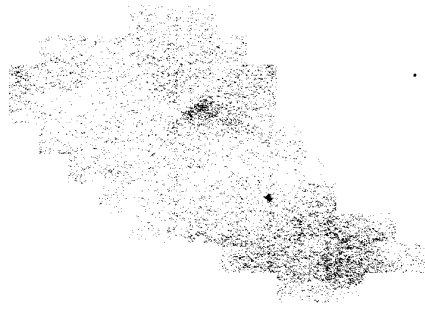


CE REPORT FOR

EUT: INDUSTRIAL PC  
MODEL: AMB-532,PIA-6430,PIA-6007,MBC-265,AMB-232

SRT REPORT # CE7B14-1



PREPARED FOR:

ASTECH TECHNOLOGY CO., LTD.  
6F-4, NO. 351, SEC. 2, CHUNG-SHAN ROAD,  
CHUNG-HO CITY, TAIPEI, TAIWAN, R.O.C.

PREPARED BY:

SPECTRUM RESEARCH & TESTING LABORATORY INC.  
NO. 101-10, LING 8 SHAN-TONG LI  
CHUNG LI CITY, TAOYUAN, TAIWAN, R.O.C.

---

# EC-CONFORMITY DECLARATION

(CE MARKING)

FOR THE FOLLOWING EQUIPMENT:

Product Name : INDUSTRIAL PC

---

MODEL : AMB-532,PIA-6430,PIA-6007,MB-265,AMB-232

---

TRADE NAME : ARBOR TECHNOLOGY CORP.

---

IS HEREWITH CONFIRMED TO COMPLY WITH THE REQUIREMENTS SET UP IN THE COUNCIL DIRECTIVE ON THE APPROXIMATION OF THE LAW OF MEMBER STATES RELATING TO ELECTROMAGNETIC COMPATIBILITY(89/336/EEC). FOR THE EVALUATION REGARDING THE ELECTROMAGNETIC COMPATIBILITY, THE FOLLOWING STANDARDS WERE APPLIED:

* EN50081-2 (1993)	* EN50082-2 (1993)
EN55011 (1989)	IEC 801-2 (1984)
EN60555-2 (1987)	IEC 801-3 (1984)
EN60555-3 (1987)	IEC 801-4 (1988)

THE FOLLOWING MANUFACTURER/IMPORTER IS RESPONSIBLE FOR THIS DECLARATION:

---

(Company Name)

---

---

(Company Address)

PERSON RESPONSIBLE FOR MAKING THIS DECLARATION:

---

(Name, Surname)

---

(Position/Title)

---

(Place)

(Date)

(Legal Signature)

SRT # CE7B14-1

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1. TEST REPORT CERTIFICATION

APPLICANT : ASTECH TECHNOLOGY CO., LTD.

EUT DESCRIPTION : INDUSTRIAL PC

(A) POWER SUPPLY : 115/230V

(B) MODEL : AMB-532, PIA-6430, PIA-6007, MBC-265, AMB-232

FINAL TEST DATE: 1997/03/14

MEASUREMENT PROCEDURE USED :

- |                    |             |
|--------------------|-------------|
| * EN50081-2        | * EN50082-2 |
| EN55011 / CISPR 11 | IEC801-2    |
| EN60555-2          | IEC801-3    |
| EN60555-3          | IEC801-4    |

WE HEREBY SHOW THAT:

THE MEASUREMENT SHOWN IN THE ATTACHMENT WERE  
MADE IN ACCORDANCE WITH THE PROCEDURES INDICATED,  
AND THE ENERGY EMITTED BY THE EQUIPMENT WAS  
FOUND TO BE WITHIN THE LIMITS APPLICABLE.

TESTING ENGINEER : Cindy DATE 3/14 97'

Supervisor : Vincent Chia DATE 3/14 97'

Manager : [Signature] DATE 3/14/97



## 2. EUT MODIFICATIONS

THE FOLLOWING ACCESSORIES WERE ADDED TO THE EUT DURING TESTING:

### TB-66A MODIFICATION LIST :

- 1). CN2 : PIN1, 2, 3, 5-25, 27-34 ADDED A 33pF TO GROUND.
- 2). RABON CABLE ADDED A FERRITE CORES ON IT.
- 3). CN3, CN4 ADDED A FERRITE CORE ON IT.

### TB-88B MODIFICATION LIST :

- 1). CN1 : PIN1-8, 11, 12, 16, 19, 20, 23, 24, 25 ADDED A 33pF TO GROUND.
- 2). THE GROUND ADDED A COPPER METAL TO BRACKET.

### MAIN BOARD (PIA-643) MODIFICATION LIST :

- 1). CN4 : DATA AND CLOCK ADDED 33pF TO GROUND.
- 2). L4, L5 CHANGED TO 600ohm AT 100 MHz BEADS.

### LVDS - 265B MODIFICATION LIST :

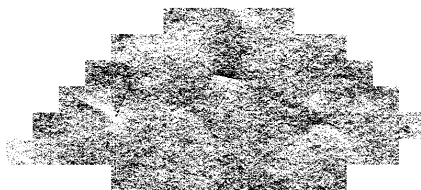
- 1). CHANGED FB1, FB2, FB3 TO 90ohm BEADS.
- 2). CHANGED R4, R5, R8, R9, R10 FROM 0ohm TO 33ohm.
- 3). CN1 : PIN1-5, 6, 8, 11, 12, 16, 20, 23, 24 AND 25 ADDED A 150pF TO GROUND.
- 4). CN1 : PIN 7 ADDED A 180pF TO GROUND.
- 5). THE CN1 GROUND ADDED A COPPER METAL TO BRACKET.

### VGA CARD MODIFICATION LIST :

- 1). CHANGED FB1, FB2, FB3, FB4, FB5, FB6 AND FB7 TO 90ohm BEADS.
- 2). CN1 : PIN6, 7 AND PIN8 ADDED A COPPER METAL TO BRACKET.
- 3). FB5, FB6 AND FB7 ADDED A 200pF TO GROUND.
- 4). CHANGED CN4 UNSHIELDED CABLE TO SHIELDED CABLE.

### CASE MODIFICATION LIST :

- 1). ADDED 10 SPRING FINGERS BETWEEN COVER AND CASE.



3. CONDUCTED POWER LINE TEST

3.1 TEST EQUIPMENT

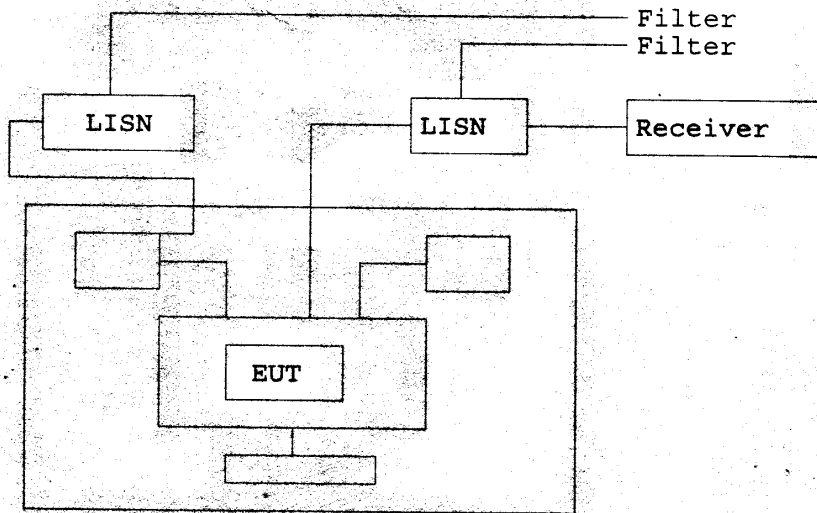
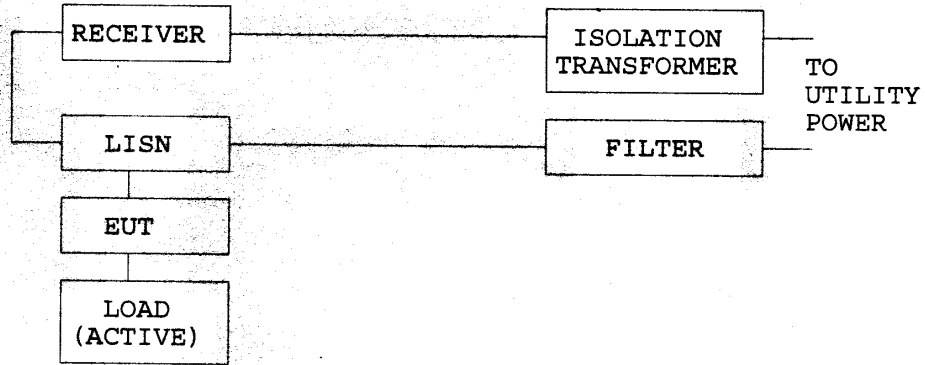
THE FOLLOWING TEST EQUIPMENT WAS USED DURING THE  
 CONDUCTED POWER LINE TEST :

EQUIPMENT/ FACILITIES	SPECIFICAT -IONS	MANUFACTURER	MODEL#/ SERIAL#	DATE OF CAL. & CAL.CENTER	DUE DATE
SPECTRUM ANALZER	9 KHz TO 1 GHz	HP	8590L/ 3624A01317	JULY, 1996 HP	1Y
EMI TEST RECEIVER	9 KHz TO 30 MHz	ROHDE & SCHWARZ	ESHS30/ 893517/013	SEP, 1996 ERSO	1Y
LISN	50 uH, 50 ohm	SOLAR ELECTRONICS	9252-50- R24-BNC/ 85C-08-244- 01	AUGUST, 1996 ETC	1Y
LISN	50 uH, 50 ohm	SOLAR ELECTRONICS	9252-50- R24-BNC/ 85C-08-244- 02	AUGUST, 1996 ETC	1Y
SIGNAL GENERATOR	9 KHz TO 1080 MHz	ROHDE & SCHWARZ	SMY01/ 841104/019	APRIL, 1996 R&S	1Y
SIGNAL GENERATOR	500 KHz TO 1024 MHz	HP	8640B/ 2910A30728	MARCH, 1996 ERSO	1Y
POWER CONVERTER	0 TO 300 VAC 47 - 500 Hz	AFC	AFC-1KW/ 850510	N/A	1Y

3.2 TEST PROCEDURE

THE EUT WAS TESTED ACCORDING TO EN55022. THE CONDUCTED TEST  
 WAS PERFORMED IN AN ANECHOIC CHAMBER. THE FREQUENCY SPECTRUM  
 FROM 0.15 MHz TO 30 MHz WAS INVESTIGATED. THE LISN USED WAS  
 50 ohm/50 uHenry AS SPECIFIED BY EN55022. CABLES AND PERI-  
 PHERALS WERE MOVED TO FIND THE MAXIMUM EMISSION LEVELS FOR  
 EACH FREQUENCY.

3.3 TEST SETUP





3.4 CONFIGURATION OF THE EUT

THE EUT WAS CONFIGURED ACCORDING TO EN55022. ALL INTERFACE PORTS WERE CONNECTED TO THE APPROPRIATE PERIPHERALS. ALL PERIPHERALS AND CABLES ARE LISTED BELOW.

- EUT

DEVICE	MANUFACTURER	MODEL #
INDUSTRIAL PC	ARBOR TECHNOLOGY CORP.	IWS-532, PIA-6430, PIA-6007, PIA-692-1, DP-213T

- PERIPHERALS

DEVICE	MANUFACTURER	MODEL# / SERIAL#
MONITOR	PHILIPS	14B1320
PRINTER	HP	2225C+
MODEM	SMARTEAM	103/212A
KEYBOARD	COMPAQ	KPQ-E99ZC-13
MOUSE	LOGITECH	M-M30-9F

- REMARK:

3.4 CONFIGURATION OF THE EUT (CONTINUED)

-CABLES - ALL 1m OR GREATER IN LENGTH - BUNDLED ACCORDING TO EN55022

MONITOR	POWER CABLE - UNSHIELDED
	DATA CABLE - SHIELDED
MODEM	POWER CABLE - UNSHIELDED
	DATA CABLE - SHIELDED
KEYBOARD	DATA CABLE - UNSHIELDED
MOUSE	DATA CABLE - UNSHIELDED

-INTERNAL DEVICES

<u>DEVICE</u>	<u>MANUFACTURER</u>	<u>MODEL #</u>
MAIN BOARD	ARBOR	PIA-6430
POWER SUPPLY	ARBOR	AC-870A
VGA CARD	ARBOR	PIA-692-1
SLOT BOARD	ARBOR	PIA-6007

### 3.5 EUT OPERATING CONDITION

OPERATING CONDITION IS ACCORDING TO EN55022.

THE OPERATING SPEED OF THE COMPUTER WERE 66 MHz

1. EUT POWER ON.
2. "H" PATTERN SENT TO THE FOLLOWING PERIPHERALS:
  - PRINTER
  - MONITOR
  - MODEM
3. CPU : 486DX4/100  
CLOCK CHIP : 66 MHz

### 3.6 CONDUCTED POWER LINE EMISSION LIMIT

CLASS A :

FREQUENCY RANGE (MHz)	QUASI PEAK	AVERAGE
0.15 - 0.5	76-66dBuV	66-56dBuV
0.5 - 5	66dBuV	56dBuV
5 - 30	70dBuV	60dBuV

NOTE : IN THE ABOVE TABLE, THE TIGHTER LIMIT  
APPLIES AT THE BAND EDGES.

3.7 CONDUCTED POWER LINE TEST RESULT

THE FREQUENCY SPECTRUM FROM 0.15 MHz TO 30 MHz WAS INVESTIGATED. ALL READINGS ARE QUASI-PEAK VALUES & AVERAGE WITH A RESOLUTION BANDWIDTH OF 9 KHZ.

TEMPERATURE : 28 C HUMIDITY : 78 %RH

QUASI-PEAK

FREQUENCY (MHz)	LINE1 (dBuv)	LINE2 (dBuv)	LIMIT (dBuv)
0.187	46.4	45.3	75.3
0.374	37.4	38.6	72.0
0.690	35.7	39.3	66.0
1.880	35.3	38.9	66.0
2.320	34.9	36.8	66.0
4.700	29.8	33.9	66.0
14.38	43.7	41.9	70.0

AVERAGE

FREQUENCY (MHz)	LINE1 (dBuv)	LINE2 (dBuv)	LIMIT (dBuv)
0.187	34.3	34.4	65.3
0.374	29.0	33.6	62.0
0.690	29.6	34.7	56.0
1.880	28.5	34.1	56.0
2.320	31.8	33.5	56.0
4.700	21.3	28.9	56.0
14.38	38.4	36.6	60.0

REMARKS : (1). \* = MEASUREMENT DOES NOT APPLY FOR THIS FREQUENCY  
 (2). UNCERTAINTY IN CONDUCTED EMISSION MEASURED IS <+/-2dB  
 (3). ONLY INDUSTRIAL PC

SIGNED BY TESTING ENGINEER : Cindy

3.7 CONDUCTED POWER LINE TEST RESULT

THE FREQUENCY SPECTRUM FROM 0.15 MHz TO 30 MHz WAS INVESTIGATED. ALL READINGS ARE QUASI-PEAK VALUES & AVERAGE WITH A RESOLUTION BANDWIDTH OF 9 KHZ.

TEMPERATURE : 28 C HUMIDITY : 78 %RH

QUASI-PEAK

FREQUENCY (MHz)	LINE1 (dBuv)	LINE2 (dBuv)	LIMIT (dBuv)
0.187	46.4	45.9	75.3
0.312	39.1	38.9	72.0
0.690	36.2	37.5	66.0
1.190	35.8	36.8	66.0
2.130	34.8	33.2	66.0
14.32	48.4	46.9	70.0
23.01	58.3	58.6	70.0

AVERAGE

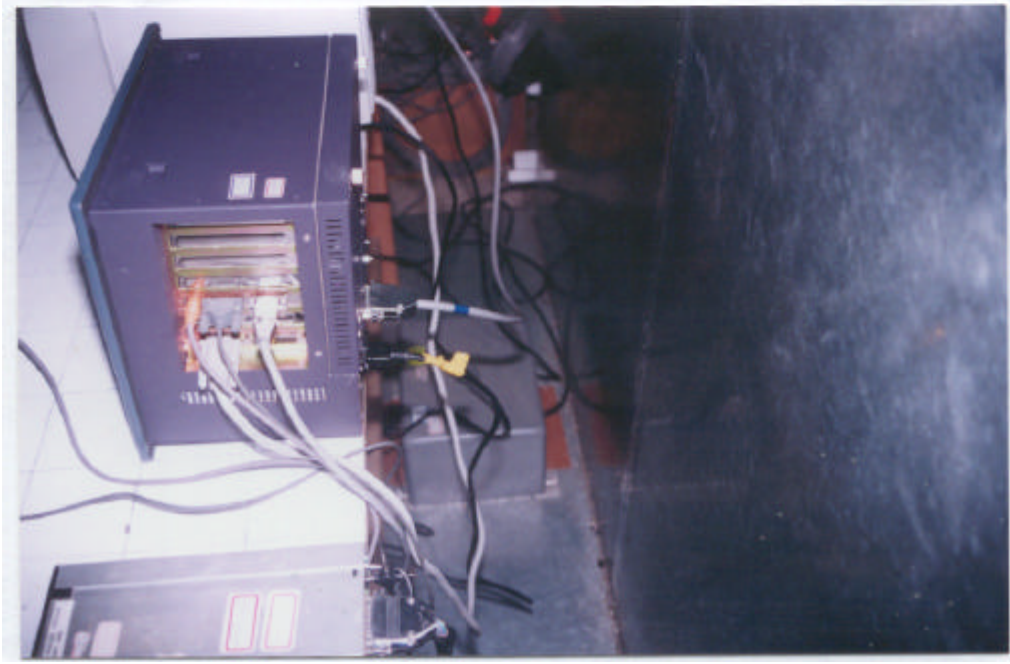
FREQUENCY (MHz)	LINE1 (dBuv)	LINE2 (dBuv)	LIMIT (dBuv)
0.187	33.3	34.5	65.3
0.312	31.6	32.6	62.0
0.690	29.3	33.4	56.0
1.190	28.9	32.7	56.0
2.130	30.2	32.8	56.0
14.32	41.3	44.5	60.0
23.01	57.4	57.8	60.0

REMARKS : (1). \* = MEASUREMENT DOES NOT APPLY FOR THIS FREQUENCY  
(2). UNCERTAINTY IN CONDUCTED EMISSION MEASURED IS  $\pm 2$ dB  
(3). CONNECTOR LCD PANNEL

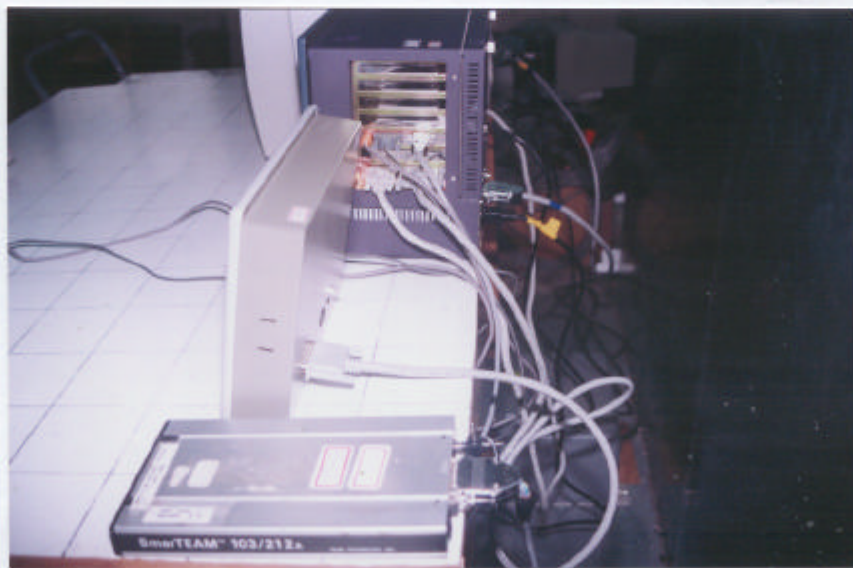
SIGNED BY TESTING ENGINEER :

*Cindy*

3.8 PHOTOS - ONLY INDUSTRIAL PC



3.8 PHOTOS - CONNECTOR LCD PANNEL



4. RADIATED EMISSION TEST

4.1 TEST EQUIPMENT

THE FOLLOWING TEST EQUIPMENT WAS USED DURING THE  
 RADIATED EMISSION TEST :

EQUIPMENT / FACILITIES	SPECIFICAT - IONS	MANUFACTUR - ER	MODEL#/ SERIAL#	DATE OF CAL. & CAL. CENTER	DUE DATE
RECEIVER	20 MHz TO 1000 MHz	R & S	ESVS 30/ 841977/003	JAN, 1996 R&S	1Y
SPECTRUM ANALYZER	100 Hz TO 1500 MHz	HP	8568B/ 3019A05294	JULY, 1996 HP	1Y
SPECTRUM ANALYZER	9 KHz TO 22 GHz	HP	8593B/ 3322A00670	OCTOBER, 1996 AEL	1Y
SPECTRUM ANALYZER	100 Hz TO 1500 MHz	HP	8568B/ 3019A05294	JULY, 1996 HP	1Y
SIGNAL GENERATOR	9 KHz TO 1080 MHz	ROHDE & SCHWARZ	SMY01/ 841104/019	APRIL, 1996 R&S	1Y
SIGNAL GENERATOR	500 KHz TO 1024 MHz	HP	8640B/ 2910A30728	MARCH, 1996 ERSO	1Y
DIPOLE ANTENNA	28 MHz TO 1000 MHz	EMCO	3121C/ 9505-1137	AUGUST, 1996 EMCO	1Y
BI-LOG ANTENNA	26 MHz TO 1100 MHz	EMCO	3143/ 9509-1135	SEP, 1996 EMCO	1Y
BI-LOG ANTENNA	26 MHz TO 1100 MHz	EMCO	3143/ 9001-1443	SEP, 1996 EMCO	1Y
BICONICAL ANTENNA	30 MHz TO 300 MHz	EMCO	3108	MAY, 1996 SRT	1Y
LOG-PERIODIC ANTENNA	200 MHz TO 1000 MHz	EMCO	3146	MAY, 1996 SRT	1Y
PRE-AMPLIFIER	0.1 MHz TO 1300 MHz	HP	8447D/ 2944A08402	MARCH, 1996 ERSO	1Y
PRE-AMPLIFIER	0.1 MHz TO 1300 MHz	HP	8447D/ 2944A06412	FEB, 1996 HP	1Y
HORN ANTENNA	1 GHz TO 18 GHz	EMCO	3115/ 9012-3619	MAY, 1996 EMCO	1Y

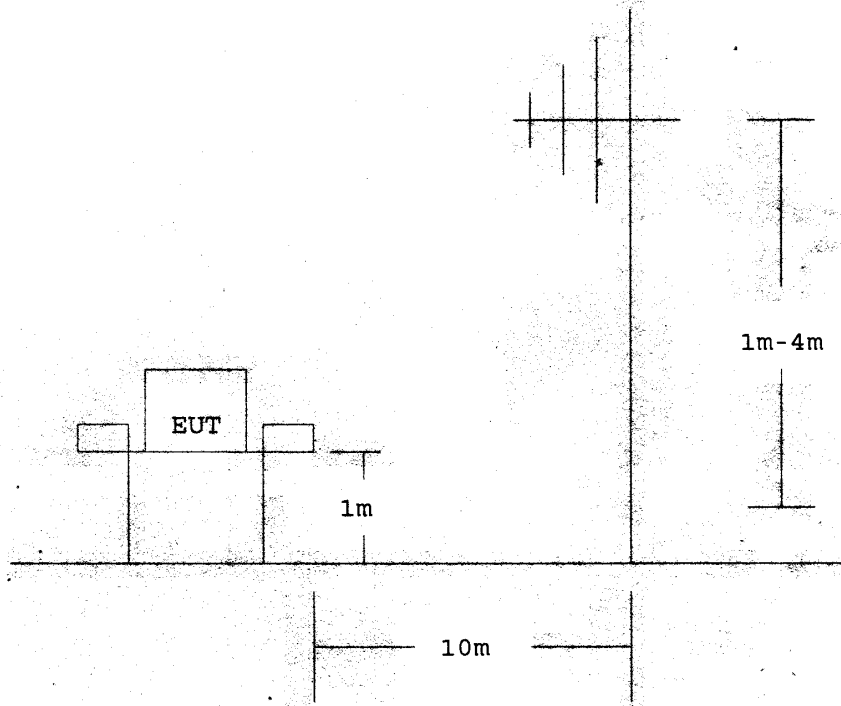


#### 4.2 TEST PROCEDURE

THE EUT WAS TESTED ACCORDING TO EN55022. THE RADIATED TEST WAS PERFORMED AT SRT LAB'S OPEN SITE. THIS SITE IS ON FILE WITH THE FCC LABORATORY DIVISION, REFERENCE 31040/SIT.

THE FREQUENCY SPECTRUM FROM 30 MHz TO 1 GHz WAS INVESTIGATED. MEASUREMENT WERE MADE AT TEN METERS WITH AN ADJUSTABLE DIPOLE ANTENNA. PERIPHERALS, CABLES, EUT ORIENTATION, AND ANTENNA HEIGHT WERE VARIED TO FIND THE MAXIMUM EMISSION FOR EACH FREQUENCY.

#### 4.3 TEST SET-UP



4.4 CONFIGURATION OF THE EUT

SAME AS SECTION 3.4 OF THIS REPORT.

4.5 EUT OPERATING CONDITION

SAME AS SECTION 3.5 OF THIS REPORT.

4.6 RADIATED EMISSION LIMIT

ALL EMISSION FROM A DIGITAL DEVICE, INCLUDING ANY NETWORK OF CONDUCTORS AND APPARATUS CONNECTED THERETO, SHALL NOT EXCEED THE LEVEL OF FIELD STRENGTH SPECIFIED BELOW :

CLASS A

FREQUENCY (MHz)	DISTANCE (m)	FIELD STRENGTH (dBuV/m)
30 - 230	10	40
230 -1000	10	47

- NOTE : 1. IN THE EMISSION TABLES ABOVE, THE TIGHTER LIMIT APPLIES AT THE BAND EDGES.
2. DISTANCE REFERS TO THE DISTANCE BETWEEN MEASURING INSTRUMENT, ANTENNA, AND THE CLOSEST POINT OF ANY PART OF THE DEVICE OR SYSTEM.

4.7 RADIATED EMISSION TEST RESULT

THE FREQUENCY SPECTRUM FROM 30 MHz TO 1 GHz WAS INVESTIGATED. ALL READINGS ARE QUASI-PEAK VALUES WITH A RESOLUTION BANDWIDTH OF 120 KHZ. MEASUREMENT WERE MADE AT 10 METERS.  
 TEMPERATURE : 28 C

HUMIDITY : 78 %RH

FREQ. (MHz)	CABLE LOSS (dB)	ANT. FACTOR (dB)	READING (dBuV)		EMISSION (dBuV)		LMTS (dBuV)
			HORIZ	VERT	HORIZ	VERT	
64.0	1.0	6.7	28.3	*	36.0	*	40
117.3	1.4	7.1	*	24.6	*	33.1	40
163.4	1.6	9.2	*	26.1	*	36.9	40
233.7	1.9	11.3	24.3	*	37.5	*	47
255.5	2.0	12.2	26.0	*	40.2	*	47
485.9	2.6	17.1	15.3	16.6	35.0	36.3	47
510.2	2.8	17.4	19.0	18.5	39.2	38.7	47

REMARKS : (1). \* = MEASUREMENT DOES NOT APPLY FOR THIS FREQUENCY  
 (2). UNCERTAINTY IN RADIATED EMISSION MEASURED IS <+/- 4dB  
 (3). ONLY INDUSTRIAL PC

SIGNED BY TESTING ENGINEER : Candy

4.7 RADIATED EMISSION TEST RESULT

THE FREQUENCY SPECTRUM FROM 30 MHz TO 1 GHz WAS INVESTIGATED. ALL READINGS ARE QUASI-PEAK VALUES WITH A RESOLUTION BANDWIDTH OF 120 KHZ. MEASUREMENT WERE MADE AT 10 METERS.  
 TEMPERATURE : 28 C

HUMIDITY : 78 %RH

FREQ. (MHz)	CABLE LOSS (dB)	ANT. FACTOR (dB)	READING (dBuV)		EMISSION (dBuV)		LMTS (dBuV)
			HORIZ	VERT	HORIZ	VERT	
32.4	0.7	12.8	23.8	20.6	37.3	34.1	40
64.0	1.0	6.7	19.4	24.6	27.1	32.3	40
233.7	1.9	11.3	25.7	*	38.9	*	47
255.5	2.0	12.5	27.8	*	42.3	*	47
325.9	2.2	14.7	*	20.5	*	37.4	47
510.2	2.8	17.4	21.3	*	41.5	*	47

REMARKS : (1) .\* = MEASUREMENT DOES NOT APPLY FOR THIS FREQUENCY  
 (2) .UNCERTAINTY IN RADIATED EMISSION MEASURED IS <+/- 4dB  
 (3) .CONNECTOR LCD PANNEL

SIGNED BY TESTING ENGINEER : Cindy

4.8 PHOTOS - ONLY INDUSTRIAL PC



4.8 PHOTOS - CONNECTOR LCD PANNEL



5. HARMONICS TEST

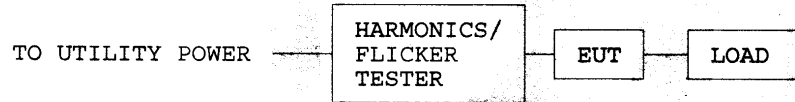
5.1 TEST EQUIPMENT

EQUIPMENT/ FACILITIES	MANUFACTURER	MODEL #/ SERIAL#	DATE OF CAL. & SERIAL #	DUE. DATE
MAIN UNIT	HP	6843A	N/A	1Y
CONTROL PC	IBM	350-P75	N/A	1Y

5.2 TEST PROCEDURE

ACCORDING TO IEC 555-2

5.3 TEST SET-UP



5.4 CONFIGURATION OF THE EUT

THE SAME AS 3.4

5.5 EUT OPERATION CONDITION

THE SAME AS 3.5

5.6 LIMIT

EVEN HARMONIC		ODD HARMONIC	
HARMONICS ORDER	LIMIT (Amp.)	HARMONICS ORDER	LIMIT (Amp.)
2	1.08	3	2.30
4	0.43	5	1.14
6	0.30	7	0.77
8<n<40	0.23 * 8 / n	9	0.40
		11	0.33
		13	0.21
		15<n<39	0.15 * 8 / n

5.7 SUMMARY OF TEST RESULT

\* TEMPERATURE : 28 C  
\* HUMIDILITY : 78 %RH  
FINAL TEST RESULT : PASS



6. VOLTAGE FLUCTUATIONS

6.1 TEST EQUIPMENT

EQUIPMENT/ FACILITIES	MANUFACTURER	MODEL #/ SERIAL#	DATE OF CAL. & SERIAL #	DUE. DATE
MAIN UNIT	HP	6843A	N/A	1Y
CONTROL PC	IBM	350-P75	N/A	1Y

6.2 TEST PROCEDURE

ACCORDING TO IEC 555-3

6.3 TEST SET-UP

THE SAME AS 5.3

6.4 CONFIGURATION OF THE EUT

THE SAME AS 3.4

6.5 EUT OPERATION CONDITION

THE SAME AS 3.5

5.8 PHOTOS

- A. ONLY INDUSTRIAL PC
- B. CONNECTOR LCD PANNEL



6.6 LIMIT

SHORT-TERM FLICKER(Pst) : Pst : 1.0

LONG-TERM FLICKER(Plt) : Plt : 0.65

RELATIVE STEADY-STATE VOLTAGE CHANGE (Dc) :  
Dc <=3%

RELATIVE VOLTAGE CHANGE CHARACTERISTIC (D(t)) :  
D(t) > 3%

MAXIMUM RELATIVE VOLTAGE CHANGE (Dmax) :  
Dmax <=4%

6.7 SUMMARY OF TEST RESULT

\* TEMPERATURE : 28 C

\* HUMIDILITY : 78 %RH

FINAL TEST RESULT : PASS

6.6 LIMIT

SHORT-TERM FLICKER(Pst) : Pst : 1.0

LONG-TERM FLICKER(Plt) : Plt : 0.65

RELATIVE STEADY-STATE VOLTAGE CHANGE (Dc) :  
Dc <=3%

RELATIVE VOLTAGE CHANGE CHARACTERISTIC (D(t)) :  
D(t) > 3%

MAXIMUM RELATIVE VOLTAGE CHANGE (Dmax) :  
Dmax <=4%

6.7 SUMMARY OF TEST RESULT

\* TEMPERATURE : 28 C

\* HUMIDILITY : 78 %RH

FINAL TEST RESULT : PASS

6.6 LIMIT

SHORT-TERM FLICKER(Pst) : Pst : 1.0

LONG-TERM FLICKER(Plt) : Plt : 0.65

RELATIVE STEADY-STATE VOLTAGE CHANGE (Dc) :  
Dc <=3%

RELATIVE VOLTAGE CHANGE CHARACTERISTIC (D(t)) :  
D(t) > 3%

MAXIMUM RELATIVE VOLTAGE CHANGE (Dmax) :  
Dmax <=4%

6.7 SUMMARY OF TEST RESULT

\* TEMPERATURE : 28 C

\* HUMIDILITY : 78 %RH

FINAL TEST RESULT : PASS

6.8 PHOTOS

- A. ONLY INDUSTRIAL PC
- B. CONNECTOR LCD PANNEL



7. ELECTROSTATIC DISCHARGE IMMUNITY TEST

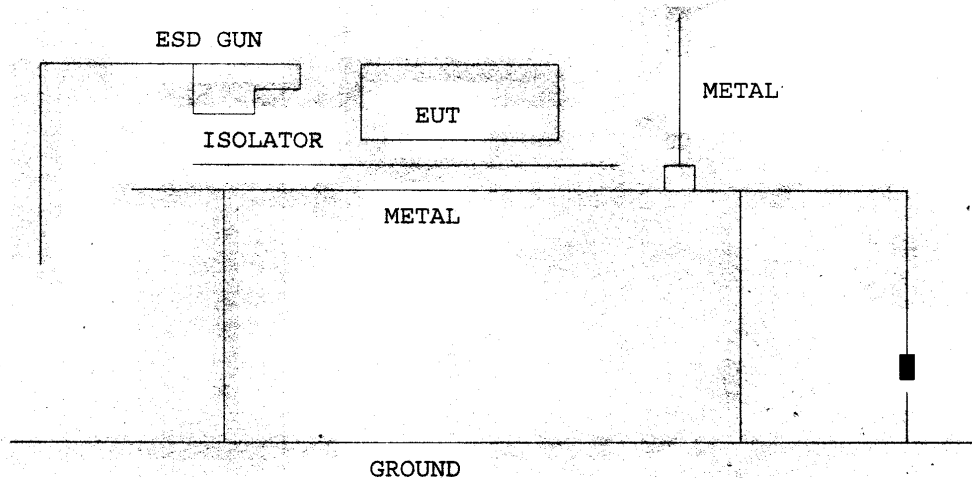
7.1 TEST EQUIPMENT

EQUIPMENT/ FACILITIES	MANUFACTURER	MODEL #/ SERIAL#	DATE OF CAL. & CAL. CENTER	DUE. DATE
ESD MAIN UNIT	HAEFELY	PSD25B	JUN., 1995	1Y
ESD GUN	HAEFELY	AIR DISCHARGE	JUN., 1995	1Y
ESD GUN	HAEFELY	DIRECTLY	JUN., 1995	1Y
VERTICAL PANEL	SRT	SRT ESD 1	N/A	1Y

7.2 TEST PROCEDURE

ACCORDING TO IEC 801-2

7.3 TEST SET-UP



7.4 CONFIGURATION OF THE EUT

THE SAME AS 3.4

7.5 EUT OPERATION CONDITION

THE SAME AS 3.5

7.6 TEST CONDITION / PERFORMANCE CRITERIA

- . SOURCE VOLTAGE AND FREQUENCY: 220V/50Hz, SINGLE PHASE
- . R-C NETWORK: 330ohm , 150pF
- . TEST LEVEL:
  - AIR DISCHARGE: 2, 4, 8, 15KV
  - CONTACT DISCHARGE: 2, 4, 6, 8KV
- . NUMBER OF TEST: 12 DISCHARGE / LEVEL
- . TIME BETWEEN TEST: 1 SEC

- (A). NORMAL PERFORMANCE WITHIN THE SPECIFICATION.
- (B). TEMPORARY DEGRADATION OR LOSS FUNCTION OR PERFORMANCE WHICH IS SELF-RECOVERABLE.
- (C). TEMPORARY DEGRADATION OR LOSS FUNCTION OR PERFORMANCE WHICH REQUIRES OPERATOR INTERVENTION SYSTEM RESET.
- (D). DEGRADATION OR LOSS FUNCTION WHICH IS NOT RECOVERABLE DUE TO DAMAGE OF EUT OR SOFTWARE, OR LOSS OF DATA.

7.7 SUMMARY OF TEST RESULT

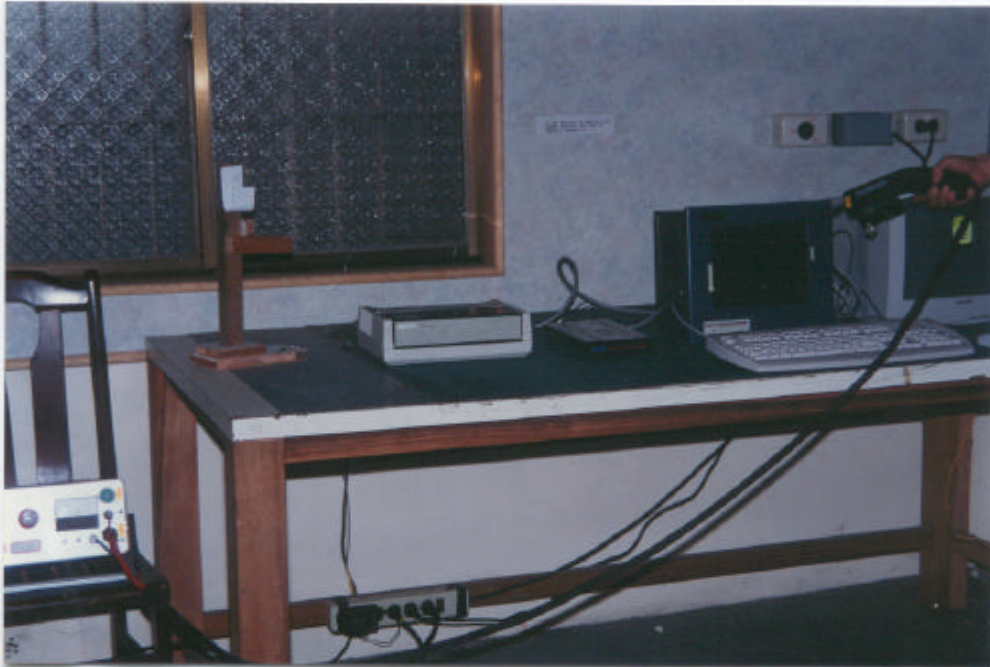
- \* TEMPERATURE
- \* HUMIDILITY

SEVERITY LEVEL	prEN55024-b REQUIREMENT		PERFORMANCE VERIFICATION		
COUPLING MODE	AIR DISCHARGE	CONTACT DISCHARGE	AIR DISCHARGE	CONTACT DISCHARGE	TEST RESULT
2	A	A	A	A	PASS
4	A	A	A	A	PASS
8	A	A	A	A	PASS
15	A	NR	A	NR	PASS



7.8 PHOTOS

- A. ONLY INDUSTRIAL PC
- B. CONNECTOR LCD PANNEL



8. RADIATED IMMUNITY TEST

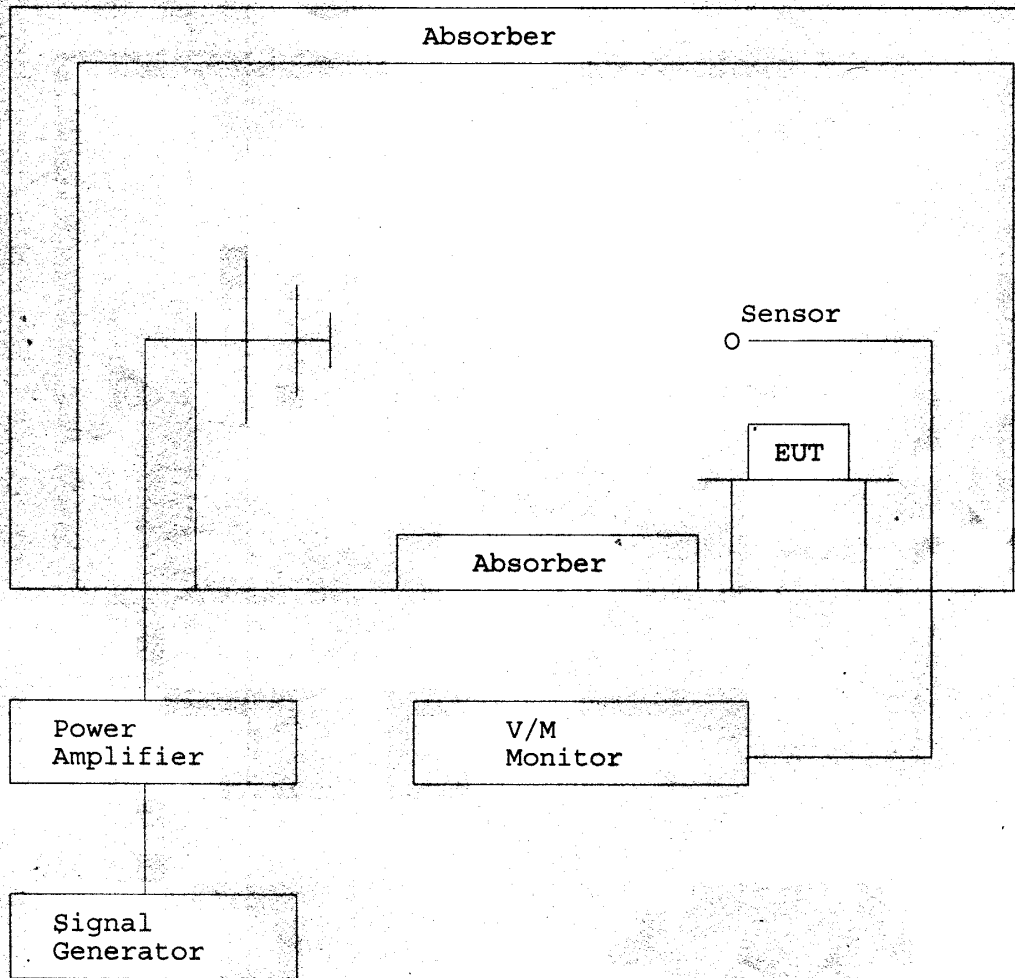
8.1 TEST EQUIPMENT

EQUIPMENT/ FACILITIES	MANUFACTURER	MODEL #/ SERIAL#	DATE OF CAL. & CAL. CENTER	DUE. DATE
SIGNAL GENERATOR	HP	8640B	MAR., 1996	1Y
SIGNAL GENERATOR	Rohde & Schwarz	SMY01	APR., 1996	1Y
POWER AMPLIFIER	Amplifier Research	30W1000M7	AUG., 1996	1Y
POWER AMPLIFIER	ENI	A-300	DEC., 1996	1Y
ANTENNA	EMCO	3143	SEP., 1995	1Y
ANTENNA	EMCO	3143	SEP., 1995	1Y
FIELD SERSOR	Amplifier Research	FP2000	APR., 1997	1Y
VOLTAGE MONITOR	Amplifier Research	FM2000	MAY., 1995	1Y
ANECHOIC CHAMBER	SRT	SRT03	N/A	N/A

8.2 TEST PROCEDURE

ACCORDING TO IEC 801-3

8.3 TEST SET-UP



Example of test set-up for table-top Equipment

8.4 CONFIGURATION OF THE EUT

THE SAME AS 3.4

8.5 EUT OPERATION CONDITION

THE SAME AS 3.5

8.6 TEST CONDITION / PERFORMANCE CRITERIA

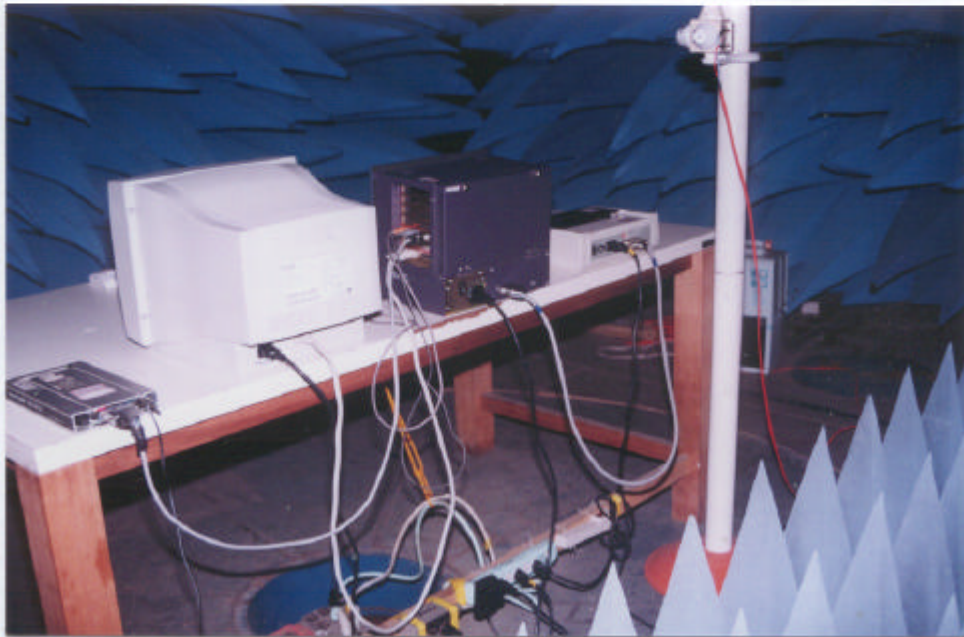
- . SOURCE VOLTAGE AND FREQUENCY: 220V/50Hz, SINGLE PHASE
- . SWEEPING FREQUENCY: 27MHz - 500MHz
- . TEST LEVEL: 3V/m, THE FREQUENCY STEP IS 1%
- . THE FOUR SIDES OF EUT ARE TESTED (FRONT, REAR, LEFT, RIGHT)
- . ANTENNA POLARITY: HORIZONTAL AND VERTICAL POLARIZATION

- (A). NORMAL PERFORMANCE WITHIN THE SPECIFICATION.
- (B). TEMPORARY DEGRADATION OR LOSS FUNCTION OR PERFORMANCE WHICH IS SELF-RECOVERABLE.
- (C). TEMPORARY DEGRADATION OR LOSS FUNCTION OR PERFORMANCE WHICH REQUIRES OPERATOR INTERVENTION SYSTEM RESET.
- (D). DEGRADATION OR LOSS FUNCTION WHICH IS NOT RECOVERABLE DUE TO DAMAGE OF EUT OR SOFTWARE, OR LOSS OF DATA.

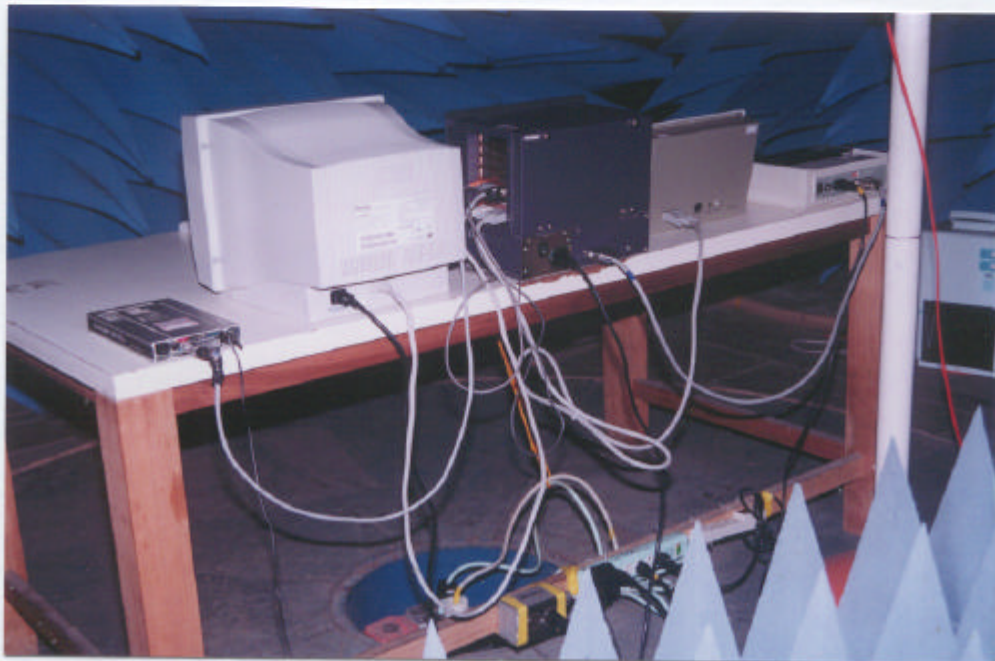
8.7 SUMMARY OF TEST RESULT

- \* TEMPERATURE
- \* HUMIDILITY
- \* SEVERITY LEVEL: 3V/m
- \* prEN55024-b REQUIREMENT: A
- \* PERFORMANCE VERIFICATION: A
- \* TEST RESULTS: PASS

8.8 PHOTOS - ONLY INDUSTRIAL PC



8.8 PHOTOS - CONNECTOR LCD PANNEL



9. ELECTRICAL FAST TRANSIENT / BURST IMMUNITY TEST

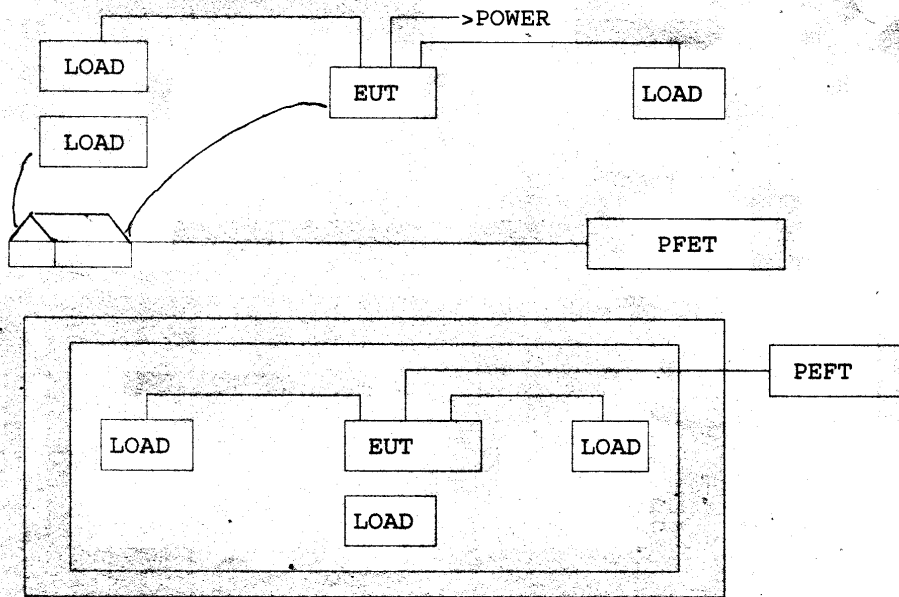
9.1 TEST EQUIPMENT

EQUIPMENT/ FACILITIES	MANUFACTURER	MODEL #/ SERIAL#	DATE OF CAL. & CAL. CENTER	DUE. DATE
CONTROL UNIT	HAEFELY	P90.1	JUN.,1995	1Y
BURST-TESTER	HAEFELY	PEFT.1	JUN.,1995	1Y
HV-UNIT	HAEFELY	PHV41.24A	JUN.,1995	1Y
COUPLING-CLAMP	HAEFELY	IP4A	JUN.,1995	1Y
ADAPTER SET	HAEFELY	N/A	N/A	1Y

9.2 TEST PROCEDURE

ACCORDING TO IEC 801-4

9.3 TEST SET-UP



9.4 CONFIGURATION OF THE EUT

THE SAME AS 3.4

9.5 EUT OPERATION CONDITION

THE SAME AS 3.5

9.6 TEST CONDITION / PERFORMANCE CRITERIA

- . SOURCE VOLTAGE AND FREQUENCY: 220V/50Hz, SINGLE PHASE
- . PULSE RISE TIME AND DURATION: 5ns/50ns
- . PULSE REPETITION: 5KHz
- . POLARITY: POSITIVE / NEGATIVE. LEA
- . BURST DURATION AND PERIOD: 15ms / 300ms
- . TEST DURATION: 2 Min
- . TIME BETWEEN TEST: 10 sec
- . SEVERITY LEVELS: +/-0.5KV, +/-1KV, +/-2KV
- . COUPLING OF POWER LINE: L, N, PE, L+N, L+PE+N, L+PE, N+PE
- . COUPLING OF DATA LINE

- (A). NORMAL PERFORMANCE WITHIN THE SPECIFICATION.
- (B). TEMPORARY DEGRADATION OR LOSS FUNCTION OR PERFORMANCE WHICH IS SELF-RECOVERABLE.
- (C). TEMPORARY DEGRADATION OR LOSS FUNCTION OR PERFORMANCE WHICH REQUIRES OPERATOR INTERVENTION OR SYSTEM RESET.
- (D). DEGRADATION OR LOSS FUNCTION WHICH IS NOT RECOVERABLE DUE TO DAMAGE OF EUT OR SOFTWARE, OR LOSS OF DATA.

9.7 SUMMARY OF TEST RESULT

- \* TEMPERATURE
- \* HUMIDILITY

SEVERITY LEVEL (KV)	prEN55024-b REQUIREMENT (criteria)	PERFORMANCE VERIFICATION (criteria)	TEST RESULTS
+/-0.5KV	A	A	PASS
+/-1KV	A	A	PASS
+/-2KV	A	A	PASS



9.8 PHOTOS

- A. ONLY INDUSTRIAL PC
- B. CONNECTOR LCD PANNEL



\*. PHOTOS



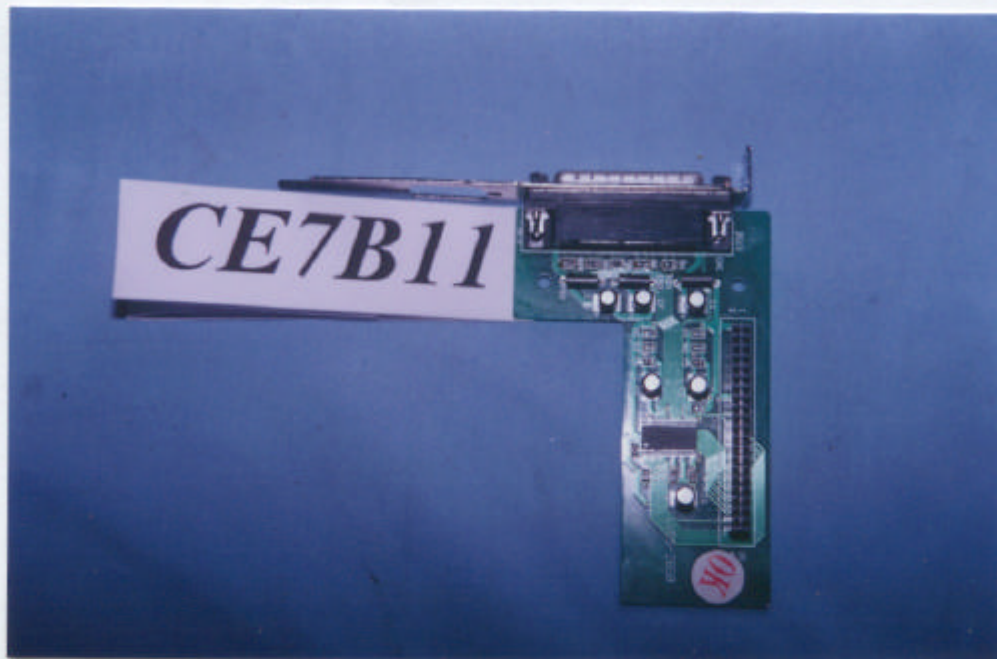
\*. PHOTOS



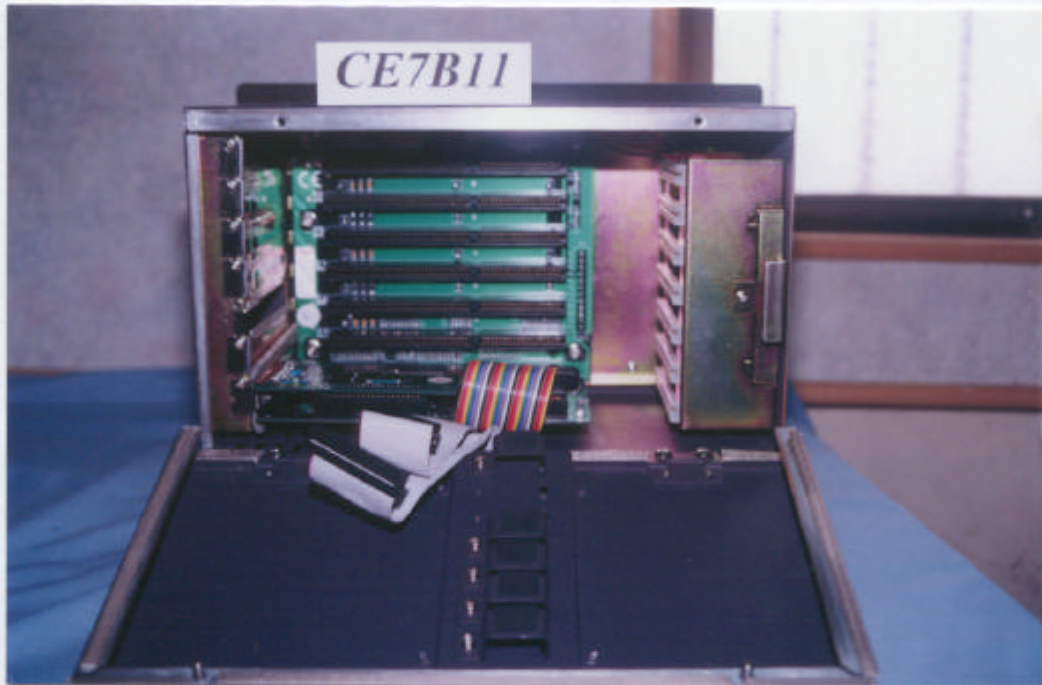
\*. PHOTOS



\*. PHOTOS



\* PHOTOS



\*. PHOTOS



\* PHOTOS





Spectrum Research & Testing Lab.  
MODEL: AMB-532, PIA-6430, PIA-6007, MBC-265, AMB-232

Report: #CE7B14

\*. PHOTOS

