

Neutron Engineering Inc.

EMC TEST Report

FCC ID: H8GNB90DP

This report concerns (check one) : Criginal Grant Class II Change

Issued Date : May 11, 2006 Report No. : 0603C038 Equipment : Wireless Battery Free Optical Mouse Model No. : NB-90D

Applicant: A-FOUR TECH CO., LTD.

Address: 6F, No.108, Min-Chuan Rd., Hsin-Tien, Taipei, Taiwan, R.O.C.

Tested by: Neutron Engineering Inc. EMC Laboratory Data of Test: Mar. 22, 2006 ~ Apr. 13, 2006

Testing Engineer

Technical Manager

Authorized Signatory

NEUTRON ENGINEERING INC.

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Report No.: NEI-FCCP-1-0603C038

Page 1 of 25



Declaration

Neutron represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C**., or National Institute of Standards and Technology (**NIST**) of **U.S.A**.

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Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Assessment Authorities





Test Standard/Scope/Item Acceptance

FCC Part 15 Subpart B IEC/CISPR22 AS/NZS CISPR 22 CNS 13438

FCC Part 15 Subpart B CISPR 22/EN 55022 AS/NZS CISPR 22 VCCI -Technical Requirement CNS 13438 SS IEC/CISPR 22 IEC/EN 61000-3-2 IEC/EN 61000-4-5 IEC/EN 61000-3-3 IEC/EN 61000-4-6 IEC/EN 61000-4-2 IEC/EN 61000-4-8 IEC/EN 61000-4-3 IEC/EN 61000-4-11 IEC/EN 61000-4-4

Report No.: NEI-FCCP-1-0603C038





Table of Contents P	age
1. CERTIFICATION	4
2 . SUMMARY OF TEST RESULTS	5
2.1 TEST FACILITY	6
2.2 MEASUREMENT UNCERTAINTY	6
3 . GENERAL INFORMATION	7
3.1 GENERAL DESCRIPTION OF EUT	7
3.2 DESCRIPTION OF TEST MODES	8
3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	9
3.4 DESCRIPTION OF SUPPORT UNITS	10
4 . EMC EMISSION TEST	11
4.1 CONDUCTED EMISSION MEASUREMENT 4.1.1 POWER LINE CONDUCTED EMISSION	11
4.1.2 MEASUREMENT INSTRUMENTS LIST	11 11
4.1.3 TEST PROCEDURE	12
4.1.4 DEVIATION FROM TEST STANDARD 4.1.5 TEST SETUP	12 12
4.1.6 EUT OPERATING CONDITIONS	13
4.1.7 TEST RESULTS	14
4.2 RADIATED EMISSION MEASUREMENT 4.2.1 RADIATED EMISSION LIMITS	16
4.2.1 RADIATED EMISSION LIMITS 4.2.2 MEASUREMENT INSTRUMENTS LIST	16 17
4.2.3 TEST PROCEDURE	17
4.2.4 DEVIATION FROM TEST STANDARD 4.2.5 TEST SETUP	17 18
4.2.6 EUT OPERATING CONDITIONS	18
4.2.7 TEST RESULTS	19
5 . EUT TEST PHOTO	22
6 . PRODUCT LABELING	25



1. CERTIFICATION

Equipment: Wireless Battery Free Optical Mouse Trade Name: A4TECH Model No.: NB-90D Applicant: A-FOUR TECH CO., LTD. Data of Test: Mar. 22, 2006 ~ Apr. 13, 2006 Test Item: ENGINEERING SAMPLE Standards: FCC Part15, Subpart C / RSS-210: 2004/ ANCI C63.4 : 2003

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-0603C038) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and CNLA according to the ISO-17025 quality assessment standard and technical standard(s).



2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards: (Antenna to EUT distance is **3** m)

	FCC Part15, Subpart C								
Standard	Test Item	Limit	Frequency Range (MHz)	Judgment					
15.207	Conducted Emission	Class B	0.15 - 30	PASS					
15.209	Radiated Emission	Class B	0.09 -1000	PASS					

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report



2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **C01/OS02** at the location of No.132-1, Lane 329, Sec. 2, Palain Road, Shijr City, Taipei, Taiwan.

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y \pm U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately 95 % \circ

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
C01	ANSI	150 KHz ~ 30MHz	1.94	

B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)	NOTE
OS01	ANSI	30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	Н	3.60	
		200MHz ~ 1,000MHz	V	3.86	
		200MHz ~ 1,000MHz	Н	3.94	
OS02	ANSI	30MHz ~ 200MHz	V	2.48	
		30MHz ~ 200MHz	Н	2.16	
		200MHz ~ 1,000MHz	V	2.50	
		200MHz ~ 1,000MHz	Н	2.66	



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Battery Free Optical Mouse				
Trade Name	A4TECH				
Model No.	NB-90D				
OEM Brand/Model No.	N/A				
Model Difference	N/A				
Product Description	The EUT is a Wireless Battery Free Optical Mouse. Operation Frequency: 121 KHz – 128 KHz Product Class: Class 1 Receiver Class: Class 3 Modulation Type: ASK Antenna Designation: Integra (Induction coil) Output Power: 2.5 mW (Max.) Mode of Operation: Simplex Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.				
Power Supply	Power Pad: DC 5 V, 300mA/ Supplied from PC USB port Wireless Battery Free Optical Mouse: DC 5 V, 90mA/ Faradism				
Connecting I/O Port(s)	Please refer to the User's Manual				
Products Covered	N/A				

Note:

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



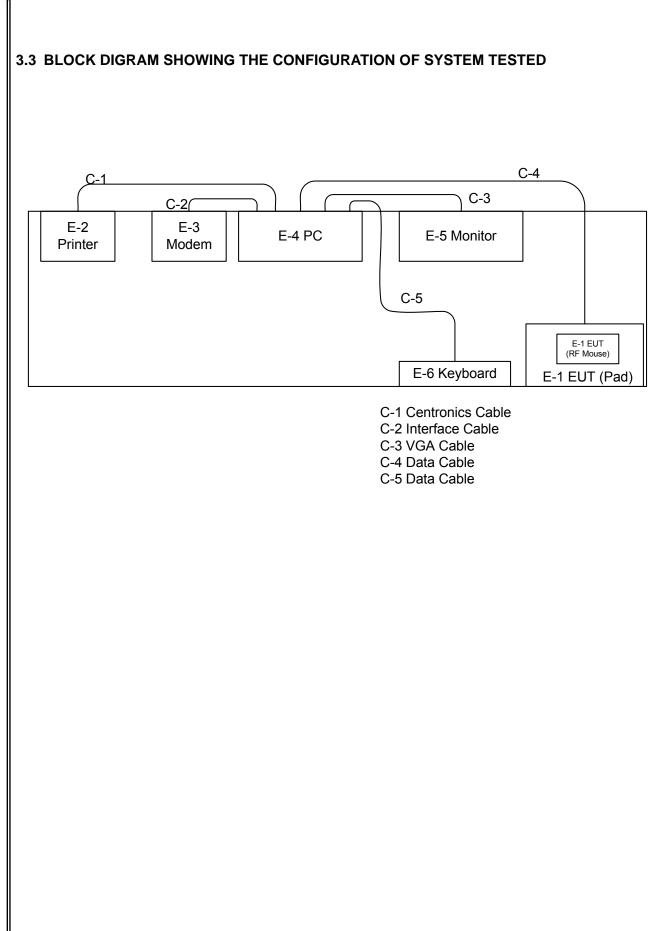
3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Test Mode	Description
Mode 1	121.0 KHz
Mode 2	124.5 KHz
Mode 3	128.0 KHz

For Conducted / Radiated Test						
Final Test Mode Description						
Mode 2 124.5 KHz						









3.4 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.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	Wireless Battery Free Optical Mouse	A4TECH	NB-90D	H8GNB90DP	N/A	EUT
E-2	Printer	SII	DPU-414	DOC	1045105A	
E-3	Modem	ACEEX	DM-1414V	DOC	8041708	
E-4	PC	IBM	8422-KVA	DOC	L3D0137	
E-5	19"TFT LCD Monitor	Samsung	SyncMaster 193T	DOC	NB19HMEX101919K	
E-6	PS/2 K/B	Logitech	Y-SJ17(ACK260A)	DOC	SYU44664880	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	YES	NO	1.8M	
C-2	YES	NO	1.5M	
C-3	YES	YES	1.8M	
C-4	YES	NO	1.5M	
C-5	YES	NO	1.5M	

Note:

(1) The support equipment was authorized by Declaration of Confirmation.

(2) For detachable type I/O cable should be specified the length in cm in ^[]Length ^[] column.



4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A	(dBuV)	Class B (dBuV)		
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	
0.50 -5.0	73.00	60.00	56.00	46.00	
5.0 -30.0	73.00	60.00	60.00	50.00	

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

4.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment Manufacturer		Type No.	Serial No.	Calibrated until
1	LISN	Rolf Heine NNB-2/16Z 98053		Dec. 19, 2006	
2	4L-V-LISN	SN Rolf Heine NNB-4/63TL 02/10040		Apr. 06, 2007	
3	Pulse Limiter Electro-Metrics		EM-7600	112644	Nov. 29, 2006
4	50Ω Terminator	50Ω Terminator N/A		N/A	May 11, 2007
5	Test Cable N/A		C01	N/A	Nov. 29, 2006
6	EMI Test Receiver R&S		ESCI	100082	Feb. 01, 2007

Remark: " N/A" denotes No Model No., Serial No. or No Calibration specified.



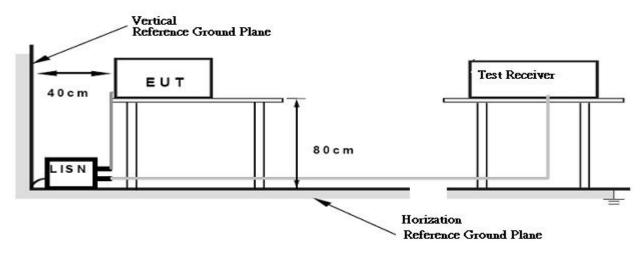


4.1.3 TEST PROCEDURE

- a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.
- 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP





4.1.6 EUT OPERATING CONDITIONS

The EUT exercise program used during radiated and/or conducted emission measurement was designed to exercise the various system components in a manner similar to a typical use. The program contained on a PC hard disk and is auto-starting on power-up. Once loaded, the program sequentially exercises each system component in turn. The sequence used is:

- 1. Read (write) from (to) mass storage device (Disk).
- 2. Send "H" pattern to video port device (Monitor).
- Send " H " pattern to parallel port device (Printer).
 Send " H " pattern to serial port device (Modem).
- 5. Repeated from 2 to 4 continuously.

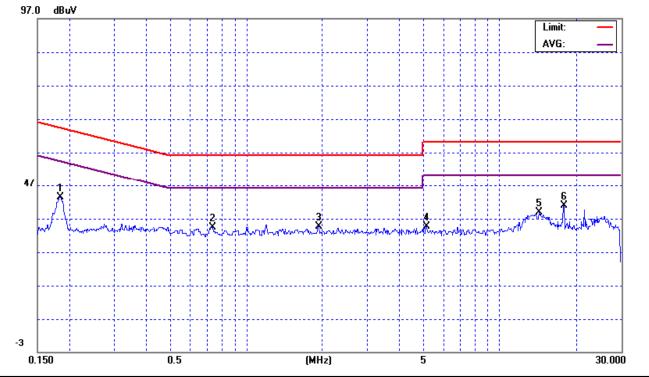


4.1.7 TEST RESULTS

EUT :		Wireless Battery Free Optical Mouse		Model No.	el No. : NB-		0D		
Temperati	ure :	23.	5 ℃		Relative Hu	midity:	51 %		
Pressure :		100)0 hPa		Test Power	:	AC 1	20V/60Hz	
Test Mode	e :	124	1.5 KHz						
Freq.	Termir	nal	al Measured(dBuV) Limits(dBuV) Margin			Margin	Note		
(MHz)	L/N		QP-Mode	AV-Mode	QP-Mode	AV-Mo	ode	(dB)	NOLE
0.18	Line		43.25	*	64.30	54.3	0	-21.05	(QP)
0.74	Line		34.38	*	56.00	46.0	0	-21.62	(QP)
1.93	Line	34.69 *		*	56.00	46.0	0	-21.31	(QP)
5.13	Line		34.50 * 60.00 50.00		-25.50	(QP)			
14.31	Line		38.82	*	60.00	50.0	0	-21.18	(QP)
17.88	Line		40.97	*	60.00	50.0	0	-19.03	(QP)

Remark

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz;SPA setting in RBW=10KHz,VBW =10KHz, Swp. Time = 0.3 sec./MHz ° Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=1MHz,VBW=10Hz, Swp. Time =0.3 sec./MHz °
- (2) All readings are QP Mode value unless otherwise stated AVG in column of ^ℂNote_J. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform ∘ In this case, a "*" marked in AVG Mode column of Interference Voltage Measured ∘
- (3) Measuring frequency range from 150KHz to 30MHz \circ

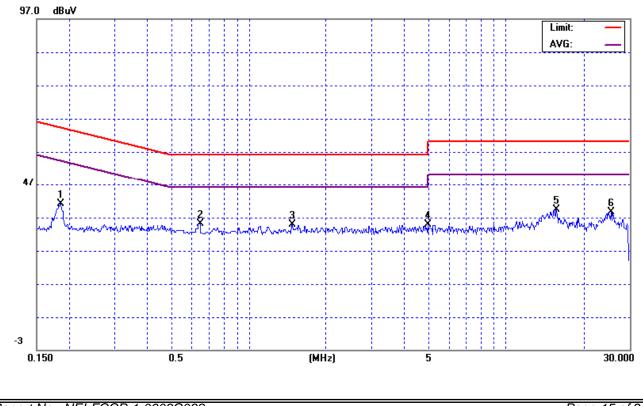




EUT :			eless Battery use	Free Optical	Model No.	NB-90D			
Temperati	ure :	23.	5 ℃		Relative Hu	Relative Humidity: 51 %			
Pressure :		100)0 hPa		Test Power	:	AC 1	120V/60Hz	
Test Mode	e :	124	1.5 KHz						
Freq.	Termir	nal Measured(dBuV)			Limits(dBuV)			Margin	Note
(MHz)	L/N		QP-Mode	AV-Mode	QP-Mode	AV-Mode		(dB)	NOLE
0.19	Neutr	al	41.22	*	64.26	54.2	6	-23.04	(QP)
0.65	Neutr	al	35.18	*	56.00	46.0	0	-20.82	(QP)
1.47	Neutr	tral 34.84 *		56.00	46.0	0	-21.16	(QP)	
4.96	Neutr	al	34.95	*	56.00	46.0	0	-21.05	(QP)
15.69	Neutr	al	39.47	*	60.00	50.0	0	-20.53	(QP)
25.69	Neutr	al	38.63	*	60.00	50.0	0	-21.37	(QP)

Remark

- (1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz;SPA setting in RBW=10KHz,VBW =10KHz, Swp. Time = 0.3 sec./MHz ° Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=1MHz,VBW=10Hz, Swp. Time =0.3 sec./MHz °
- (2) All readings are QP Mode value unless otherwise stated AVG in column of ^ℂNote_⊥. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform ∘ In this case, a "*" marked in AVG Mode column of Interference Voltage Measured ∘
- (3) Measuring frequency range from 150KHz to 30MHz °







4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS

Frequency	Field Streng Limitation		Field Strength Limitation at 3m Measurement Dist			
(MHz)	(uV/m) Dist		(uV/m)	(dBuV/m)		
0.009 - 0.490	2400 / F(KHz)	300m	10000 * 2400/F(KHz)	20log 2400/F(KHz) + 80		
0.490 - 1.705	24000 / F(KHz)	30m	100 * 24000/F(KHz)	20log 24000/F(KHz) + 40		
1.705 – 30.00	30	30m	100* 30	20log 30 + 40		
30.0 - 88.0	100	3m	100	20log 100		
88.0 - 216.0	150	3m	150	20log 150		
216.0 - 960.0	200 3m		200	20log 200		
Above 960.0	500	3m	500	20log 500		

Notes:

(1) The tighter limit shall apply at the boundary between two frequency range.

(2) Limitation expressed in dBuV/m is calculated by 20log Emission Level (uV/m).

(3) If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula of $L_{d1} = L_{d2} * (d_2/d_1)^2$. Example:

F.S Limit at 30m distance is 30uV/m , then F.S Limitation at 3m distance is adjusted as $L_{d1} = L_1 = 30uV/m * (10)^2 = 100 * 30 uV/m$



Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Log-Bicon Antenna	MESS-ELEKTRONIK	VULB 9160	3058	Nov. 29, 2006
2	Test Cable	N/A	10M_OS02	N/A	Nov. 29, 2006
3	Test Cable	N/A	OS02-1/-2/-3	N/A	Nov. 29, 2006
4	Pre-Amplifier	Anritsu	MH648A	M09961	Nov. 29, 2006
5	EMI Test Receiver	R&S	ESCI	100082	Feb. 01, 2007
6	Antenna Mast	Chance Most	CMTB-1.5	N/A	N/A
7	Turn Table	Chance Most	CMTB-1.5	N/A	N/A
8	Loop Ant	EMCO	6502	00042960	Jan. 13, 2008

4.2.2 MEASUREMENT INSTRUMENTS LIST

Remark: " N/A" denotes No Model No. / Serial No. and No Calibration specified.

4.2.3 TEST PROCEDURE

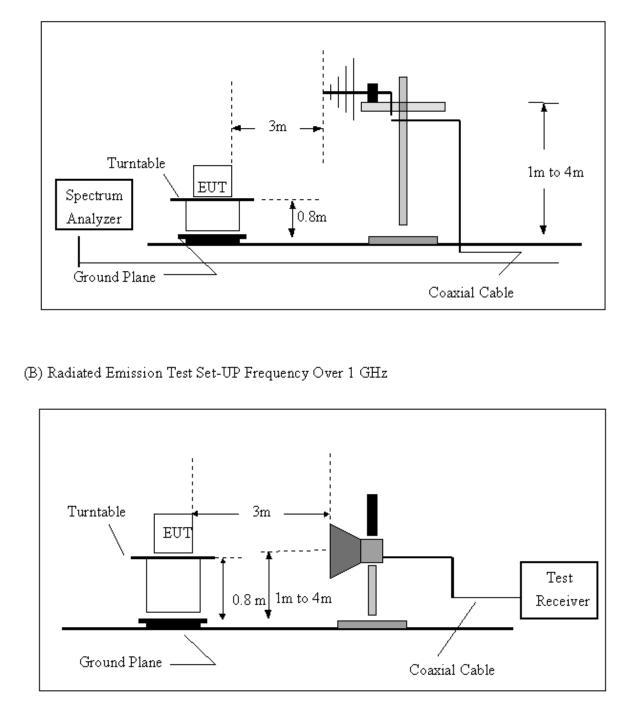
- a. The measuring distance of at 3m or 10m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m or 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.4 DEVIATION FROM TEST STANDARD No deviation



4.2.5 TEST SETUP

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



4.2.6 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.



4.2.7 TEST RESULTS (Below 30MHz)

EUI.	Wireless Battery Free Optical Mouse	Model No. :	NB-90D
Temperature :	28 ℃	Relative Humidity:	56 %
Pressure :	1004 hPa	Test Power :	AC 120V/60Hz
Test distance :	3m		
Test Mode :	124.5 KHz		

Freq. (KHz)	Receiver Reading in dBuV/m	Factor (dB)	Field Strength Limit (uV/m)	Required Measurement Distance(m)	Limitation Converted 3m dist. (dBuV/m)	Over Limit	Dectector Mode PK/AV
124.50	83.37	13.00	19.28	300.00	105.70	- 9.33	Peak
249.00	45.92	12.80	9.64	300.00	99.68	- 40.96	Peak
373.50	37.60	12.80	6.43	300.00	96.16	- 45.76	Peak
498.00	34.50	12.70	48.19	30.00	73.66	- 26.46	Peak
622.50	-	12.70	38.55	30.00	71.72	-	Peak
747.00	-	12.80	32.13	30.00	70.14	-	Peak
871.50	-	12.80	27.54	30.00	68.80	-	Peak
996.00	-	12.80	24.10	30.00	67.64	-	Peak
1120.50	-	12.90	21.42	30.00	66.62	-	Peak
1245.00	-	12.90	19.28	30.00	65.70	-	Peak

Remark :

(1) Spectrum Setting:

9 KHz – 150 KHz, RBW= 1 KHz, VBW=1 KHz, Sweep time = 200 ms. 150 K Hz – 30 MHz, RBW= 9 KHz, VBW=9 KHz, Sweep time = 200 ms.

30 MHz – 1000 MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.

- (2) All receiver readings (the measured field strength levels) are measured from loop antenna directly.
- (3) The emission limits shown in the above table are base on measurements employing a quasi-peak detector except for the frequency bands 9-90 KHz, 110-490 KHz and above 1000MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.
- (4) Data of measurement within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



(Between 30 – 1000 MHz)

EUT :		Wireless Batter Mouse	y Free Opt	Model N	lo. :	NB-90D		
Temperati		26 ℃		Relative	Humidity:	55 %		
Pressure :		1004 hPa		Test Pov	•	AC 120V/6	0Hz	
Fest dista		10m						
Fest Mode	e :	124.5 KHz						
Freq.	Ant.Pol.	DetectorMode	Reading	Ant./CL/	Actual FS	Limits 3m	Margin	Not
(MHz)	H/V	(PK/AV)	(dBuV)	Amp. CF(dB)	, ,	(dBuV/m)	(dB)	1101
34.73	V	Peak	42.15	-6.47	35.68	40.00	- 4.32	
81.98	V	Peak	45.01	-10.10	34.91	40.00	- 5.09	
121.80 187.28	V V	Peak Peak	44.50 39.93	-6.60 -7.03	37.90 32.90	43.50 43.50	- 5.60 - 10.60	
228.45	V	Peak	39.93 31.92	-7.03	25.71	43.50	- 10.60	
283.13	V	Peak	38.88	-4.52	34.36	46.00	- 11.64	
(2)	30 MHz All readi	z – 30 MHz, RE – 1000 MHz, R ngs are Peak ur Peak reading co rform ∘	BW= 100K	vise stated QP	in column o	ep time = 20 f『Note』. F	Peak denot	
(3)	30 MHz All readin that the didn't pe Measuri	– 1000 MHz, R ngs are Peak ur Peak reading c	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure	-mei
(3) (4)	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure	-mei
(3) (4)	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-me
(3) (4)	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-me
(3) (4)	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-me
(3) (4)	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-mei
(3) (4)	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-mei
(3) (4)	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-mei
(3) (4)	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-mei
(3) (4) 00.0 dBuV	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-mer
(3) (4) 00.0 dBuV	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-mer
(3) (4) 00.0 dBuV	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-mer
(3) (4) 00.0 dBuV	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-mer
(3) (4) 00.0 dBuV	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-mei
(3) (4) 00.0 dBuV	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	-mer
(3) (4) 00.0 dBuV	30 MHz All readin that the didn't pe Measuri If the pe table °	 – 1000 MHz, R ngs are Peak un Peak reading construction rform ∘ ng frequency ratio 	BW= 100K alless otherw ompliance	vise stated QP with the QP L 30MHz to 100	in column o imits and th 0MHz(@10	ep time = 20 f『Note』. F en QP Mod∘ m) ∘	Peak denot e measure does not h	



EUI.	Wireless Battery Free Optical Mouse	Model No. :	NB-90D
Temperature :	26 ℃	Relative Humidity:	55 %
Pressure :	1004 hPa	Test Power :	AC 120V/60Hz
Test distance :	10m		
Test Mode :	124.5 KHz		

Freq.	Ant.Pol.	DetectorMode	Reading	Ant./CL/	Actual FS	Limits 3m	Margin	Note
(MHz)	H/V	(PK/AV)	(dBuV)	Amp. CF(dB)	(dBuV/m)	(dBuV/m)	(dB)	NOLE
35.40	Н	Peak	35.62	-6.48	29.14	40.00	- 10.86	
86.70	Н	Peak	45.41	-10.08	35.33	40.00	- 4.67	
92.10	Н	Peak	48.84	-9.81	39.03	43.50	- 4.47	
200.10	Н	Peak	36.95	-7.56	29.39	43.50	- 14.11	
285.83	Н	Peak	44.75	-4.47	40.28	46.00	- 5.72	
300.00	Н	Peak	45.17	-4.11	41.06	46.00	- 4.94	

Remark :

(1) Spectrum Setting:

9 KHz – 150 KHz, RBW= 1 KHz, VBW=1 KHz, Sweep time = 200 ms.

150 K Hz – 30 MHz, RBW= 9 KHz, VBW=9 KHz, Sweep time = 200 ms.

30 MHz – 1000 MHz, RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.

- (2) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measure-ment didn't perform ∘
- (3) Measuring frequency range from 30MHz to 1000MHz(@10m) °
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not how in table \circ

