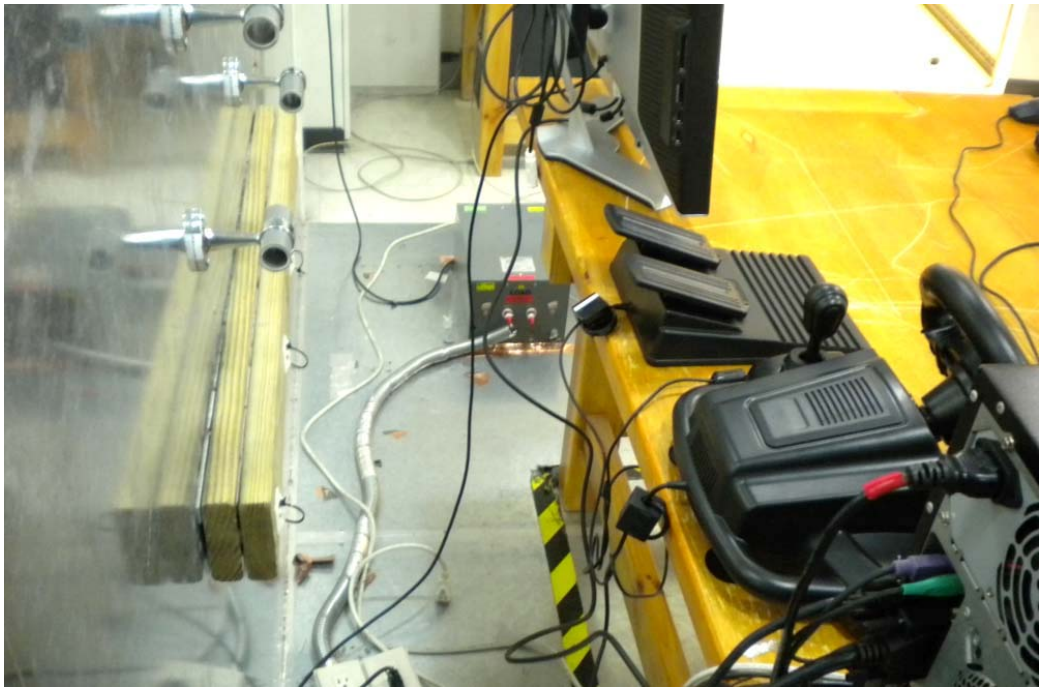
16.8 Appendix G: Photographs of EUT Configuration Test Set Up

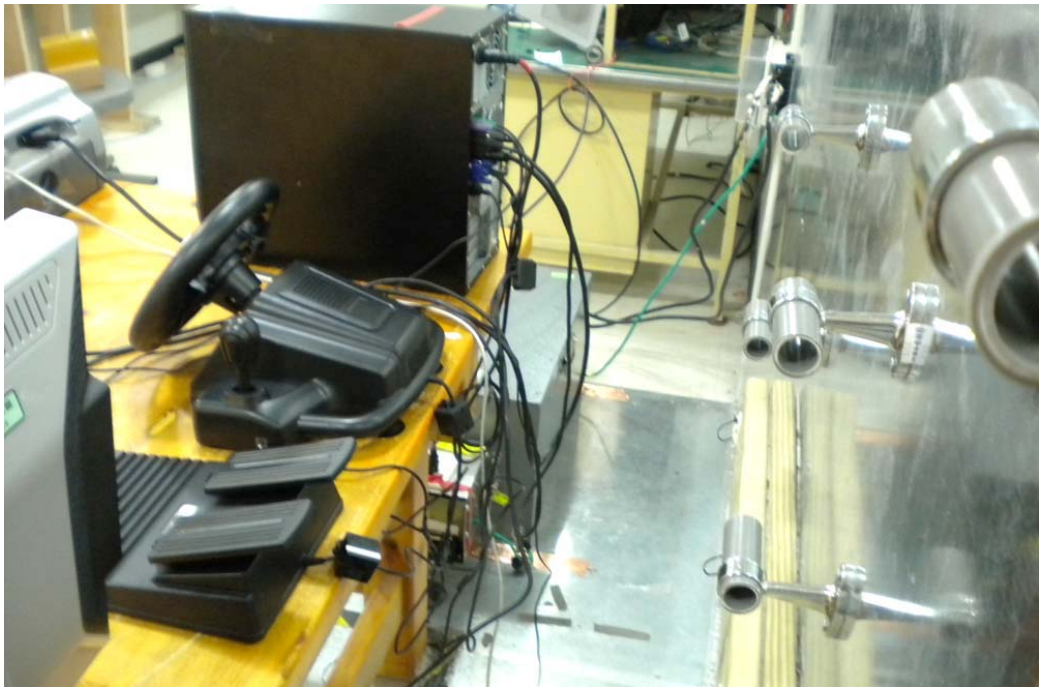
16.8.1 Photo of Main Power Port Conducted Emission and Telecommunication Port Conducted Emission Measurement

Front View



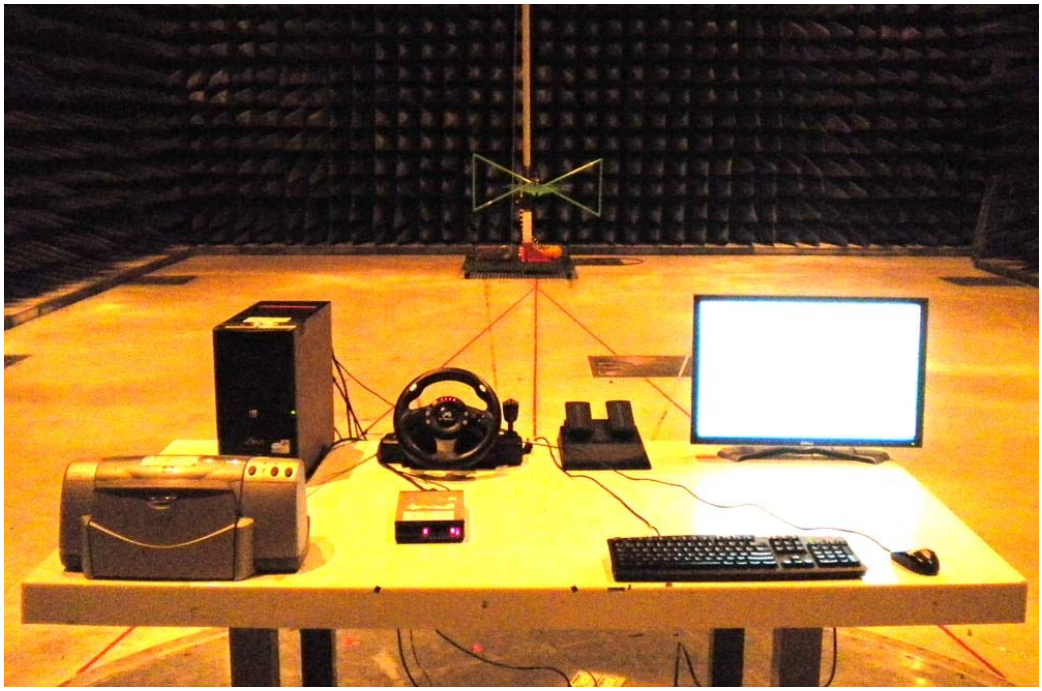
Back View



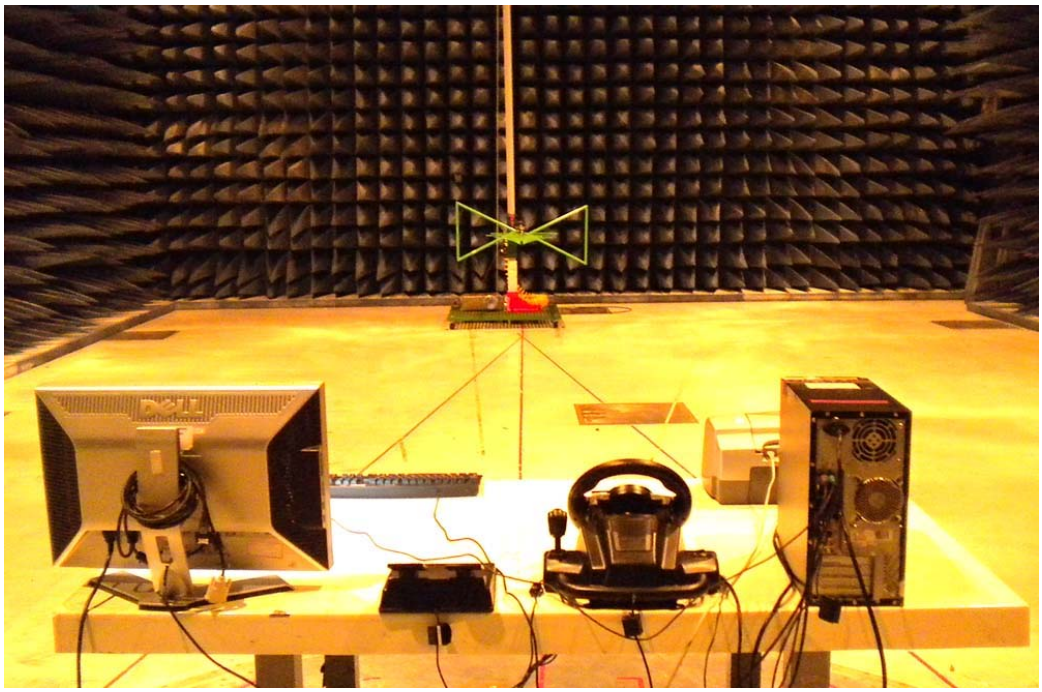


16.8.2 Photo of Radiated Emission Measurement

Front View



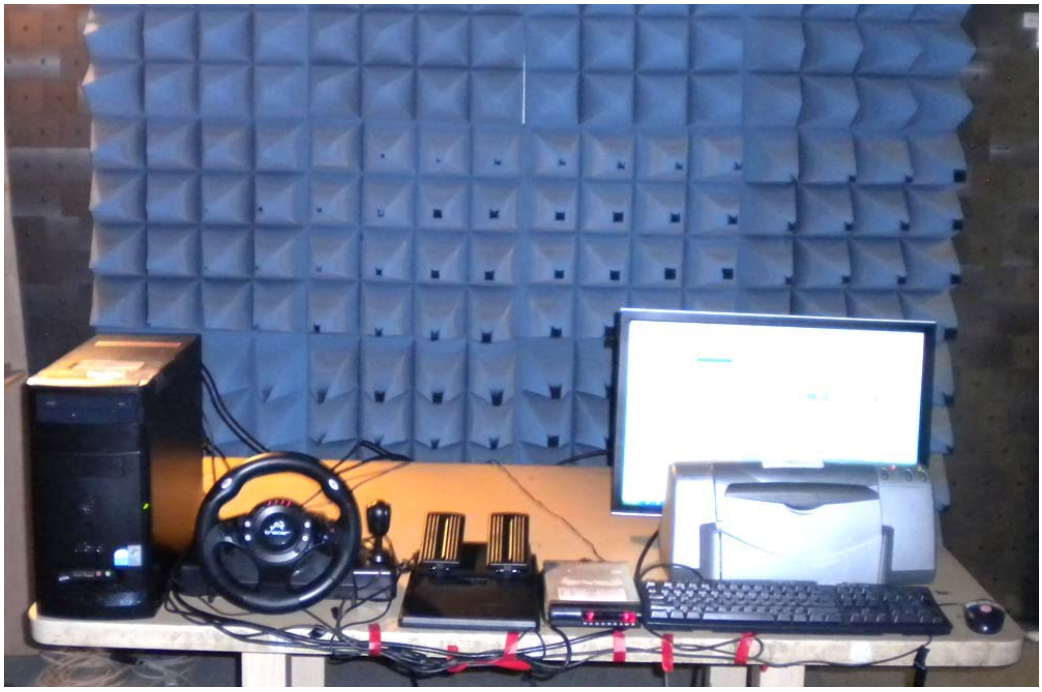
Back View



16.8.3 Photo of ESD Measurement

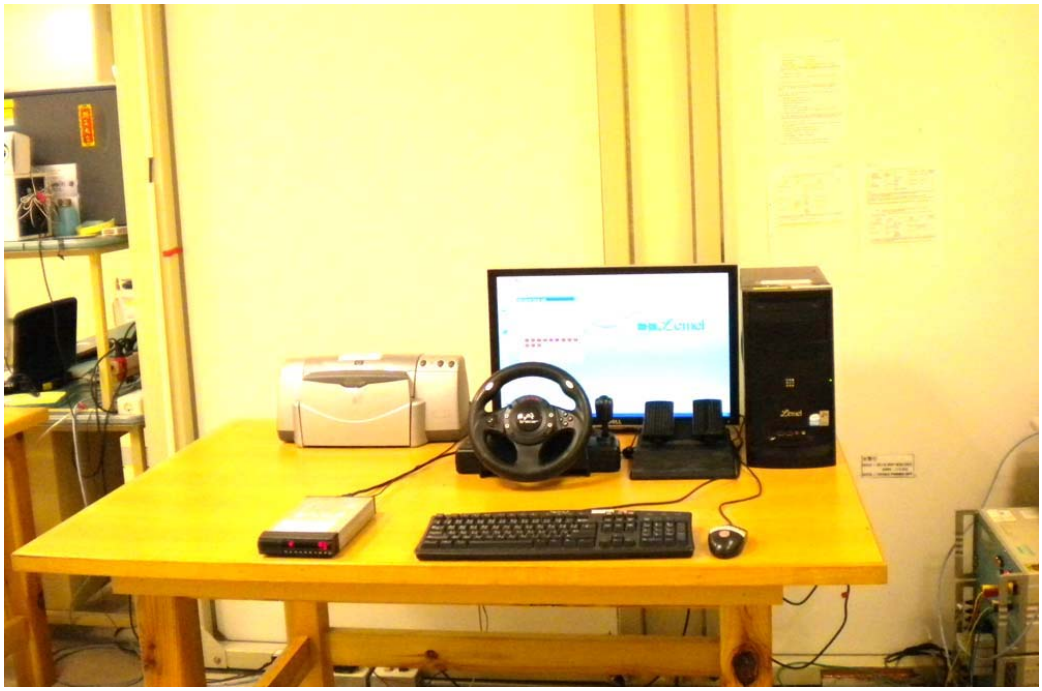
16.8.4 Photo of RF Field Strength Susceptibility Measurement

.



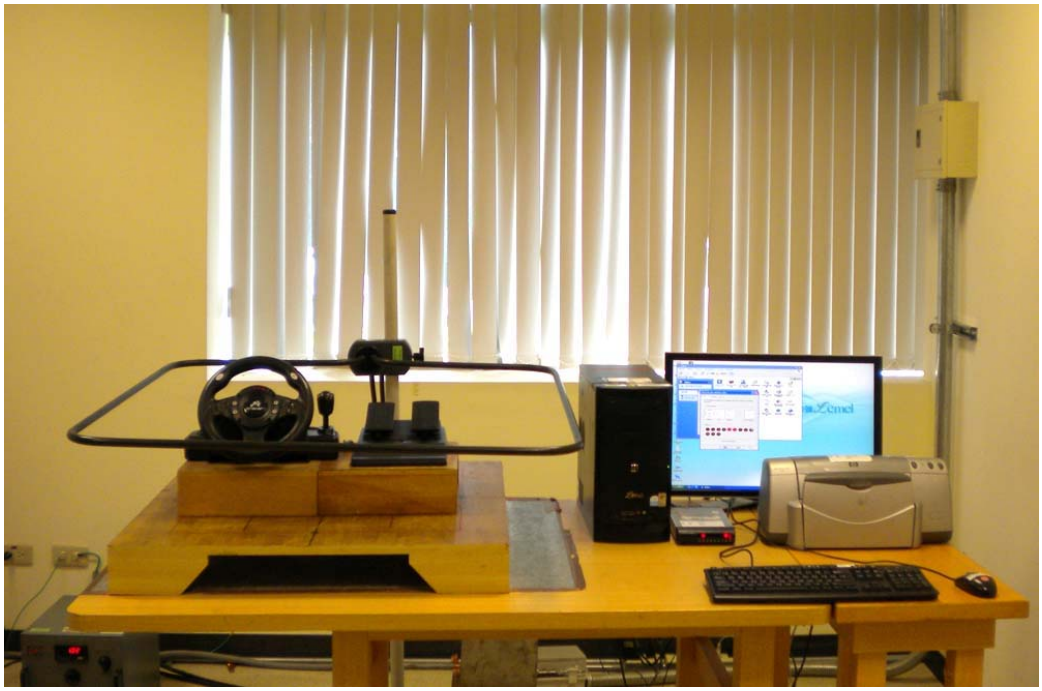
16.8.5 Photo of Electrical Fast Transient/Burst Measurement

16.8.6 Photo of Surge Measurement

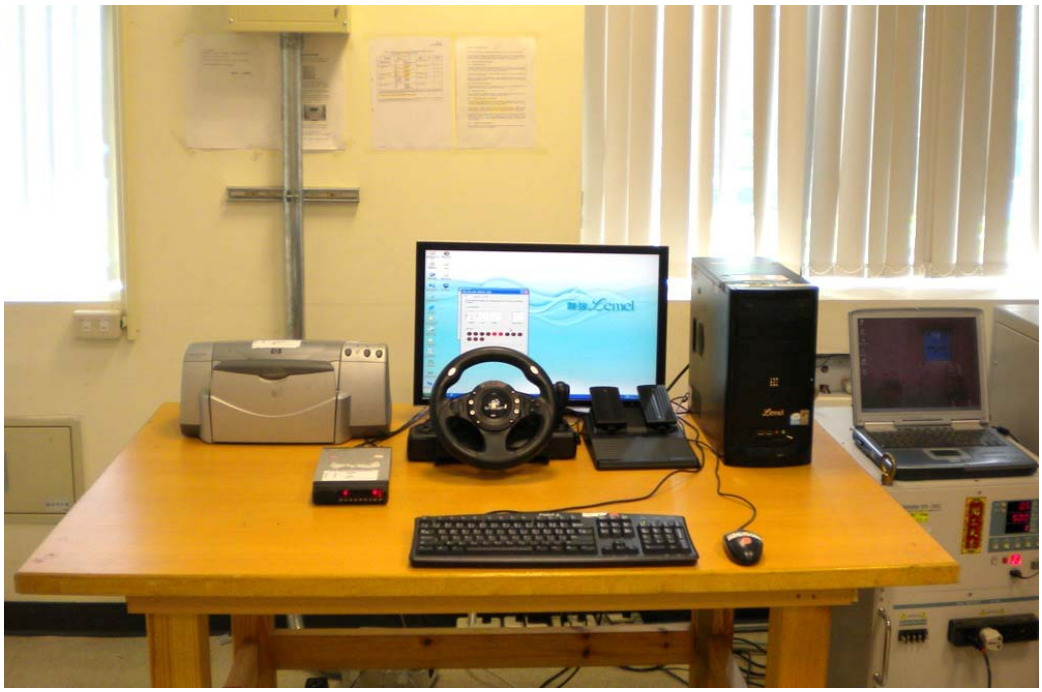


16.8.7 Photo of Conductive Measurement

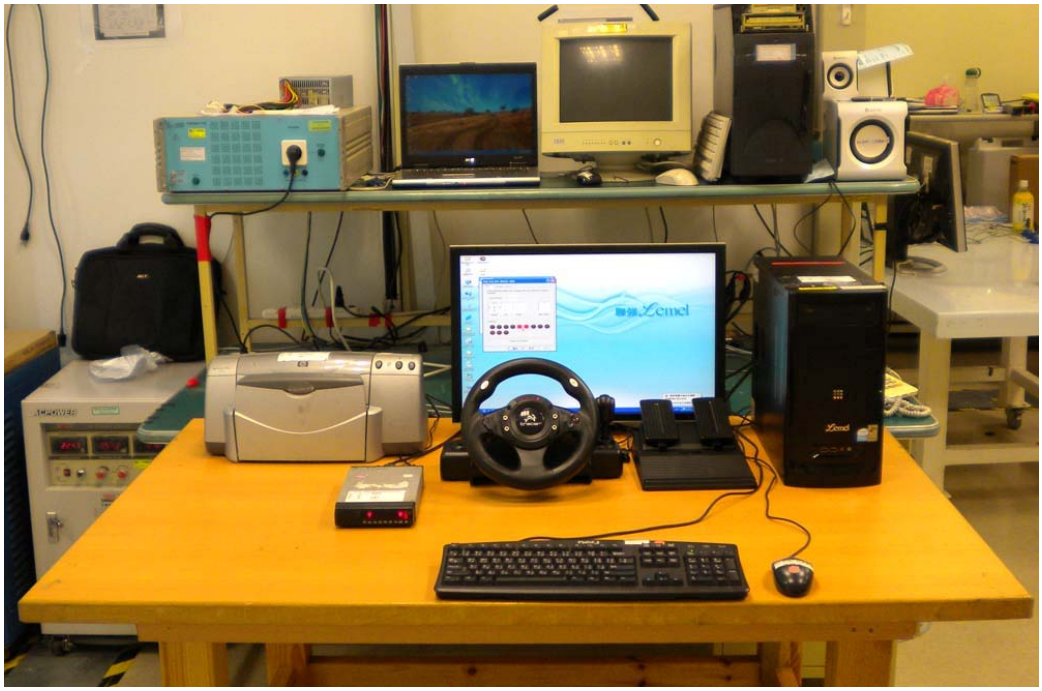
16.8.8 Photo of Magnetic field Measurement



16.8.9 Photo of Voltage Dips Measurement



16.8.10 Photo of Harmonics and Voltage Fluctuations



16.9 Photographs of EUT

Please refer to the File of ISL-*10LE178*P