FCC DoC TEST REPORT

REPORT NO.: FD990608D09

MODEL NO.: N3902

RECEIVED: June 8, 2010

TESTED: June 10, 2010

ISSUED: June 14, 2010

APPLICANT: PRIMAX ELECTRONICS LTD.

ADDRESS: No. 669, Ruey Kuang Road, Neihu, Taipei, Taiwan, R.O.C.

ISSUED BY: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

LAB LOCATION: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang, Taipei Hsien 244, Taiwan

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Testing Laboratory 2021

LAB CODE: 200836-0

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1 CERTIFICATION

PRODUCT:	Lenovo Wireless Mouse N3902
BRAND NAME :	lenovo
MODEL NO.:	N3902
APPLICANT:	PRIMAX ELECTRONICS LTD.
TEST ITEM:	ENGINEERING SAMPLE
TESTED:	June 10, 2010
STANDARDS:	FCC Part 15, Subpart B, Class B CISPR 22: 1997, Class B ICES-003: 2004, Class B ANSI C63.4-2003

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Celia Chen , **DATE:** June 14, 2010
(Celia Chen / Senior Specialist)

TECHNICAL ACCEPTANCE : Joyce Chen , **DATE:** June 14, 2010
(Joyce Chen / Senior Engineer)

APPROVED BY : Kenny Meng , **DATE:** June 14, 2010
(Kenny Meng / Assistant Manager)

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Remarks
FCC Part 15, Subpart B, Class B CISPR 22: 1997, Class B ICES-003: 2004, Class B	Conducted Test	PASS	Meets Class B Limit Minimum passing margin is –17.91 dB at 0.193 MHz
	Radiated Test (30MHz ~ 12.5GHz)	PASS	Meets Class B Limit Minimum passing margin is –7.27 dB at 228.38 MHz

Note: The limit for radiated test (for 30 ~ 1000MHz) was performed according to CISPR 22: 1997, which was specified in FCC PART 15 Subpart B 15.109(g). Also the limits of ICES-003: 2004 and CISPR 22:1997 Subpart B are same.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	150kHz ~ 30MHz	2.41 dB
Radiated emissions	30MHz ~ 1GHz	3.54 dB
	1GHz ~ 40GHz	2.89 dB

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Lenovo Wireless Mouse N3902
MODEL NO.	N3902
POWER SUPPLY	3Vdc from batteries (for Mouse) 5.0Vdc from host equipment (for Dongle)
DATA CABLE SUPPLIED	N/A

NOTE:

1. The EUT is a Lenovo Wireless Mouse N3902 including wireless mouse and dongle (USB type).

2. The EUT consumed power from PC, which designed with AC power supply of 100-240V, 50/ 60Hz.
   For radiated emission evaluation, 230Vac/50Hz (for EN 55022), 120Vac/60Hz (for FCC Part 15) had been covered during the pre-test. The worst radiated emission data was founded at **120Vac/60Hz** and recorded in the applied test report.

3. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

3.2 DESCRIPTION OF SUPPORT UNITS

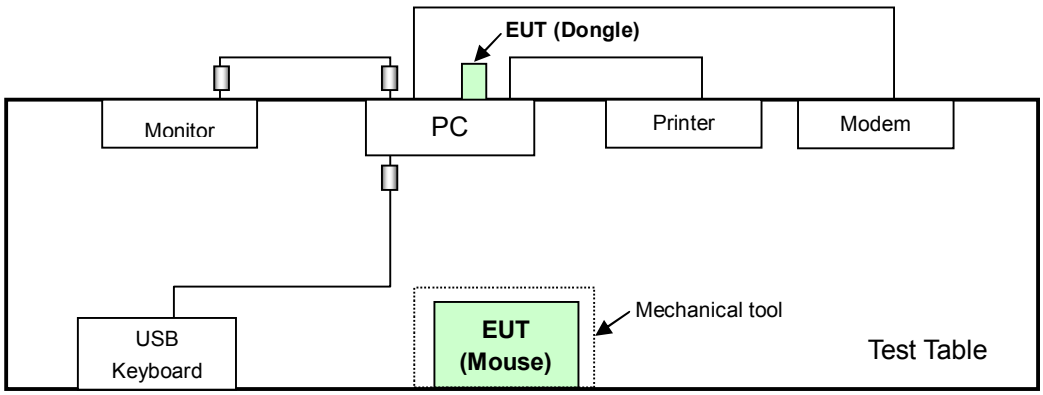
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	PERSONAL COMPUTER	LENOVO	MT-M7611R89	R8CGYRN	FCC DoC Approved
2	LCD MONITOR	LENOVO	L2440xwC	VN08481	FCC DoC Approved
3	PRINTER	EPSON	LQ-300+	DCGY017058	FCC DoC Approved
4	MODEM	ACEEX	1414	980020526	IFAXDM1414
5	USB KEYBOARD	LENOVO	KU-0225	0368885	FCC DoC Approved

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A
2	1.8 m braid shielded wire, terminated with VGA connector via metallic frame, with two cores
3	1.8m braid shielded wire, terminated with DB25 and Centronics connector via metallic frame, w/o core
4	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame, w/o core.
5	1.8 m braid shielded wire, terminated with USB connector via drain wire, with one core.

NOTE: All power cords of the above support units are non-shielded (1.8m).

TEST CONFIGURATION



4 EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

TEST STANDARD:

FCC Part 15, Subpart B (Section: 15.107)

CISPR 22: 1997 (section 5)

ICES-003: 2004 (Class A: section 5.2)
(Class B: section 5.3)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

NOTE: (1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
(3) All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS 30	100276	Dec. 15, 2009	Dec. 14, 2010
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100218	Nov. 24, 2009	Nov. 23, 2010
LISN With Adapter (for EUT)	AD10	C10Ada-001	Nov. 24, 2009	Nov. 23, 2010
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100219	Nov. 23, 2009	Nov. 22, 2010
Software	ADT_Cond_V7.3.7	NA	NA	NA
Software	ADT_ISN_V7.3.7	NA	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	Feb. 23, 2010	Feb. 22, 2011
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-010773	Feb. 23, 2010	Feb. 22, 2011

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. 10.
3. The VCCI Site Registration No. C-1852.

4.1.3 TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4-2003 (section 7), CISPR 22 (section 9) and ICES-003: 2004 (section 4).

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

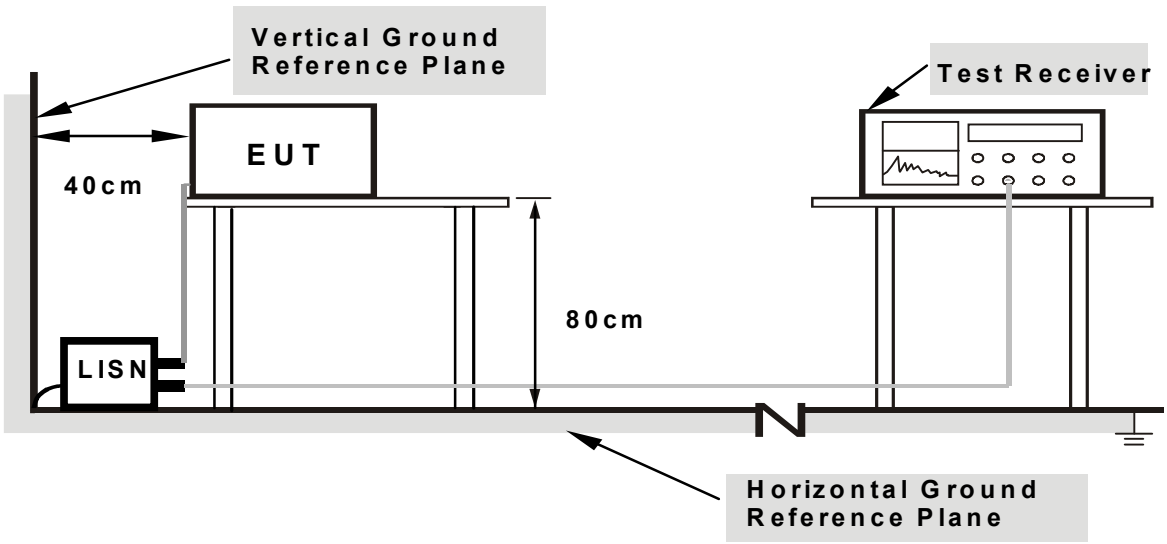
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80cm from EUT and at least 80cm from other units and other metal planes support units.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.1.6 EUT OPERATING CONDITIONS

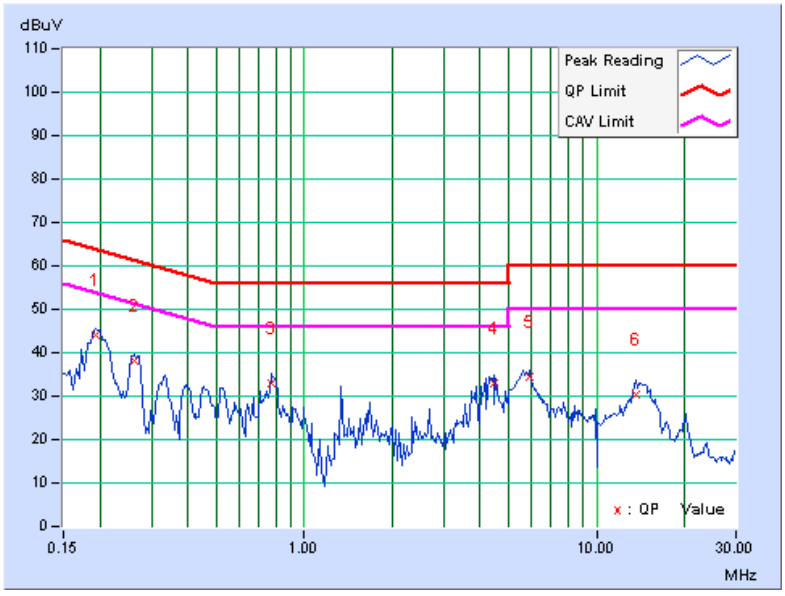
a. Turned on the power of all equipment.
b. PC ran a test program to enable all functions.
c. PC read and wrote messages from/to HDD.
d. Connected the Dongle (EUT) with a PC on the testing table.
e. Checked if the Dongle (EUT) and the wireless mouse (EUT) were set at the same channel.
f. Set the wireless mouse (EUT) under transmitting condition at specific channel.
g. A mechanical tool designed for help the wireless mouse (EUT), was turned on the working mode function.
h. PC sent "H" messages to monitor and monitor displayed "H" patterns on screen.
i. PC sent messages to printer and printer printed it out.
j. PC sent messages to modem.
k. Repeated steps c-k.

4.1.7 TEST RESULTS

TEST MODE	Operating	6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	PHASE	Line (L)
ENVIRONMENTAL CONDITIONS	25deg. C, 79% RH, 1009hPa	TESTED BY: Brad Tung	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.193	0.19	43.72	-	43.91	-	63.91	53.91	-20.00	-
2	0.263	0.22	37.88	-	38.10	-	61.33	51.33	-23.22	-
3	0.775	0.31	32.47	-	32.78	-	56.00	46.00	-23.22	-
4	4.449	0.51	32.36	-	32.87	-	56.00	46.00	-23.13	-
5	5.902	0.56	33.94	-	34.50	-	60.00	50.00	-25.50	-
6	13.629	0.95	29.54	-	30.49	-	60.00	50.00	-29.51	-

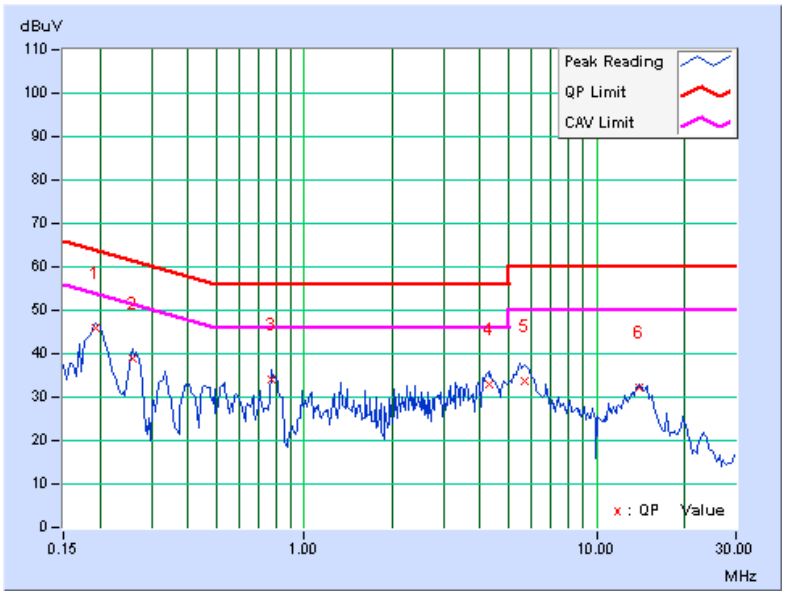
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



TEST MODE	Operating	**6dB BANDWIDTH**	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	25deg. C, 79% RH, 1009hPa	**TESTED BY:** Brad Tung	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.193**	**0.28**	**45.72**	**-**	**46.00**	**-**	**63.91**	**53.91**	**-17.91**	**-**
2	0.259	0.31	38.71	-	39.02	-	61.45	51.45	-22.43	-
3	0.775	0.39	33.58	-	33.97	-	56.00	46.00	-22.03	-
4	4.277	0.56	32.23	-	32.79	-	56.00	46.00	-23.21	-
5	5.668	0.59	33.22	-	33.81	-	60.00	50.00	-26.19	-
6	14.035	0.88	31.51	-	32.39	-	60.00	50.00	-27.61	-

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

TEST STANDARD:
FCC Part 15, Subpart B (Section: 15.109)
CISPR 22: 1997 (section 6)
ICES-003: 2004 (Class A: Section 5.4)
(Class B: Section 5.5)

FOR FREQUENCY BELOW 1000 MHz

FREQUENCY (MHz)	Class A (at 10m)	Class B (at 10m)
	dBuV/m	dBuV/m
30 – 230	40	30
230 - 1000	47	37

Note: The limit for radiated test was performed according to CISPR 22: 1997, which was specified in FCC PART 15B 15.109(g). Also the limits of ICES-003: 2004 and CISPR 22: 1997 are same.

LIMIT OF RADIATED EMISSION OF FCC PART 15, SUBPART B FOR FREQUENCY ABOVE 1000 MHz

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80.0	60.0	74.0	54.0

Note: (1) The lower limit shall apply at the transition frequencies.
(2) Emission level (dBuV/m) = 20 log Emission level (uV/m).
(3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

FREQUENCY RANGE OF RADIATED MEASUREMENT
(For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

4.2.2 TEST INSTRUMENTS

Frequency Range 30MHz~1GHz

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ROHDE & SCHWARZ TEST RECEIVER	ESVS 30	841977/008	Apr. 27, 2010	Apr. 26, 2011
SCHAFFNER BILOG Antenna	CBL6111C	2793	Apr. 29, 2010	Apr. 28, 2011
ADT. Turn Table	TT100	0201	NA	NA
ADT. Tower	AT100	0201	NA	NA
Software	ADT_Radiated _V7.6.15.9.2	NA	NA	NA
ADT RF Switches BOX	EM-H-01-1	1004	Dec. 17, 2009	Dec. 16, 2010
WOKEN RF cable	8D	CABLE-ST10-01	Dec. 17, 2009	Dec. 16, 2010

NOTE: 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Open Site No. 10.
3. The VCCI Site Registration No. R-1625.
4. The Industry Canada Reference No. IC 7450E-10.
5. The FCC Site Registration No. 698148.

Frequency Range above 1GHz

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum	8564EC	4208A00659	Jul. 24, 2009	Jul. 23, 2010
Agilent Preamplifier	8449B	3008A01924	Aug. 31, 2009	Aug. 30, 2010
Agilent Preamplifier	8449B	3008A01292	Aug. 10, 2009	Aug. 09, 2010
MITEQ Preamplifier	AMF-6F-260400-33-8P	892164	Aug. 31, 2009	Aug. 30, 2010
Schwarzbeck Horn Antenna	BBHA-9170	BBHA9170190	Sep. 24, 2009	Sep. 23, 2010
Schwarzbeck Horn Antenna	BBHA-9120	D130	May 25, 2010	May 24, 2011
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	ADT_Radiated_V 7.6.15.9.2	NA	NA	NA
SUHNER RF cable	SF104-26.5	Cable-CH6-17 m-01	Aug. 20, 2009	Aug. 19, 2010

NOTE: 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Chamber No. 6.
3. The Industry Canada Reference No. IC 7450E-6.
4. The FCC Site Registration No. 447212.

4.2.3 TEST PROCEDURE

The basic test procedure was in accordance with ANSI C63.4-2003 (section 8), CISPR 22 (section 10) and ICES-003: 2004 (section 4).

<Frequency Range 30MHz ~ 1GHz>

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open test site. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the turn table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

NOTE: The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.

<Frequency Range above 1GHz>

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter Semi-anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna can be varied from one meter to four meters, the height of adjustment depends on the EUT height and the antenna 3dB beamwidth both, to detect the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.

NOTE:

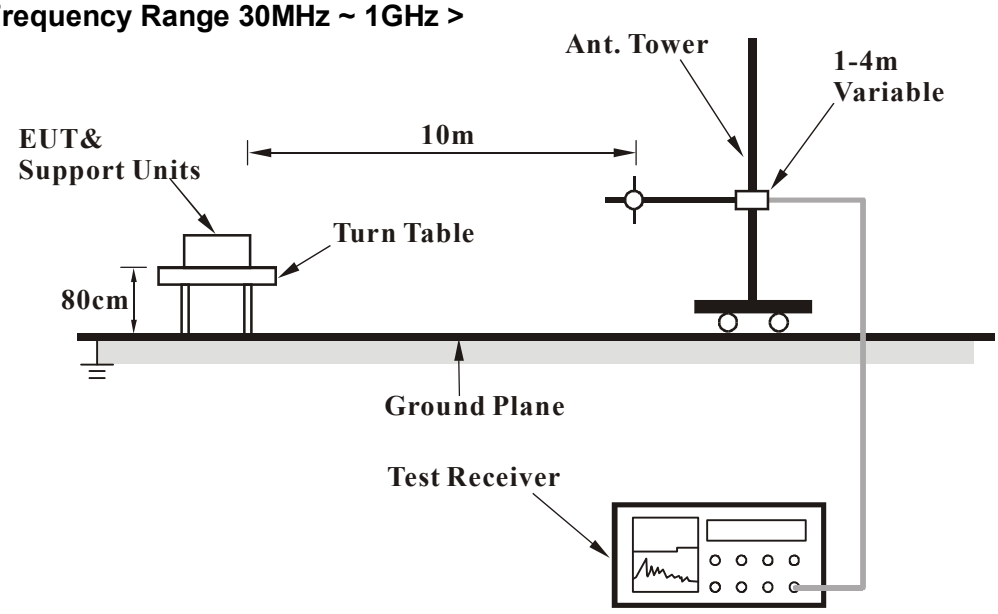
1. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz for Average detection (AV) at frequency above 1GHz.
2. For measurement of frequency above 1000 MHz, the EUT was set 3 meters away from the receiver antenna.

4.2.4 DEVIATION FROM TEST STANDARD

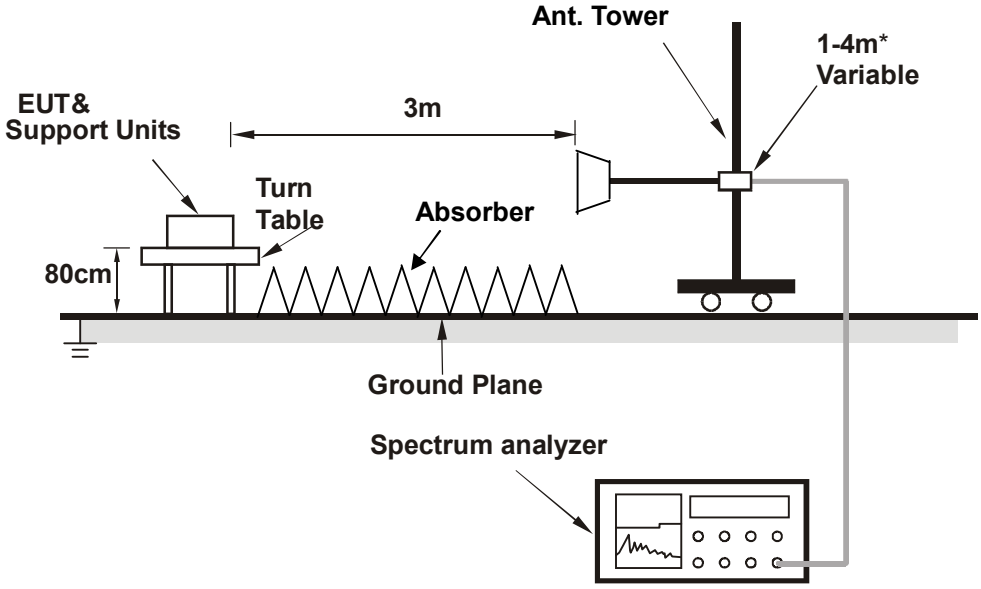
No deviation

4.2.5 TEST SETUP

<Frequency Range 30MHz ~ 1GHz >



<Frequency Range above 1GHz>



* : depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.6 EUT OPERATING CONDITIONS

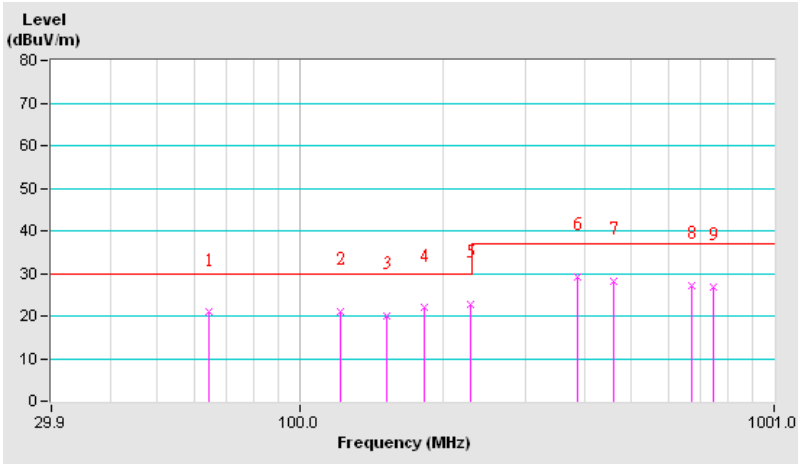
Same as item 4.1.6

4.2.7 TEST RESULTS

TEST MODE	Operating		
FREQUENCY RANGE	30-1000 MHz	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	23deg. C, 85% RH, 1008hPa	**TESTED BY:** Vhenson Huang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 10 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	64.37	20.88 QP	30.00	-9.12	4.00 H	125	13.32	7.56
2	121.78	21.07 QP	30.00	-8.93	4.00 H	213	8.79	12.28
3	152.51	19.96 QP	30.00	-10.04	4.00 H	175	6.52	13.44
4	183.22	21.94 QP	30.00	-8.06	4.00 H	127	10.18	11.76
5	**228.38**	**22.73 QP**	**30.00**	**-7.27**	**4.00 H**	**83**	**9.09**	**13.64**
6	384.71	29.19 QP	37.00	-7.81	2.38 H	339	9.94	19.25
7	458.12	28.28 QP	37.00	-8.72	1.96 H	119	6.99	21.29
8	668.74	27.08 QP	37.00	-9.92	1.42 H	255	2.26	24.82
9	747.32	26.86 QP	37.00	-10.14	1.00 H	142	0.95	25.91

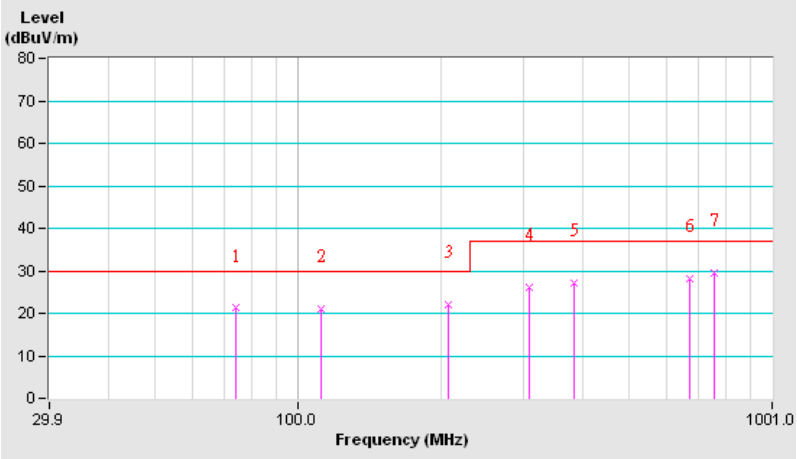
REMARKS:
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



TEST MODE	Operating		
FREQUENCY RANGE	30-1000 MHz	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Quasi-Peak, 120kHz
ENVIRONMENTAL CONDITIONS	23deg. C, 85% RH, 1008hPa	**TESTED BY:** Vhenson Huang	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 10 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	73.94	21.24 QP	30.00	-8.76	1.00 V	344	12.94	8.30
2	111.56	21.15 QP	30.00	-8.85	1.00 V	228	9.31	11.84
3	207.15	21.98 QP	30.00	-8.02	1.00 V	251	10.16	11.82
4	307.54	26.22 QP	37.00	-10.78	1.00 V	69	10.09	16.13
5	383.69	27.22 QP	37.00	-9.78	1.00 V	108	8.01	19.21
6	668.96	28.29 QP	37.00	-8.71	2.66 V	195	3.47	24.82
7	757.23	29.47 QP	37.00	-7.53	2.41 V	103	3.39	26.08

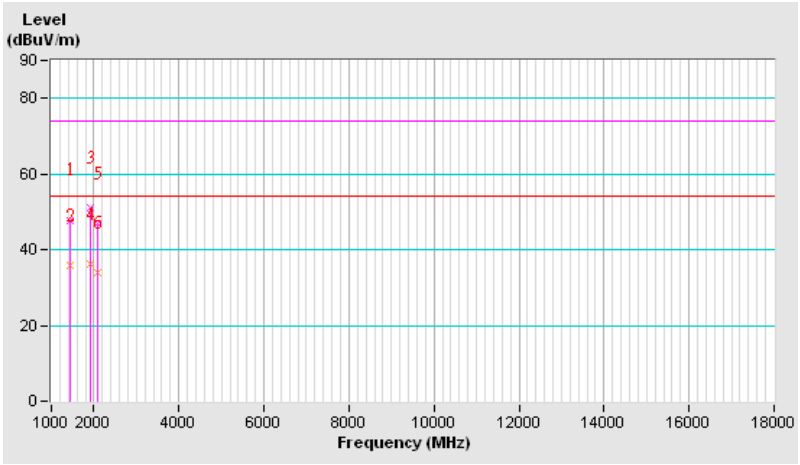
REMARKS:
1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



TEST MODE	Operating		
FREQUENCY RANGE	1-12.5GHz	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Peak/ Average, 1MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 81% RH, 1008hPa	**TESTED BY:** Kobe Lu	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1434.25	47.85 PK	74.00	-26.15	1.00 H	138	19.13	28.71
2	1434.25	35.76 AV	54.00	-18.24	1.00 H	138	7.04	28.71
3	1914.57	51.11 PK	74.00	-22.89	1.25 H	55	21.39	29.72
4	1914.57	36.25 AV	54.00	-17.75	1.25 H	55	6.53	29.72
5	2074.86	46.87 PK	74.00	-27.13	1.00 H	303	16.67	30.20
6	2074.86	33.95 AV	54.00	-20.05	1.00 H	303	3.75	30.20

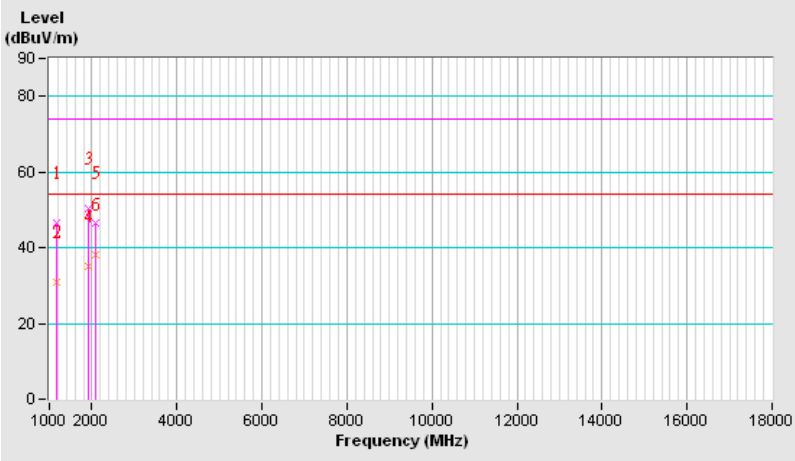
REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



TEST MODE	Operating		
FREQUENCY RANGE	1-12.5GHz	**DETECTOR FUNCTION & RESOLUTION BANDWIDTH**	Peak/ Average, 1MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 81% RH, 1008hPa	**TESTED BY:** Kobe Lu	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1166.24	46.60 PK	74.00	-27.40	1.12 V	27	18.73	27.88
2	1166.24	30.81 AV	54.00	-23.19	1.12 V	27	2.94	27.88
3	1916.24	50.19 PK	74.00	-23.81	1.00 V	184	20.47	29.72
4	1916.24	34.96 AV	54.00	-19.04	1.00 V	184	5.24	29.72
5	2074.35	46.54 PK	74.00	-27.46	1.27 V	226	16.34	30.20
6	2074.35	37.97 AV	54.00	-16.03	1.27 V	226	7.77	30.20

REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

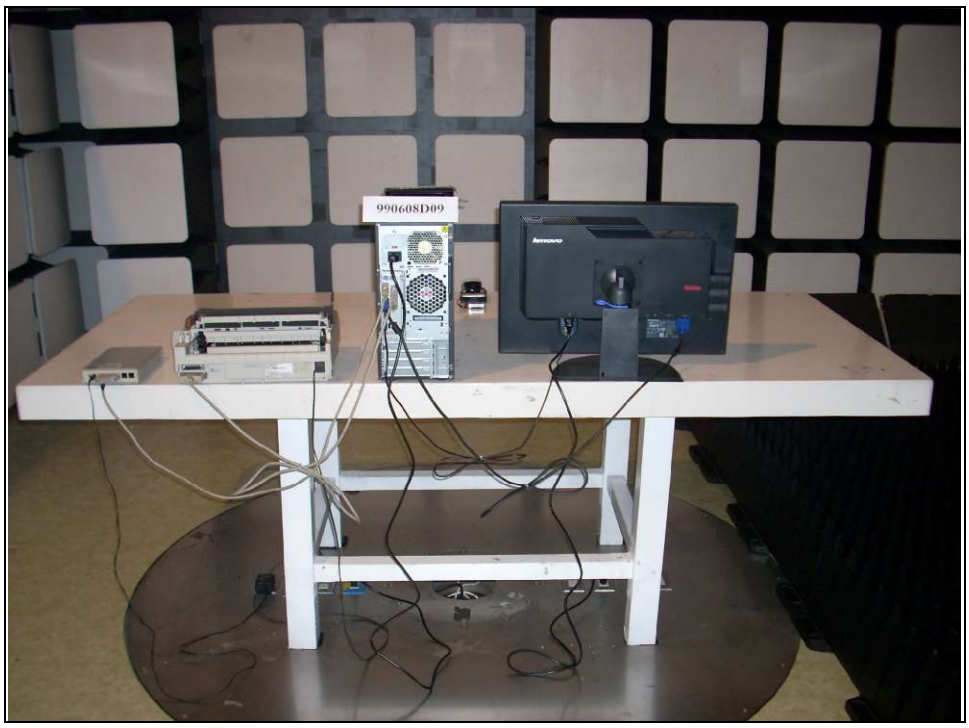


5 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST

RADIATED EMISSION TEST
<Frequency Range 30MHz~1GHz>

RADIATED EMISSION TEST
<Frequency Range above 1GHz>



6 INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml.
If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab:
Tel: 886-3-3183232
Fax: 886-3-3185050

Email: service@adt.com.tw
Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

7 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

--- END ---