

FCC TEST REPORT

REPORT NO.: F900906A05

MODEL NO.: M860U, M850U, M860C, M850C

RECEIVED: Sept. 4, 2001

TESTED: Sept. 10, 2001

APPLICANT: BEHAVIOR TECH COMPUTER CORP.

ADDRESS: 2F, 51 TUNG HSING RD., TAIPEI, TAIWAN, R.O.C.

ISSUED BY: Advance Data Technology Corporation

LAB LOCATION: 47 14th Lin, Chiapau Tsun, Linko, Taipei, Taiwan, R.O.C.

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0528

Lab Code: 200102-0



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1 CERTIFICATION

PRODUCT:	MOUSE
BRAND NAME:	BTC
MODEL NO:	M860U, M850U, M860C, M850C
TEST ITEM:	ENGINEERING SAMPLE
APPLICANT:	BEHAVIOR TECH COMPUTER CORP.
STANDARDS:	FCC Part 15, Subpart B, Class B
	CISPR 22: 1997, Class B
	ANSI C63.4-1992

We, **Advance Data Technology Corporation**, hereby certify that two samples (model: M860C, M860U) of the designation has been tested in our facility on Sept. 10, 2001. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

TESTED BY:	<u> </u>	, DATE:	Sep. 13. 200/
CHECKED BY:	Kathy Joing (Kathy Tseng)	, DATE:	Sept 13, 2001
APPROVED BY:	(Jonson Lee, Manage	, DATE :	Sep. 13, 200/



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 /	Conducted Test	PASS	Meets Class B Limit Minimum passing margin is –3.03 dB at 0.207 MHz
CISPR 22: 1997, Class B	Radiated Test	PASS	Meets Class B Limit Minimum passing margin is –7.4 dB at 816.02 MHz

NOTE: For conducted emission test, the test limit used is according to FCC Part 15.107. In this part, conducted emission test for telecom port is not mentioned and therefore this item is not tested.



3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	MOUSE
MODEL NO.	M860U, M850U, M860C, M850C
POWER SUPPLY	DC 5V From PC
DATA CABLE	Shielded (1.5m) – USB & PS2

NOTE: The EUT is a Optical Mouse.

The EUT has four model names, which are identical to each other including the outlook except for their function key & connector as the following:

MODEL	DIFFERENCE					
MODEL	FUNCTION KEY	CONNECTOR				
M860U	5 keys	USB interface				
M850U	3 keys (there are 5 function keys on its surface but only 3 keys can work)	USB interface				
M860C	5 keys	with PS2 transfer connector				
M850C	3 keys (there are 5 function keys on its surface but only 3 keys can work)	with PS2 transfer connector				

During the pretest, the model: M860U, M860C were tested separately and their data were recorded in this report.

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	IBM	2187-12W	1S218714ABNA	
	COMPUTER			0002	APPROVED
2	21" COLOR	HP	D2846A	JP90512317	FCC DoC
	MONITOR				APPROVED
3	MODEM	ACEEX	1414	980020534	IFAXDM1414
4	PRINTER	HP	2225C	2923S47245	DSI6XU2225
5	PS/2	FORWARD	FDA-104GA	FDKB8110112	F4ZDA-104G
	KEYBOARD				

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS					
1	NA					
2	1.8 m braid shielded wire, terminated with VGA connector via metallic frame, w/o core.					
3	1.2 m braid shielded wire, terminated with DB25 and DB9 connector via metallic frame,					
	w/o core.					
4	1.2m braid shielded wire, terminated with DB25 and Centronics connector via metallic					
	frame, w/o core.					
5	1.5 m foil shielded wire, terminated with PS/2 connector via metallic frame, w/o core.					

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



4 EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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	

NOTES: (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 UNTIL
ROHDE & SCHWARZ Test Receiver	ESCS30	838251/021	Jan. 17, 2002
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	835239/001	May 20, 2002
ROHDE & SCHWARZ 4-wire ISN	ENY41	935154/007	May 13, 2002
ROHDE & SCHWARZ 2-wire ISN	ENY22	833823/026	May 9, 2002
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	835239/002	May 20, 2002
Software	Cond-V2J	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C09.01	June 10, 2002
JYEBAO Terminator (For ROHDE & SCHWARZ LISN)	BNC 3950- 0000	E1-01-379	June 13, 2002
Shielded Room	Site 9	ADT-C09	NA
VCCI Site Registration No.	Site 9	C-1312	NA

NOTE: 1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.

2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.



4.1.3 TEST PROCEDURE

- 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 over 10dB under the prescribed limits could not be reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

FCC ID : E5XMSM860U 4.1.5 TEST SETUP Vertical Reference Test Receiver Ground Plane ٦ EUT 0 000 0 0 0 0 40 c m 80 c m **ISN** Horizontal Reference Ground Plane Note: 1.Support units were connected to second LISN. 2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes 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 read a test program to enable all functions.
- c. PC read and wrote messages from FDD and HDD.
- d. PC sent "H" messages to monitor and monitor displayed "H" patterns on screen.
- e. PC sent "H" messages to modem.
- f. PC sent "H" messages to printer, and the printer printed them on paper.
- g. Steps c-g were repeated.

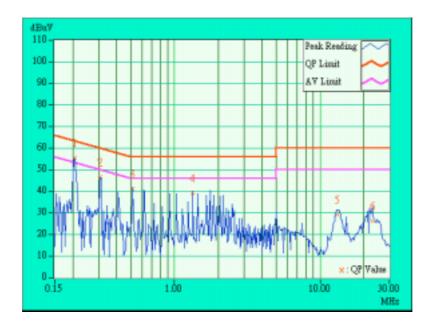


4.1.7 TEST RESULTS (A)

EUT	MOUSE	MODEL	M860C	
	MOUSE	6dB BANDWIDTH	10 kHz	
INPUT POWER	120Vac, 60 Hz	PHASE	Line (L)	
ENVIRONMENTAL	25 deg. C, 74 % RH,	TESTED BY: Mart Su		
CONDITIONS	1005 hPa	IESTED BT. Mart Su		

No	Freq.	Corr. Factor	r		Emission Level		Mar	-		
		1 40101	[dB	(uV)]	[dB	(uV)]	[dB	(uV)]	(dl	B)
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.207	0.10	55.59	50.19	55.69	50.29	63.32	53.32	-7.63	-3.03
2	0.309	0.10	46.49	-	46.59	-	60.00	50.00	-13.41	-
3	0.516	0.12	41.20	-	41.32	-	56.00	46.00	-14.68	-
4	1.341	0.20	39.32	-	39.52	-	56.00	46.00	-16.48	-
5	13.205	0.79	29.23	-	30.02	-	60.00	50.00	-29.98	-
6	23.009	0.96	26.31	-	27.27	-	60.00	50.00	-32.73	-

- 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.

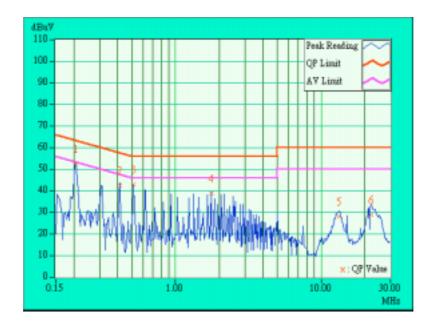




EUT	MOUSE	MODEL	M860C	
EUT	MOUSE	6dB BANDWIDTH	10 kHz	
INPUT POWER	120Vac, 60 Hz	PHASE	Neutral (N)	
ENVIRONMENTAL	25 deg. C, 74 % RH,			
CONDITIONS	1005 hPa	TESTED BY: Mart Su		

No	Freq.	Corr. Factor	Reading	g Value		sion vel	Lir	nit	Mar	gin
NO		I actor	[dB	(uV)]	[dB	(uV)]	[dB	(uV)]	(dl	B)
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.207	0.10	52.57	-	52.67	-	63.32	53.32	-10.65	-
2	0.414	0.10	42.68	-	42.78	-	57.57	47.57	-14.79	-
3	0.516	0.12	42.94	-	43.06	-	56.00	46.00	-12.94	-
4	1.755	0.28	39.05	-	39.33	-	56.00	46.00	-16.67	-
5	13.313	0.63	28.30	-	28.93	-	60.00	50.00	-31.07	-
6	22.187	0.74	28.74	-	29.48	-	60.00	50.00	-30.52	-

- 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.



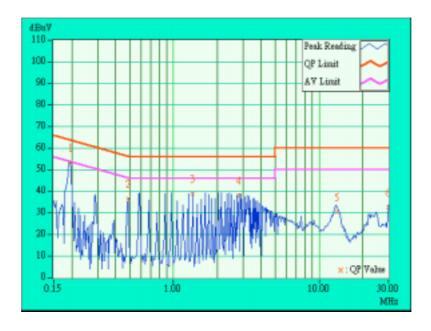


4.1.8 TEST RESULTS (B)

EUT	MOUSE	MODEL	M860U
	MOUSE	6dB BANDWIDTH	10 kHz
INPUT POWER	120Vac, 60 Hz	PHASE	Line (L)
ENVIRONMENTAL	25 deg. C, 74 % RH,	TESTED BY: Mart Su	
CONDITIONS	1005 hPa	IESTED BT . Walt St	A

No	Freq.	req. Corr. Factor		g Value	Le	sion vel		nit	Mar	<u> </u>
			[dB ((uV)]	[dB	(uV)]	[dB	(uV)]	(dl	B)
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.195	0.10	53.38	-	53.48	-	63.82	53.82	-10.34	-
2	0.486	0.11	36.54	-	36.65	-	56.24	46.24	-19.58	-
3	1.356	0.20	39.00	-	39.20	-	56.00	46.00	-16.80	-
4	2.808	0.24	38.22	-	38.46	-	56.00	46.00	-17.54	-
5	13.272	0.80	30.44	-	31.24	-	60.00	50.00	-28.76	-
6	29.888	1.10	32.66	-	33.76	-	60.00	50.00	-26.24	-

- 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.

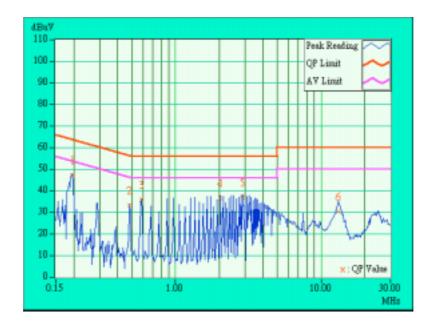




EUT	MOUSE	MODEL	M860U
EUT	MOUSE	6dB BANDWIDTH	10 kHz
INPUT POWER	120Vac, 60 Hz	PHASE	Neutral (N)
ENVIRONMENTAL	25 deg. C, 74 % RH,	TESTED BY: Mart Su	
CONDITIONS	1005 hPa	TESTED BT. Mart St	J

No	Freq.	Corr. Factor	Reading Val		Emission Level		Limit		Margin	
NO		I actor	[dB ((uV)]	[dB((uV)]	[dB	(uV)]	(dl	B)
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.195	0.10	47.44	-	47.54	-	63.82	53.82	-16.28	-
2	0.483	0.11	33.18	-	33.29	-	56.29	46.29	-22.99	-
3	0.582	0.13	35.75	-	35.88	-	56.00	46.00	-20.12	-
4	2.037	0.30	36.60	-	36.90	-	56.00	46.00	-19.10	-
5	2.904	0.30	36.94	-	37.24	-	56.00	46.00	-18.76	-
6	13.172	0.63	30.53	-	31.16	-	60.00	50.00	-28.84	-

- 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 FOR FREQUENCY BELOW 1000 MHz

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

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

FREQUENCY (MHz)	Class A (dBu	ıV/m) (at 3m)	Class B (dBu	ıV/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.



4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
HP Spectrum Analyzer	8590L	3520A00667	Aug. 30, 2002
CHASE Preamplifier	CPA9231A/4	3215	Nov. 12, 2001
* HP Preamplifier	8449B	3008A01201	Dec. 13, 2001
* HP Preamplifier	8449B	3008A01292	Aug. 21, 2002
* ROHDE & SCHWARZ TEST RECEIVER	ESVS10	846285/012	Dec. 28, 2001
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Jan. 25, 2002
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 23, 2001
* CHASE BILOG Antenna	CBL6112	2074	Dec. 25, 2001
* SCHWARZBECK Horn Antenna	BBHA9120- D1	D130	July 6, 2002
* EMCO Horn Antenna	3115	9312-4192	April 15, 2002
* CHANCE Turn Table & Tower Controller	ACS-I	NA	NA
* Software	AS61D4	NA	NA
* ANRITSU RF Switches	MP59B	M51167	Dec. 25, 2001
* TIMES RF cable	LMR-600	CABLE- ST6-01	Dec. 25, 2001
Open Field Test Site	Site 6	ADT-R06	Dec. 24, 2001
VCCI Site Registration No.	Site 6	R-728	NA

- **NOTE:** 1.The measurement uncertainty is less than +/- 3.0dB, which is calculated as per the NAMAS document NIS81.
 - 2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.
 - 3. "*" = These equipment are used for the final measurement.
 - 4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz.

4.2.3 TEST PROCEDURE

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area 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 antenna is a broadband antenna, and its height 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 rotatable 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.
- f. 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. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

NOTE:

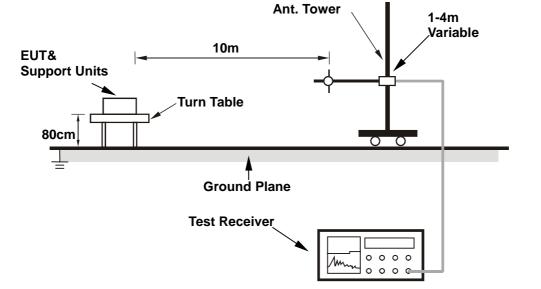
- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
- 2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 300 Hz for Average detection (AV) at frequency above 1GHz.
- 3. For measurement of frequency above 1000 MHz, the EUT was set 3 meters away from the interference antenna.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation



4.2.5 TEST SETUP



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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6



4.2.7 TEST RESULTS (A)

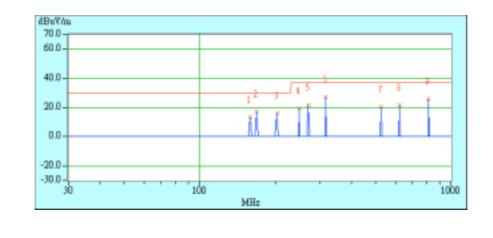
		MODEL	M860C	
EUT	MOUSE	FREQUENCY	20 4000 MU	
		RANGE	30-1000 MHz	
		DETECTOR		
INPUT POWER	230Vac, 50 Hz	FUNCTION &	Quasi-Peak, 120kHz	
		BANDWIDTH		
ENVIRONMENTAL	25 deg. C, 74 % RH,	TESTED BY: Mart S	Su	
CONDITIONS	1005 hPa		Su	

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 10 M										
	Freq.	Emission	Limit	Margin	Antenna	Table	Raw	Antenna	Cable	Pre-Amp.	Correction
No.	(MHz)	Level	(dBuV/m)	(dB)	Height	Angle	Value	Factor	Factor	Gain	Factor
		(dBuV/m)	(ubuv/iii)	(ub)	(m)	(Degree)	(dBuV)	(dB/m)	(dB)	(dB)	(dB/m)
1	158.00	13.6 QP	30.00	-16.40	4.00H	95	2.25	10.31	1.04	0.00	-11.35
2	168.02	17.3 QP	30.00	-12.70	4.00H	104	6.41	9.84	1.05	0.00	-10.89
3	203.15	16.3 QP	30.00	-13.70	3.91H	101	5.77	9.40	1.17	0.00	-10.56
4	248.28	19.5 QP	37.00	-17.50	2.50H	255	6.30	11.91	1.29	0.00	-13.20
5	270.85	21.9 QP	37.00	-15.10	3.47H	264	8.03	12.50	1.37	0.00	-13.87
6	316.00	27.0 QP	37.00	-10.00	2.83H	249	12.18	13.36	1.47	0.00	-14.82
7	528.02	20.5 QP	37.00	-16.50	2.27H	223	0.52	18.02	1.96	0.00	-19.98
8	624.01	21.5 QP	37.00	-15.50	1.21H	229	0.53	18.84	2.14	0.00	-20.97
9	816.00	26.1 QP	37.00	-10.90	1.35H	266	3.13	20.49	2.48	0.00	-22.97

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) – Correction Factor(dB) 2. Correction Factor(dB/m) = Pre-Amplifier Gain (dB) - Antenna Factor

- (dB/m) Cable Factor (dB)
- 3. Pre-Amplifier Gain (dB) = 0, when the test receiver is used to read the value and because it did not use the Pre-Amplifier.
- 4. The other emission levels were very low against the limit.
- 5. Margin value = Emission level Limit value.





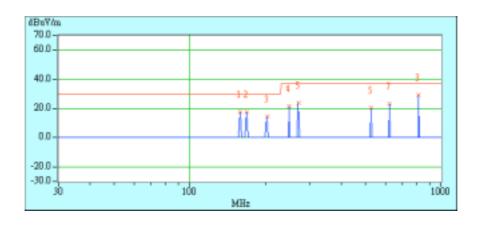
		MODEL	M860C
EUT	MOUSE	FREQUENCY	20 4000 MUL
		RANGE	30-1000 MHz
		DETECTOR	
INPUT POWER	230Vac, 50 Hz	FUNCTION &	Quasi-Peak, 120kHz
		BANDWIDTH	
ENVIRONMENTAL	25 deg. C, 74 % RH,	TESTED BY: Mart \$	Su
CONDITIONS	1005 hPa		50

	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 10 M										
No.	Freq.	Emission Level	Limit	Margin	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-Amp. Gain	Correction Factor
	(MHz) (dBuV/m)	(dBuV/m)	(dB)	(m)	(Degree)	(dBuV)	(dB/m)	(dB)	(dB)	(dB/m)	
1	158.03	17.9 QP	30.00	-12.10	1.00V	341	6.55	10.31	1.04	0.00	-11.35
2	168.04	17.7 QP	30.00	-12.30	1.00V	0	6.82	9.84	1.05	0.00	-10.89.
3	203.18	14.7 QP	30.00	-15.30	1.00V	301	4.14	9.40	1.17	0.00	-10.57
4	248.28	21.9 QP	37.00	-15.10	1.00V	330	8.70	11.91	1.29	0.00	-13.20
5	270.87	23.6 QP	37.00	-13.40	1.00V	5	9.71	12.50	1.37	0.00	-13.87
6	528.02	20.6 QP	37.00	-16.40	2.52V	187	0.67	18.02	1.96	0.00	-19.98
7	624.00	23.5 QP	37.00	-13.50	1.91V	181	2.53	18.84	2.14	0.00	-20.97
8	816.02	29.6 QP	37.00	-7.40	2.11V	11	6.63	20.49	2.48	0.00	-22.98

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) – Correction Factor(dB)

- 2. Correction Factor(dB/m) = Pre-Amplifier Gain (dB) Antenna Factor (dB/m) Cable Factor (dB)
- 3. Pre-Amplifier Gain (dB) = 0, when the test receiver is used to read the value and because it did not use the Pre-Amplifier.
- 4. The other emission levels were very low against the limit.
- 5. Margin value = Emission level Limit value.





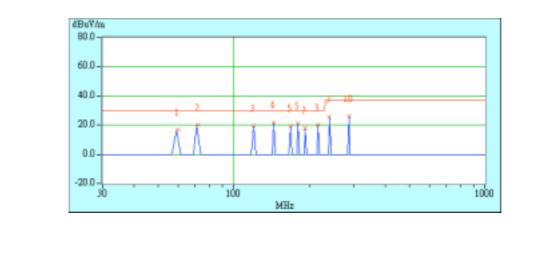
4.2.8 TEST RESULTS (B)

		MODEL	M860U			
EUT	MOUSE	FREQUENCY	30-1000 MHz			
		RANGE				
		DETECTOR	Quasi-Peak, 120kHz			
INPUT POWER	230Vac, 50 Hz	FUNCTION &				
		BANDWIDTH				
ENVIRONMENTAL	25 deg. C, 74 % RH,	TESTED BY: Mart Su				
CONDITIONS	1005 hPa					

	ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 10 M										
	From	Emission	Limit	Margin	Antenna	Table	Raw	Antenna	Cable	Pre-Amp.	Correction
No.	Freq.	Level	(dBuV/m)	(dB)	Height	Angle	Value	Factor	Factor	Gain	Factor
	(MHz)	(dBuV/m)	(ubuv/iii)	(ub)	(m)	(Degree)	(dBuV)	(dB/m)	(dB)	(dB)	(dB/m)
1	60.08	16.8 QP	30.00	-13.20	3.64H	34	38.45	7.45	0.90	30.00	21.65
2	72.12	20.0 QP	30.00	-10.00	3.79H	146	41.59	7.41	1.00	30.00	21.59
3	119.92	19.5 QP	30.00	-10.50	4.00H	334	34.88	13.34	1.28	30.00	15.38
4	144.03	21.6 QP	30.00	-8.40	4.00H	227	37.87	12.28	1.45	30.00	16.28
5	168.02	19.4 QP	30.00	-10.60	4.00H	263	36.52	11.27	1.62	30.00	17.12
6	180.13	21.0 QP	30.00	-9.00	4.00H	351	38.50	10.82	1.67	30.00	17.50
7	192.06	17.7 QP	30.00	-12.30	4.00H	135	34.98	10.98	1.74	30.00	17.28
8	216.09	20.2 QP	30.00	-9.80	4.00H	181	36.08	12.22	1.90	30.00	15.89
9	240.04	25.4 QP	37.00	-11.60	4.00H	171	39.45	13.90	2.05	30.00	14.05
10	288.01	26.1 QP	37.00	-10.90	4.00H	259	38.37	15.47	2.26	30.00	12.27

REMARKS: 1. Emission level(dBuV/m)=Raw Value(dBuV) – Correction Factor(dB)

- 2. Correction Factor(dB/m) = Pre-Amplifier Gain (dB) Antenna Factor (dB/m) Cable Factor (dB)
- 3. Pre-Amplifier Gain (dB) = 0, when the test receiver is used to read the value and because it did not use the Pre-Amplifier.
- 4. The other emission levels were very low against the limit.
- 5. Margin value = Emission level Limit value.





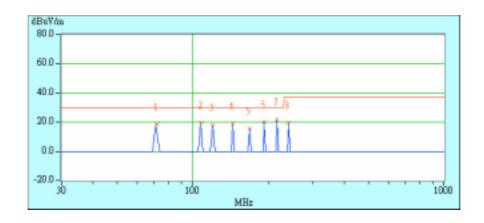
		MODEL	M860U		
EUT	MOUSE	FREQUENCY	30-1000 MHz		
		RANGE			
		DETECTOR			
INPUT POWER	230Vac, 50 Hz	FUNCTION &	Quasi-Peak, 120kHz		
		BANDWIDTH			
ENVIRONMENTAL	25 deg. C, 74 % RH,	TESTED BY: Mart Su			
CONDITIONS	1005 hPa		Su		

	ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 10 M										
No.	Freq.	Emission Level	Margin	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-Amp. Gain	Correction Factor	
NO.	(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(m)	(Degree)	(dBuV)	(dB/m)	(dB)	(dB)	(dB/m)
1	72.03	18.3 QP	30.00	-11.70	1.41V	151	39.89	7.41	1.00	30.00	21.59
2	108.00	19.5 QP	30.00	-10.50	1.00V	249	35.73	12.52	1.24	30.00	16.24
3	120.02	17.9 QP	30.00	-12.10	1.00V	165	33.27	13.34	1.28	30.00	15.38
4	144.00	18.9 QP	30.00	-11.10	1.00V	114	35.14	12.28	1.45	30.00	16.27
5	168.11	15.7 QP	30.00	-14.30	1.00V	273	32.83	11.27	1.62	30.00	17.12
6	192.01	20.3 QP	30.00	-9.70	1.00V	72	37.57	10.98	1.74	30.00	17.28
7	215.99	21.6 QP	30.00	-8.40	1.00V	189	37.46	12.22	1.90	30.00	15.88
8	240.00	19.7 QP	37.00	-17.30	1.00V	108	33.74	13.90	2.05	30.00	14.05

REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) – Correction Factor(dB)

- 2. Correction Factor(dB/m) = Pre-Amplifier Gain (dB) Antenna Factor (dB/m) Cable Factor (dB)
- 3. Pre-Amplifier Gain (dB) = 0, when the test receiver is used to read the value and because it did not use the Pre-Amplifier.
- 4. The other emission levels were very low against the limit.
- 5. Margin value = Emission level Limit value.





5 PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST (model: M860C)







CONDUCTED EMISSION TEST (model:M860U)











RADIATED EMISSION TEST (model:M860U)







6 APPENDIX - INFORMATION ON THE TESTING LABORATORIES

We, ADT Corp., were founded in 1988 to provide our best service in EMC and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025, Guide 25 or EN 45001:

USA	FCC, NVLAP, UL
Germany	TUV Rheinland
Japan	VCCI
New Zealand	MoC
Norway	NEMKO, DNV
Canada	INDUSTRY CANADA
R.O.C.	CNLA, BSMI

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: <u>www.adt.com.tw/index.5/phtml</u>.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC Lab: Tel: 886-2-26052180 Fax: 886-2-26052943 Hsin Chu EMC Lab: Tel: 886-35-935343 Fax: 886-35-935342

Lin Kou Safety Lab: Tel: 886-2-26093195 Fax: 886-2-26093184 Lin Kou RF & Telecom Lab. Tel: 886-3-3270910 Fax: 886-3-3270892

Email: <u>service@mail.adt.com.tw</u> Web Site: <u>www.adt.com.tw</u>

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

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