SPORTON LAB. **SPORTON INTERNATIONAL INC.**

FILE: C671214

CERTIFICATE OF COMPLIANCE

APPLICABLE SPECIFICATION: European Standard EN 55022 TEST REPORT FOR CLASS A ITE

EQUIPMENT : COMPACT SIZE FLAT-PANEL INDUSTRIAL WORKSTATION

MODEL : AMB-620

COMPANY : ASTECH TECHNOLOGY CO., LTD.

6F-4, No. 351, Chung-Shan Rd., Sec. 2,

Chung-Ho City, Taipei, Taiwan R.O.C.

I **HEREBY** CERTIFY THAT:

THE MEASUREMENTS SHOWN IN THIS REPORT WERE MADE IN ACCORDANCE WITH THE PROCEDURES GIVEN IN European Standard EN 55022 AND THE ENERGY EMITTED BY THIS EQUIPMENT WAS PASSED BOTH RADIATED AND CONDUCTED EMISSIONS LIMITS. TESTING WAS PERFORMED ON 20 July 1996 AT SPORTON INTERNATIONAL INC. LAB. IN NEI HWU.

W. L. Huang,
GENERAL MANAGER

SPORTON INTERNATIONAL INC.

No.38 , Alley 119 , Lane 30 ,Yung Gi

Road, Taipei 10541, Taiwan R.O.C.

三上科技 文管中心 87. 1.-1 發行章

1F, No. 38, Alley 119, Lane 30, Yung Gi Rd., Taipei 10541, Taiwan, R.O.C. Tel:886-2-7641655 Fax:886-2-7468440

CE EMI TEST REPORT

European Standard EN 55022 CLASS A ITE

E U T : COMPACT SIZE FLAT-PANEL INDUSTRIAL WORKSTATION

MODEL NO. : AMB-620

FILE NO. : C671214

DATE OF TEST : 20 Jul. 1996

PREPARED FOR : ASTECH TECHNOLOGY CO., LTD.
6F-4, No. 351, Chung-Shan Rd., Sec. 2,
Chung-Ho City, Taipei, Taiwan R.O.C.

PREPARED BY : SPORTON INTERNATIONAL INC.
No. 38, Alley 119, Lane 30, Yung Gi
Road, Taipei 10541, Taiwan, R.O.C.

Get CE Certificate issued by German EMV TESTHAUS GMBH from SPORTON LAB.

In order for domestic factories to obtain EMC Test Report and CE Certificate issued by a laboratory recognized by BAPT more rapidly, SPORTON LAB. established a sound cooperative relationship with the German Lab. EMV TESTHAUS GMBH in 1994. During this time of cooperation, EMV TESTHAUS GMBH had sent its personnel to SPORTON LAB. for EMC Test Site recognition, training of SPORTON LAB. test personnel, and understanding of its test methods and work flow. After more than one year's cooperation and counseling, the German EMV TESTHAUS GMBH believed SPORTON LAB.'s test quality has reached a professional level, conforming to the requirement of EMC testing. For products tested by SPORTON LAB., EMV TESTHAUS GMBH would conduct paper review directly and also issue its Test Report and CE Certificate. Besides, SPORTON LAB. also sends its designated personnel to EMV TESTHAUS GMBH in Germany for EMC professional test technology training and better understanding of related rules and regulations.

Bundesamt für Post und Telekommunikation (BAPT)
Deutsche Akkreditierungsstelle Technik (DATech) e.V.
Deutsche Koordinierungsstelle für IT-Normenkonformitätsprüfung und -zertifizierung (DEKITZ)
vertreten im

Deutschen Akkreditierungs Rat

Akkreditierung

This is to certify that the Testing Laboratory

EMV TESTHAUS GMBH
Gustav-Hertz-Straße 35
94315 Straubing

is competent under the terms of DIN EN 45 001 to carry out testing in the fields

Electromagnetic Compatibility (EMC)

according to the annexed list of standards and specifications.

The accreditation is valid until: 02.05.2000
The annex is deemed part of this certificate and comprises 1 page.
DAR-Registration number: TTI-P-G 101/95-00

Bundesamt für Post und Telekommunikation (BAPT)
Mainz, den 02.05.1995

Deutsche Akkreditierungsstelle Technik (DATech) e.V.
Frankfurt, den 02.05.1995

Deutsche Koordinierungsstelle für IT-Normenkonformitätsprüfung und -zertifizierung (DEKITZ)
Berlin, den 02.05.1995

President / Head of the Accr. Body — Managing Director / Head of the Accr. Body — Managing Director / Head of the Accr. Body — Chairman

DATech/DEKITZ - Accreditation Bodies in the TGA - Trägergemeinschaft für Akkreditierungen GmbH

SPORTON LAB. is knows for its first-class professional know-how, test quality, superb staff, and extraordinary equipment. These, adding that SPORTON LAB. has been cooperating with the German EMV TESTHAUS GMBH, evidence that SPORTON LAB. is your best possible choice.

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1.GENERAL INFORMATION

1.1 APPLICANT : ASTECH TECHNOLOGY CO., LTD.

6F-4, No. 351, Chung-Shan Rd., Sec. 2,

Chung-Ho City, Taipei, Taiwan R.O.C.

1.2 MANUFACTURER : Same as item 1.1

1.3 DESCRIPTION OF EUT

Kind of Equipment : COMPACT SIZE FLAT-PANEL INDUSTRIAL WORKSTATION

Model No. : AMB-620

Trade Name : ASTECH

Power Cord : N/A

Data Cable : Shielded

Power Supply Type : Switching

* ISA-Bus (PC/AT compatible)
* 19" rack panel mounting
* 9.4" color TFT LCD display, color STN_DD LCD, B/W LCD or 10.4" EL display
* 200-watt auto-range switching power supply
* Two sealed-membrane keypads: one with 59 data-entry keys and one with 20 function keys
* External monitor connector

1.4 DESCRIPTION OF THE SUPPORT EQUIPMENTS

SUPPORT UNIT 1. --- KEYBOARD (DELL)

Model No. : EQ3633VLUS

Power Supply Type : N/A

Power Cord : N/A

Data Cable : Shielded

FCC ID : N/A

SUPPORT UNIT 2. --- DISPLAY MONITOR (HP)

Model No. : D2807A

Power Supply Type : Switching

Power Cord : Non-shielded

Data Cable : Shielded

FCC ID : N/A

SUPPORT UNIT 3. --- MODEM (SMARTLINK)

Model No. : 2400EM

Power Supply Type : Linear

Data Cable : Shielded

FCC ID : FI747H2400M

SUPPORT UNIT 4. --- Printer (HEWLETT PACKARD)

Model No. : 2225C

Power Supply Type : Linear, AC Adapter

Power Cord : Non-shielded

Data Cable : Shielded, 137cm Length, Metallic connector

FCC ID : DSI6XU2225

SUPPORT UNIT 5. --- MOUSE (HP)

Model No. : M-S34

Data Cable : Non-shielded

FCC ID : DZL210582

1.5 MEASUREMENT PROCEDURE

European Standard EN 55022

1.6 TESTED FOR COMPLIANCE WITH

European Standard EN 55022

1.7 FREQUENCY RANGE INVESTIGATED:

Conduction 150 kHz TO 30 MHz

Radiation 30 MHz TO 1000 MHz

1.8 PLACE OF MEASUREMENT

SPORTON INTERNATIONAL INC.

No.3 ,Lane 238, Kang Lo Street, Nei Hwu District,

Taipei 11424, Taiwan R.O.C.

TEL: (02) 631-4739 FAX: (02) 631-9740

1.9 DATE OF MEASUREMENT

20 JUL. 1996

2.CONDUCTED POWERLINE TEST

2.1 CONDUCTED EMISSION TEST, POWER LEADS, 150 kHz TO 30 MHz

Conducted Emissions were measured from 150 kHz to 30 MHz, with a bandwidth of 10 kHz, on the 100 VAC power and return leads of the EUT according to the methods defined in European Standard EN 55022 Clause 9. The EUT was placed on a non-metallic stand in a shielded room 0.8 meters above the ground plane, as shown in FIGURE 1. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position producted maximum conducted emissions.

THE FOLLOWING TEST INSTRUMENTATION WAS USED:

INSTRUMENT	MFR.	MODEL	CAL. DATE
SPECTRUM MONITOR	R&S	EZM	N/A
TEST RECEIVER	R&S	ESH3	JULY 27,1996
LISN	KYORITSU	KNW 242C	NOV 05,1995
PLOTTER	HP	7475A	N/A
COIL POWER LINE FILTER	CORCOM	CDSRW2030A6-C	N/A
SHIELDED ROOM	SPORTON	N/A	N/A

2.2 MEASURING INSTRUMENTS

(A) Test Receiver

Attenuation	0 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
Step MHz	0.007 MHz
IF Bandwidth	10 kHz

2.3 TEST LAYOUT

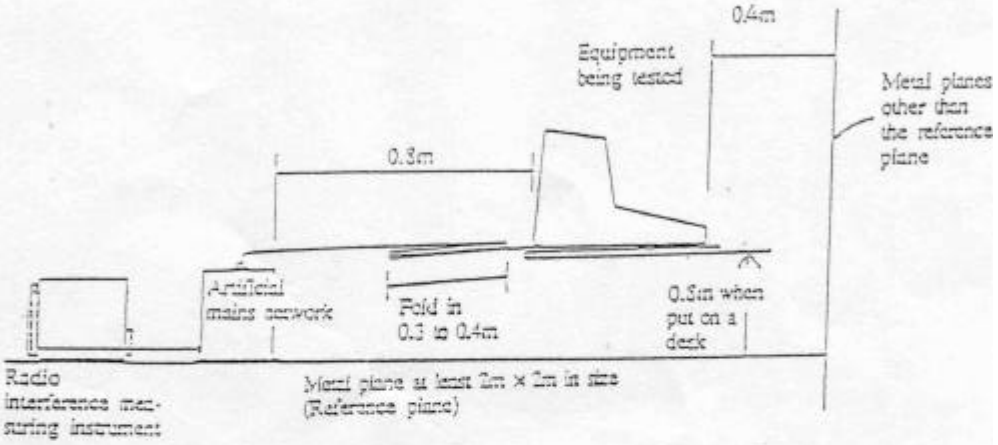


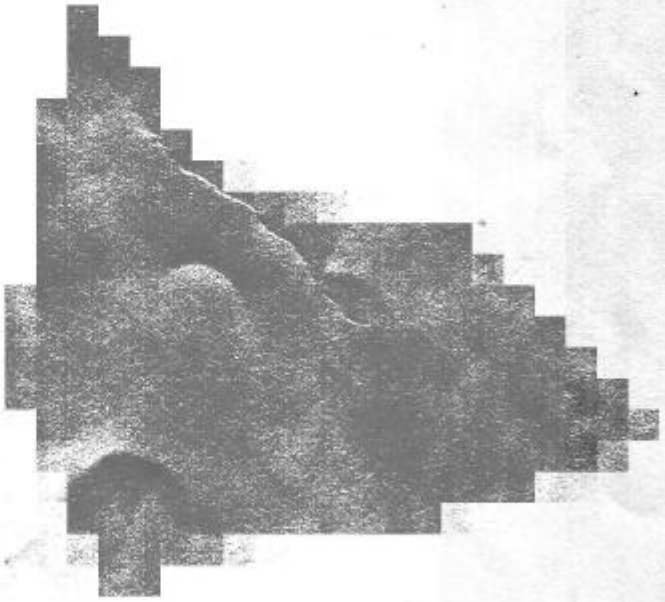
Fig. Installation Example of Measurement of High Frequency Voltage at Mains Terminals (when the fererence plane is a horizontal floor)

2.4 TEST PROCEDURES.

1. The EUT was put on a desk 80cm height from ground metal plane and 40cm from the conducting wall of the shielding room and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. The LISN provides 50 ohm coupling impedance for the measuring instrument.
4. The CISPR states that a 50 ohm, 50 microhenry L.I.S.N should be used.
5. Both sides of AC line were checked for maximum conducted interference.
6. The frequency range from 150 kHz to 30 MHz was searched.
7. Set the test-receiver system (R/S reveiver ESH3) to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
8. If the emission level of the EUT in peak mode was 6 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported otherwise the emissions which do not have 6 dB margin will be retested one by one using the quasi-peak method and reported.

2.5 CONFIGURATION OF EQUIPMENT UNDER TEST

a. The DELL keyboard, HP monitor, HP printer, HP mouse, SMARTLINK modem were connected to the ASTECH PC. During testing, the interface cables and equipment positions were varied according to Euripean Standard EN 55022.



3. SOFTWARE

3.0 A basic language program which generates a complete line of continuously repeating "H" pattern is used as the software.

The program was executed as follows:

1. Turn on the power of all equipment.
2. PC reads test program from floppy disk drive and run it.
3. PC sends "H" messages to monitor, and monitor display "H" patterns on screen
4. PC sends "H" messages to printer, then printer prints it on paper.
5. PC sends "H" messages to modem.
6. Repeat to step 2 to 5.

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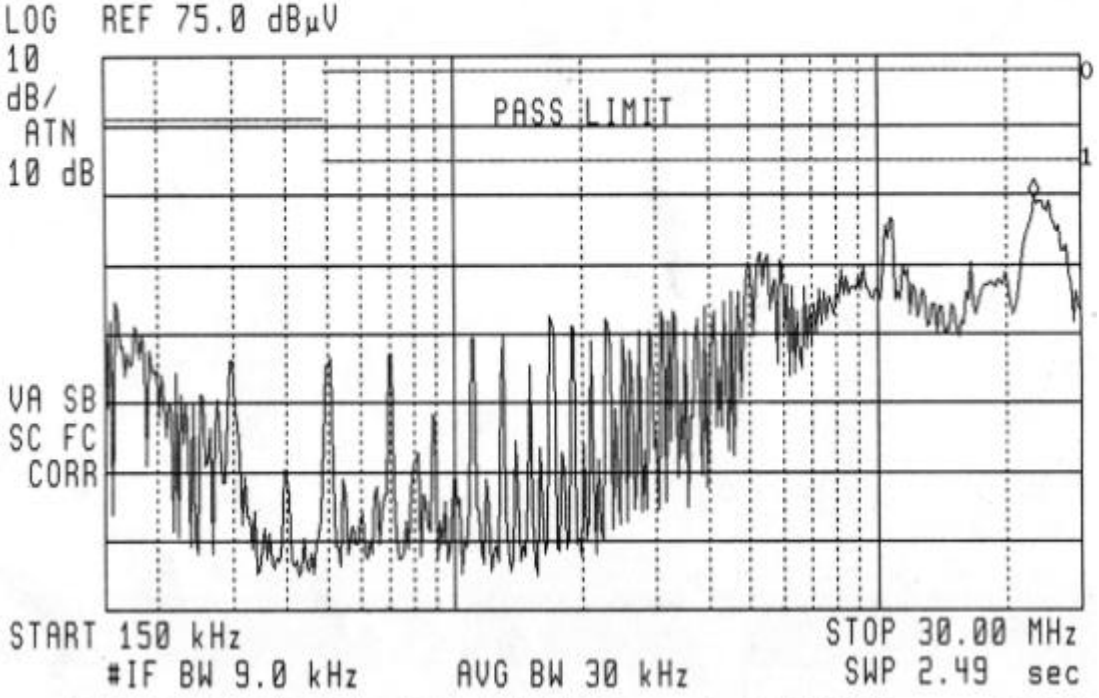
Remark:
Limit Line 0 for Quasi-peak lev
Limit Line 1 for Average level

MARKER
23.15 MHz
54.08 dBµV

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 23.15 MHz
54.08 dBµV



EUT:COMPACT SIZE FLAT-PANEL INDUSTRIAL WORKSTATION Model:AMB-620 LINE:L

Equipment meets the technical specifications of European Standard EN55022 CLASS B.

5. RADIATED EMISSIONS TEST

MEASUREMENT

RADIATED EMISSION TEST, 30 MHz to 1000 MHz

Radiated emissions from 30 MHz to 1000 MHz were measured with a bandwidth of 120 kHz according to the Methods defines in European Standard EN 55022, Clause 10. The EUT was placed on a nonmetallic stand in the open-field site, 1 meter above the ground plane, as shown in FIGURE 2. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producting maximum radiated emissions.

5.1 THE FOLLOWING TEST INSTRUMENTATION WAS USED:

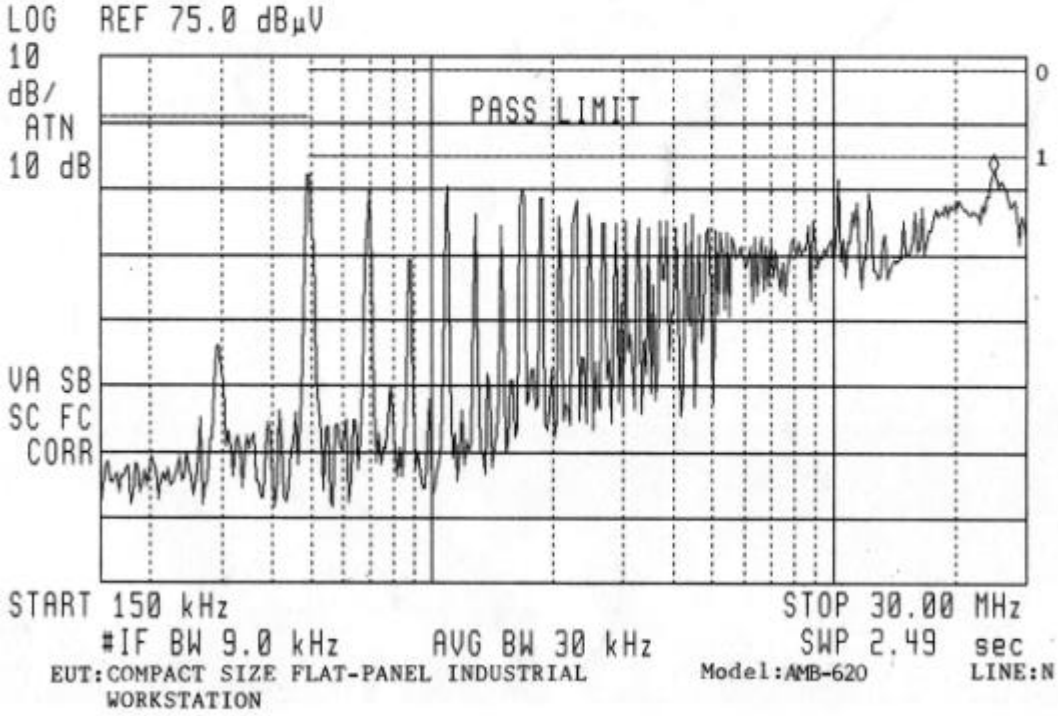
INSTRUMENT	MFR.	MODEL	CAL. DATE
Spectrum Analyzer	HP	8568B	AUG 20,1995
RF. Preselector	HP	85685A	AUG 20,1995
Quasi-Peak Adapter	HP	85650A	AUG 20,1995
Antenna Mast	Sporton	N/A	N/A
Turntable	Sporton	N/A	N/A
Plotter	HP	7475A	N/A
Biconical Antenna	EMCO	3104	DEC 05,1995
Log-Period Antenna	EMCO	3146	DEC 05,1995
Dipole Antenna	EMCO	3121	DEC 02,1995

AMB-620 C671214 N

Remark:
Limit Line 0 for Quasi-peak level
Limit Line 1 for Average level

MARKER
24.80 MHz
57.53 dBµV

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 24.80 MHz
57.53 dBµV



EUT:COMPACT SIZE FLAT-PANEL INDUSTRIAL WORKSTATION
Model:AMB-620
LINE:N

Equipment meets the technical specifications of European Standard EN55022 CLASS B.

5.2 MEASURING INSTRUMENTS

(A) RF Preselector

Attenuation	0 dB
RF Gain	20 dB
Signal Input	Input 2 (for 20 MHz - 2 GHz)

(B) Spectrum Analyzer

Attenuation	0 dB
Start Frequency	30 MHz
Stop Frequency	1000 MHz
Resolution Bandwidth	1 MHz
Video Bandwidth	1 MHz
Signal Input	Input 2 (for 100 kHz - 1.5 GHz)

(C) Quasi-Peak Adaptor

Resolution Bandwidth	120 kHz
Frequency Band	30 MHz - 1 GHz
Quasi-Peak Detector	ON for Quasi-Peak Mode
	OFF for Peak Mode

5.3 TEST LAYOUT

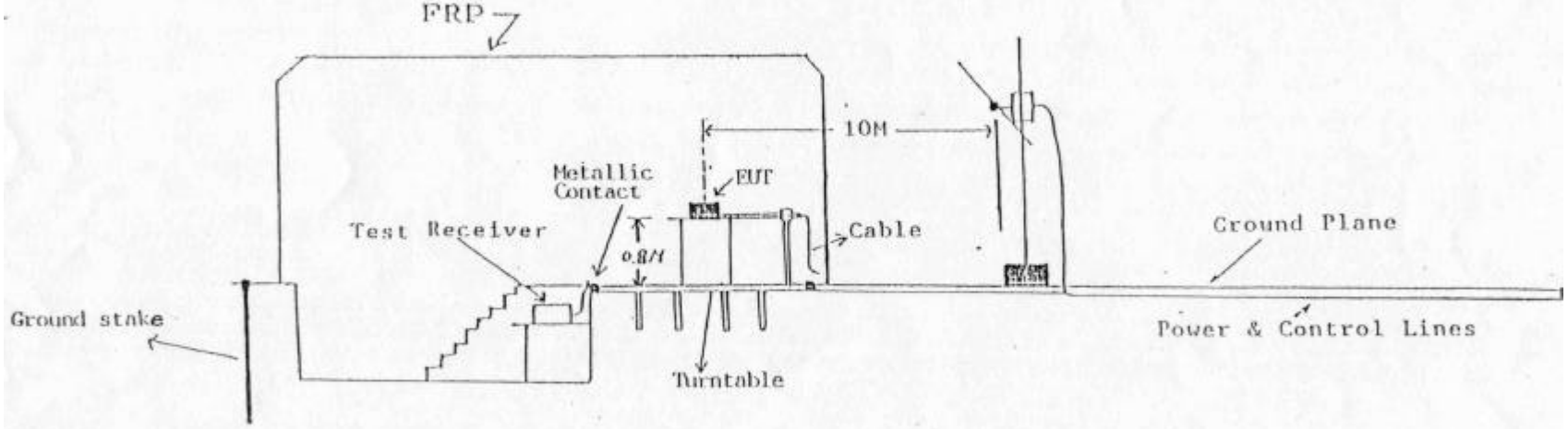


FIGURE : Typical Test Setup for Radiated Emissions

5.4 TEST PROCEDURE

1. The EUT was placed on a rotatable table top one meter above ground.
2. The EUT was set 10 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
5. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (form 1M to 4M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system (HP 8568B) to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
7. If the emission level of the EUT in peak mode was 6 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported otherwise the emissions which do not have 6 dB margin will be repeated one by one using the quasi-peak method and reported.

5.5 CONFIGURATION OF EQUIPMENT UNDER TEST

Same as item 2.4

5.6 SOFTWARE

Same as item 3.0

6. PHOTOS OF RADIATED EMISSION TEST CONFIGURATION

FRONT VIEW

REAR VIEW

7. TEST RESULT OF RFI FIELD STRENGTH

7.1 HORIZONTAL POLARIZATION

EUT: COMPACT SIZE FLAT-PANEL INDUSTRIAL WORKSTATION MODEL: AMB-620

Test Distance: 10M Antenna Polarity: HORIZONTAL Date: 20 Jul. 1996

Freq. (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read. At 10M (dBuV)	Limits At 10M (dBuV)	(uV)	Emission Level At 10M (dBuV)	(uV)	Margin (dB)
33.23	17.00	0.91	4.03	40.00	100	21.94	12.50	-18.06
52.44	7.60	1.10	11.98	40.00	100	20.68	10.81	-19.32
66.00	6.05	1.48	18.57	40.00	100	26.10	20.18	-13.90
81.69	7.10	1.55	9.74	40.00	100	18.39	8.31	-21.61
110.92	10.50	1.81	9.65	40.00	100	21.96	12.53	-18.04
160.56	10.12	2.00	5.34	40.00	100	17.46	7.46	-22.54
172.12	9.98	1.91	9.11	40.00	100	21.00	11.22	-19.00
176.88	9.00	2.00	8.45	40.00	100	19.45	9.39	-20.55
183.68	9.10	2.10	8.42	40.00	100	19.62	9.57	-20.38
200.00	9.10	2.30	11.58	40.00	100	22.98	14.09	-17.02
232.00	11.29	2.60	15.11	47.00	224	29.00	28.18	-18.00
272.00	12.52	3.10	16.14	47.00	224	31.76	38.73	-15.24
299.00	13.60	2.90	18.90	47.00	224	35.40	58.88	-11.60

Remarks : 1. Equipment meets the technical specifications of European Standard EN 55022

2. Emission level (dBuV/m)=20log Emission level (uV/m)

3. Sample Calculation AT 299.00 MHz

Corrected Reading= 13.60 + 2.90 + 18.90 = 35.40 (dBuV/m)

Temperature : 24 degree C Relative Humidity : 50% RH

Tested Engineer : T. C. Tseng Prepared by : K. L. Chang

7.2 VERTICAL POLARIZATION

EUT: COMPACT SIZE FLAT-PANEL INDUSTRIAL WORKSTATION MODEL: AMB-620

Test Distance: 10M Antenna Polarity: VERTICAL Date: 20 Jul. 1996

Freq. (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Read. At 10M (dBuV)	Limits At 10M (dBuV)	(uV)	Emission Level At 10M (dBuV)	(uV)	Margin (dB)
33.23	17.00	0.91	15.22	40.00	100	33.13	45.34	-6.87
65.87	6.05	1.48	18.80	40.00	100	26.33	20.73	-13.67
81.69	7.10	1.55	19.29	40.00	100	27.94	24.95	-12.06
110.00	10.40	1.91	15.33	40.00	100	27.64	24.10	-12.36
116.36	11.80	1.80	15.40	40.00	100	29.00	28.18	-11.00
132.34	11.39	2.31	17.70	40.00	100	31.40	37.15	-8.60
170.00	10.00	1.98	10.49	40.00	100	22.47	13.29	-17.53
182.66	9.10	2.10	18.31	40.00	100	29.51	29.89	-10.49
195.24	9.10	2.21	10.79	40.00	100	22.10	12.74	-17.90
200.00	9.10	2.30	12.60	40.00	100	24.00	15.85	-16.00
256.00	12.19	2.84	13.65	47.00	224	28.68	27.16	-18.32
299.00	13.60	2.90	15.18	47.00	224	31.68	38.37	-15.32
376.00	15.50	3.31	21.99	47.00	224	40.80	109.65	-13.80

Remarks : 1. Equipment meets the technical specifications of European Standard EN 55022

2. Emission level (dBuV/m)=20log Emission level (uV/m)

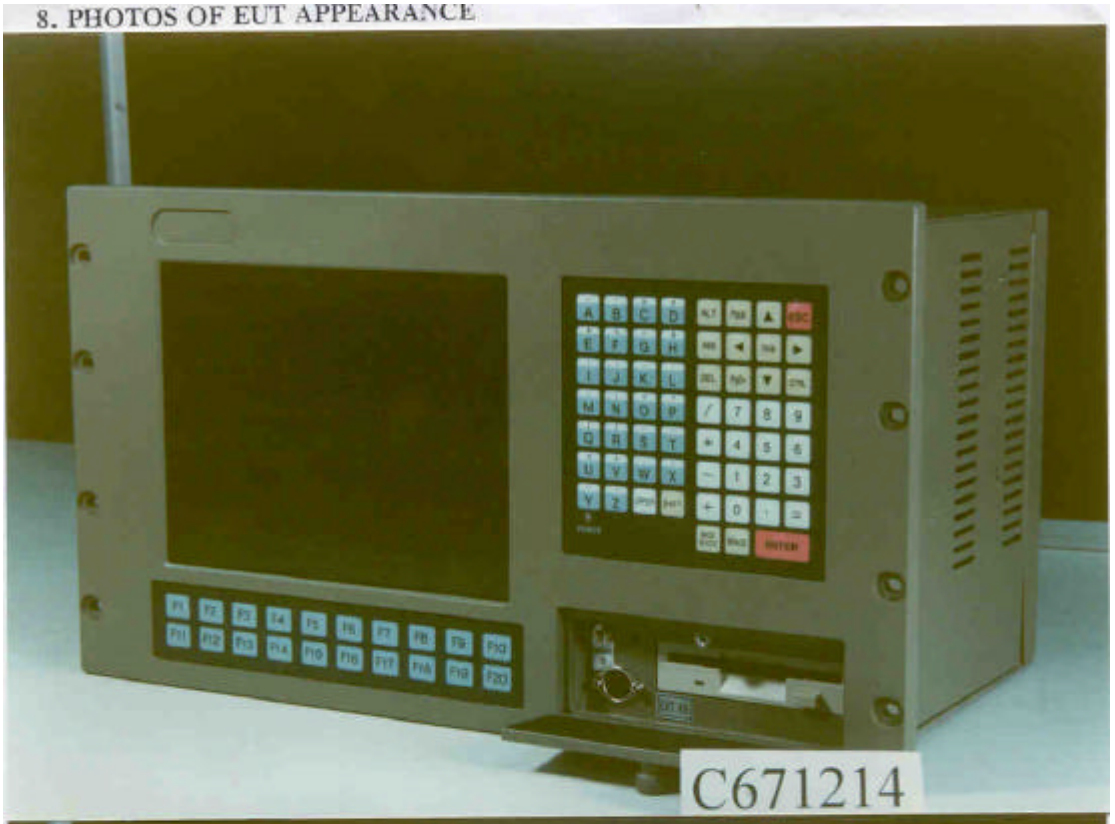
3. Sample Calculation AT 376.00 MHz

Corrected Reading= 15.50 + 3.31 + 21.99 = 40.80 (dBuV/m)

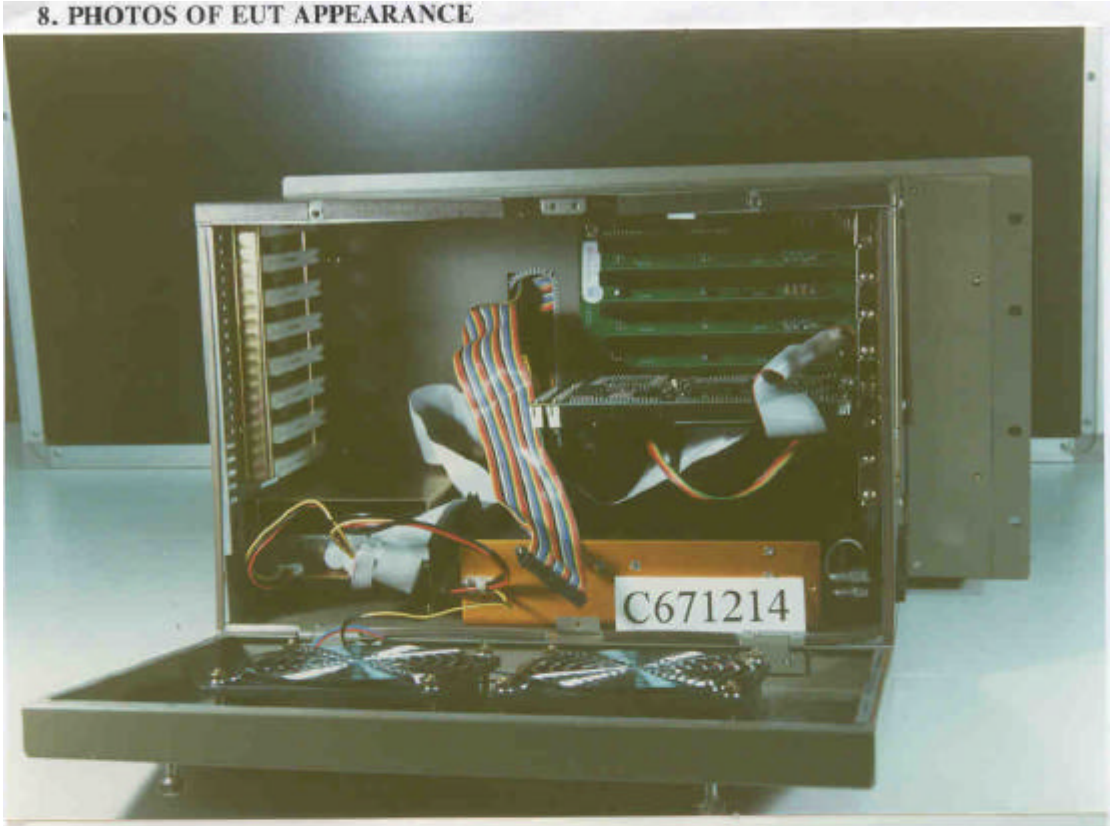
Temperature : 24 degree C Relative Humidity : 50% RH

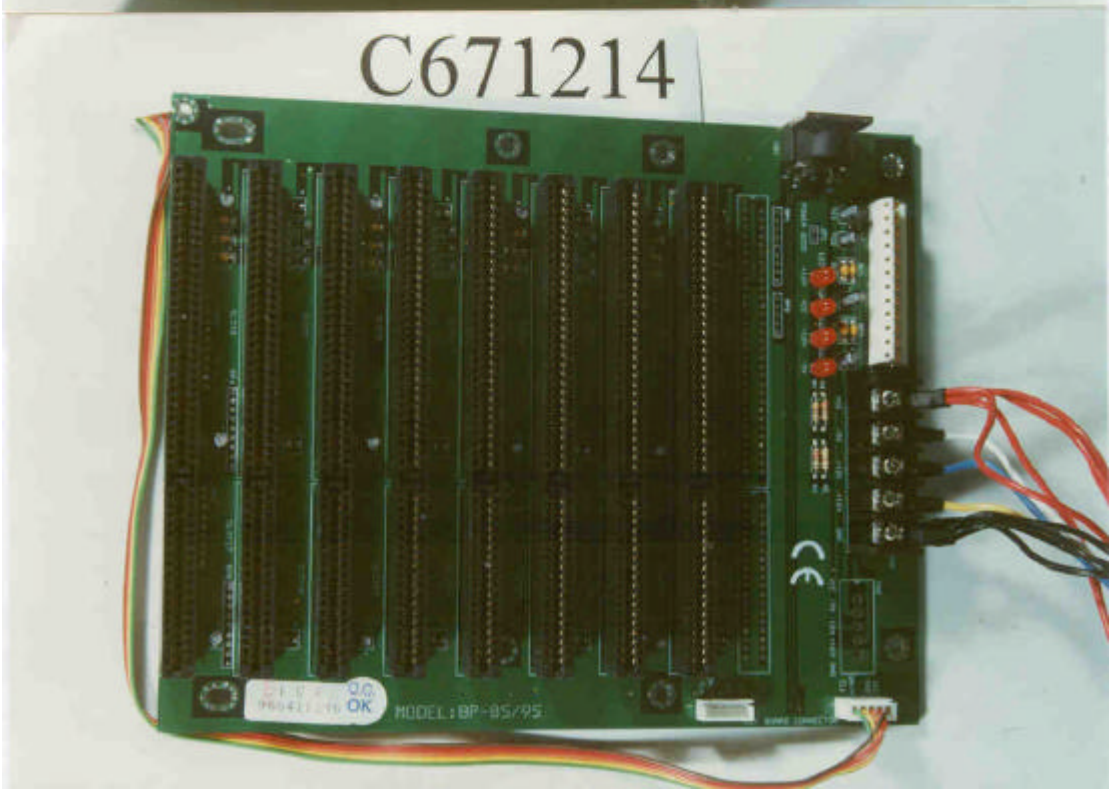
Tested Engineer : T.C. Tseng Prepared by : K.L. Chang

8. PHOTOS OF EUT APPEARANCE



8. PHOTOS OF EUT APPEARANCE





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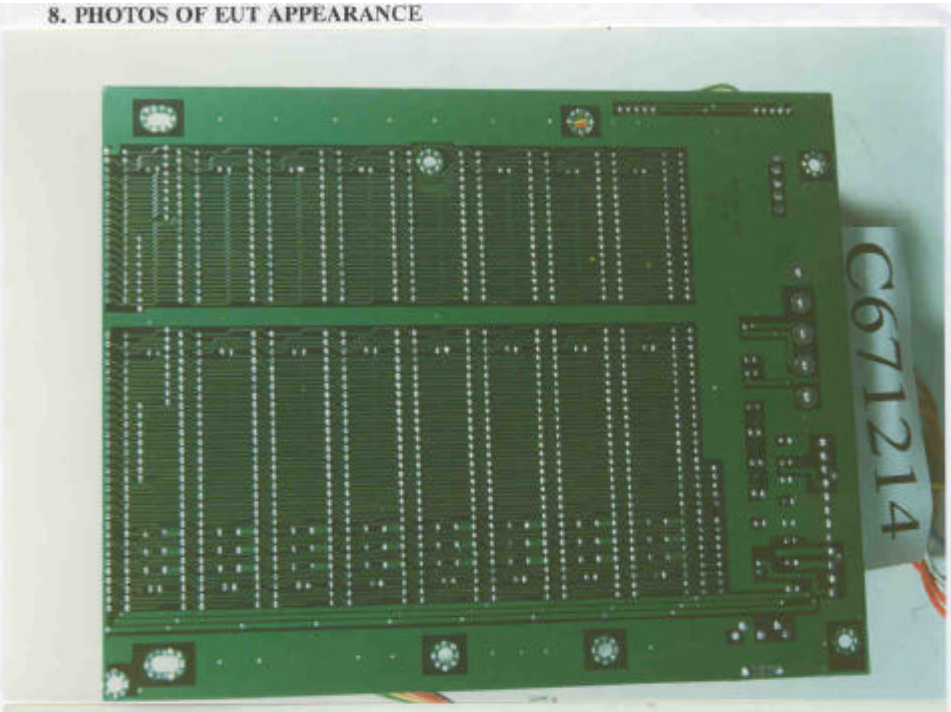

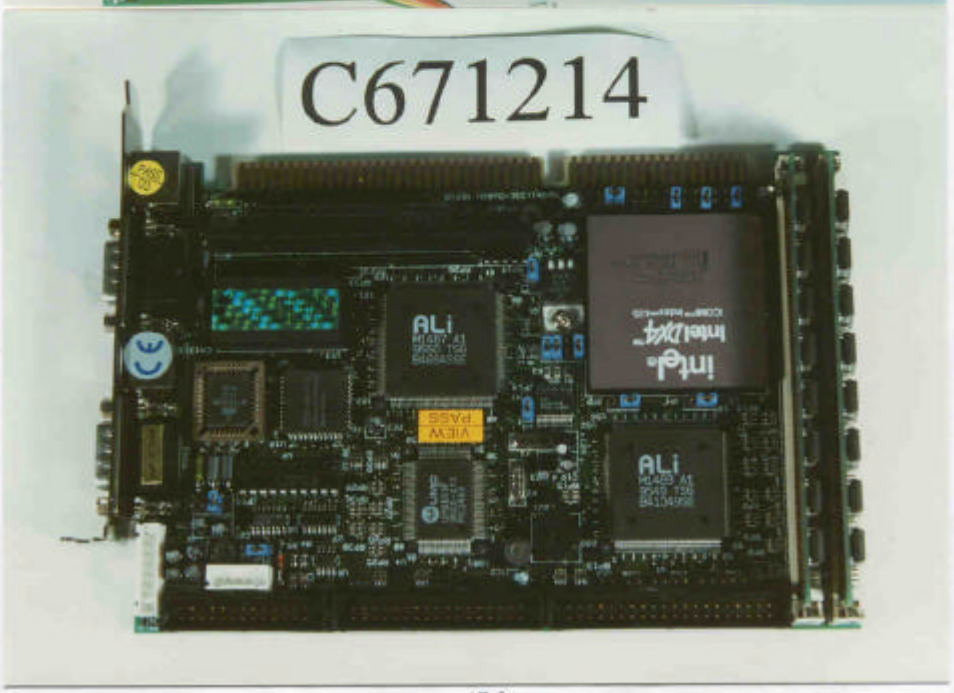

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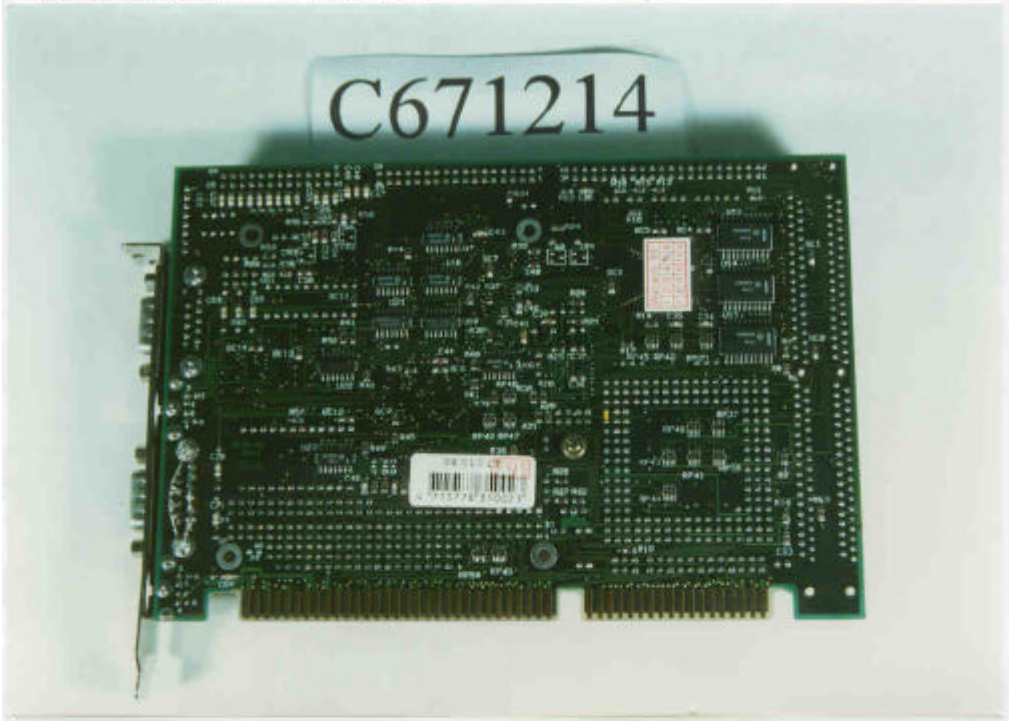

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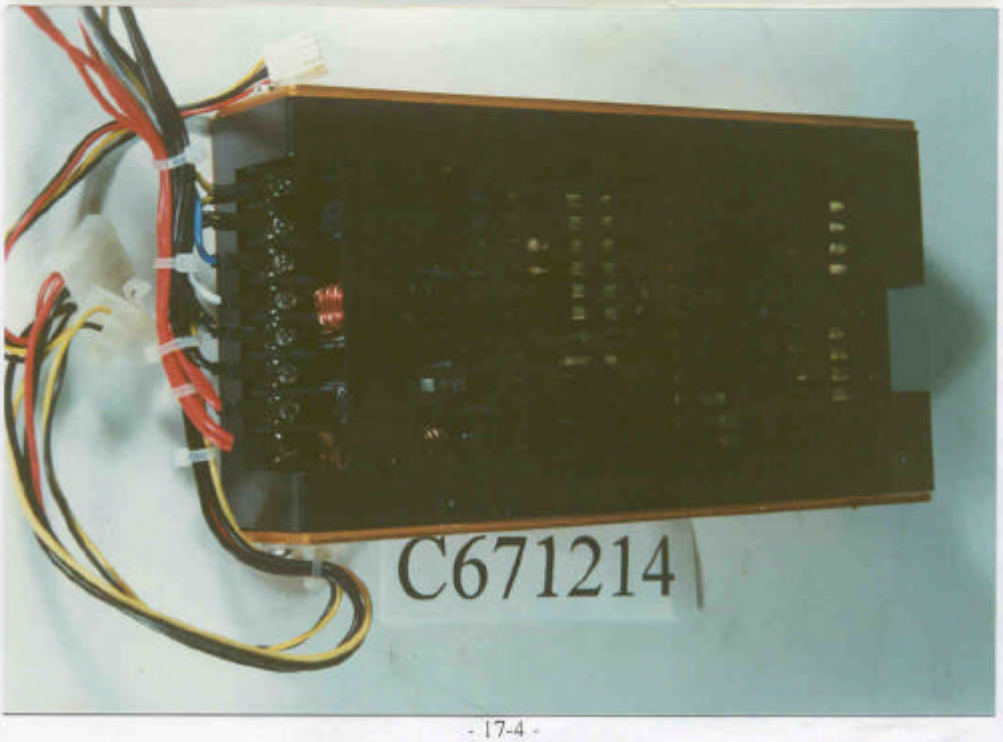

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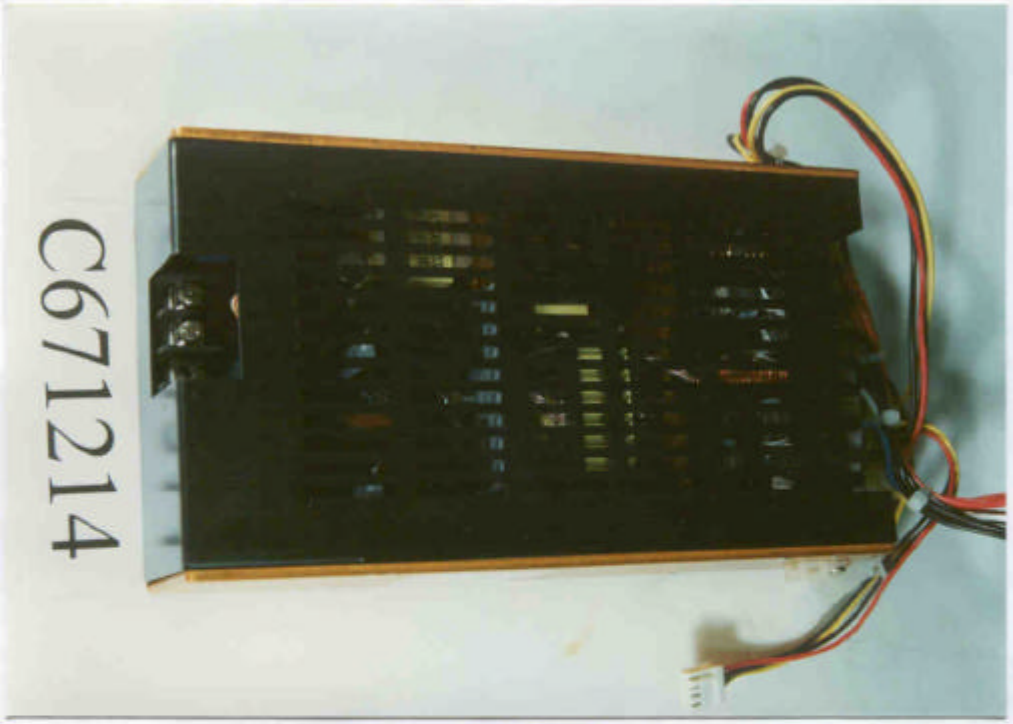

9.ANTENNA FACTOR & CABLE LOSS

Frequency (MHz)	Antenna Factor (dB)	Cable Loss (dB)
30.00	0.3	0.80
35.00	1.6	1.00
40.00	2.2	1.10
45.00	3.0	1.30
50.00	4.1	1.20
55.00	5.2	1.40
60.00	5.7	1.40
65.00	5.9	1.40
70.00	6.1	1.50
75.00	6.3	1.50
80.00	6.6	1.70
85.00	6.8	1.70
90.00	7.1	1.80
95.00	7.2	1.80
100.00	8.2	1.90
110.00	9.4	2.00
120.00	10.4	2.20
130.00	11.2	2.30
140.00	11.3	2.40
150.00	12.1	2.50
160.00	12.6	2.60
170.00	12.8	2.60
180.00	13.7	2.70
190.00	14.3	2.80
200.00	14.9	2.80
220.00	15.6	3.10
250.00	16.1	3.10
270.00	17.1	3.60
300.00	18.1	3.90
320.00	18.2	4.90
350.00	19.7	4.10
370.00	19.9	4.10
400.00	21.4	4.40
450.00	21.6	4.20
500.00	22.9	5.10
550.00	23.2	5.30
600.00	24.6	5.60
650.00	25.6	5.60
700.00	26.2	6.40
750.00	26.3	6.60
800.00	26.9	6.90
850.00	27.4	6.90
900.00	28.0	7.20
950.00	28.7	7.50
1000.00	28.7	7.80

10. LIST OF MEASURING EQUIPMENT USED

INSTRUMENT		MFR	MODEL	CHARACTERISTICS	CAL. DATE
01	Spectrum Analyzer	HP	8568B	100Hz - 1500MHz	AUG 20,1995
02	Quasi-Peak Adapter	HP	85650A	100Hz - 1500MHz	AUG 20,1995
03	RF. Preselector	HP	85685A	20 Hz - 2000MHz	AUG 20,1995
04	Test Receiver	R&S	ESVP	20 Hz - 1300MHz	JUL 27,1996
05	Test Receiver	R&S	ESH3	9kHz - 30 MHz	JUL 27,1996
06	Spectrum Monitor	R&S	EZM	N/A	JUL 27,1996
07	LISN	KYORITSU	KNW 242C	50 ohm / 50 uH	JUL 05,1996
08	Signal Generator	R&S	SMH	100kHz - 2000MHz	JUN 25,1996
09	Antenna Mast	EMCO	1050	N/A	N/A
10	Turntable	Sporton	N/A	N/A	N/A
11	Wooden Table	Sporton	N/A	N/A	N/A
12	Plotter	HP	7475A	N/A	N/A
13	Biconical Antenna	EMCO	3104	20MHz - 200MHz	DEC 05,1995
14	Log-Period Antenna	EMCO	3146	200MHz - 1000MHz	DEC 05,1995
15	Dipole Antenna	EMCO	3121	28 MHz - 1000MHz	DEC 02,1995
16	Loop Antenna	R&S	N/A	10 KHz - 30 MHz	OCT 23,1995
17	Shielding Room	Sporton	N/A	8m x 4.8m x 4.8m	N/A
18	Spectrum	HP	8594A	9 KHz - 2.9 GHz	MAR 02,1996

July 24, 1996

CE EMS & Harmonics TEST REPORT

EQUIPMENT:	**COMPACT SIZE FLAT-PANEL INDUSTRIAL WORKSTATION**
MODEL NO:	**AMB-620**
APPLICANT:	**ASTECH TECHNOLOGY CO., LTD.**
ADDRESS:	**6F-4, No.351, Sec. 2, Chung-Shan Rd., Chung Ho City, Taipei, Taiwan, R.O.C.**
TRADE MARK:	**ASTECH**
FILE NO. :	**C671214**
STANDARDS:	**EN 50 082-1(1992), EN 61000-3-2(1995) IEC 801-2(1984) IEC 801-3(1984) IEC 801-4(1988)**
TEST RESULT:	***PASS***
DATE OF TEST:	**July 22, 1996**
PREPARE BY:	*SPORTON INTERNATIONAL INC. No. 38, Alley 119, Lane 30, Yung Gi Road, Taipei 10541, Taiwan, R.O.C. TEL: 886 2 7641655, 886 2 6011640 FAX: 886 2 7468440, 886 2 6011695*

CERTIFICATION OF COMPLIANCE

APPLICABLE SPECIFICATION:EN50 082-1

EQUIPMENT: COMPACT SIZE FLAT-PANEL INDUSTRIAL WORKSTATION

MODEL NO.: AMB-620

APPLICANT: ASTECH TECHNOLOGY CO., LTD.

ADDRESS: 6F-4, No. 351, Sec. 2, Chung-Shan Rd., Chung Ho City, Taipei, Taiwan, R.O.C.

TESTED ACCORDING TO: EN 50082-1(1992), EN 61000-3-2(1995)
IEC 801-2(1984)
IEC 801-3(1984)
IEC 801-4(1988)

I HEREBY CERTIFY THAT:

THE MEASUREMENT SHOWN IN THIS REPORT WAS MADE IN ACCORDANCE WITH THE PROCEDURES GIVEN IN EUROPEAN COUNCIL DIRECTIVE 89/336/EEC AND THE EQUIPMENT UNDER TEST WAS *PASSED* THE EN50 082-1. TESTING WAS PERFORMED ON July 22, 1996 AT SPORTON INTERNATIONAL INC. LAB. IN LIN KO.

W. L. Huang

W. L. Huang
GENERAL MANAGER

Ronnie Cheng

Ronnie Cheng
SPECIAL ASSISTANT

SPORTON INTERNATIONAL INC.
No. 38, Alley 119, Lane 30, Yung Gi Road, Taipei 10541, Taiwan, R.O.C.
TEL: 886 2 7641655, 886 2 6011640
FAX: 886 2 7468440, 886 2 6011695

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CONTENT	PAGE

1. DESCRIPTION OF THE EQUIPMENT UNDER TEST

1.1. GENERAL DESCRIPTION OF EQUIPMENT UNDER TEST

APPLICANT:	ASTECH TECHNOLOGY CO., LTD.
ADDRESS:	6F-4, No. 351, Sec. 2, Chung-Shan Rd., Chung Ho City, Taipei, Taiwan, R.O.C.
EQUIPMENT:	COMPACT SIZE FLAT-PANEL INDUSTRIAL WORKSTATION
MODEL NO:	AMB-620
TRADE MARK:	ASTECH
POWER CORD:	NON-SHIELDED
DATA CABLE:	SHIELDED
POWER SUPPLY:	SWITCHING
FEATURE:	* ISA-Bus (PC / AT compatible) * 19" Rack panel mounting * 9.4" color TFT LCD display, color STN_DD LCD, B/W LCD or 10.4" EL display * 200-watt auto-range switching power supply -AC input voltage: 90 to 132V or 180 to 264 V auto-range -Output voltages: +5V @25A +12V @5A -5V @ 2A -12V @ 2A * 8-slot passive backplane * Two sealed-membrane keypads: one with 59 data-entry keys and one with 20 function keys * External monitor connector * Disk drive housing: Two drive spaces for 3.5" FDD and HDD

2. MEASUREMENT CONDITIONS

2.1. CONFIGURATION OF EQUIPMENT UNDER TEST

The DELL keyboard, HP monitor, HP printer, HP mouse MIDASONIC mouse, and LIGHT SPEED modem were connected to the EUT

2.2. SUPPORT EQUIPMENT

SUPPORT UNIT 1. --- MONITOR (HP)

MODEL NO. :	D2807A
POWER SUPPLY TYPE :	SWITCHING
POWER CORD :	NON-SHIELDED
DATA CABLE :	SHIELDED, 150CM LENGTH METALLIC CONNECTOR

SUPPORT UNIT 2. --- KEYBOARD (DELL)

MODEL NO. :	AT101
DATA CABLE :	SHIELDED

SUPPORT UNIT 3. --- PRINTER (HEWLETT PACKARD)

MODEL NO. :	2225C+
POWER SUPPLY TYPE :	LINEAR, AC ADAPTER
POWER CORD :	NON-SHIELDED
DATA CABLE :	SHIELDED, 137CM LENGTH, METALLIC CONNECTOR

SUPPORT UNIT 4. ---MODEM (LIGHT SPEED)

MODEL NO. :	1414S
DATA CABLE :	SHIELDED

SUPPOTT UNIT 5. ---MOUSE (HP)

MODEL NO. :	M-S34
DATA CABLE:	NON-SHIELDED

SUPPORT UNIT 6. ---MOUSE (MIDASONIC)

MODEL NO. :	340861
DATA CABLE:	NON-SHIELDED

2.3. TEST SOFTWARE

Use a batch program to run all equipments that connect to the EUT..

2.4. TEST ENGINEERS

2.4.1. SUSCEPTIBILITY TO ELECTROSTATIC DISCHARGES(ESD)

TEST BY C.W. Lee

2.4.2. SUSCEPTIBILITY TO FREQUENCY ELECTROMAGNETIC FIELDS (RS)

TEST BY Jones Jam

2.4.3. SUSCEPTIBILITY TO FAST TRANSIENT INTERFERENCE (BURSTS)

TEST BY Mark Chen

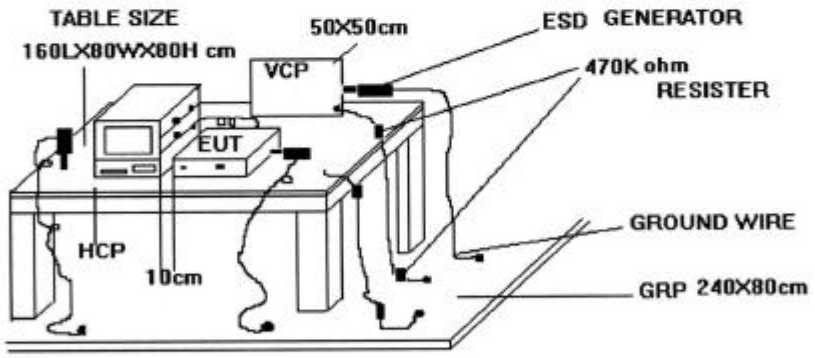
2.4.4. SUSCEPTIBILITY TO FAST TRANSIENT INTERFERENCE (HARMONIC)

TEST BY Jack Ding

3. SUSCEPTIBILITY TO ELECTROSTATIC DISCHARGES(ESD)

BASIC STANDARD:	IEC 801-2
PRODUCT STANDARD:	EN 50082-1
PERFORMANCE CRITERIA:	B
LEVEL:	2
TESTED VOLTAGE:	8 KV FOR AIR DISCHARGE
	4 KV FOR CONTACT DISCHARGE
TEMPERATURE:	27 ° C
REACTIVE HUMIDITY:	43 %

3.1 TEST SETUP



The test setup consists of the test generator, EUT and auxiliary instrumentation nessary to perform DIRECT and INDIRECT application of discharges to the EUT as applicable, in the follow manner:

a) CONTACT DISCHARGE to the conductive surfaces and to coupling plane;

b) AIR DISCHARGE at insulating surfaces.

The preferred test method is that of type tests performed in laboratories and the only accepted method of demonstrating conformance with this standard. The EUT was arranged as closely as possible to arrangement in final installed conditions.

3.2 TEST SETUP FOR TESTS PERFORMED IN LABORATORIES

A ground reference plane was provided on the floor of the test site.

It was a metallic sheet (copper or aluminum) of 0.25mm ,minimum thickness; other metallic may be used but they shall have at least 0.65mm thickness. In the SPORTON EMC LAB. we provided 1mm thickness aluminum ground reference plane or 1mm thickness stainless steel ground reference plane. The minimum size of the ground reference plane is 1mx1m, the exact size depending on the dimensions of the EUT. It was connected to the protective grounding system.

The EUT was arranged and connected according to its functional requirements.

A distance of 1m minimum was provided between the EUT and the wall of the lab. and any other metallic structure. In cases where this length exceeds the length nessary to apply the discharges to the selected points, the excess length shall , where possible, be placed non-inductively off the ground reference plane and shall not come closer than 0.2m to other conductive parts in the test setup.

Where the EUT is installed on a metal table, the table was connected to the reference plane via a cable with a 470k ohm resister located at each end, to prevent a build-up of charge.

The test setup was consist a wooden table, 0.8m high, standing on the ground reference plane. A HCP, 1.6mx0.8m, was placed on the table.The EUT and cables was isolated from the HCP by an insulating support 0.5mm thick. The VCP size,0.5mx0.5m.

3.3 ESD TEST PROCEDURE

a. In the case of air discharge testing the climatic conditions shall be within the following ranges:
   - ambient temperature : 15℃ to 35℃;
   - relative humidity : 30% to 60%;
   - atmospheric pressure : 68 KPa (680 mbar) to 106 KPa (1060 mbar).

b. Test programs and software shall be chosen so as to exercise all normal modes of operation of the EUT. The use of special exercising software is encouraged, but permitted only where it can be shown that the EUTis being comprehensively exercised.

c. The test voltage shall be increased from the minimum to the selected test severity level, in order to determine any threshold of failure. The final severity level should not exceed the product specification value in order to avoid damage to the equipment.

d. The test shall be performed with single discharges. On preselected points at least ten single discharges (in the most sensitive polarity) shall be applied.

e. For the time interval between successive single discharges an initial value of one second is recommended. Longer intervals may be necessary to determine whether a system failure has occurred.

f. In the case of contact discharges, the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

g. In the case of painted surface covering a conducting substrate, the following procedure shall be adopted:
   - If the coating is not declared to be an insulating coating by the equipment manufacturer, then the pointed tip of the generator shall penetrate the coating so as to make contact with the conducting substrate.
   - Coating declared as insulating by the manufacturer shall only be submitted to the air discharge.
   - The contact discharge test shall not be applied to such surfaces.

h. In the case of air discharges, the round discharge tip of the discharge electrode shall be approached as fast as possible (without causing mechanical damage) to touch the EUT . After each discharge, the ESD generator (discharge electrode) shall be removed from the EUT. The generator is then retriggered for a new single discharge. This procedure shall be repeated until the discharges are completed. In the case of an air discharge test, the discharge switch, which is used for contact discharge, shall be closed.

3.4 TEST POINTS

3.4.1 TEST RESULT OF AIR DISCHARGE

POINT	VOLTAGE	TESTED NO.	OBSERVATION	RESULT
FDD	2/4/8	+/-BY 10	NORMAL	PASS
LED	2/4/8	+/-BY 10	NORMAL	PASS
BRIGHTNESS VARIABLE RESISTER	2/4/8	+/-BY 10	NORMAL	PASS
PANEL	2/4/8	+/-BY 10	NORMAL	PASS
CASE	2/4/8	+/-BY 10	NORMAL	PASS
CRT	2/4/8	+/-BY 10	NORMAL	PASS
SCREW	2/4/8	+/-BY 10	NORMAL	PASS
EXTERNAL KEYBOARD PORT	2/4/8	+/-BY 10	NORMAL	PASS
INTERNAL KEYBOARD PORT	2/4/8	+/-BY 10	NORMAL	PASS
RS-232 PORT	2/4/8	+/-BY 10	NORMAL	PASS
MOUSE CONNECTOR	2/4/8	+/-BY 10	NORMAL	PASS
MODEM CONNECTOR	2/4/8	+/-BY 10	NORMAL	PASS
PRINTER CONNECTOR	2/4/8	+/-BY 10	NORMAL	PASS
VGA CONNECTOR	2/4/8	+/-BY 10	NORMAL	PASS
FAN	2/4/8	+/-BY 10	NORMAL	PASS
AC SOCKET	2/4/8	+/-BY 10	NORMAL	PASS

3.4.2 TEST RESULT OF CONTACT DISCHARGE

POLARITY	VOLTAGE	TESTED NO.	OBSERVATION	RESULT
HORIZONTAL(AT FRONT)	2/4/6	+/- BY 10	NORMAL	***PASS***
HORIZONTAL (AT LEFT)	2/4/6	+/- BY 10	NORMAL	***PASS***
HORIZONTAL (AT RIGHT)	2/4/6	+/- BY 10	NORMAL	***PASS***
HORIZONTAL (AT REAR)	2/4/6	+/- BY 10	NORMAL	***PASS***
VERTICAL (AT FRONT)	2/4/6	+/- BY 10	NORMAL	***PASS***
VERTICAL (AT LEFT)	2/4/6	+/- BY 10	NORMAL	***PASS***
VERTICAL (AT RIGHT)	2/4/6	+/- BY 10	NORMAL	***PASS***
VERTICAL (AT REAR)	2/4/6	+/- BY 10	NORMAL	***PASS***

3.5 TEST SEVERITY LEVELS

3.5.1 Contact discharge

Level	Test Voltage (kV) of Contact discharge
1	2
2	4
3	6
4	8
X	Special

Remark : "X" is an open level.

3.5.2 Air discharge

Level	Test Voltage (kV) of Air Discharge
1	2
2	4
3	8
4	15
X	Special

Remark : "X" is an open level.

3.6 TEST RESULT

Test Result : *PASSED*

3.7. PHOTOGRAPHS OF THE TEST CONFIGURATION (ESD)

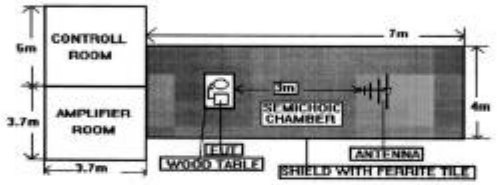
FRONT VIEW

REAR VIEW

4. SUSCEPTIBILITY TO FREQUENCY ELECTROMAGNETIC FIELDS (RS)

BASIC STANDARD:	IEC 801-2
PRODUCT STANDARD:	EN 50082-1
PERFORMANCE CRITERIA:	A
LEVEL:	3
FREQUENCY RANGE:	27 TO 500 MHz
FIELD STRENGTH:	10 V/m (UNMODULATED)
TEMPERATURE:	27° C
REACTIVE HUMIDITY:	43 %

4.1 TEST SETUP



Important: The SPORTON 7m x 4m x 4m anechoic chamber is compliance with the sixteen points uniform field requirement as stated in IEC 1000-4-3 Section 6.2

The procedure defined in this part requires the generation of electromagnetic fields within which the test sample is placed and its operation observed. To generate fields that are useful for simulation of actual (field) conditions may require significant antenna drive power and the resultant high field strength levels. To comply with local regulations and to prevent biological hazards to the testing personnel, it is recommended that these tests be carried out in a shielded enclosure or anchor chamber.

4.2 TEST PROCEDURE

a. The equipment to be tested is placed in the center of the enclosure on a wooden table. The equipment is then connected to power and signal leads according to pertinent installation instructions.

b. The biconical antenna and the log-spiral antenna are placed 1m away from the equipment, thus enabling the complete frequency range of 30 MHz to 1000 MHz to be traversed without having to change the position of the antennae at the 200 MHz crossover frequency. The required field strength is determined by placing the field strength meter(s) on top of or directly alongside the equipment under test and monitoring the field strentgh meter via a remote field strentgh indicator outside the enclosure while adjusting the continuous-wave to the applicable antennae.

c. The test is normally performed with the antenna facing the most sensitive side of the EUT. The polarization of the field generated by the biconical antenna necessitates testing each position twice, once with the antenna positioned vertically and again with the antenna positioned horizontally. The circular polarization of the field from the log-spiral antenna makes a change of position of the antenna unnecessary.

d. At each of the above conditions, the frequency range is swept from 30 MHz to 1000 MHz, pausing to adjust the R.F. signal level or to switch oscillators and antenna. The rate of sweep is in the order of 1.5 * 10^-3 decades/s. The sensitive frequencies or frequencies of dominant interest may be discretely analyzed.

4.3 TEST SEVERITY LEVELS

Frequency Band : 30 MHz to 1000 MHz

Level	Test field strength (V/m)
1	1
2	3
3	10
X	Special

Remark : "X" is an open class.

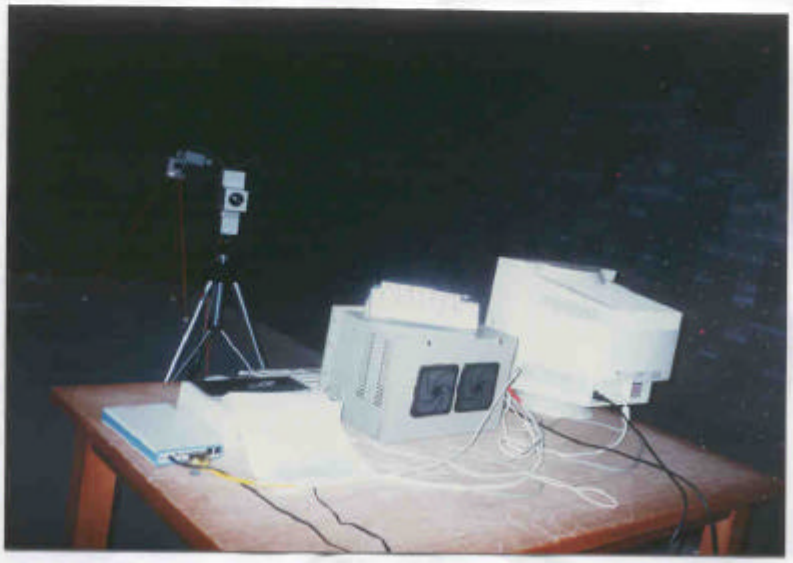
4.4 TEST RESULT

Test Result : *PASSED*

4.5. PHOTOGRAPHS OF THE TEST CONFIGURATION (RS)

FRONT VIEW

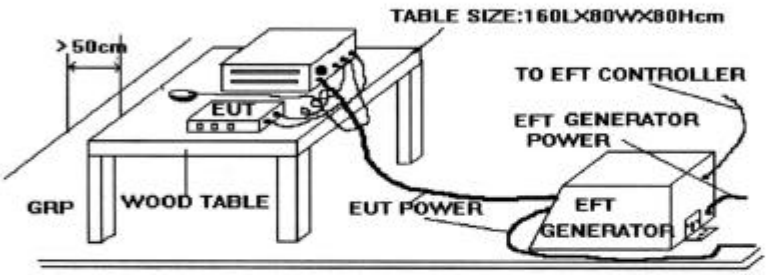
REAR VIEW



5. SUSCEPTIBILITY TO FAST TRANSIENT INTERFERENCE (BURSTS)

BASIC STANDARD	IEC 801-4
PRODUCT STANDARD:	EN 50082-1
PERFORMANCE CRITERIA:	B
LEVEL	3
TESTED VOLTAGE:	2 KV
TEMPERATURE:	27 ° C
REACTIVE HUMIDITY:	43 %

5.1 TEST SETUP



The EUT's was placed on a ground reference plane and was insulated from it by an insulating support about 0.1m thick. If the EUT is table-top equipment, it was located approximately 0.8m above the GRP..

The GRP. was a metallic sheet (copper or aluminum) of 0.25mm ,minimum thickness; other metallic may be used but they shall have at least 0.65mm thickness. It shall project beyond the EUT by at least 0.1m on all sides and connected to the protecitive earth.

In the SPORTON EMC LAB. we provided 1mm thickness aluminum ground reference plane or 1mm thickness stainless steel ground reference plane.

The minimum size of the ground reference plane is 1mx1m, the exact size depending on the dimensions of the EUT. It was connected to the protective grounding system.

The EUT was arranged and connected according to its functional requirements.

The minimum distance between the EUT and othor conductive structures, execpt the GRP. beneath the EUT, was more than 0.5m.

Using the coupling clamp, the minimum distance between the coupling plates and all othor conductive structures, execpt the GRP. beneath the EUT, was more than 0.5m.

The length of the signal and power lines between the coupling device and the EUT was 1m or less.

5.2 TEST ON POWER LINE

a. The EFT/B-generator was located on the GRP.. The length from the EFT/B-generator to the EUT as not exceed 1m.

b. The EFT/B-generator provides the ability to apply the test voltage in a non-symmetrical condition to the power supply input terminals of the EUT.

5.3 TEST ON COMMUNICATION LINES

a. The coupling clamp is composed of a clamp unit for housing the cable (length more than 3m), and was placed on the GRP..

b. The coupling clamp provides the ability of coupling the fast transient/bursts to the cable under test.

5.4 TEST PROCEDURE

a. In order to minimize the effect of environmental parameters on test results, the climatic conditions when test is carrying out shall comply with the following requirements :

- ambient temperature : 15℃ to 35℃;
- relative humidity : 45% to 75%;
- atmospheric pressure : 68 KPa (680 mbar) to 106 KPa (1060 mbar).

b. In order to minimize the effect of environmental parameters on test results, the electromagnetic environment of the laboratory shall not influence the test results.

c. The variety and diversity of equipment and systems to be tested make it difficult to establish general criteria for the evaluation of the effects of fast transients/bursts on equipment and systems.

d. The test results may be classified on the basic of the operating conditions and the functional specification of the equipment under test, according to the following performance criteria :

- Normal performance within the specification limits.
- Temporary degradation or loss of function or performance which is selfrecoverable.
- Temporary degradation or loss of function or performance which requires operator intervention or system reset.
- Degradation or loss of function which is not recoverable due to damage of equipment (components).

5.5 TEST SEVERITY LEVELS

The following test severity levels are recommended for the fast transient/burst test :

Open circuit output test voltage ±10%		
Level	On Power Supply	On I/O signal, data and control line
1	0.5 kV	0.25 kV
2	1.0 kV	0.50 kV
3	2.0 kV	1.00 kV
4	4.0 kV	2.00 kV
X	Special	Special

Remark : "X" is an open level. The level is subject to negotiation between the user and the manufacturer or is specified by the manufacturer.

5.6 TEST RESULT

Test Result : ***PASSED***

5.7. PHOTOGRAPHS OF THE TEST CONFIGURATION (BURSTS)

FRONT VIEW

REAR VIEW

6. HARMONICS TEST

6.1 TEST PROCEDURE

The measured values of the harmonics components of the input current, including line current and neutral current, shall be compared with the limits given in **Clause 4.**

6.2 TEST CONDITION

Line Voltage: 230.00 Vac
Line Frequency: 50 Hz
Temperature: 20℃
Relative Humidty: 55%

6.3 TEST RESULT

Test Result : *PASSED*

6.4 TEST RESULT OF HARMONICS

EQUIPMENT: COMPACT SIZE FLAT-PANEL INDUSTRIAL WORKSTATION
MODEL NO.: AMB-620

Harmonic Number	Indicated Values (A rms)	Max. Permiss Harm. Current (A rms)	Harmonic Number	Indicated Values (A rms)	Max. Permiss Harm. Current (A rms)
1	Fund	0.1809	21	0.1070	0.0221
2	1.0800	0.0056	22	0.0840	0.0008
3	2.3000	0.1184	23	0.0980	0.0123
4	0.4300	0.0059	24	0.0770	0.0009
5	1.1400	0.1277	25	0.0900	0.0050
6	0.3000	0.0042	26	0.0710	0.0011
7	0.7700	0.1185	27	0.0830	0.0048
8	0.2300	0.0067	28	0.0660	0.0013
9	0.4000	0.1021	29	0.0780	0.0075
10	0.1840	0.0037	30	0.0610	0.0012
11	0.3300	0.0867	31	0.0730	0.0090
12	0.1530	0.0038	32	0.0580	0.0011
13	0.2100	0.0740	33	0.0680	0.0094
14	0.1310	0.0024	34	0.0540	0.0010
15	0.1500	0.0605	35	0.0640	0.0089
16	0.1150	0.0015	36	0.0510	0.0009
17	0.1320	0.0471	37	0.0610	0.0077
18	0.1020	0.0013	38	0.0480	0.0008
19	0.1180	0.0340	39	0.0580	0.0057
20	0.0920	0.0009	40	0.0460	0.0006

6.5 EPHOTOGRATHS OF THE TEST CONFIGURATION (HARMONICS)

FRONT VIEW

REAR VIEW

7.LIST OF MEASUREMENT INSTRUMENTS USED

No.	Instrument	Manufacture	Model	Characteristics	Calibration Date
1	ESD SIMULATOR	KEYTEK	MZ-15/EC	0KV TO 15KV	MAR 7 ,96
2	OMNI-TIP	KEYTEK	TPC-2	0KV TO 15KV	MAR 7 ,96
3	EFT GENERATOR	KEYTEK	CE-40	0KV TO 4..4KV	MAY 12,96
4	CAPACITIVE CLAMP	KEYTEK	CE40-CCL	0KV TO 2KV	MAY 12,96
5	AMPLIFIER	AR	100W 1000M3	80MHz TO 1GHz	JUNE 15,96
6	ISOTROPIC FIELD PROBE	AR	FP3000A	10KHz TO 1GHz	JUNE 21,96
7	IEEE-488 INTERFACE	AR	CP3000	N/A	N/A
8	SYSTEM INTERFACE	EMC Automation	200	HP-IB INTERFACE	N/A
9	POWER METER	EMC Automation	438A	100KHz To 4.2GHz	N/A
10	VIDEO CAMERA CONTROLLER	EMC Automation	VCC-01	N/A	N/A
11	SIGNAL GENERATOR	H P	8648A	100KHz To 1GHz	SEP 11,95
12	SIGNAL GENERATOR	R&S	SMX	100KHz To 1GHz	SEP 11,95
13	TURN TABLE	EMCO	1060	N/A	N/A
14	POSITIONING CONTROLLER	EMCO	1060	N/A	N/A
15	ANTENNA MAST	EMCO	1050	N/A	N/A
16	ANTENNA STAND	AR	TP1000	N/A	N/A
17	ANTENNA	CHASE	CBL6111	30MHz TO 1GHz	APR 27,96
18	ANTENNA	AR	AT1000	80MHz TO 1GHz	SEP 11,95
19	AMPLIFIER	AR	100W 1000M7	25MHz TO 1GHz	JUNE 15,96

8. DECLARATION OF CONFORMITY AND THE CE MARK

* There are three possible procedures pertaining to the declaration of conformity:

A) ***Conformity testing and declaration of conformity by the manufacturer*** or his authorized representative established within the Community or by an importer.

- Article 10 (1) of the EMC Directive,

- § 3 (1) no. 2a of the EMC Act.

B) Declaration of conformity issued by the manufacturer or his authorized representative established within the Community or by an importer following testing of the product and issued of an ***EC certificate of conformity by a competent body.***

- Article 10 (2) of the EMC Directive,

- § 3 (1) no. 2b of the EMC Act.

C) Declaration of conformity issued by the manufacturer or his authorized representative established within the Community or by an importer following ***testing and certification of the product by a notified body.***

- Article 10 (5) of the EMC Directive,

- § 3 (1) no. 2b of the EMC Act (radio transmitting installations).

**** Specimen For The CE Marking Of Electrical / Electronical Equipment***

**** The components of the CE marking shall have substantially the same vertical dimension, which may not be less than 5 mm.***

EC Declaration of Conformity

This certifies that the following designated product

.....

.....

.....

.....

complies with the essential protection requirements of Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

This declaration applies to all specimens manufactured in accordance with the attached manufacturing drawings which form part of this declaration.

Assessment of compliance of the product with the requirements relating to electromagnetic compatibility was based on the following standards:

.....

EN 50081-1 (EN 55022 cIass B)

.....

EN 50082-1 (IEC 801 Teil 2,3,4)

This declaration is the responsibility of the manufacturer / importer

.....

.....

(Name)

.....

.....

(Address)

and was made by

.....

(Surname, forename)

.....

(Position in manufacturer's company)

.....	.....	.....
(Place)	(Date)	(Legally valid signature)

EC Declaration of Conformity

This certifies that the following designated product

產品名稱及 MODEL No.

complies with the essential protection requirements of Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

This declaration applies to all specimens manufactured in accordance with the attached manufacturing drawings which form part of this declaration.

Assessment of compliance of the product with the requirements relating to electromagnetic compatibility was based on the following standards:

EN 50081-1 (EN 55022 class B)

EN 50082-1 (IEC 801 Teil 2,3,4)

This declaration is the responsibility of the manufacturer / importer

歐盟內的製造商或進口商公司名稱

(Name)

地 址

(Address)

and was made by 上述公司代表人姓名

(Surname, forename)

職 務

(Position in manufacturer's company)

地 點	日 期	簽 名
(Place)	(Date)	(Legally valid signature)

Notice

本份報告若有錯誤, 請直接傳眞通知本公司總經理黃文亮先生, 謝謝 !

TEL NO. : 02-764-1655
FAX NO. : 02-746-8440

恆 興 科 技 有 限 公 司
SPORTON LAB. SPORTON INTERNATIONAL INC.

EC-Conformity Declaration

For the following equipment :

_____

_____

_____

_____

complies with the essential protection requirements of Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.
This declaration applies to all specimens manufactured in accordance with the attached manufacturing drawing which form part of this declaration.
Assessment of compliance of the product with the requirements relating to electromagnetic compatibility was based on the following standards:

_____

_____

_____

_____

The following importer/manufacturer is responsible for this declaration:

_____	**Astech Technology Co.,**
(Company Name, Importer)	(Company Name, Manufacturer)
_____	**6F-4,No.351,Sec.2 Chung-Shan Road, Chung-Ho City,Taipei, Taiwan, R.O.C.**
(Company Address, Importer)	(Company Address,Manufacturer)
Person responsible for this declaration:	**Person responsible for this declaration:**
_____	_____
(Name, Surname, Importer)	(Name, Surname, Importer)
_____	_____
(Position/Title)	(Position/Title)
_____	_____
(Legal Signature)	(Legal Signature)
_____ _____	**Taipei, Taiwan** _____
(Place) (Date)	(Place) (Date)

三上科技股份有限公司
ASTECH Technology CO., LTD.

TEL:886-2-2264585
FAX:886-2-2264584

台北縣中和市中山路二段351號6F-4
6F-4, NO. 351, CHUNG-SHAN RD., SEC. 2, CHUNG-HO CITY, TAIPEI, TAIWAN, R.O.C.

LETTER OF AUTHORIZATION

To whom it may concern:

This is to advise that we, the undersigned, hereby authorize Arbor Tech. Corp. to use their own brand, Arbor and model name: IWS-920, on our product , model: AMB-620, which is in compliance with the requirements of EMC directive 89/336/EEC and the specific standards described in the attached test report copy.

The model IWS-920 to be sold by Arbor Tech. Corp. is identical to our original model: AMB-620 in all aspects except for its model name , trade name and outer appearance.

三上科技股份有限公司

Signature and Title
Company Name

Issue Date:

Aug. 26, 96