FCC ID: NRQUT4030M

EMC

TEST REPORT

REPORT NO. : F89031362
MODEL NO. : HyperPen 4000U
DATE OF TEST : Mar. 14, 2000

PREPARED FOR : AIPTEK INTERNATIONAL INC.

ADDRESS : 3F, NO. 5-1, INNOVATION RD. 1, SCIENCE-BASED INDUSTRIAL PARK, HSIN-CHU, TAIWAN, R.O.C.

PREPARED BY: ADVANCE DATA TECHNOLOGY CORPORATION

NVLAP®
Accredited Laboratory

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1. CERTIFICATION

Issue Date: Mar. 22, 2000
Reference No.: 89031362

Product	:	TABLET
Trade Name	:	AIPTEK
Model No.	:	HyperPen 4000U, T-4000U
Applicant	:	AIPTEK INTERNATIONAL INC.
Standard	:	FCC Part 15, Subpart B, Class B
		ANSI C63.4-1992
		CISPR 22:1993 + A1:1995 + A2:1996, Class B

We hereby certify that one sample of the designation has been tested in our facility on Mar. 14, 2000. The test record, data evaluation and Equipment Under Test (EUT) configurations represent herein are true and accurate representation of the measurements of the sample's EMC characteristics under the conditions herein specified.

The test results show that the EUT as described in this report is in compliance with the Class B limits of conducted and radiated emission of applicable standards

TESTED BY: _____ , DATE: Mar. 22, 2000
(Cody Chang)

CHECKED BY: _____ , DATE: Mar. 22, 2000
(Rita Yi)

APPROVED BY: _____ , DATE: Mar. 22, 2000
(Fred Chen)

ADVANCE DATA TECHNOLOGY CORPORATION

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2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product	:	TABLET
Model No.	:	HyperPen 4000U
Power Supply	:	DC 5V (From PC)
Data Cable	:	Shielded USB Cable (1.8m)

Note: The EUT is a digitizing TABLET input device with USB interface. It has two model names which are identical to each other in all aspects except for their model names:

Model Name	Brand
HyperPen 4000U	AIPTEK
T-4000U	AIPTEK

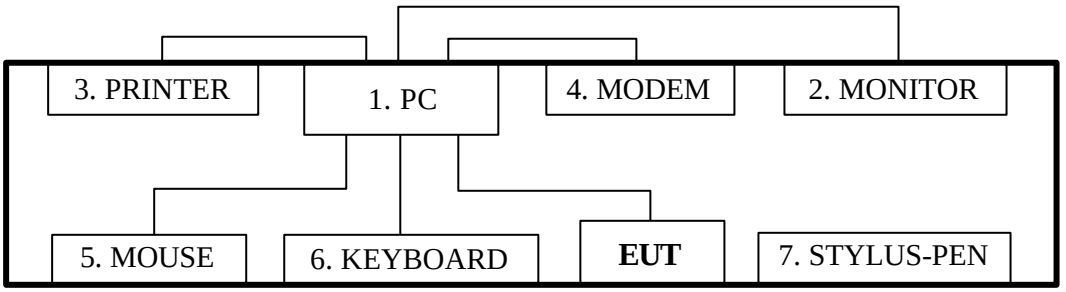
For more detailed features, please refer to User' s Manual.

2.2 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 are used to form representative test configuration during the tests.

No	Product	Brand	Model No.	FCC ID	I/O Cable
1.	PERSONAL COMPUTER	IBM	2187-12W	FCC DoC	Nonshielded Power (1.8m)
2.	MONITOR	ADI	937G	BR8937G	Shielded Signal (1.5m) Nonshielded Power (1.8m)
3.	PRINTER	HP	2225C	BS46XU2225C	Shielded Signal (1.0m) Nonshielded Power (1.8m)
4.	MODEM	ACEEX	1414	IFAXDM1414	Shielded Signal (1.0m) Nonshielded Power (2.1m)
5.	MOUSE	LOGITECH	M-S34	DZL211029	Shielded Signal (1.8m)
6.	KEYBOARD	IBM	KB-7953	FCC DoC	Shielded Signal (1.8m)
7.	STYLUS-PEN	AIPTEK	Hyper Pen	NA	NA

2.3 TEST METHODOLOGY AND CONFIGURATION



Both conducted and radiated testing were performed according to the procedures in ANSI C63.4:1992. Radiated testing was performed at an antenna to EUT distance of 10 m on an open area test site. Please refer to the photos of test configuration in Item 5.

3. TEST INSTRUMENTS

3.1 TEST INSTRUMENTS (EMISSION)

CONDUCTED EMISSION MEASUREMENT

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE & SCHWARZ Test Receiver	ESCS 30	847124/029	Oct. 6, 2000
ROHDE & SCHWARZ LISN	ESHS-Z5	848773/004	Oct. 8, 2000
KYORITSU LISN	KNW-407	8/1395/12	Aug. 02, 2000
Shielded Room	Con A	ADT-CA	N/A

Note: 1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per 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.

RADIATED EMISSION MEASUREMENT

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
HP Spectrum Analyzer	8594E	3710A04861	Sep. 9, 2000
ADVANTEST Spectrum Analyzer	R3271A	85060311	May. 14, 2000
CHASE RF Pre_Amplifier	CPA9232	1001	Jan. 26, 2001
HP Pre_Amplifier	8449B	3008A01281	June 22, 2000
ROHDE & SCHWARZ Test Receiver	ESVS 10	846285/019	Aug. 17, 2000
CHASE Broadband Antenna	CBL6112B	2502	July 24, 2000
Schwarzbeck Horn_Antenna	BBHA9120-D1	D123	July 21, 2000
ROHDE & SCHWARZ Precision Dipole	HZ-12 (30~300MHz)	846932/0003	June 06, 2000
ROHDE & SCHWARZ Precision Dipole	HZ-13 (300~1000MHz)	846556/0007	June 17, 2000
EMCO Antenna Tower	2075-2	9712-2124	N/A
EMCO Turn Table	2081-1.53	9712-2030	N/A
CORCOM AC Filter	MRI2030	107/108	N/A
Open Field Test Site	Site A	ADT-RA	Oct. 03, 2000

Note: 1. The measurement uncertainty is less than +/- 3dB, which is calculated as per 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.

3.2 LIMITS OF CONDUCTED AND RADIATED EMISSION

LIMIT OF RADIATED EMISSION OF CISPR 22

FREQUENCY (MHz)	Class A (at 10m) dBuV/m	Class B (at 10m) 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 (at 10m)		Class B (at 3m)	
	uV/m	dBuV/m	uV/m	dBuV/m
Above 1000	300	49.5	500	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.

LIMIT OF CONDUCTED EMISSION OF CISPR 22

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 linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz

(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. TEST RESULTS (EMISSION)

4.1 RADIO DISTURBANCE

Frequency Range	:	0.15 - 30 MHz (Conducted Emission)
		30 - 1000 MHz (Radiated Emission)
Input Voltage	:	DC 5V (From PC)
Temperature	:	18 degree C
Relative Humidity	:	69 percent
Atmospheric Pressure	:	982 mbar

TEST RESULT	Remarks
PASS	Minimum passing margin of conducted emission: -18.4 dB at 0.200 MHz Minimum passing margin of radiated emission: -7.0 dB at 144.3 MHz

4.2 EUT OPERATION CONDITION

1. Turn on the power of all equipment.
2. PC runs a test program to enable all functions.

4.3 TEST DATA OF CONDUCTED EMISSION

EUT: **TABELT** MODEL: **HyperPen 4000U**

6 dB Bandwidth: 9 kHz PHASE: LINE **(L)**

Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.200	0.1	42.5	-	42.6	-	64.5	54.5	-21.9	-
0.400	0.1	33.6	-	33.7	-	58.9	48.9	-25.2	-
0.501	0.1	33.0	-	33.1	-	56.0	46.0	-22.9	-
0.603	0.1	30.0	-	30.1	-	56.0	46.0	-25.9	-
0.903	0.1	27.0	-	27.1	-	56.0	46.0	-28.9	-
1.006	0.1	26.3	-	26.4	-	56.0	46.0	-29.6	-
1.400	0.1	25.6	-	25.7	-	56.0	46.0	-30.3	-
21.500	0.6	25.5	-	26.1	-	60.0	50.0	-33.9	-

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

4.3 TEST DATA OF CONDUCTED EMISSION

EUT: **TABELT** MODEL: **HyperPen 4000U**

6 dB Bandwidth: 9 kHz PHASE: NEUTRAL **(N)**

Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.200	0.1	46.0	-	46.1	-	64.5	54.5	-18.4	-
0.400	0.1	30.5	-	30.6	-	58.9	48.9	-28.3	-
0.501	0.1	31.8	-	31.9	-	56.0	46.0	-24.1	-
0.603	0.1	30.6	-	30.7	-	56.0	46.0	-25.3	-
0.903	0.1	28.5	-	28.6	-	56.0	46.0	-27.4	-
1.006	0.1	28.5	-	28.6	-	56.0	46.0	-27.4	-
1.400	0.1	26.8	-	26.9	-	56.0	46.0	-29.1	
21.500	0.9	25.6	-	26.5	-	60.0	50.0	-33.5	

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

4.4 TEST DATA OF RADIATED EMISSION

EUT: **TABELT** MODEL: **HyperPen 4000U**

ANT. POLARITY: Horizontal

DETECTOR FUNCTION: Quasi-peak 6 dB BANDWIDTH: 120 kHz

FREQUENCY RANGE: 30-1000 MHz MEASURED DISTANCE: 10 M

Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height(cm)	Table Angle (°)
42.1	13.3	7.8	21.1	30.0	-8.9	373	74
43.9	12.4	9.4	21.8	30.0	-8.2	364	338
48.0	9.8	10.7	20.5	30.0	-9.5	376	79
60.0	6.5	8.7	15.2	30.0	-14.8	399	331
84.0	8.7	10.4	19.1	30.0	-10.9	395	337
120.1	13.3	7.2	20.5	30.0	-9.5	397	84
132.1	12.8	5.7	18.5	30.0	-11.5	397	69
144.2	12.3	8.1	20.4	30.0	-9.6	400	307
156.0	11.9	6.2	18.1	30.0	-11.9	388	65
200.8	11.1	9.8	20.9	30.0	-9.1	400	333

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

4.4 TEST DATA OF RADIATED EMISSION

EUT: **TABELT** MODEL: **HyperPen 4000U**

ANT. POLARITY: Vertical

DETECTOR FUNCTION: Quasi-peak 6 dB BANDWIDTH: 120 kHz

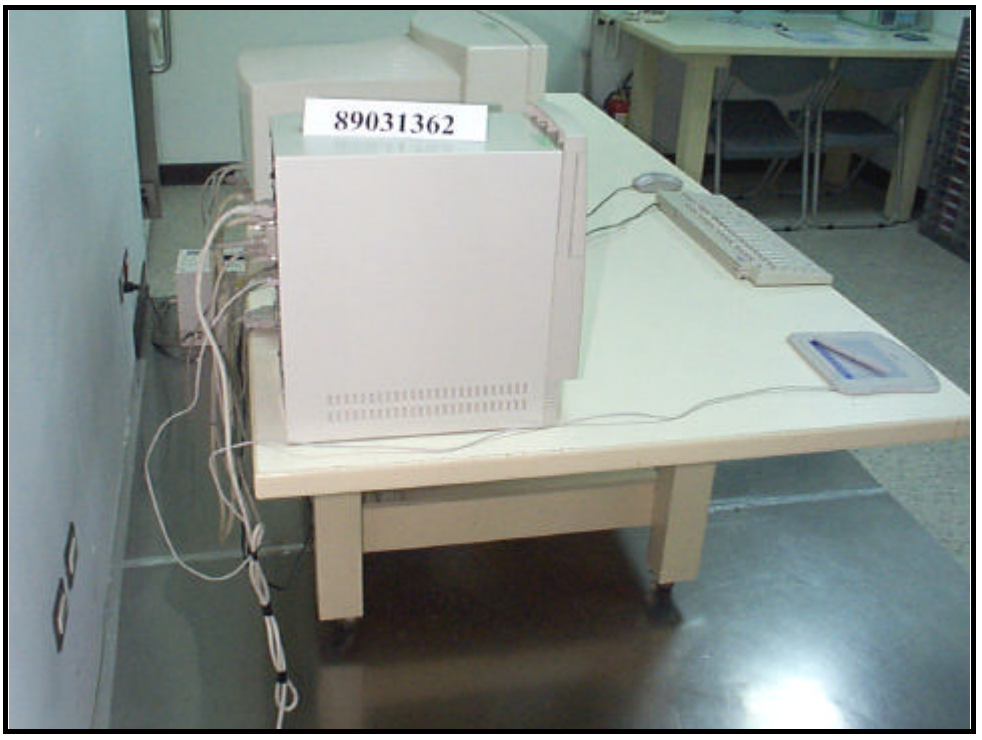
FREQUENCY RANGE: 30-1000 MHz MEASURED DISTANCE: 10 M

Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height(cm)	Table Angle (°)
42.1	13.3	7.8	21.1	30.0	-8.9	258	25
48.0	9.8	12.8	22.6	30.0	-7.4	223	318
60.0	6.5	11.3	17.8	30.0	-12.2	128	93
84.0	8.7	9.9	18.6	30.0	-11.4	111	20
120.0	13.3	6.3	19.6	30.0	-10.4	100	90
132.0	12.8	8.3	21.1	30.0	-8.9	102	324
144.3	12.3	10.7	23.0	30.0	-7.0	102	287
156.1	11.9	8.4	20.3	30.0	-9.7	113	339
192.1	11.1	7.5	18.6	30.0	-11.4	102	329
200.0	11.1	10.8	21.9	30.0	-8.1	107	65

REMARKS:
1. Emission level (dBuV/m) = Correction Factor (dB) + Reading Value (dBuV).
2. Correction Factor (dB) = Ant. Factor (dB)+Cable loss (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 WITH MINIMUM MARGIN

CONDUCTED EMISSION TEST



RADIATED EMISSION TEST