

Certificate of Compliance

We, **ADVANCE DATA TECHNOLOGY CORP.**, hereby certify that:

The product : CPU BOARD

Trade Name : AAEON

Model No. : SBC-656

Applicant : AAEON TECHNOLOGY INC.

one sample of the designation has been tested in our facility from Oct. 6 ~ 15, 1999. The test record, data evaluation and Equipment Under Test (EUT) configuration represented in our report No. **CE88100602**, are in compliance with the following standards:

EN 55022: 1994+A1: 1995+A2: 1997, Class A

EN 50082-2: 1995

EN 61000-4-2: 1995


EN 61000-4-3: 1996

EN 61000-4-4: 1995

EN 61000-4-6: 1996

EN 61000-4-8: 1993

ENV 50204: 1995



Mike Su / Project Manager

Issue Date: Oct. 19, 1999



ADVANCE DATA TECHNOLOGY CORP.

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EMC

TEST REPORT

REPORT NO. : CE88100602
MODEL NO. : SBC-656
DATE OF TEST : Oct 6 ~ 15, 1999

PREPARED FOR: AAEON TECHNOLOGY INC.

ADDRESS : 1F, NO. 6, ALLEY 6, LANE 45, PAO-HSIN RD.,
HSIN-TIEN CITY, TAIPEI, TAIWAN, R.O.C.

PREPARED BY: ADVANCE DATA TECHNOLOGY CORPORATION



Accredited Laboratory

11F, NO.1, SEC.4, NAN-KING EAST RD.,
TAIPEI, TAIWAN, R.O.C.

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TABLE OF CONTENTS

1. CERTIFICATION	3
2. GENERAL INFORMATION	4
2.1 GENERAL DESCRIPTION OF EUT	4
2.2 GENERAL DESCRIPTION OF APPLIED STANDARD	4
2.3 DESCRIPTION OF SUPPORT UNITS	5
2.4 TEST SETUP	6
3. TEST INSTRUMENTS	7
3.1 TEST INSTRUMENTS (EMISSION)	7
3.2 TEST INSTRUMENTS (IMMUNITY)	8
3.3 LIMITS OF CONDUCTED AND RADIATED EMISSION	9
4. TEST RESULTS (EMISSION)	10
4.1 RADIO DISTURBANCE	10
4.2 EUT OPERATION CONDITION	10
4.3 TEST DATA OF CONDUCTED EMISSION	11
4.4 TEST DATA OF RADIATED EMISSION	13
5. TEST RESULTS (IMMUNITY)	15
5.1 GENERAL DESCRIPTION	15
5.2 PERFORMANCE CRITERIA DESCRIPTION	15
5.3 EUT OPERATION CONDITION	15
5.4 TEST RESULT OF ELECTROSTATIC DISCHARGE (ESD)	16
5.5 TEST RESULT OF RADIATED RADIO FREQUENCY	17
5.6 TEST RESULT OF ELECTRICAL FAST TRANSIENT/BURST (EFT/BURST)	18
5.7 TEST RESULT OF CONDUCTED RADIO FREQUENCY DISTURBANCES (CS)	19
5.8 TEST RESULT OF POWER FREQUENCY MAGNETIC FIELD	20
5.9 TEST RESULT OF RADIO-FREQUENCY ELECTROMAGNETIC	21
6. PHOTOGRAPHS OF THE TEST CONFIGURATION	22
7. APPENDIX - INFORMATION OF THE TESTING LABORATORY	30



1.

CERTIFICATION

Issue date: Oct. 19, 1999

Product	:	CPU BOARD	
Trade Name	:	AAEON	
Model No.	:	SBC-656	
Applicant	:	AAEON TECHNOLOGY INC.	
Standard	:	EN 55022: 1994+A1: 1995+A2: 1997, Class A	EN 50082-2: 1995 EN 61000-4-2: 1995 EN 61000-4-3: 1996 EN 61000-4-4: 1995 EN 61000-4-6: 1996 EN 61000-4-8: 1993 ENV 50204: 1995

We hereby certify that one sample of the designation has been tested in our facility from Oct. 6 to 15, 1999. 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.

TESTED BY (Emission)	:	<u>Kenny Meng</u> (Kenny Meng)	, DATE:	<u>10/19/99</u>
TESTED BY (Immunity)	:	<u>Dennis Chuang</u> (Dennis Chuang)	, DATE:	<u>10/19/99</u>
CHECKED BY	:	<u>Yenny Seung</u> (Yenny Seung)	, DATE:	<u>10/19/99</u>
APPROVED BY	:	<u>Mike Su</u> (Mike Su)	, DATE:	<u>10/19/99</u>

ADVANCE DATA TECHNOLOGY CORPORATION



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2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product : CPU BOARD
Model No. : SBC-656
Power Supply : Switching (from PC)

Note: During the test, the EUT was installed in a metal enclosure with a slot board to form an industrial PC.

The EUT was tested under the following configurations:

CPU	INTEL CELERON, 433MHz (66MHz x 6.5)
HDD	SEAGATE, ST34520A, 4.5GB
BACKPLANE	AAEON, BP-206B
CHASSIS	AAEON, AMPC-106
MEMORY	64MB SDRAM
SPS	ZIPPY, EPZ-4150F

The EUT has a resolution up to 1024x768, 256 color.

For more detailed features description, please refer to Manufacturer's Specification or User's Manual.

2.2 GENERAL DESCRIPTION OF APPLIED STANDARD

The EUT is a kind of Information Technology Equipment which could be used in industrial area and according to the manufacturer's specifications, it was tested according to the following standards:

EN 55022: 1994+A1: 1995-A2: 1997, Class A

EN 50082-2: 1995

EN 61000-4-2: 1995

EN 61000-4-3: 1996

EN 61000-4-4: 1995

EN 61000-4-6: 1996

EN 61000-4-8: 1993

ENV 50204: 1995

All tests are performed and recorded as per above standards.



2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as a PC system together with other necessary accessories or support units. The following support units or accessories are used to form representative test configuration during the tests.

FOR EMISSION TEST

No	Product	Brand	Model No.	Serial No.	I/O Cable
1	COLOR MONITOR	HP	D2846	JP74912250	Nonshielded Signal (1.5m) Shielded Power (1.8m)
2	PRINTER	HP	2225C+	3123S97230	Nonshielded Signal (1.2m) Shielded Power (1.2m)
3	MODEM	ACEEX	1414	980020308	Shielded signal (1.2m) Nonshielded Power (1.2m)
4	KEYBOARD	FORWARD	FDA-104GA	FDKB8110120	Shielded Signal (1.4m)
5	MOUSE	LOGITECH	M-M30	LTR53500791	Shielded signal (2.0m)
6	USB KEYBOARD	BTC	7932	178190004	Shielded Signal (1.7m)
7	USB MOUSE	DEXIN	AZU800A	71001820	Shielded Signal (1.5m)
8	PC	IBM	6587-T8T	9983708	Nonshielded power (10.0m) Shielded Signal (1.8m)
9	MONITOR	ADI	SM-5514A	5218030301A	Nonshielded Signal (1.5m) Shielded Power (1.8m)
10	KEYBOARD	HP	C3757A	C3757-60223	Shielded Signal (1.2m)
11	MOUSE	DEXIN	A2P800A	80102267	Shielded signal (1.5m)
12	LAN CARD	3COM	3CCFB575BT	6NV1F89B7A	NA

Note: 1. Support unit 1~7 acted as SERVER PC and communicated with support unit 8-12 which acted as HOST PC and systems of communication partner via a UTP cable (10m).

2. Support unit 6 & 7 were connected to the USB ports of EUT.



FOR IMMUNITY TEST

No	Product	Brand	Model No.	Serial No.	I/O Cable
1	COLOR MONITOR	ADI	SM-5514A	521S030297A	Shielded signal (1.5m) Nonshielded Power (1.8m)
2	PRINTER	HP	C2145A	SQ59N160GY	Shielded signal (1.5m) Nonshielded Power (1.8m)
3	MODEM	GVC	F-1128V1R6	96-191-113003	Shielded signal (1.25m) Nonshielded Power (1.5m)
4	KEYBOARD	HP	C3753A	C3753-60223	Shielded Signal (1.8m)
5	MOUSE	LOGITECH	M-M30	LTR53500777	Shielded signal (1.9m)
6	USB KEYBOARD	ACER	6512-BU	NA	Shielded Signal (2.9m)
7	USB MOUSE	FORWARD	FDM-F30	NA	Shielded Signal (1.8m)
8	NOTEBOOK	USI	UNI-812	97207-0112-02-9850	Nonshielded Power (1.8m)
9	LAN CARD	3COM	3CCFE575BT	6NV1F89B7A	NA

Note: 1. Support unit 1~7 acted as SERVER PC and communicated with support unit 8-9 which acted as HOST PC and systems of communication partner via a UTP cable (10m).

2. Support unit 6 & 7 were connected to the USB ports of EUT.

2.4 TEST SETUP

Please refer to the photos of test configuration in Item 6.



3. TEST INSTRUMENTS

3.1 TEST INSTRUMENTS (EMISSION)

CONDUCTED EMISSION MEASUREMENT

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE & SCHWARZ Test Receiver	ESHS30	828765/002	Aug. 2, 2000
ROHDE & SCHWARZ Artificial Mains Network	ESH2-Z5	828075/003	July 21, 2000
EMCO-L.I.S.N. Shielded Room	3825/2 Site 5	90031627 ADT-C05	July 21, 2000 NA

- 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	8590L	3544A01176	April 22, 2000
HP Preamplifier	8447D	2944A08485	April 21, 2000
HP Preamplifier	8347A	3307A01088	Aug. 30, 2000
ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Aug. 30, 2000
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 25, 1999G19
CHASE BILOG Antenna	CBL6112A	2221	Aug. 4, 2000
EMCO Turn Table	1060	1115	NA
SHOSHIN Tower	AP-4701	A6Y005	NA
Open Field Test Site	Site 5	ADT-R05	July 30, 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 TEST INSTRUMENTS (IMMUNITY)

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
KeyTek, ESD Test System	2000	9105240/41	Aug. 10, 2000
KeyTek, ESD Simulator	M7-15/EC	92022232	April 14, 2000
KeyTek, EFT Generator	CE-40	9508257	Sept. 5, 2000
KeyTek, Capacitive Clamp	CE-40-CCL	9508259	Sept. 5, 2000
KeyTek, Control Center	E103	9508347	NA
KeyTek, Surge Combination Wave	E501A	9508349	Aug. 30, 2000
KeyTek, Surge Coupler/Decoupler	E551	9508350	Aug. 30, 2000
ROHDE & SCHWARZ Signal Generator	SMY01	840490/009	Aug. 19, 2000
KALMUS Power Amplifier	LA1000V	091995-1	NA
KALMUS Power Amplifier	757LC	091995-2	NA
HOLADAY Field Probe	HI-4422	89915	Oct. 27, 1999
EMCO BiconiLog Antenna	3141	1001	NA
FCC Coupling Decoupling Network	FCC-801-M3-25	48	NA
FCC Coupling Decoupling Network	FCC-801-M2-25	20	NA
FISCHER CUSTOM COMMUNICATIONS EM Injection Clamp	FCC-203I	50	NA
FCC Coupling Decoupling Network	FCC-801-M1-25	17	NA
BOONTON RF Voltage Meter	9200B	331801AE	Dec. 17, 1999
COMTEST Compact Full Anechoic Chamber (7x3x3 m)	CFAC	ADT-S01	Aug. 24, 2000
HAEFELY Magnetic Field Tester	MAG 100.1	083794-06	NA
COMBINOVA Magnetic Field Meter	MFM10	224	Oct. 28, 1999
HAEFELY Mains Interference Simulator	PLINE 1610	083690-17	June 7, 2000

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



3.3 LIMITS OF CONDUCTED AND RADIATED EMISSION

LIMIT OF RADIATED EMISSION OF EN 55022

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

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 EN 55022

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

Product Family Standard : EN 55022: 1994+A1: 1995+A2: 1997, Class A
 Frequency Range : 0.15 - 30 MHz (Conducted Emission)
 30 - 1000 MHz (Radiated Emission)
 Input Voltage : 230 Vac, 50 Hz (to PC)
 Temperature : 28 °C
 Humidity : 52 %
 Atmospheric Pressure : 997 mbar

TEST RESULT	Remarks
PASS	Minimum passing margin of conducted emission: -14.4 dB at 0.168 MHz Minimum passing margin of radiated emission: -5.4 dB at 66.83 MHz

4.2 EUT OPERATION CONDITION

1. Turn on the power of all equipment.
2. Industrial PC reads a test program to enable all functions.
3. Industrial PC reads and writes messages from HDD.
4. Industrial PC sends and receives messages to and from HOST PC via a UTP cable.
5. Industrial PC sends "H" messages to monitor and monitor display "H" patterns on screen.
6. Industrial PC sends "H" messages to modem.
7. Industrial PC sends "H" messages to printer, and the printer prints them on paper.
8. Repeat steps 2-8.



4.3 TEST DATA OF CONDUCTED EMISSION

EUT: CPU BOARD

MODEL: SBC-656

6 dB Bandwidth: 10 kHz

PHASE: LINE (L)

Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
		[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.168	0.2	64.1	-	64.3	-	79.0	69.0	-14.7	-
0.264	0.2	50.3	-	50.5	-	79.0	69.0	-28.5	-
0.363	0.2	42.1	-	42.3	-	79.0	69.0	-36.7	-
0.408	0.2	37.2	-	37.4	-	79.0	69.0	-41.6	-
13.697	1.0	43.1	-	44.1	-	73.0	63.0	-28.9	-
16.910	1.0	41.3	-	42.3	-	73.0	63.0	-30.7	-

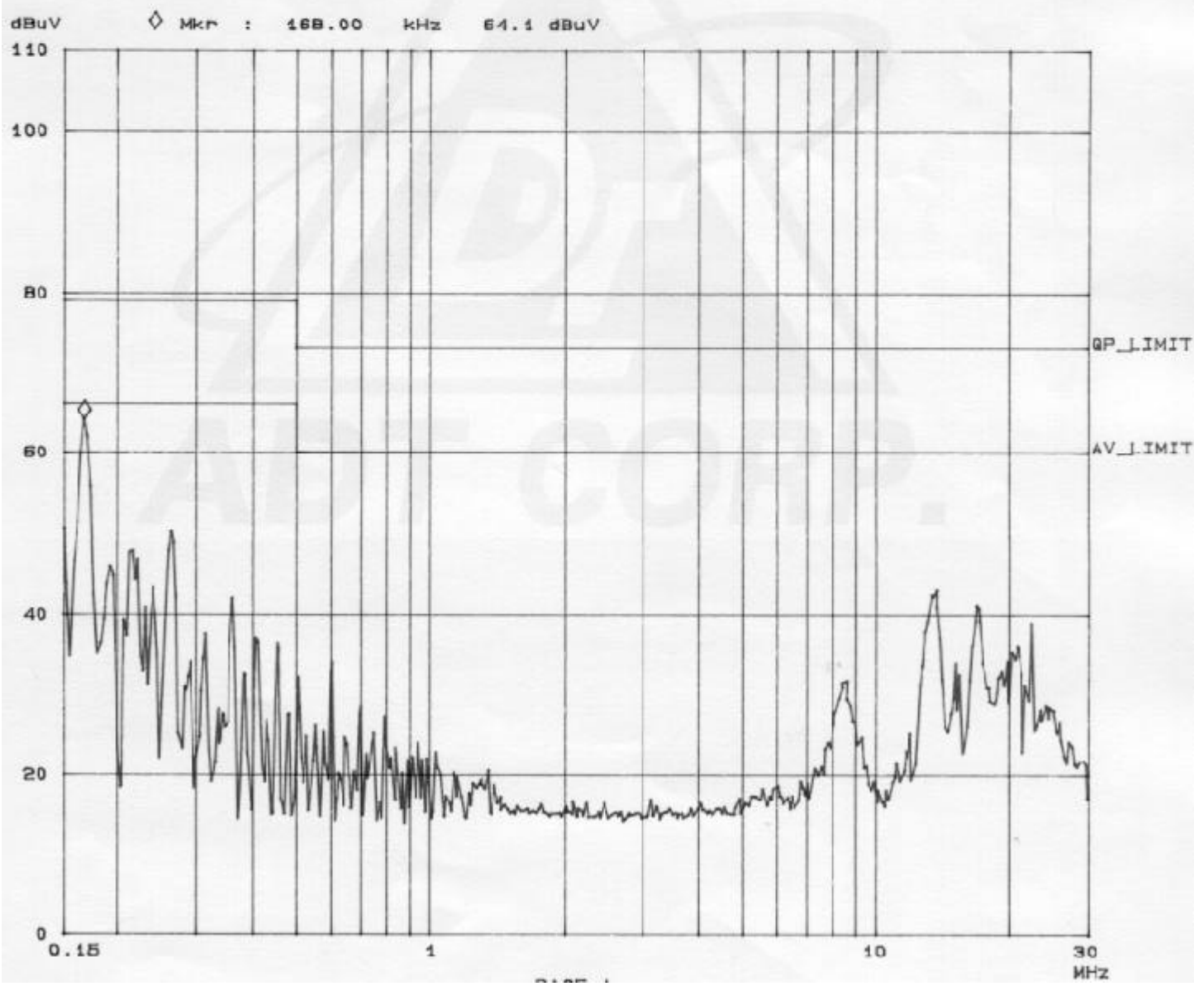
- Remarks:
1. "": Undetectable
 2. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": The Emission Level reading value also meets average limit and measurement with the average detector is unnecessary.
 4. The emission levels of other frequencies were very low against the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

EUT: SBC-656
Test Spec: LISN: L

Report No. CE 88100602
Page 11-1
Tested by Kenny Meng

Fast Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150k	450k	3k	10k	PK	0.05ms	10dB LN	OFF	60dB
450k	5M	3k	10k	PK	0.05ms	10dB LN	OFF	60dB
5M	30M	3k	10k	PK	0.05ms	10dB LN	OFF	60dB





TEST DATA OF CONDUCTED EMISSION

EUT: CPU BOARD

MODEL: SBC-656

6 dB Bandwidth: 10 kHz

PHASE: NEUTRAL (N)

Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
		[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.168	0.2	64.4	-	64.6	-	79.0	69.0	-14.4	-
0.264	0.2	53.8	-	54.0	-	79.0	69.0	-25.0	-
0.363	0.2	44.5	-	44.7	-	79.0	69.0	-34.3	-
0.408	0.2	41.7	-	41.9	-	79.0	69.0	-37.1	-
13.697	0.7	43.6	-	44.3	-	73.0	63.0	-28.7	-
16.910	0.7	41.2	-	41.9	-	73.0	63.0	-31.1	-

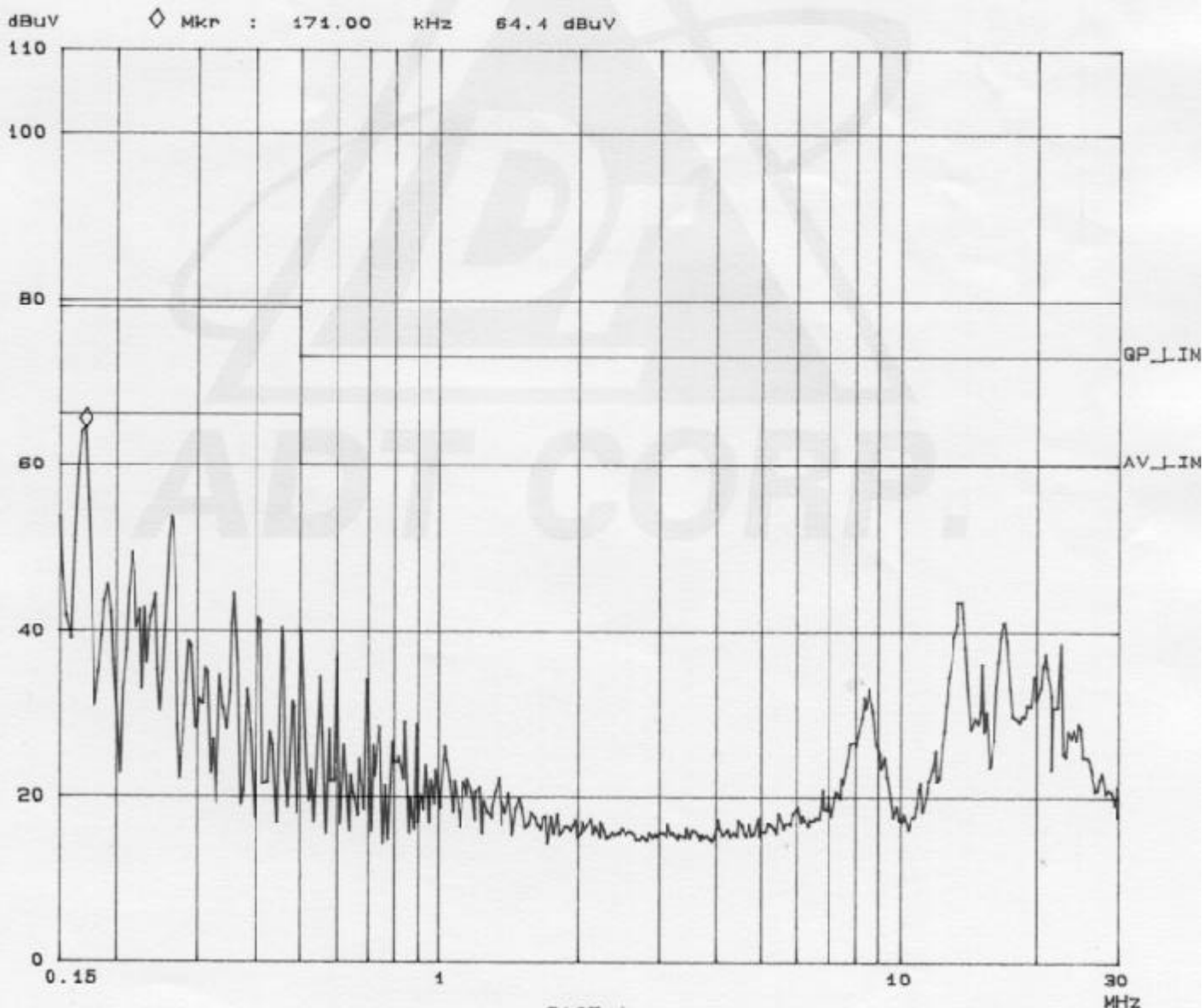
- Remarks:
1. "-": Undetectable
 2. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": The Emission Level reading value also meets average limit and measurement with the average detector is unnecessary.
 4. The emission levels of other frequencies were very low against the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

EUT: SBC-656
Test Spec: LISN : N

Report No. CE88100602
Page 12-1
Tested by *Lenny Mend*

Fast Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150k	450k	3k	10k	PK	0.05ms	10dB	LN OFF	60dB
450k	5M	3k	10k	PK	0.05ms	10dB	LN OFF	60dB
5M	30M	3k	10k	PK	0.05ms	10dB	LN OFF	60dB





4.4 TEST DATA OF RADIATED EMISSION

EUT: CPU BOARD

MODEL: SBC-656

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 (Degree)
66.86	6.6	26.7	33.3	40.0	-6.7	400	0
160.00	11.7	16.2	27.9	40.0	-12.1	400	2
191.80	10.4	19.8	30.2	40.0	-9.8	400	2
200.01	10.2	16.0	26.2	40.0	-13.8	400	0
250.04	13.7	22.4	36.1	47.0	-10.9	172	75
434.35	18.4	10.5	28.9	47.0	-18.1	215	292
935.49	23.9	10.5	34.4	47.0	-12.6	100	133

- 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



TEST DATA OF RADIATED EMISSION

EUT: CPU BOARD

MODEL: SBC-656

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 (Degree)
66.83	6.6	28.0	34.6	40.0	-5.4	182	100
133.66	12.7	19.2	31.9	40.0	-8.1	100	132
144.03	12.4	16.6	29.0	40.0	-11.0	100	344
150.01	12.1	20.8	32.9	40.0	-7.1	100	235
160.01	11.7	18.0	29.7	40.0	-10.3	100	113
181.95	10.7	15.6	26.3	40.0	-13.7	100	255
190.01	10.5	20.8	31.3	40.0	-8.7	100	190
200.01	10.2	20.9	31.1	40.0	-8.9	100	133
250.04	13.7	25.5	39.2	47.0	-7.8	144	300
935.51	23.9	17.4	41.3	47.0	-5.7	186	73

- 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. TEST RESULTS (IMMUNITY)

5.1 GENERAL DESCRIPTION

Generic Standard	:	EN 50082-2: 1995
Basic Standard and Performance Criteria	:	EN 61000-4-2 (Electrostatic Discharge, ESD, 8kV air discharge, 4kV Contact discharge, Performance Criterion B)
		EN 61000-4-3 (Radio-Frequency Electromagnetic Field Susceptibility Test, RS, 80-1000 MHz, 10V/m, 80% AM (1kHz), Performance Criterion A)
		EN 61000-4-4 (Electrical Fast Transient/Burst, EFT, Power line: 2kV, Signal line: 1kV, Performance Criterion B)
		EN 61000-4-6 (Conducted Radio Frequency Disturbances Test, CS, 0.15-80 MHz, 10V/m, 80% AM, 1kHz, Performance Criterion A)
		EN 61000-4-8 (Power Frequency Magnetic Field Test, 50 Hz, 30A/m, Performance Criterion A)
		ENV 50204 (Radio-Frequency Electromagnetic Field, Pulse modulated, 900 +/- 5 MHz, 10V/m, 50 % duty cycle, Rep. Frequency 200 Hz, Performance Criterion A)
Input Voltage	:	230 Vac, 50 Hz (to power of Industrial PC)
Temperature	:	25 °C
Humidity	:	56 %
Atmospheric Pressure	:	1002 mbar

5.2 PERFORMANCE CRITERIA DESCRIPTION

- Criterion A - The apparatus shall continue to operate as intended. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended.
- Criterion B - The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the apparatus is used as intended.
- Criterion C - Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls.

5.3 EUT OPERATION CONDITION

Industrial PC runs a test program to access FDD/HDD/MODEM/PRINTER sequentially and show the result on monitor screen.



5.4 TEST RESULT OF ELECTROSTATIC DISCHARGE (ESD)

Basic Standard : EN 61000-4-2
 Generic Standard : EN 50082-2
 Discharge Impedance : 330 ohm / 150 pF
 Discharge Voltage : Air Discharge - 8 kV (Direct)
 Contact Discharge - 4 kV (Direct/ Indirect)
 Polarity : Positive/Negative
 Number of Discharge : Minimum 20 times at each test point
 Discharge Mode : Single Discharge
 Discharge Period : 1-second minimum

Test Result		Remarks
Criterion A	PASS	MODEL: SBC-656

OBSERVATION DESCRIPTION

Direct Application			Test Result	
Discharge Level (kV)	Polarity (+/-)	Test Point	Contact Discharge	Air Discharge
8	+/-	1 ~ 6	NA	Note 1
4	+/-	1 ~ 3	Note 1	NA

Description of test point: (Please refer to ESD photo)

- | | |
|-------------------|--------------------|
| 1. All I/O port | 2. All screws |
| 3. All Metal case | 4. All openings |
| 5. Power switch | 6. AC in connector |

Indirect Application			Test Result	
Discharge Level (kV)	Polarity (+/-)	Test Point	Horizontal Coupling Plane	Vertical Coupling Plane
4	+/-	1 ~ 4	Note 1	Note 1

Description of test point:

- | | |
|---------------|---------------|
| 1. Front side | 2. Right side |
| 3. Left side | 4. Rear side |

Description of test result:

Note 1: There was no change compared with initial operation during the test.



5.5 TEST RESULT OF RADIATED RADIO FREQUENCY

DISTURBANCES (RS)

Basic Standard : EN 61000-4-3
Generic Standard : EN 50082-2
Frequency range : 80 MHz - 1000 MHz
Field strength : 10 V/m
Modulation : 1kHz Sine Wave, 80%, AM Modulation
Dwell Time : 3 seconds
Frequency step : 1 % of fundamental
Polarity of Antenna : Horizontal and Vertical
Test distance : 3 m

Test Result		Remarks
Criterion A	PASS	MODEL: SBC-656

Note: Four sides of EUT are verified separately.

OBSERVATION DESCRIPTION

There was no change compared with initial operation during the test.



5.6 TEST RESULT OF ELECTRICAL FAST TRANSIENT/BURST (EFT/BURST)

Basic Standard : EN 61000-4-4
 Generic Standard : EN 50082-2
 Test Voltage : Power Line - 2 kV (to power of Industrial PC)
 : Signal/Control Line - 1kV
 Polarity : Positive/Negative
 Impulse Frequency : 5 kHz
 Tr / Tn : 5/50 ns
 Burst Duration : 15 ms
 Burst Period : 300 ms
 Test Duration : Not less than 1 min.

Test Result	Remarks
Criterion A Pass	MODEL: SBC-656

OBSERVATION DESCRIPTION

Test Point	Polarity	Test Level (kV)	Result
L1	+/-	2	Note 1
L2	+/-	2	Note 1
GND	+/-	2	Note 1
Signal / Control Line	+/-	1	Note 1

Description of test result:

Note 1: There was no change compared with initial operation during the test.



5.7 TEST RESULT OF CONDUCTED RADIO FREQUENCY DISTURBANCES (CS)

Basic Standard : EN 61000-4-6
Generic Standard : EN 50082-2
Frequency range : 0.15 MHz - 80 MHz
Field strength : 10 V/m
Modulation : 1kHz Sine Wave, 80%, AM Modulation
Frequency step : 1 % of fundamental
Coupled cable : Power Mains, Unshielded LAN cable
Coupling device : CDN-M3 (3 wires), Clamp

Test Result		Remarks
Criterion A	PASS	MODEL: SBC-656

OBSERVATION DESCRIPTION

There is no change compared with initial operation during the test.



5.8 TEST RESULT OF POWER FREQUENCY MAGNETIC FIELD

Basic Standard : EN 61000-4-8
Generic Standard : EN 50082-2
Frequency range : 50 Hz
Field strength : 30 A/m
Observation Time : 1 minute
Inductance coil : Rectangular type, 1m x 1m

Test Result		Remarks
Criterion A	PASS	MODEL: SBC-656

OBSERVATION DESCRIPTION

There was no change compared with initial operation during the test.



5.9 TEST RESULT OF RADIO-FREQUENCY ELECTROMAGNETIC FIELD, PULSE MODULATED

Basic Standard : ENV 50204
Generic Standard : EN 50082-2
Frequency range : 900 +/- 5 MHz
Field strength : 10 V/m
Modulation : 200Hz, Square Wave, 50% Duty Cycle
Dwell Time : 30 second
Polarity of Antenna : Horizontal and Vertical
Test distance : 3 m

Test Result		Remarks
Criterion A	PASS	MODEL: SBC-656

Note: Four sides of EUT are verified separately.

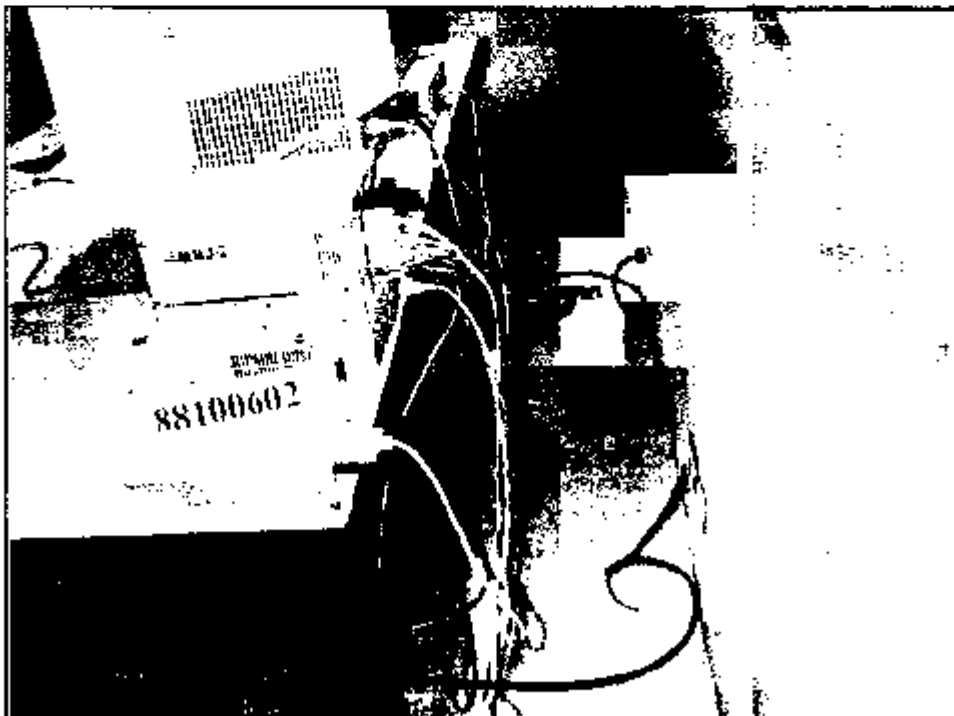
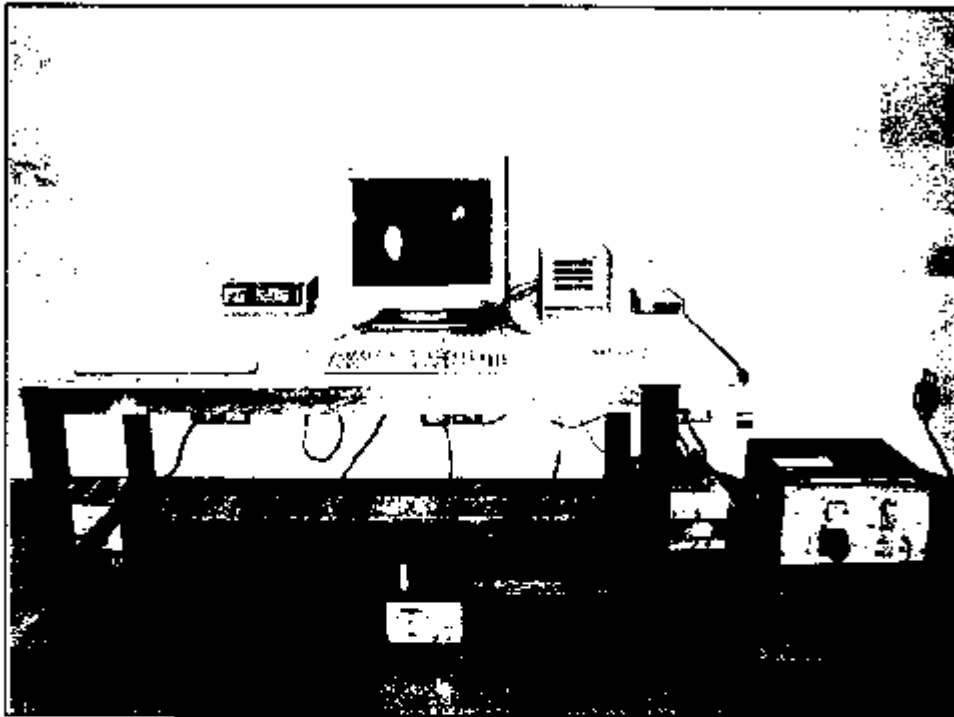
OBSERVATION DESCRIPTION

There is no change compared with initial operation during the test.



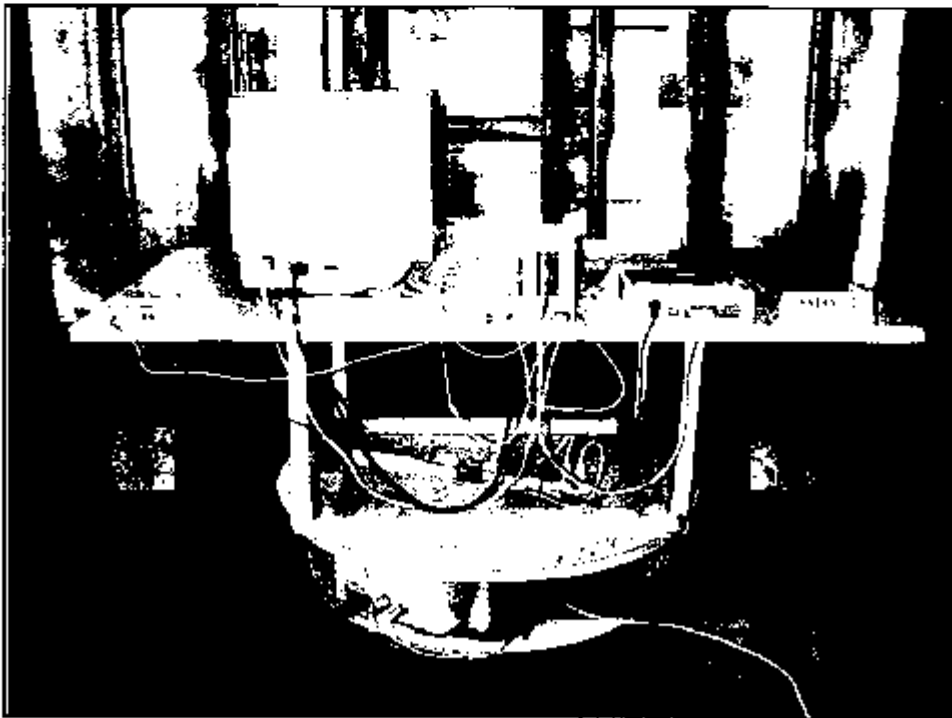
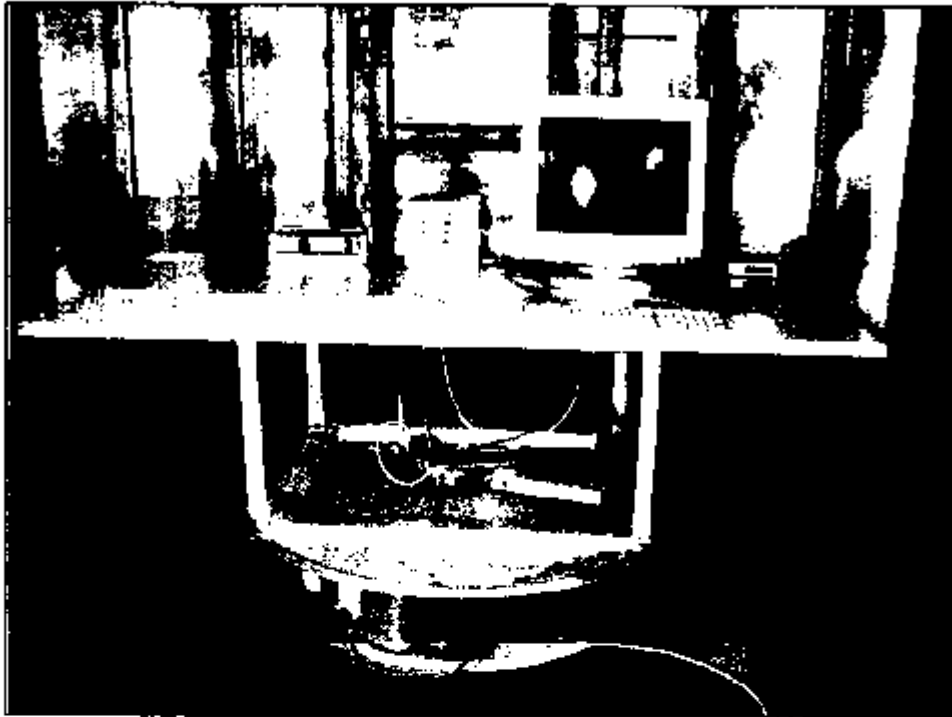
6. PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST





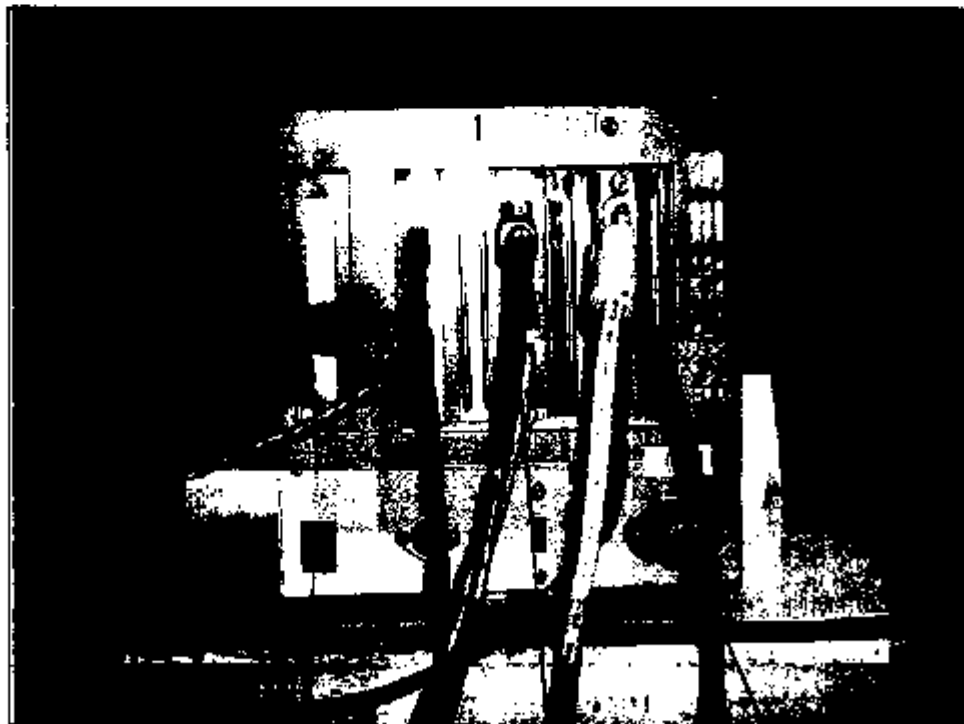
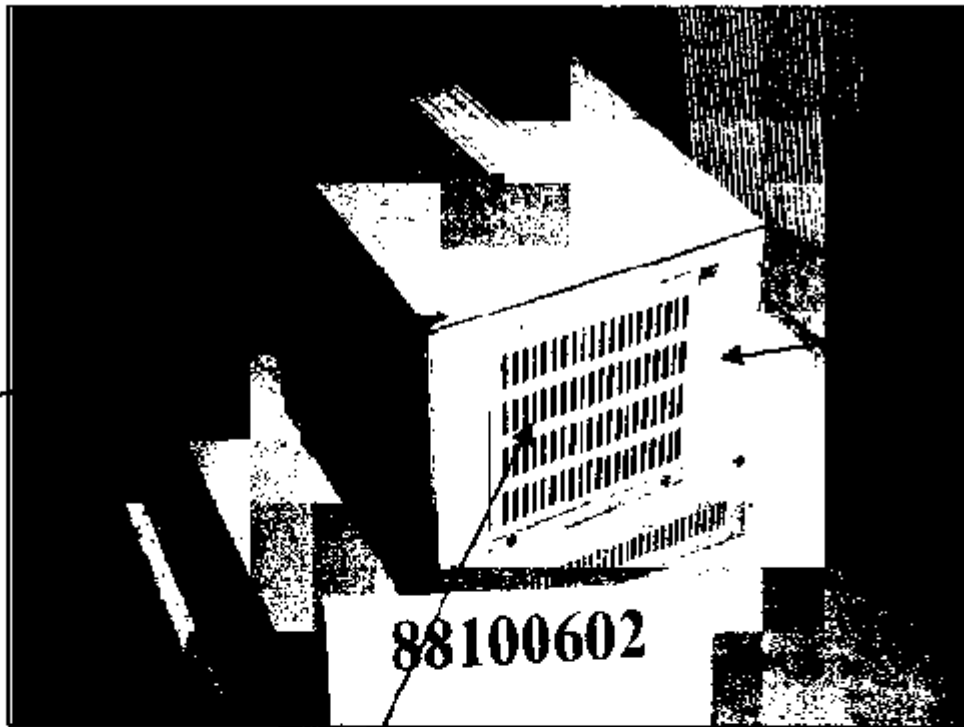
RADIATED EMISSION TEST





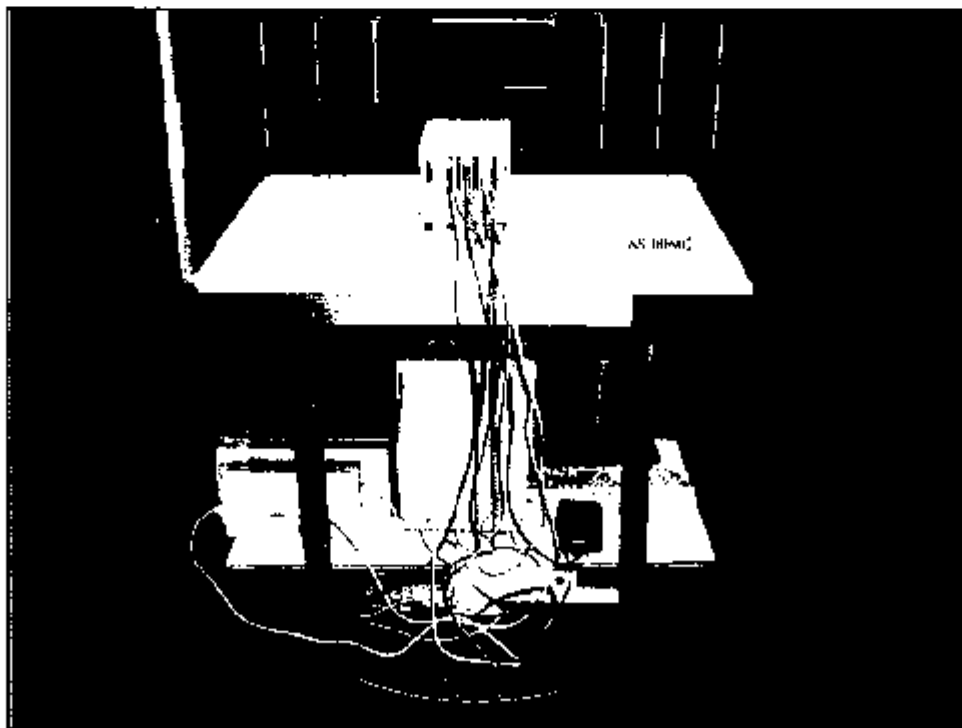
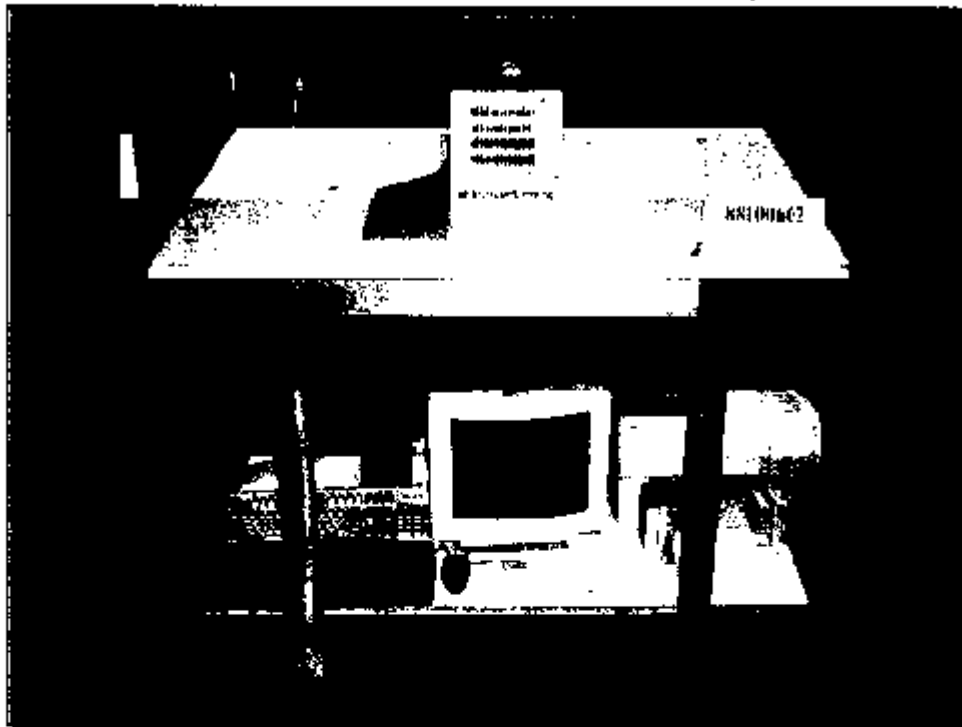
ESD TEST





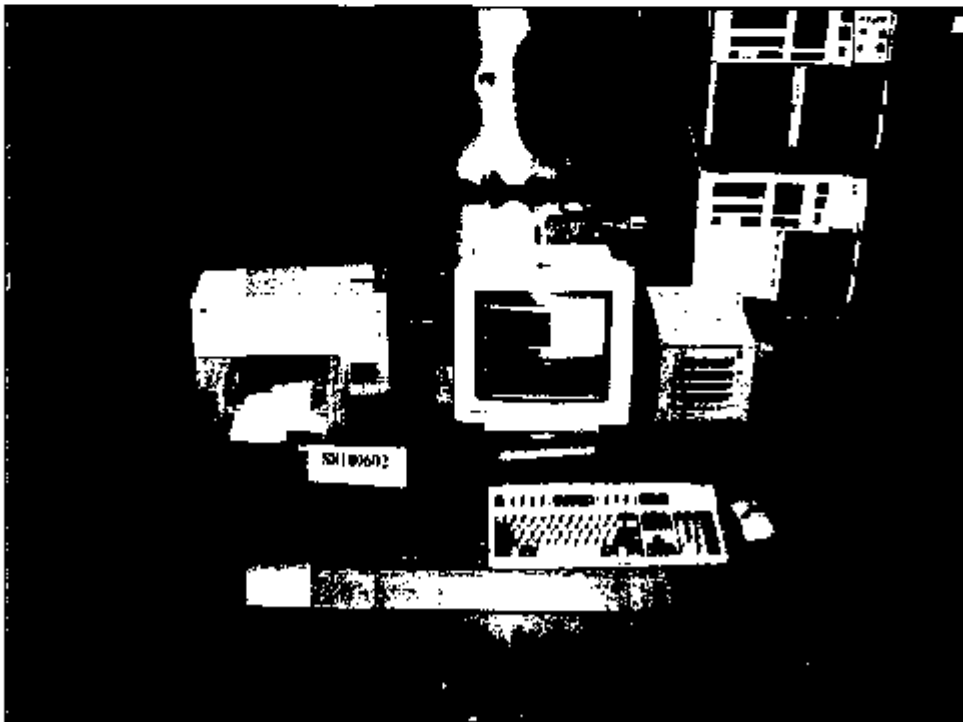
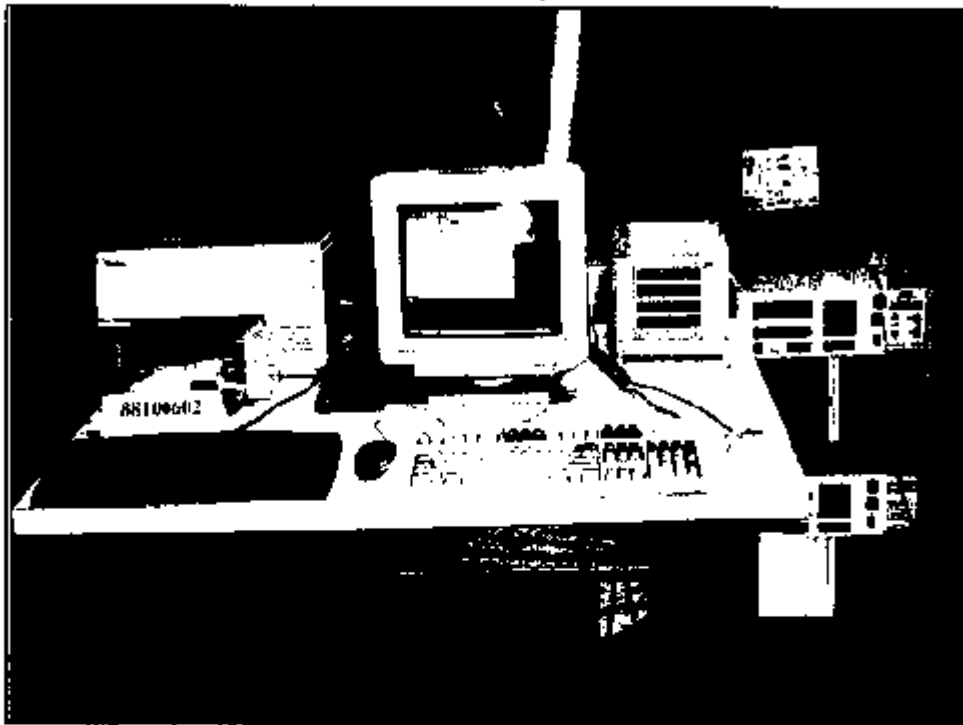


RS & PULSE MODULATION TEST

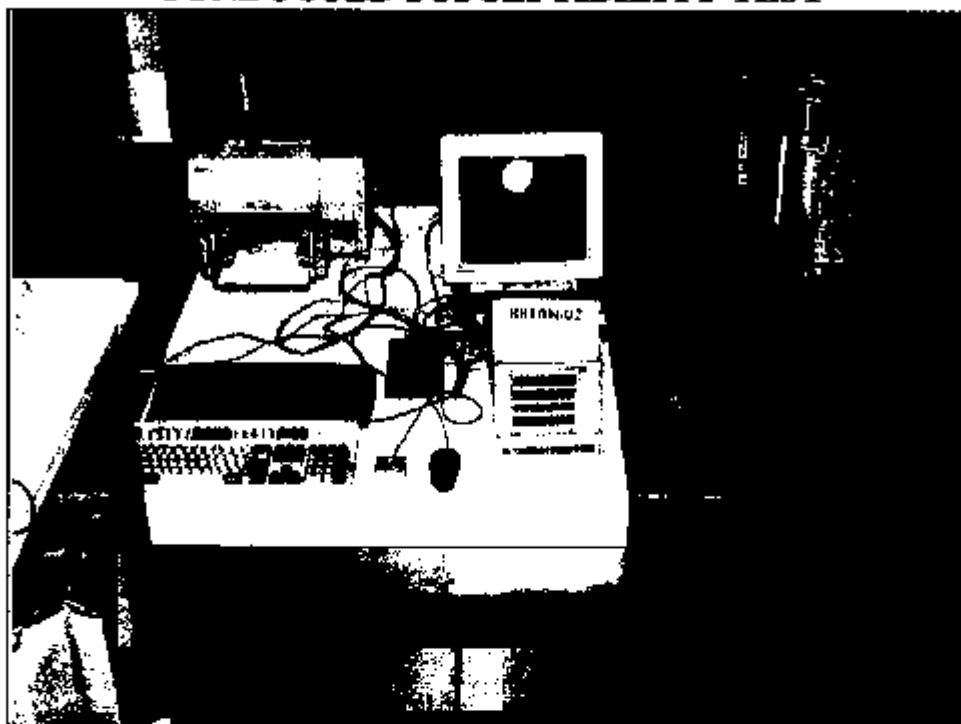




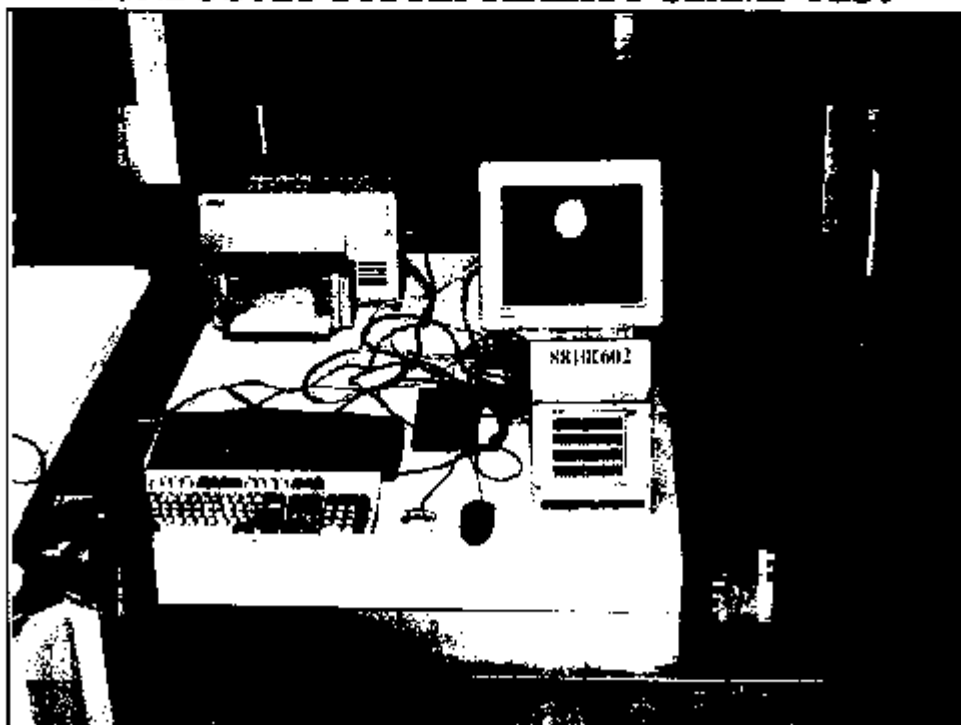
EFT TEST



CONDUCTED SUSCEPTIBILITY TEST

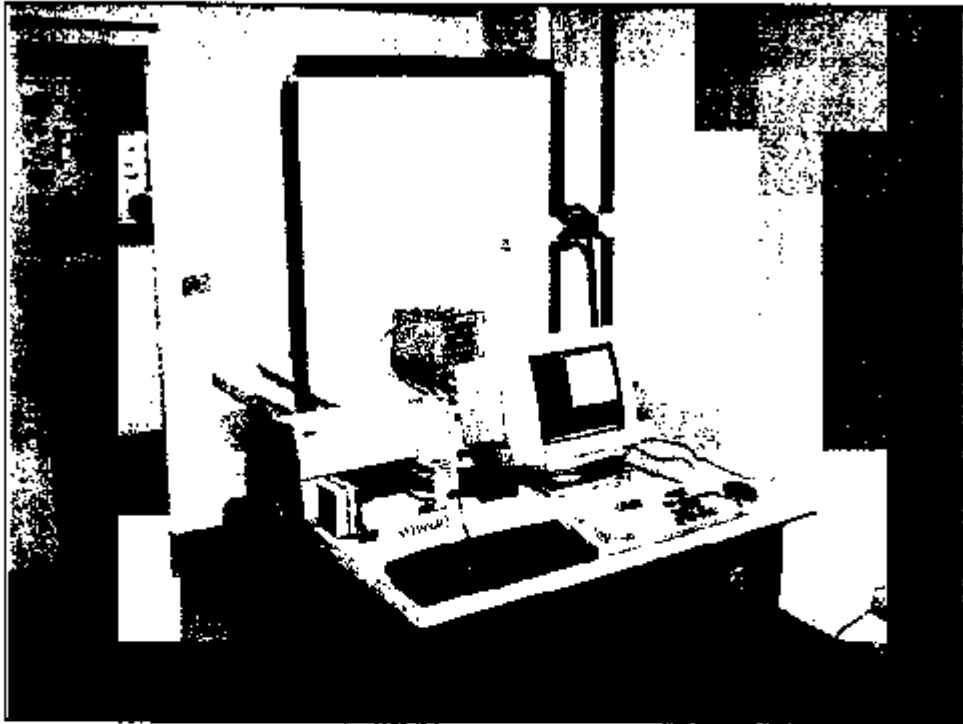


CONDUCTED SUSCEPTIBILITY CLAMP TEST





MAGNETIC TEST





7. APPENDIX - INFORMATION OF THE TESTING LABORATORY

Information of the testing laboratory

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

- | | |
|---------------|--------------------------------------|
| ● USA | FCC, UL, NVLAP |
| ● Germany | TUV Rheinland
TUV Product Service |
| ● Japan | VCCI |
| ● New Zealand | RFS |
| ● Norway | NEMKO, DNV |
| ● U.K. | INCHCAPE |
| ● R.O.C. | BSMI |

Enclosed please find some certificates of our laboratory obtained from approval agencies. If you have any comments, please feel free to contact us with the following:

Lin Kou EMC Lab.:
Tel: 886-2-26032180
Fax: 886-2-26022943

Hsin Chu EMC Lab:
Tel: 886-35-935343
Fax: 886-35-935342

Lin Kou Safety Lab.:
Tel: 886-2-26093195
Fax: 886-2-26093184

Design Center:
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Fax: 886-2-26093184

E-mail: service@mail.adt.com.tw
<http://www.adt.com.tw>



CONSTRUCTION PHOTOS OF EUT

