



EMC

TEST REPORT

REPORT NO. : F87120109
MODEL NO. : PE1110, PE1110T
DATE OF TEST : Dec. 15, 1998

PREPARED FOR : ADI CORP.

ADDRESS : 14TH FL. NO. 1, SEC. 4, NAN-KING E. RD.,
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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**1. CERTIFICATION**

Issue Date: Dec. 21, 1998

Product : COLOR MONITOR
Trade Name : COMPAQ
Model No. : PE1110
Applicant : ADI CORP.
Standard : FCC Part 15, Subpart B, Class B
ANSI C63.4-1992
CISPR 22:1993+A1:1995+A2:1997

We hereby certify that one sample of the designation has been tested in our facility on Dec. 15, 1998. The test record, data evaluation and Equipment Under Test (EUT) configurations represent herein are true and accurate representation of the measurements of the sample's EMC characteristics under the conditions herein specified.

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

TESTED BY: J. W. Kuo , DATE: 12/21/98
(J. W. Kuo)

CHECKED BY: Yemmy Soong , DATE: 12/21/98
(Yemmy Soong)

APPROVED BY: Mike Su , DATE: 12/21/98
(Mike Su)

ADVANCE DATA TECHNOLOGY CORPORATION**NVLAP[®]**

Accredited Laboratory



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product	:	COLOR MONITOR
Model No.	:	PE1110
Power Supply Type	:	Switching
Power Cord	:	Nonshielded (1.8m)
Data Cable	:	Shielded (1.8m)

Note: The EUT is a 15" color monitor with resolution up to 1280x1024 (64 kHz).

The EUT has two model names which are identical to each other, except for their CRT, as the following:

- * Model : PE1110, using a Standard CRT
- * Model : PE1110T, using a TCO CRT

From the above two models, Model : PE1110 was selected as the representative for the test and its data is recorded in this report.

There is a ferrite core on the video cable outside the monitor.

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



2.2 DESCRIPTION OF SUPPORT UNITS

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

No.	Product	Brand	Model No.	FCC ID	I/O Cable
1	PERSONAL COMPUTER	COMPAQ	DEPEND- P400/6.4/W5C US	FCC DoC APPROVED	Nonshielded Power (1.8m)
2	KEYBOARD	COMPAQ	RT101	AQ6-MTN4XZ15	Shielded Signal (2.0m)
3	PRINTER	HP	2225C+	DSI6XU2225	Shielded Signal (1.4m) Nonshielded Power (2.2m)
4	MODEM	ACEEX	1414	IFAXDM1414	Shielded Signal (2.2m) Nonshielded Power (1.5m)
5	MOUSE	COMPAQ	MUS9J	EMJMUSJJ	Shielded Signal (1.8m)
6	VGA CARD	ATI	3D RAGE PRO	FCC DoC APPROVED	N/A

2.3 TEST METHODOLOGY AND CONFIGURATION

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

Please refer to the photos of test configuration in Item 5.



3. TEST INSTRUMENTS

3.1 TEST INSTRUMENTS (EMISSION)

RADIATED EMISSION MEASUREMENT

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
HP Spectrum Analyzer	8594A	3144A00308	Sept. 3, 1999
HP Preamplifier	8447D	2944A08119	Jan. 20, 1999
ROHDE & SCHWARZ TEST RECEIVER	ESVP	893496/030	July 15, 1999
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 25, 1999
CHASE Bilog Antenna	CBL6112A	2329	Sept. 19, 1999
EMCO Turn Table	1060	1195	N/A
EMCO Tower	1051	1163	N/A
Open Field Test Site	Site 2	ADT-R02	Sept. 18, 1999

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

CONDUCTED EMISSION MEASUREMENT

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
ROHDE & SCHWARZ Test Receiver	ESH3	893495/006	July 15, 1999
ROHDE & SCHWARZ Spectrum Monitor	EZM	893787/013	July 16, 1999
ROHDE & SCHWARZ Artificial Mains Network	ESH3-Z5	839135/006	July 14, 1999
EMCO-L.I.S.N.	3825/2	9204-1964	July 14, 1999
Shielded Room	Site 2	ADT-C02	N/A

Note: 1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per NAMA's document NIS81.

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



3.2 LIMITS OF CONDUCTED AND RADIATED EMISSION

LIMIT OF RADIATED EMISSION OF CISPR 22

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

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

FREQUENCY (MHz)	Class A (at 10m)		Class B (at 3m)	
	uV/m	dBuV/m	uV/m	dBuV/m
Above 1000	300	49.5	500	54.0

Note: (1) The lower limit shall apply at the transition frequencies.

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

(3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

LIMIT OF CONDUCTED EMISSION OF CISPR 22

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

Note: (1) The lower limit shall apply at the transition frequencies.

(2) The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz

(3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.



4. TEST RESULTS (EMISSION)

4.1 RADIO DISTURBANCE

Frequency Range	:	0.15 - 30 MHz (Conducted Emission) 30 - 1000 MHz (Radiated Emission)
Input Voltage	:	120 Vac, 60 Hz
Temperature	:	20 °C
Humidity	:	65 %
Atmospheric Pressure	:	997 mbar

TEST RESULT	Remarks
PASS	Minimum passing margin of conducted emission: -14.8 dB at 11.491 MHz Minimum passing margin of radiated emission: -3.1 dB at 189.19 MHz

Note: The EUT was pretested under the following resolution & horizontal synchronization speed mode:

- * 1280x1024 mode (64 kHz),
- * 1024x768 mode (69 kHz),
- * 640x480 mode (31.5 kHz)

The worst emission levels were found under 1280x1024 (64 kHz) and therefore the test data of only this mode is recorded.

4.2 EUT OPERATION CONDITION

1. Turn on the power of all equipments.
2. PC runs a test program to enable all functions.
3. PC reads and writes messages from FDD and HDD.
4. PC sends "H" messages to monitor (EUT) and monitor displays "H" patterns on screen.
5. PC sends "H" messages to modem.
6. PC sends "H" messages to printer, and the printer prints them on paper.
7. Repeat steps 3-7.



4.3 TEST DATA OF CONDUCTED EMISSION

EUT: COLOR MONITOR

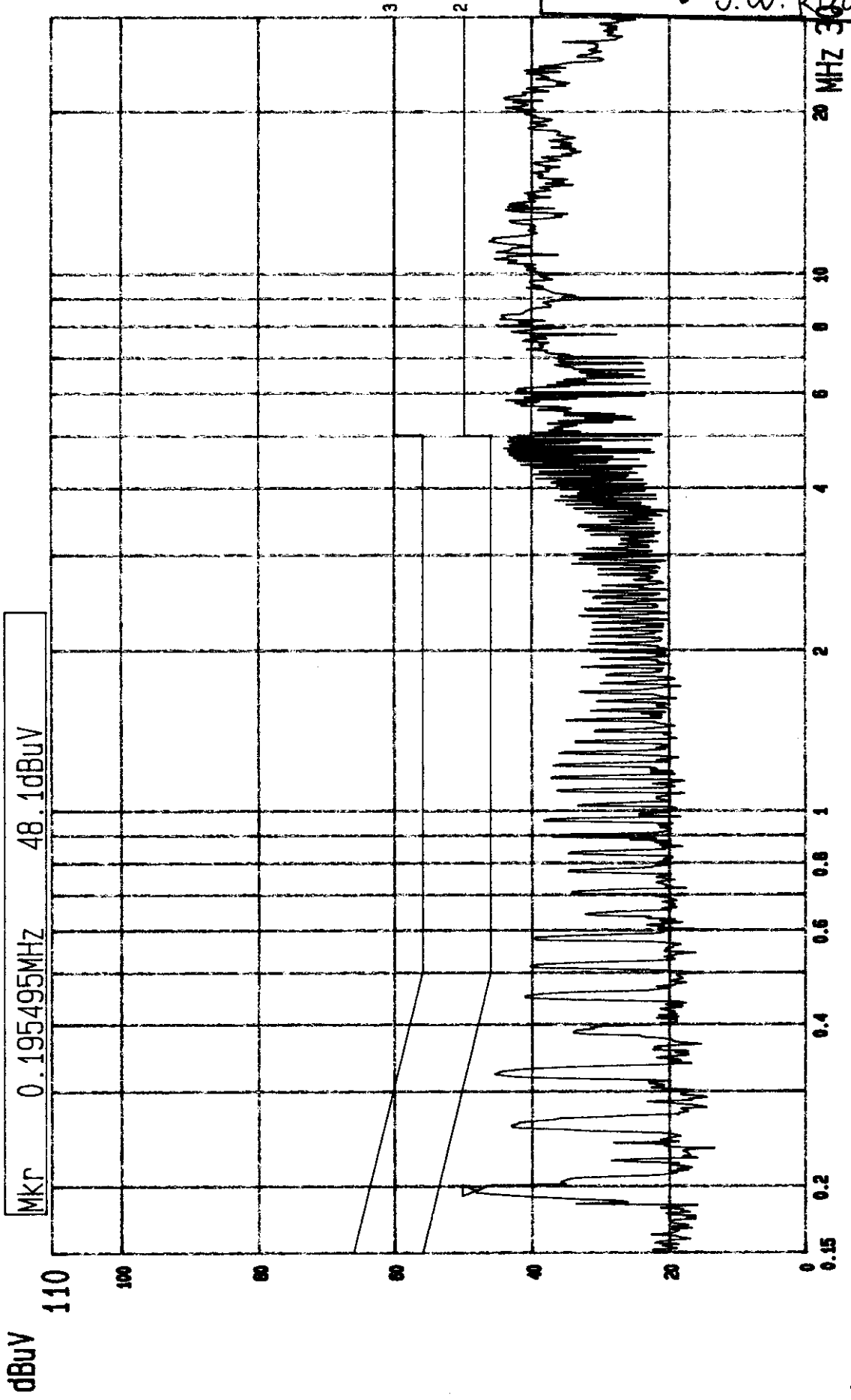
MODEL: PE1110

MODE: 1280x1024 (64 kHz)

6 dB Bandwidth: 10 kHz

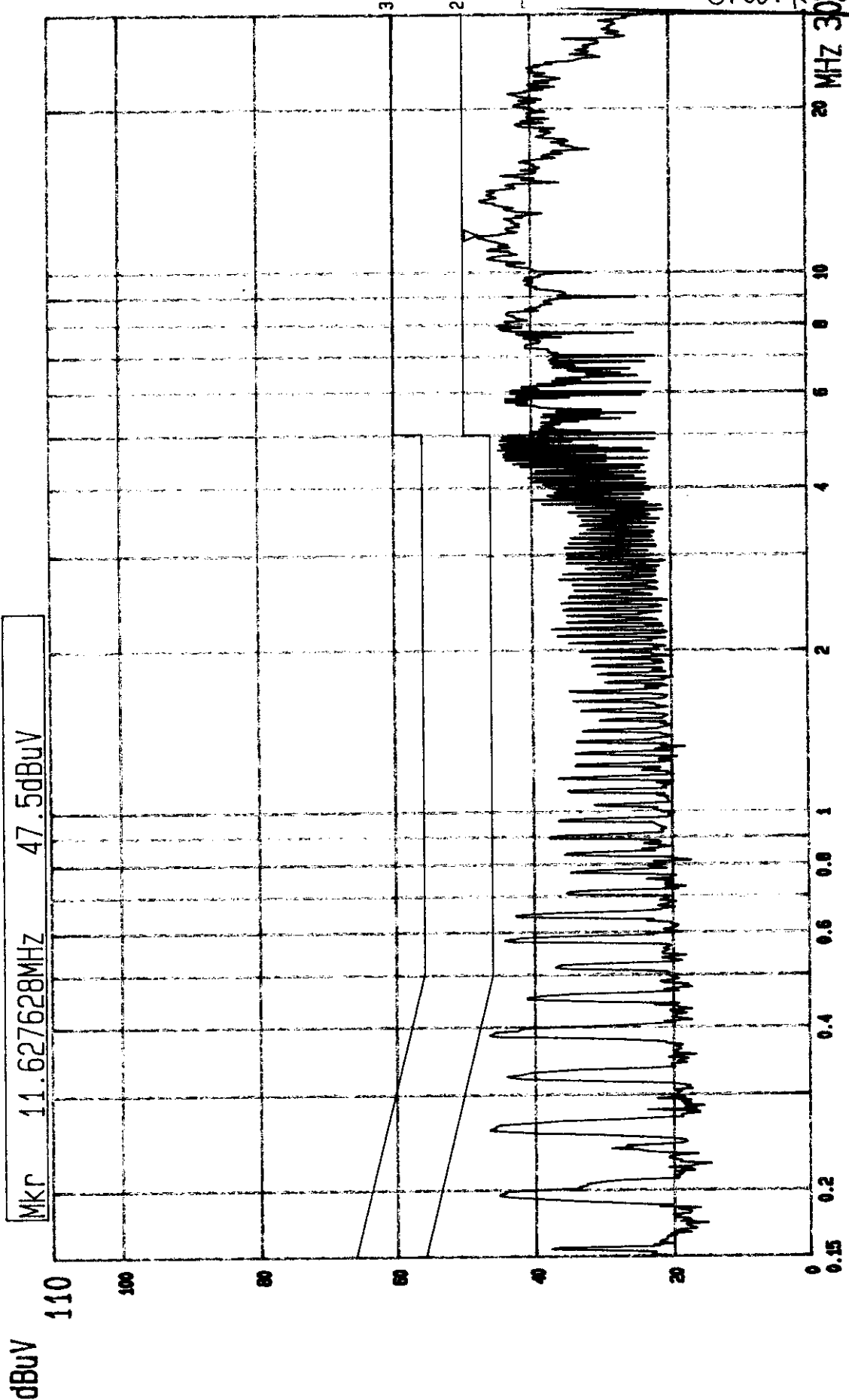
Freq. [MHz]	L Level [dB (μV)]		N Level [dB (μV)]		Limit [dB (μV)]		Margin [dB (μV)]			
	QP	AV	QP	AV	QP	AV	L		N	
	QP	AV	QP	AV	QP	AV	QP	AV	QP	AV
0.195	47.0	-	45.0	-	63.8	53.8	-16.8	-	-18.8	-
0.322	44.3	-	43.4	-	59.7	49.7	-15.4	-	-16.3	-
0.513	39.1	-	36.0	-	56.0	46.0	-16.9	-	-20.0	-
4.724	30.1	-	30.3	-	56.0	46.0	-25.9	-	-25.7	-
8.313	43.2	-	44.0	-	60.0	50.0	-16.8	-	-16.0	-
11.491	45.2	-	33.6	-	60.0	50.0	-14.8	-	-26.4	-

- Remarks:
1. "*": Undetectable
 2. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 3. "-": The Quasi-peak 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



--- Date 15.DEC.'98 Time 17:00:41
CISPR 22 CLASS B CONDUCTION TEST (PEAK VALUE)
MODEL: PE1110

ADT CORP.
LISN: L



---- Date 15.DEC.'98 Time 17:15:49
CISPR 22 CLASS B CONDUCTION TEST (PEAK VALUE)
MODEL: PE1110

ADT CORP.
LISN: N



4.4 TEST DATA OF RADIATED EMISSION

EUT: COLOR MONITOR

MODEL: PE1110

MODE: 1280x1024 (64 kHz)

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/m)	Reading Data (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
67.48	7.5	10.6	18.1	30.0	-11.9
81.10	8.6	11.3	19.9	30.0	-10.1
135.14	13.8	8.0	21.8	30.0	-8.2
162.16	11.3	7.8	19.1	30.0	-10.9
175.67	11.5	11.2	22.7	30.0	-7.3
189.18	11.7	15.1	26.8	30.0	-3.2
216.20	13.0	8.7	21.7	30.0	-8.3
229.73	14.0	8.4	22.4	30.0	-7.6
243.22	15.0	12.6	27.6	37.0	-9.4

- REMARKS:
1. Emission level (dBuV/m) = Correction Factor (dB/m) + Meter Reading (dBuV).
 2. Correction Factor (dB/m) = Ant. Factor (dB/m) + 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: COLOR MONITORMODEL: PE1110MODE: 1280x1024 (64 kHz)ANT. POLARITY: VerticalDETECTOR FUNCTION: Quasi-peak6 dB BANDWIDTH: 120 kHzFREQUENCY RANGE: 30-1000 MHzMEASURED DISTANCE: 10 M

Frequency (MHz)	Correction Factor (dB/m)	Reading Data (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
54.03	6.8	13.6	20.4	30.0	-9.6
67.55	6.5	12.3	18.8	30.0	-11.2
81.07	7.8	15.9	23.7	30.0	-6.3
135.11	14.1	7.3	21.4	30.0	-8.6
162.13	11.6	6.9	18.5	30.0	-11.5
175.64	11.4	7.3	18.7	30.0	-11.3
189.19	12.0	14.9	26.9	30.0	-3.1
216.21	13.4	7.7	21.1	30.0	-8.9
229.72	14.0	9.1	23.1	30.0	-6.9
243.23	14.7	9.2	23.9	37.0	-13.1

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



6. APPENDIX - INFORMATION OF THE TESTING LABORATORY

Information of the testing laboratory

We, ADT Corp., is 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 |
| ● U.K. | INCHCAPE, SGS |
| ● R.O.C. | BCIQ |

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

Lin Kou Safety Lab.:

Tel: 886-2-26093195

Fax: 886-2-26093184

Hsin Chu EMC Lab:

Tel: 886-35-935343

Fax: 886-35-935342

Design Center:

Tel: 886-2-26093195

Fax: 886-2-26093184

E-mail: service@mail.adt.com.tw

<http://www.adt.com.tw>

FEDERAL COMMUNICATIONS COMMISSION

7433 Ostland Mills Road
 Columbia, MD 21046
 Telephone: 301-725-1588 (toll-free) 301-725-1588
 Facsimile: 301-344-2050

October 21, 1998

IN REPLY REFER TO
 31040/SIT
 1300F2

Advance Data Technology Corporation
 12F, No. 1, Sec. 4
 Nan-King East Rd.
 Taipei, Taiwan, R.O.C.

Attention: Harns W. Lai

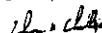
Re: Measurement facility located at above address, Site No. 1
 (3 and 10 meters)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1992. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has been also added to our list of those who perform these measurement services for the public on a fee basis. This list is published periodically and is also available on the Laboratory's Public Access Link as described in the enclosed Public Notice.

Sincerely,



Thomas W. Phillips
 Electronics Engineer
 Customer Service Branch

Enclosure:
 PAL PN

FEDERAL COMMUNICATIONS COMMISSION

7433 Ostland Mills Road
 Columbia, MD 21046
 Telephone: 301-725-1588 (toll-free) 301-725-1588
 Facsimile: 301-344-2050

September 15, 1998

IN REPLY REFER TO
 31040/SIT
 1300F2

Advance Data Technology Corporation
 12F, No. 1, Sec. 4
 Nan-King E. Rd.
 Taipei, Taiwan, R.O.C.

Attention: Harns Lai

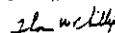
Re: Measurement facility located at Lin Kou, Sites 2 & 3
 (3 & 10 meters)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has also been added to our list of those who perform these measurement services for the public on a fee basis. An up-to-date list is available on the internet at the FCC Website www.fcc.gov under Electronic Filing.

Sincerely,



Thomas W. Phillips
 Electronics Engineer
 Customer Service Branch

FEDERAL COMMUNICATIONS COMMISSION

7433 Ostland Mills Road
 Columbia, MD 21046
 Telephone: 301-725-1588 (toll-free) 301-725-1588
 Facsimile: 301-344-2050

April 17, 1998

IN REPLY REFER TO
 31040/SIT
 1300F2

Advance Data Technology Corporation
 12F, No. 1, Sec. 4
 Nan-King East Rd.
 Taipei, Taiwan, R.O.C.

Attention: Harns W. Lai

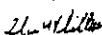
Re: Measurement facility located at above address
 Site No. 4 (3 and 10 meters)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1992. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has been also added to our list of those who perform these measurement services for the public on a fee basis. This list is published periodically and is also available on the Laboratory's Public Access Link as described in the enclosed Public Notice.

Sincerely,



Thomas W. Phillips
 Electronics Engineer
 Customer Service Branch

Enclosure:
 PAL PN

FEDERAL COMMUNICATIONS COMMISSION

7433 Ostland Mills Road
 Columbia, MD 21046
 Telephone: 301-725-1588 (toll-free) 301-725-1588
 Facsimile: 301-344-2050

October 21, 1998

IN REPLY REFER TO
 31040/SIT
 1300F2

Advance Data Technology Corporation
 12F, No. 1, Sec. 4
 Nan-King East Rd.
 Taipei, Taiwan, R.O.C.

Attention: Harns W. Lai

Re: Measurement facility located at above address, Site No. 5
 (3 and 10 meters)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1992. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has been also added to our list of those who perform these measurement services for the public on a fee basis. This list is published periodically and is also available on the Laboratory's Public Access Link as described in the enclosed Public Notice.

Sincerely,



Thomas W. Phillips
 Electronics Engineer
 Customer Service Branch

Enclosure:
 PAL PN

FEDERAL COMMUNICATIONS COMMISSION

7330 Oakridge Mills Road
 Columbia, MD 21046
 Telephone: 301-725-1200 (toll-free)
 Facsimile: 301-344-8200

February 23, 1998

STANDARD FORM NO.
 3104/05/IT
 1300F2

Advance Data Technology Corporation
 127, No. 1, Sec. 4, Nan-Ging E. Rd.
 Taipei, Taiwan

Attn: Mr. Hsin W. Lai

Re: Measurement facility located at above address, Site No. 3
 (3 and 10 meters)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.946 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1982. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has been also added to our list of those who perform these measurement services for the public on a fee basis. This list is updated monthly and is available on the Laboratory's Public Access Link (PAL) at 301-725-1072, and also on the Internet at the FCC Website www.fcc.gov/ovr/inf/ordstabase/retststtr.

Sincerely,

Thomas W. Phillips
 Electronics Engineer
 Customer Service Branch



Technischer Überwachungs-Verein Rheinland

Certificate

of Appointment

No. 1-9743928-9707

The applicant:

Advance Data Technology (ADT) Corporation
 No. 47, 14 Ling, Chia Pau Tsuen, Lin Kou Hsiang, Taipei Hsien,
 Taiwan, R.O.C.

has been authorized to carry out EMC tests by order and under supervision of
 TÜV Rheinland according to

CISPR14, EN 55 011:1991, EN 55 014:1993, EN 55 015:1993, EN 55 022:1994/AL,
 EN 55 164:1995, EN 68 525-2:1987, EN 61 000-3-2:1995, EN 61 000-3-3:1995,
 EN 59 081-1:1992, EN 59 082-1:1992, EN 59 081-2:1993, EN 59 082-2:1994,
 IEC 801-2:1991, IEC 801-3:1984, IEC 801-4:1988, IEC 801-5:1990, EN 61 000-4-2:1995,
 EN V 59 140:1993, EN V 59 141:1993, IEC 1 000-4-3:1995, EN 61 000-4-4:1995,
 EN 61 000-4-5:1995, EN 61 000-4-8:1993, EN 61 000-4-11:1994, EN 60 601-1-2:1993

An inspection of the facility was conducted according to the Document
 "Approval of Test Site" with reference to EN 45 001 by a TÜV Rheinland inspector.

Audit Report No. P 9763928E01, Rev. A
 This certificate is valid until the next scheduled inspection or up to 15 month,
 at the discretion of TÜV Rheinland.

TÜV Rheinland Taiwan Ltd.
 Taipei, 16.07.1997

Dipl.-Ing. G. Lübken
 Vice General Manager
 Product Safety Department

Dipl.-Ing. U. Meyer
 Auditor

The signatures of the Testing and Certification Personnel are an integral part of this certificate.



Worldwide Testing and Certification

ELA 4

EMC Laboratory Authorization

Aut. No.: ELA 112

EMC Laboratory: ADT Advance Data Technology Corporation
 No. 47, 14 Ling, Chia Pau Tsuen,
 Lin Kou Hsiang, Taipei Hsien,
 Taiwan R.O.C.

Scope of Authorization: All CENELEC standards (ENs) for EMC that are listed on
 the accompanying page, and, all of the corresponding
 CISPR, IEC, and ISO EMC standards that are listed on the
 accompanying page.

This Authorization Document confirms that the above mentioned EMC Laboratory has been
 validated against EN 45001 and found to be compliant. The laboratory also fulfills the
 conditions described in Nemko Document ELA 10. During Nemko's visit to the laboratory on
 9. October 1996, an assessment was made of the relevant parts of your organization - i.e.
 facilities, personnel qualifications, test equipment, and testing practices. It was found that the
 EMC Laboratory is capable of performing tests within the Scope of Authorization given on
 the accompanying page. Accordingly, Nemko will accept your test reports as a basis for
 assessing conformity to these EMC Standards for the products in question under either the
 European Union EMC Directive or the European Union Automotive EMC Directive (as
 applicable).

In case of applications for Product Certification(s) to be issued by Nemko, your EMC
 Laboratory's test report(s) will be accepted by Nemko if they are enclosed with the
 Application Form submitted by the manufacturer.

In order to maintain the Authorization, the information given in the enclosed ELA-INFOs (if
 any) must be carefully followed. Nemko is to be promptly notified about any changes in the
 situation at your EMC Laboratory which may affect the basis for this Authorization. The
 Authorization may at any time be withdrawn if the conditions are no longer considered to be
 fulfilled.

The Authorization is valid through February 28, 1999.

Oslø, 13 March 1998

For Nemko AS:

Kjell Bergh, Head of EMC Section

Postal address: Oslo, Norway
 Telephone: +47 22 00 00 00
 Facsimile: +47 22 00 00 00
 Telex: 220000 NEMKO



Worldwide Testing and Certification

ELA 4

EMC Laboratory Authorisation

Aut. No.: ELA 112

(Page 2 of 2)

SCOPE OF AUTHORIZATION

GENERIC & PRODUCT-FAMILY STANDARDS

EN 50081-1, EN 50081-2	EN 50082-1, EN 50082-2	EN 55011, Gr. 1, CISPR 11
EN 55013, CISPR 13	EN 55014-1, CISPR 14-1	EN 55015, CISPR 15
EN 55022	EN 60555-2, IEC 555-2, EN 61000-3-2, IEC 61000-3-2	EN 60555-3, IEC 555-3, EN 61000-3-3, IEC 61000-3-3


BASIC STANDARDS

EN 61000-4-2, IEC 61000-4-2, IEC 801-2	EN 61000-4-3, EN V 50140, EN V 50204, IEC 61000-4-3, IEC 801-3	EN 61000-4-4, IEC 61000-4-4, IEC 801-4
EN 61000-4-5, IEC 61000-4-5	EN 61000-4-6, EN V 50141, IEC 61000-4-6	EN 61000-4-8, IEC 61000-4-8
EN 61000-1-11, IEC 61000-1-11		

Oslø, 13 March 1998

Kjell Bergh, Nemko EMC Services

Postal address: Oslo, Norway
 Telephone: +47 22 00 00 00
 Facsimile: +47 22 00 00 00
 Telex: 220000 NEMKO



 National Institute of Standards and Technology

Scope of Accreditation

National Voluntary Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
 ISO 9002:1987

Page 1 of 1
 NVLAP LAB CODE 206102-0

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

ADVANCE DATA TECHNOLOGY CORPORATION
 No. 47, 14 Ling, Chia Pan Tsaun,
 Lin Kou Hsiang
 Taipei Hsien
 TAIWAN
 Mr. Harris W. Lai
 Phone: 886-2-6032180 Fax: 886-2-6022943

NVLAP Code Designation / Description

International Special Committee on Radio Interference (CISPR) Methods

12/CIS22 IEC/CISPR 22:1993: Limits and methods of measurement of radio disturbance characteristics of information technology equipment

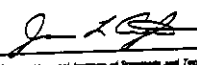
Federal Communications Commission (FCC) Methods

12/F01 FCC Method - 47 CFR Part 15 - Digital Devices
 12/F01a Conducted Emissions, Power Lines, 450 KHz to 30 MHz
 12/F01b Radiated Emissions

Australian Standards referred to by classes in AUSTEL Technical Standards


12/T31 AS/NZS 3548: Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment

December 31, 1998
 Effective through


 For the National Institute of Standards and Technology

NVLAP-018 (11-88)

United States Department of Commerce
 National Institute of Standards and Technology




Certificate of Accreditation


ISO/IEC GUIDE 25:1990
 ISO 9002:1987

ADVANCE DATA TECHNOLOGY CORPORATION
 TAIPEI HSIEN
 TAIWAN

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as supplier of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS FCC

December 31, 1998
 Effective through


 For the National Institute of Standards and Technology
 NVLAP Lab Code: 206102-0


 MINISTRY OF COMMERCE
 Te Manatū Takekōwhiri

ENG 3/8
 A/D

20 February 1998

Advance Data Technology Corporation
 12F
 No 1
 Sec 4
 Nan King E Rd
 Taipei
 TAIWAN ROC

Attention: Mr Harris W Lai

Dear Sir

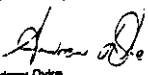
LABORATORY APPROVAL

Thank you for your letter of 19 February 1997 regarding the re-certification of your testing laboratory to the Ministry of Commerce's laboratory approval criteria.


I am pleased to advise that your approval has been extended until 31 December 1998. At this time, the Approved Laboratory scheme will cease operation with the implementation of the new radiocommunications regulations. Test reports from your laboratory will be accepted under the new framework. Please find enclosed a copy of the Ministry's discussion paper, DP10, outlining the proposed compliance process from 1 January 1998.

If you have any further questions on this matter please do not hesitate to contact me.

Yours faithfully


 Andrew Dyke
 Senior Technical Officer (Regulatory)

Operations and Mail Management Branch, Ministry of Commerce Building, 33 Brough Street, Wellington, New Zealand
 PO Box 267 Telephone (041) 473 0258 Fax (041) 473 1497



Certificate of Assessment

This is to Certify

That ADVANCE DATA TECHNOLOGY CORP.

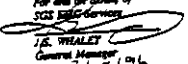
Has been approved as a supplier of
"EMC TESTING SERVICES"
 and in particular for specifications implemented by

The EC DIRECTIVE on EMC

SGS EMC SERVICES

in accordance with
SGS Laboratory Approval Scheme

The scope of approval is detailed in the
Schedule of Assessment

Approved
 For and on behalf of

 J.R. WHEALEY
 General Manager
 Date: 02/10/98

SGS EMC Services
 South End Rd
 Boreham
 Ch Chelms
 DM8 5AD
 UNITED KINGDOM



CERTIFICATE

Facility: NO. 1 SITE
 (Radiation 3 and 10 meter site)
 Company : Advance Data Technology Corp.
 Address : No.47, CHIA PAU TSUEN, LIN KOU HSIANG,
 TAIPEI HSIEN, TAIWAN

*This is to certify that the following measuring facility
 has been registered in accordance with the Regulations
 for Voluntary Control Measures.*

Registration No. : R-236
 Date of Registration : July 1, 1998
 This Certificate is valid until September 30, 2001

Voluntary Control Council for Interference
 Information Technology Equipment



CERTIFICATE

Facility: NO. 2 SITE
 (Radiation 3 and 10 meter site)
 Company : Advance Data Technology Corp.
 Address : No.47, CHIA PAU TSUEN, LIN KOU HSIANG,
 TAIPEI HSIEN, TAIWAN

*This is to certify that the following measuring facility
 has been registered in accordance with the Regulations
 for Voluntary Control Measures.*

Registration No. : R-237
 Date of Registration : July 1, 1998
 This Certificate is valid until September 30, 2001

Voluntary Control Council for Interference
 Information Technology Equipment



CERTIFICATE

Facility: NO. 2 SITE
 (Conducted Interference Measurement)
 Company : Advance Data Technology Corp.
 Address : No.47, CHIA PAU TSUEN, LIN KOU HSIANG,
 TAIPEI HSIEN, TAIWAN

*This is to certify that the following measuring facility
 has been registered in accordance with the Regulations
 for Voluntary Control Measures.*

Registration No. : C-240
 Date of Registration : July 1, 1998
 This Certificate is valid until September 30, 2001

Voluntary Control Council for Interference
 Information Technology Equipment



CERTIFICATE

Facility: ADVANCE DATA TECHNOLOGY CORP. No. 3 Site
 (Radiation 3m, 10 meter site, and
 Conducted Interference Measurement)
 Company : ADVANCE DATA TECHNOLOGY CORP.
 Address : No. 47, CHIA PAU TSUEN, LIN KOU HSIANG,
 TAIPEI HSIEN, TAIWAN, R.O.C.

*This is to certify that the following measuring facility
 has been registered in accordance with the Regulations
 for Voluntary Control Measures, Article 8.*

Registration No. : R-269 and C-274
 Date of Registration : November 2, 1995
 This Certificate is valid until December 31, 1998

Voluntary Control Council for Interference
 Information Technology Equipment





CERTIFICATE

Facility: No.4 Site
 (Radiation 3 and 10 meter site)
 Company : ADVANCE DATA TECHNOLOGY
 CORP.
 Address : No.47, CHIA PAU TSUEN, LIN KOU
 HSIANG, TAIPEI HSIEN, TAIWAN

*This is to certify that the following measuring facility
 has been registered in accordance with the Regulations
 for Voluntary Control Measures, Article 8.*

Registration No. : R-489
 Date of Registration : December 20, 1996
 This Certificate is valid until December 31, 1999

Voluntary Control Council for Interference by
 Information Technology Equipment



CERTIFICATE

Facility: No.5 Site
 (Radiation 3 and 10 meter site)
 Company : ADVANCE DATA TECHNOLOGY
 CORP.
 Address : No.47, CHIA PAU TSUEN, LIN KOU
 HSIANG, TAIPEI HSIEN, TAIWAN

*This is to certify that the following measuring facility
 has been registered in accordance with the Regulations
 for Voluntary Control Measures, Article 8.*

Registration No. : R-490
 Date of Registration : December 20, 1996
 This Certificate is valid until December 31, 1999

Voluntary Control Council for Interference by
 Information Technology Equipment



CERTIFICATE

Facility: ADVANCE DATA TECHNOLOGY
 CORPORATION
 (Conducted Interference Measurement)
 Company : ADVANCE DATA TECHNOLOGY
 CORPORATION
 Address : No.47, CHIA PAU TSUEN, LIN KOU
 HSIANG, TAIPEI HSIEN, TAIWAN

*This is to certify that the following measuring facility
 has been registered in accordance with the Regulations
 for Voluntary Control Measures, Article 8.*

Registration No. : C-506
 Date of Registration : December 20, 1996
 This Certificate is valid until December 31, 1999

Voluntary Control Council for Interference by
 Information Technology Equipment



CERTIFICATE

Facility: Advance Data Technology Corp Site 6
 (Radiation 3 and 10 meter site)
 Company : Advance Data Technology Corp.
 Address : No.47, CHIA PAU TSUEN, LIN KOU HSIANG,
 TAIPEI HSIEN, TAIWAN

*This is to certify that the following measuring facility
 has been registered in accordance with the Regulations
 for Voluntary Control Measures.*

Registration No. : R-728
 Date of Registration : May 19, 1998
 This Certificate is valid until June 30, 2001

Voluntary Control Council for Interference
 Information Technology Equipment



經濟部商品檢驗局(函)

中華民國二十五年十月五日

檢字(八十五)三字第 20823 號

受文者：誠信科技股份有限公司

行文單位：正本：誠信科技股份有限公司

副本：本局第二組(二份)、第三組、儲蓄室(各四份)、檢驗處、各分局(均為附件)

主旨：有關貴公司電磁相容性測試實驗室申請本局電磁相容性測試增列認可案，業經實地評鑑結果，同意認可登錄，請查照。

說明：

一、復貴公司八十五年十月四日未列字號函。

二、認可登錄範圍如下：

實驗室名稱：誠信科技股份有限公司電磁相容性測試實驗室

實驗室地址：台北縣林口鄉高寶村(二)鄰之四號

認可產品類別

認可代號

認可代號

認可代號

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附件如文

20823

局長許鵬翔

誠信分局自費規定檢驗單位主管決行

經濟部商品檢驗局(函)

中華民國二十六年二月二十一日

檢字(八十六)三字第 7295 號

受文者：誠信科技股份有限公司

行文單位：正本：誠信科技股份有限公司

副本：本局第二組(二份)、第三組、儲蓄室(各四份)、檢驗處、各分局(均為附件)

主旨：有關貴公司電磁相容性測試實驗室申請本局電磁相容性測試增列認可案，業經實地評鑑結果，同意認可登錄，請查照。

說明：

一、復貴公司八十六年二月二十一日未列字號函。

二、認可登錄範圍如下：

實驗室名稱：誠信科技股份有限公司電磁相容性測試實驗室

實驗室地址：台北縣林口鄉高寶村(二)鄰之四號

認可產品類別

認可代號

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附件如文

7295

局長陳佐鎮

誠信分局自費規定檢驗單位主管決行



TEL:(02)2603-2180-3

FAX:(02)2602-2943

TEST REPORT & CERTIFICATION SERVICES QUESTIONNAIRE

We, ADT Corp., would like to provide you a high quality report and certification in a timely manner. To achieve this goal, we would like you to response to the brief questions listed below in this questionnaire. Therefore your feed back is vital to us in order to determine how good our services are, and what areas could be improved.

*Please indicate beside each question what you feel is the rating. Also, feel free to make comments and suggestions directly on this questionnaire, or by attaching separate sheet. The completed form should then be returned by mail or FAX to **Harris W. Lai**, Director. Your cooperation and effort are truly appreciated.*

TEST REPORT NUMBER : _____

	YES	NO
1. Was the information presented clearly	[]	[]
2. Was the report complete ?	[]	[]
3. Was the report timely ?	[]	[]
4. Did the report satisfy your requirement ?	[]	[]
5. Was the Certification (if any) completed in the scheduled time ?	[]	[]
Your working field ?	[] Engineering	[] Manufacturing
	[] Marketing	[] Other

YOUR CONTACT INFORMATION (OPTIONAL) : _____

OPTIONAL COMMENTS : _____
