

Report No. : NEI- FCCP-1-0505065

Measurement Report

FCC ID: H8GNB50P

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

Issued Date : Jun. 06, 2005 Project No. : 0505065 Equipment : Wireless Battery Free Optical Mouse Model No. : NB-50

Applicant: A-FOUR TECH CO., LTD.

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

Tested by: Neutron Engineering Inc. EMC Laboratory Data of Test: May 13, 2005 ~ May 31, 2005

Testing Engineer	: Alan Liu for.
Technical Manager	: James Chiu)
Authorized Signatory	: (Andy Chiu)
NEUTRON EN	GINEERING INC.

No. 132-1, *L*ane 329, Sec. 2, Palain Rd., Shijr City, Taipei, Taiwan *TEL : (02)* 2646-5426 *FAX : (02)* 2646-6815





1/27

Report No. : NEI- FCCP-1-0505065

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**.

Neutron's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **Neutron** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **Neutron** issued reports.

Neutron's reports must not be used by the client to claim product endorsement by the authorities or any agency of the Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and **Neutron-self**, extracts from the test report shall not be reproduced except in full with **Neutron**'s authorized written approval.

Neutron's laboratory quality assurance procedures are in compliance with the **ISO Guide 17025** requirements, and accredited by the conformity assessment authorities listed in this test report. 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-1-0505065

Table of Contents	Page
1. General Information	5
1.1 Applicant	5
1.2 Manufacturer	5
1.3 Equipment Under Tested	5
1.4 OEM Brand/Model	5
1.5 Model Difference	5
1.6 Product Descriptions	6
1.7 Connecting I/O Port(s)	6
1.8 Power Supplied	6
1.9 Products Covered (if applicable)	6
1.10 Description of Test Mode(s)	6
1.11 Summary of Test Results	7
2. RFI Emissions Measurement	8
2.1 Test Facility	8
2.2 Standard Compliance	8
2.3 Test Methodology	8
2.4 Deviations from Standard Test Method	8
2.5 Sample(s) Tested	8
2.6 Measurement Instruments	8
2.7 Measurement Uncertainty	9
2.8 Tested System Set-Up/Configuration Details	9
2.9 EUT Operating Conditions	13
3. Justification	14
3.1 Limitations	14
3.1.1 Power Line Conducted Emission	14
3.1.2 Radiated Emission Limits	14
3.2 Measurement Justification 3.2.1 Conducted Emission	15 15
3.2.2 Radiated Emission	15
3.2.3 Field Strength Calculation	16
3.3 Measurement Data	16
Table 4 Conducted Emission Data Table 5 Radiated Emission Data (Below 30MHz)	18 19
Table 6 Radiated Emission Data (Between 30 – 1000 MHz)	20

Report No. : NEI- FCCP-1-0505065

	Table of Contents	Page
Attachment		21
Attachment - A		22
Attachment - B		26

Report No. : NEI- FCCP-1-0505065

1. General Information

1.1 Applicant

Name : A-FOUR TECH CO., LTD.

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

- 1.2 Manufacturer
 - Name : N/A Address : N/A
- 1.3 Equipment Under Tested

Name : Wireless Battery Free Optical Mouse Trade Name : A4TECH Model No. : NB-50

- 1.4 OEM Brand/Model (if applicable) OEM Brand(s)/Model(s) except the basic model in sub-clause 1.3 is (are) the follows: OEM Brand : N/A Model No. : N/A
- 1.5 Model Difference (Series, Versions, if any) Except the basic model no. (model designation of the sample tested in this test report), additional model no. covered is(are) : N/A

1.6 Product Descriptions (Application/Features/Specification)

The EUT is a Wireless Battery Free Optical Mouse. A major technical descriptions of EUT is described as following:

5	
A. Operation Frequency	121 KHz – 128 KHz
B. Modulation Type	ASK
C. Antenna Designation	Integra (Induction coil)
D. Output Power	2.5 mW (Max.)
E. 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 .

1.7 Connecting I/O Port(s)

Please refer to the User's Manual.

1.8 Power Supplied

Power Pad: DC 5 V, 400mA(Max.)/ Supplied from PC USB port Wireless Battery Free Optical Mouse: DC 5 V, 30mA(Max.)/ Faradism

1.9 Products Covered (if applicable)

The sample tested including the following sub-system/module/accessory :

Sub-system/ Module/ Accessory	Model/Type No.	Int. Inst./ Ext. Cont.
N/A	N/A	N/A

1.10 Description of Test Mode(s)

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.

Mode 1	Low CH: 121.0KHz
Mode 2	Middle CH: 124.5KHz
Mode 3	High CH: 128.0KHz

The EUT system operated Mode 2, mentioned above was found to be the worst case during the pre-scanning test.

These operation modes were used for final testing and collecting test data included in this report.

1.11 Summary of Test Results

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

		FCC Part15, Subpart C		
Section	Test Item	Limit	Frequency Range (MHz)	Result
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. RFI Emissions Measurement

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 Standard Compliance

The test data contained in this report relate only to the item(s) listed below: Limitation Class B

FCC Part15, Subpart C / RSS-210: 2001/ ANCI C63.4 : 2003

2.3 Test Methodology

Both conducted and radiated tests were performed during the max. EMI emission evaluation. Antenna to EUT distance is 3 m.

Test procedures according to the technical standards:

FCC Part15, Subpart C / ANSI C63.4 : 2003

2.4 Deviations from Standard Test Method

N/A

2.5 Sample(s) Tested

The representative sample tested in this reports is(are): NB-50

Test results in this test report relate only to the sample(s) tested.

The EUT has been tested according to the following environmental condition:

Input Power	120Vac/60Hz
Environmental Conditions	Please refer to the measurement data.

2.6 Measurement Instruments

Valid measurement instruments used in this report refer to **Table-1** enclosed.

Report No. : NEI- FCCP-1-0505065

2.7 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 % °

- A. Conducted Measurement :5.05dB
- B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)	NOTE
OS-01	ANSI	30MHz ~ 200MHz	Н	4.59	
		30MHz ~ 200MHz	V	4.80	
		200MHz ~ 1,000MHz	Н	4.47	
		200MHz ~ 1,000MHz	V	5.03	

2.8 Tested System Set-Up/Configuration Details

The system was configured for testing in a typical fashion (as a user would normally use) or in-accordance with the operating configuration specified in the user's manual. A Block Diagram (please refer to the Diagram - 1) and Photos (please refer to the attachment - **A**) showing the set-up/configuration of system tested. In addition, **Table-2** and **Table-3** provide a detail of all equipment items and cables information used in the system tested.

Report No. : NEI- FCCP-1-0505065

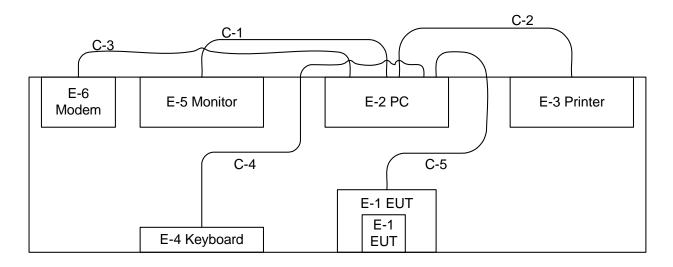
ltem 1	Instruments	Mfr/Brand					
1		iviii, Brana	Model/Type No.	Serial No.	Calibrated Date	Next Cali. Date	Note
	LISN	EMCO	3825/2	9605-2539	2004-10-01	2005-09-30	~
2	LISN	Rolf Heine	NNB-2/16Z	98083	2004-08-03	2005-08-02	
3	LISN	Rolf Heine	NNB-2/16Z	98053	2004-12-24	2005-12-23	
4	4L-V-LISN	Rolf Heine	NNB-4/63TL	02/10040	2005-04-08	2006-04-07	✓
5	LISN	EMCO	3816/2	00042991	2005-01-12	2007-01-11	
6	LISN	EMCO	4825/2	00028234	2005-04-01	2006-03-31	
7	ISN	SCHAFFNER	ISN T400	16017	2004-12-07	2005-12-06	
8	Pulse Limiter	Electro-Metrics	EM-7600	112644	2004-12-07	2005-12-06	~
9	50 Ω Terminator	N/A	N/A	N/A	2005-05-12	2007-05-11	✓
10	Test Cable	N/A	C01	N/A	2004-12-08	2005-12-07	✓
11	Log-Bicon Antenna	MESS-ELEKTRONIK	VULB 9160	3058	2004-10-20	2005-10-19	
12	Log-Bicon Antenna	MESS-ELEKTRONIK	VULB 9160	3177	2005-02-07	2007-02-06	✓
13	Log-Bicon Antenna	MESS-ELEKTRONIK	VULB 9161	4022	2004-07-15	2005-07-14	
14	Test Cable	N/A	10M_OS01	N/A	2004-12-08	2005-12-07	✓
15	Test Cable	N/A	OS01-1/-2	N/A	2004-12-08	2005-12-07	~
16	Test Cable	N/A	10M_OS02	N/A	2004-12-08	2005-12-07	
17	Test Cable	N/A	OS02-1/-2/-3	N/A	2004-12-08	2005-12-07	
18	RF Switch	Anritsu	MP59B	M65982	2004-12-07	2005-12-06	
19	Pre-Amplifier	Anritsu	MH648A	M09961	2004-11-24	2005-11-23	✓
20	Spectrum Analyzer	ADVAN TEST	R3261C	81720298	2004-09-01	2005-08-31	✓
21	Spectrum Analyzer	ADVAN TEST	R3132	81700025	2005-02-23	2006-02-22	
22	EMI Test Receiver	R&S	ESCI	1166.5950.03	2005-02-02	2007-02-01	
23	Test Receiver	R&S	ESH3	860156/018	2004-12-31	2005-12-30	
24	Test Receiver	R&S	ESVP	860687/009	2004-12-31	2005-12-30	
25	Test Receiver	MEB	SMV41	130	2004-12-06	2005-12-05	✓
26	Test Receiver	РММ	PMM 9000	4310J01002	2005-02-25	2006-02-24	
27	Absorbing Clamp	R&S	MDS-21	841077/011	2004-09-09	2005-09-08	
28	Voltage Probe	R&S	ESH2-Z3	841.800/023	2004-09-07	2005-09-06	
29	Antenna Mast	Chance Most	CMTB-1.5	N/A	N/A	N/A	✓
30	Turn Table	Chance Most	CMTB-1.5	N/A	N/A	N/A	✓
31	Loop Ant	R&S	HFH2-Z2	830749/020	2004-10-01	2005-09-30	✓
32	Loop Ant	EMCO	6502	00042960	2005-01-14	2008-01-13	

Table -1 Measurement Instruments List

Remark :

(1)" ✓" indicates the instrument used in Test Report.
(2)" N/A" denotes No Model No. / Serial No. and No Calibration specified.





C-1 VGA Cable

C-2 Centronics Cable

C-3 Interface Cable

C-4 Data Cable C-5 Data Cable

Report No. : NEI- FCCP-1-0505065Table - 2Equipments Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	Wireless Battery Free Optical Mouse	A4TECH	NB-50	H8GNB50P	N/A	EUT
E-2	PC	HP	Pavilion 8801	DOC	SG12460765	
E-3	Printer	SII	DPU-414	DOC	1045105A	
E-4	PS/2 K/B	HP	5181	DOC	N/A	
E-5	Monitor	HITACHI	CM753ET	DOC	T8L000003	
E-6	Modem	ACEEX	DM-1414V	DOC	8041708	

Note:

(1) Unless otherwise denoted as EUT in "Remark column , device(s) used in tested system is a support equipment.

- (2) Unless otherwise marked as $\$ in ^rRemark column, Neutron consigns the support equipment to the tested system.
- (3) The support equipment was authorized by Declaration of Confirmation.

Table - 3 Information of Interface Cable	Table - 3	Information of	Interface Cable
--	-----------	----------------	-----------------

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

Note:

- (1) Unless otherwise marked as * in Remark column, Neutron consigns the support equipment to the tested system.
- (2) For detachable type I/O cable should be specified the length in cm in ^[]Length ^[] column.

2.9 EUT Operating Conditions

- (a) Both conducted and radiated testing were performed during the max. EMI emission evaluation. The EUT was connected to support equipment-personal computer. Peripherals of PC, such as monitor, keyboard, modem and printer were contained in this system in order to comply with the CISPR22 Rules requirement. The PC operated in the default 800 x 600 / 35 KHz VGA Graphic mode. This operating condition was tested and used to collect the included data.
- (b) The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.
- (c) 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).
 - 3. Send " H " pattern to parallel port device (Printer).
 - 4. Send " H " pattern to serial port device (Modem).
 - 5. Repeated from 2 to 4 continuously.

NEUTRON EMC LAB.

Report No. : NEI- FCCP-1-0505065

3. Justification

3.1 Limitations

3.1.1 Power Line Conducted Emission

Measurement	Mains T	••••••	Mains Te	Note	
Frequency	Class A	A Limits	Class B Limits		CISPR
Range	(dBuV)		(dBuV)		FCC
(MHz)	QP Mode	AV Mode	QP Mode	AV Mode	Std.
0.15 - 0.50	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 - 5.00	73.00	60.00	56.00	46.00	CISPR
5.00 - 30.0	73.00	60.00	60.00	50.00	CISPR
0.15 - 0.50	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 - 5.00	73.00	60.00	56.00	46.00	FCC
5.00 - 30.0	73.00	60.00	60.00	50.00	FCC

Notes:

- (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.

3.1.2 Radiated Emission Limits

Frequency	Field Strength 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

Report No. : NEI- FCCP-1-0505065

3.2 Measurement Justification

3.2.1 Conducted Emission

The EUT is a placed on as table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4-1992. Conducted emissions from the EUT measured in the **frequency range between 0.15 MHz and 30MHz** were made with a **Spectrum Analyzer** using **CISPR Quasi-Peak detector mode**.

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 these signals are then Quasi Peak detector mode and/or Average detector mode re-measured.

Data of **Table - 4**. lists the significant emission frequencies, measured levels, limits and safe margins. All readings are Peak Mode measured unless otherwise stated as QP or AV in column of " Remark ".

If the Peak Mode measured value lower than both QP Mode and AV Mode Limit, EUT shall be deemed to compliance with both QP & AV Limits and then no additional QP Mode or AV Mode measurement performed.

If additional QP or AV Mode measurement needed, and if the QP Mode measured value compliance with the QP Mode Limit and lower than AV Mode Limit, the EUT shall be deemed to meet both QP & AV Limits and then only QP Mode was measured, but AV Mode was not performed \circ

3.2.2 Radiated Emission

The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.4-1992.

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, Peak or Average detector mode re-measured.

Data of **Table – 5** lists the significant emission frequencies, measured levels, limits and safe margins. All readings are Peak Mode measured unless otherwise stated as QP or AV in column of "Remark ".

If the Peak Mode measured value compliance with and lower than Quasi Peak or Average Mode Limit, the EUT shall be deemed to meet QP/AV Limits and then no additional QP/AV Mode measurement performed.

Report No. : NEI- FCCP-1-0505065

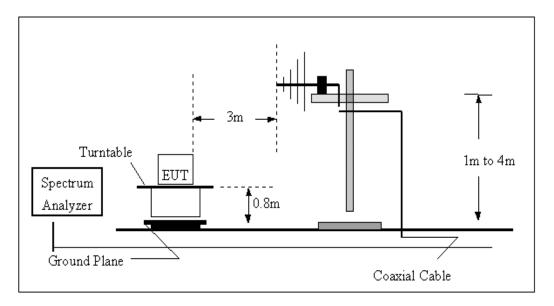
3.2.3 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as FS = RA + AF + CL - AG

- Where FS = Field Strength
 - RA = Receiver Amplitude
 - AF = Antenna Factor (1)
 - CL = Cable Attenuation Factor(Cable Loss) (1)
 - AG = Amplifier Gain (1)
- Remark :
 - (1) The Correction Factor = AF + CL AG, as shown in the data tables' Correction Factor column.

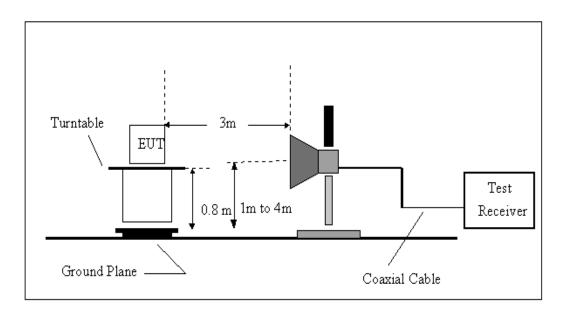
3.3 Measurement Data

- Table 4. Conducted Emission Data
- Table 5. Radiated Emission Data (Bellow 30MHz)
- Table 6. Radiated Emission Data (Between 30 1000MHz)



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

(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



Report No. : NEI- FCCP-1-0505065

Table 4 Conducted Emission Data

 EUT : Wireless Battery Free Optical Mouse
 Model/Type No. : NB-50

 Temperature : 25.7 °C
 Relative Humidity : 80 %
 Pressure : 1010 hPa

 Special Notes : (EUT Operation Mode or Test Configuration Mode, if applicable)
 Mode 2

Minimum passing margin is -12.47dB at 0.55MHz

Freq.	Terminal	Measured(dBuV)		Limits(dBuV)		Safe Margins	
(MHz)	L/N	QP-Mode	AV-Mode	QP-Mode	AV-Mode	(dBuV)	Note
0.55	Line	43.13	*	56.00	46.00	-12.87	(QP)
0.78	Line	40.35	*	56.00	46.00	-15.65	(QP)
0.91	Line	42.36	*	56.00	46.00	-13.64	(QP)
1.16	Line	41.99	*	56.00	46.00	-14.01	(QP)
1.53	Line	42.43	*	56.00	46.00	-13.57	(QP)
1.91	Line	41.67	*	56.00	46.00	-14.33	(QP)
0.55	Neutral	43.53	*	56.00	46.00	-12.47	(QP)
0.91	Neutral	43.16	*	56.00	46.00	-12.84	(QP)
1.16	Neutral	41.99	*	56.00	46.00	-14.01	(QP)
1.53	Neutral	42.83	*	56.00	46.00	-13.17	(QP)
1.90	Neutral	42.47	*	56.00	46.00	-13.53	(QP)
2.53	Neutral	41.32	*	56.00	46.00	-14.68	(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 "Note". 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 \circ In this case, a " * " marked in AVG Mode column of Interference Voltage Measured \circ
- (3) Measuring frequency range from 150KHz to 30MHz \circ

Table 5 Radiated Emission Data (Below 30MHz)

 EUT : Wireless Battery Free Optical Mouse
 Model/Type No. : NB-50

 Temperature : 25 °C
 Relative Humidity : 76 %
 Pressure : 1010 hPa

 Special Notes : (EUT Operation Mode or Test Configuration Mode, if applicable)
 Mode 2

Minimum passing margin is -3.20dB at 124.50KHz

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	82.40	20.10	19.28	300.00	105.70	- 3.20	Peak
249.00	46.00	20.10	9.64	300.00	99.68	- 33.58	Peak
373.50	37.10	20.10	6.43	300.00	96.16	- 38.96	Peak
498.00	21.10	20.10	48.19	30.00	73.66	- 32.46	Peak
622.50	22.10	20.20	38.55	30.00	71.72	- 29.42	Peak
747.00	19.30	20.20	32.13	30.00	70.14	- 30.64	Peak
871.50	17.00	20.20	27.54	30.00	68.80	- 31.60	Peak
996.00	-	20.30	24.10	30.00	67.64	-	Peak
1120.50	-	20.30	21.42	30.00	66.62	-	Peak
1245.00	-	20.30	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= 100 KHz, VBW=100 KHz, 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.

Table 6 Radiated Emission Data (Between 30 – 1000 MHz)

 EUT : Wireless Battery Free Optical Mouse Model/Type No. : NB-50

 Temperature : 28 °C Relative Humidity : 77 % Pressure : 1011 hPa

 Special Notes : (EUT Operation Mode or Test Configuration Mode, if applicable)

 Mode 2

Minimum passing margin is -6.37dB at 9.00MHz

Note

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 \circ
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not how in table \circ

Attachment

Table Contents

- A. EUT Test Photos
- B. Product Labeling

_



Report No. : NEI- FCCP-1-0505065

Attachment - A

EUT Test Photos



Report No. : NEI- FCCP-1-0505065

Attachment - B

Product Labeling



Project No. : 0505065

ATTACHMENT

0505065

PHOTOGRAPHS OF EUT

_____ 1/10