



EMC

FCC/MEI/100

JAN 08 1999

TEST REPORT

REPORT NO. : F87120702

MODEL NO. : CM700

DATE OF TEST : Dec. 23, 1998

DESCRIPTION : PD-15P+, VD-155E

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

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

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**1. CERTIFICATION**

Issue Date: Dec. 28, 1998

Product : COLOR MONITOR
Trade Name : ADI
Model No. : CM700
Description : PD-15P+, VD-155E
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. 23, 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: John Liao , DATE: 12/28/98
(John Liao)

CHECKED BY: Stacy Chang , DATE: 12/28/98
(Stacy Chang)

APPROVED BY: Mike Su , DATE: 12/28/98
(Mike Su)

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

Accredited Laboratory



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product	:	COLOR MONITOR
Model No.	:	CM700
Description	:	PD-15P+, VD-155E
Power Supply Type	:	Switching
Power Cord of monitor	:	Nonshielded (1.8 m)
Data Cable of monitor	:	Shielded (1.8 m)
Power Cord of speaker from power adapter	:	Nonshielded (1.9m)
Audio cable of speaker	:	Nonshielded (1.8m)

Note: The EUT is a 17" color monitor with resolution up to 1280x1024.

It has three model names, which are identical to each other in all aspect except for the difference as the following:

Model: CM700

Description: PD-15P+ With USB HUB (UH-200),
External Speaker (SP-3000)

VD-155E W/O USB HUB (UH-200),
External Speaker (SP-3000)

The EUT also provides hooks for a set of external speaker, Model: SP-3000 which was connected to the sound card of PC. There is a separate conducted test data in this report.

This external speaker uses an TECHNICS power adapter, model: TEAD-48-120800U. It has Input rating : 120V, 60Hz, 15W and Output rating : 12Vdc, 800mA.

The EUT was tested with a USB box, model: UH-200 which acted as a base for the EUT.

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

For more detailed features description, please refer to ATTACHMENT 1 – TECHNICAL DESCRIPTION OF EUT and 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	NTI	PII-233T	FCC DoC Approved	Nonshielded Power (1.8m)
2	KEYBOARD	FORWARD	FDA-104GA	F4ZDA-104G	Shielded Signal (1.4m)
3	USB BOX	ADI	UH-200	N/A	DC Power to monitor (0.2m)
4	PRINTER	HP	2225C+	DSI6XU2225	Shielded Signal (1.1m) Nonshielded Power (1.9m)
5	MODEM	ACEEX	1414	IFAXDM1414	Shielded Signal (1.2m) Nonshielded Power (1.9m)
6	MOUSE	DEXIN	A2P800A	NIYA2P800A	Shielded Signal (1.5m)
7	CCD CAMERA 2X	COMPAQ	YC72-CPQ	EDUYC72-CPQ	Shielded Signal (1.8m)
8	SOUND CARD	YA HSIN	AUDIO 1869	FCC DoC Approved	N/A
9	VGA CARD	CARDEX	CD-GX2A44T	ICUVGA-GW710	N/A

- Note: 1. Support unit 7 was connected to the USB port of EUT.
 2. Two USB cables (1.8m) were connected to the two USB port of EUT to form two open loop cables.
 3. A Mic cable (1.8m) was connected from the EUT to PC.
 4. A Audio cable (1.8m) was connected from the EUT to PC.

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	8590L	3544A00941	Dec. 06, 1999
HP Pre-Amplifier	8447D	2944A08312	March 14, 1999
R&S Receiver	ESVS10	844594/010	Sept. 24, 1999
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 25, 1999
CHASE BILOG Antenna	CBL6111A	1500	Sept. 4, 1999
EMCO Turn Table	1060-04	1196	N/A
EMCO Tower	1051	1264	N/A
Open Field Test Site	Site 1	ADT-R01	Aug. 28, 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	ESHS30	828765/002	July 29, 1999
ROHDE & SCHWARZ Artificial Mains Network	ESH2-Z5	828075/003	July 27, 1999
EMCO-L.I.S.N.	3825/2	90031627	July 27, 1999
Shielded Room	Site 5	ADT-C05	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 - 2000 MHz (Radiated Emission)
Input Voltage	:	120 Vac, 60 Hz
Temperature	:	21 °C
Humidity	:	88 %
Atmospheric Pressure	:	1014 mbar

TEST RESULT	Remarks
PASS	Minimum passing margin of conducted emission: -2.0 dB at 4.943 MHz Minimum passing margin of radiated emission: -3.0 dB at 720.14&32.40 MHz

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

- * 1280x1024mode (64 kHz),
- * 1024x768 mode (69kHz),
- * 640x480 mode (31.5 kHz)

The worst emission levels were found under 1280x1024mode (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 run 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. CCD cameras capture an image and sends image messages to EUT and EUT displays them on its screen.
6. PC sends "H" messages to modem.
7. PC sends "H" messages to printer, and the printer prints them on paper.
8. PC sends audio messages to external speakers of EUT.
9. Repeat steps 3-9.



4.3 TEST DATA OF CONDUCTED EMISSION (A)

EUT: **COLOR MONITOR**MODEL: **CM700**MODE: **1280x1024 (64 kHz)**6 dB Band Width: **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
0.150	57.0	31.4	56.3	30.9	66.0	56.0	-9.0	-24.6	-9.7	-25.1
0.192	53.4	-	51.4	-	63.9	53.9	-10.5	-	-12.5	-
0.386	41.9	-	41.0	-	58.1	48.1	-16.2	-	-17.1	-
0.641	34.9	-	37.2	-	56.0	46.0	-21.1	-	-18.8	-
4.943	47.4	44.0	47.3	43.9	56.0	46.0	-8.6	-2.0	-8.7	-2.1
9.567	53.4	48.0	53.1	47.6	60.0	50.0	-6.6	-25.1	-6.9	-2.4
10.532	50.7	45.6	51.2	46.2	60.0	50.0	-	-	-	-

- 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.

ADT CO. Shielded Room 5
CISPR 22 CLASS B

23. Dec 98 09:38

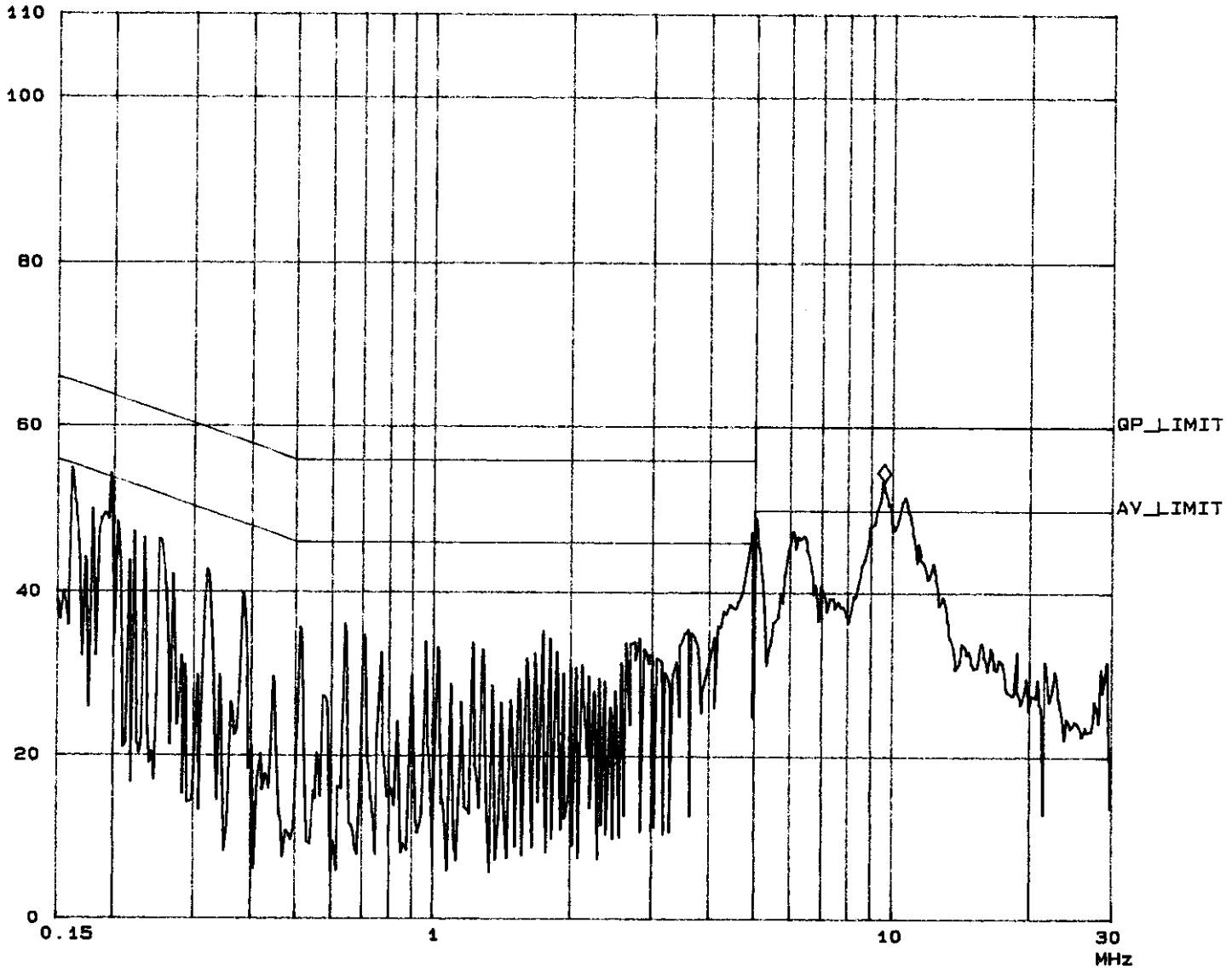
EUT: MODEL: CM700
Op Cond: 1280x1024 64kHz
Test Spec: LISN: N
Comment: FULL SYSTEM

Report No. F87120702
Page 9-2
Tested by John Liao

Fast Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpAgs
150k	450k	3k	10k	PK	1ms	10dB	BLN OFF	60dB
450k	5M	3k	10k	PK	1ms	10dB	BLN OFF	60dB
5M	30M	3k	10k	PK	1ms	10dB	BLN OFF	60dB

dBuV ◇ Mkr : 9.56900MHz 53.4 dBuV





4.4 TEST DATA OF CONDUCTED EMISSION (B)

EUT: COLOR MONITORMODEL: CM700MODE: SP-3000 (Speaker)6 dB Band Width: 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	
0.163	48.7	-	49.4	-	65.3	55.3	-16.6	-	-15.9	-
0.297	44.6	-	46.8	-	60.3	50.3	-15.7	-	-13.5	-
0.505	40.2	-	44.5	-	56.0	46.0	-15.8	-	-11.5	-
6.057	38.7	-	36.9	-	56.0	46.0	-17.3	-	-19.1	-
13.279	36.5	-	35.1	-	60.0	50.0	-23.5	-	-24.9	-
21.725	36.9	-	34.0	-	60.0	50.0	-23.1	-	-26.0	-

- 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.

Note : The above test data is the separate conduction test of Speaker and Adapter.

ADT CO. Shielded Room 5
 CISPR 22 CLASS B

23. Dec 98 10: 29

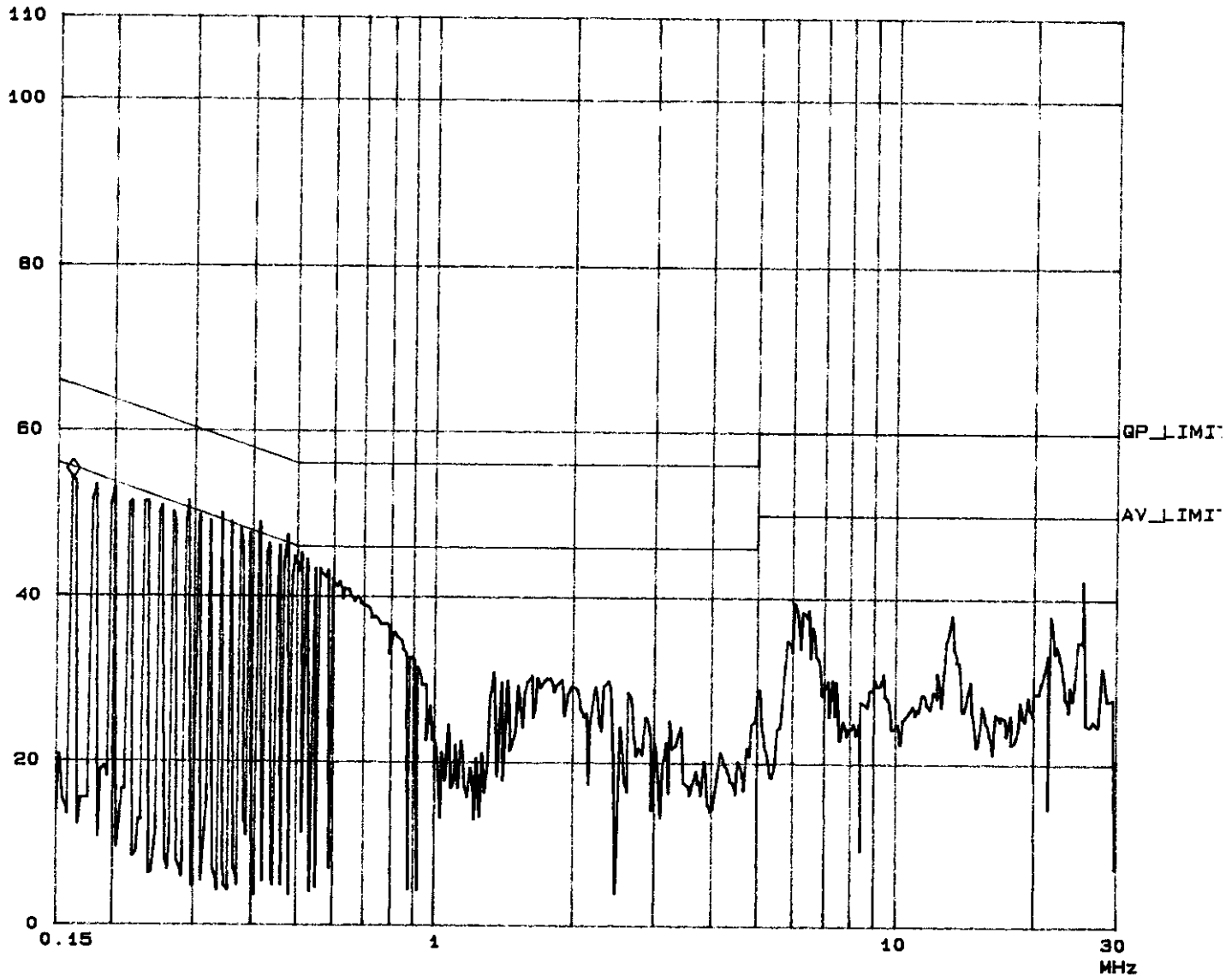
EUT: MODEL: CM700 (ADAPTOR: TEAD-48-120800U)
 Op Cond: 1280X1024 64kHz
 Test Spec: LISN: L
 Comment: FULL SYSTEM

Report No. F87120702
 Page 10-1
 Tested by John Liao

Fast Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150k	450k	3k	10k	PK	1ms	10dB	OFF	60dB
450k	5M	3k	10k	PK	1ms	10dB	OFF	60dB
5M	30M	3k	10k	PK	1ms	10dB	OFF	60dB

dBuV ◇ Mkr : 162.00 kHz 54.2 dBuV



ADT CO. Shielded Room 5
 CISPR 22 CLASS B

23. Dec 98 10:44

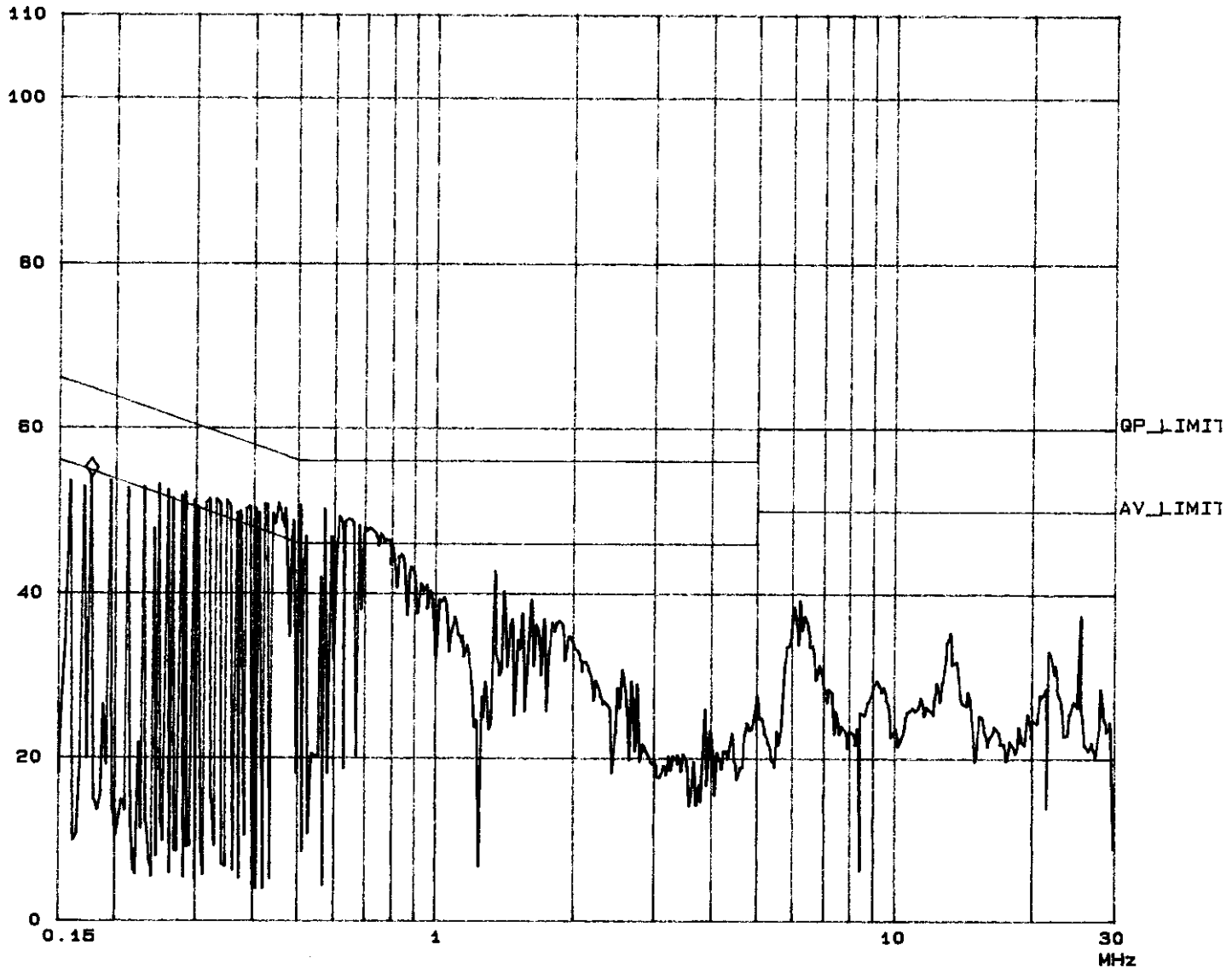
EUT: MODEL: CM700 (ADAPTOR: TEAD-48-120800U)
 Op Cond: 1280X1024 64kHz
 Test Spec: LISN: N
 Comment: FULL SYSTEM

Report No. F87120702
 Page 10-2
 Tested by John Liao

Fast Scan Settings (3 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpGgs
150k	450k	3k	10k	PK	1ms	10dB	OFF	60dB
450k	5M	3k	10k	PK	1ms	10dB	OFF	60dB
5M	30M	3k	10k	PK	1ms	10dB	OFF	60dB

dBuV ◇ Mkr : 177.00 kHz 54.0 dBuV





4.5 TEST DATA OF RADIATED EMISSION

EUT: **COLOR MONITOR**MODEL: **CM700**MODE: **1280x1024 (64 kHz)**ANT. POLARITY: **Horizontal**DETECTOR FUNCTION AND BANDWIDTH: **Quasi peak, 120 kHz (30-1000 MHz)
Peak, 1 MHz (1000 MHz-2000 MHz)**FREQUENCY RANGE: **30-1000 MHz**MEASURED DISTANCE: **10 M**FREQUENCY RANGE: **1000-2000 MHz**MEASURED DISTANCE: **3 M**

Frequency (MHz)	Correction Factor (dB/m)	Reading Data (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
32.48	18.7	6.6	25.3	30.0	-4.7
43.29	14.2	9.1	23.3	30.0	-6.7
65.00	7.4	12.0	19.4	30.0	-10.6
75.82	8.3	14.0	22.3	30.0	-7.7
86.66	9.8	12.3	22.1	30.0	-7.9
108.32	13.4	7.5	20.9	30.0	-9.1
120.02	15.4	11.5	26.9	30.0	-3.1
144.02	14.6	7.3	21.9	30.0	-8.1
168.02	12.6	10.5	23.1	30.0	-6.9
184.01	12.3	10.7	23.0	30.0	-7.0
216.03	14.0	12.5	26.5	30.0	-3.5
227.14	14.9	5.7	20.6	30.0	-9.4
720.14	28.9	5.1	34.0	37.0	-3.0

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 MONITOR**MODEL: **CM700**MODE: **1280x1024 (64 kHz)**ANT. POLARITY: VerticalDETECTOR FUNCTION AND BANDWIDTH: Quasi peak, 120 kHz (30-1000 MHz)
Peak, 1 MHz (1000 MHz-2000 MHz)FREQUENCY RANGE: 30-1000 MHzMEASURED DISTANCE: 10 MFREQUENCY RANGE: 1000-2000 MHzMEASURED DISTANCE: 3 M

Frequency (MHz)	Correction Factor (dB/m)	Reading Data (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
32.40	18.4	8.6	27.0	30.0	-3.0
39.60	14.7	12.1	26.8	30.0	-3.2
65.04	7.5	16.9	24.4	30.0	-5.6
75.81	7.9	17.6	25.5	30.0	-4.5
86.65	8.9	16.7	25.6	30.0	-4.4
108.29	13.4	11.9	25.3	30.0	-4.7
120.00	15.8	10.8	26.6	30.0	-3.4
144.03	14.8	8.2	23.0	30.0	-7.0
184.01	12.6	12.5	25.1	30.0	-4.9
192.03	13.0	8.7	21.7	30.0	-8.3
195.01	13.1	7.2	20.3	30.0	-9.7
216.03	14.1	12.8	26.9	30.0	-3.1
227.15	14.6	6.5	21.1	30.0	-8.9

- 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

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

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

Design Center:
Tel: 886-2-26093195
Fax: 886-2-26093184

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

FEDERAL COMMUNICATIONS COMMISSION

7439 Ostland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
Facsimile: 301-344-2090

October 21, 1996

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: Hama W. Lai

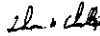
Re: Measurement facility located at above address, Site No. 1
(3 and 10 meters)

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 C83.4-1992. 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

7439 Ostland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
Facsimile: 301-344-2090

September 15, 1996

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: Hama Lai

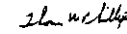
Re: Measurement facility located at Lin Kou, Sites 2 & 3
(3 & 10 meters)

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

7439 Ostland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
Facsimile: 301-344-2090

April 17, 1996

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: Hama W. Lai

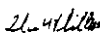
Re: Measurement facility located at above address
Site No. 4 (3 and 10 meters)

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 C83.4-1992. 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

7439 Ostland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
Facsimile: 301-344-2090

October 21, 1996

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: Hama 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 C83.4-1992. 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

7430 Chestnut Mills Road
 Columbia, MD 21046
 Telephone: 301-725-1228 (toll-free)
 Facsimile: 301-344-3300

February 25, 1998

EMC REPORT NO.
 310403RT
 1300F2

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

Attention: Harris W. Lai

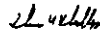
Re: Measurement facility located at above address, Site No. 6
 (3 and 10 meters)

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 C83.4-1992. 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 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/eet/info/da/essafe/essafe.html.

Sincerely,



Thomas W. Phillips
 Electronics Engineer
 Customer Service Branch



Technischer Überwachungs-Verein Rheinland

Certificate

of Appointment

No. L-9763928-9707

The applicant:

Advance Data Technology (ADT) Corporation
 No. 47, 14 Ling, Chia Pau Tsoen, 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

CISPR16, EN 55 011:1991, EN 55 014:1993, EN 55 015:1993, EN 55 022:1994/A1,
 EN 55 104:1995, EN 60 525-2:1987, EN 61 000-3-2:1995, EN 61 000-3-3:1995,
 EN 50 081-1:1992, EN 50 082-1:1992, EN 50 081-2:1993, EN 50 082-2:1995,
 IEC 801-2:1991, IEC 801-3:1984, IEC 801-4:1988, IEC 801-5:1996, EN 61 000-4-2:1995,
 ENV 50 140:1993, ENV 50 141:1993, 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. Lübben
 Vice General Manager
 Product Safety Department



Dipl.-Ing. U. Meyer
 Auditor

The conditions of the Testing and Certification Regulations 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 Tsoen,
 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 attesting 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).

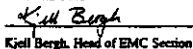
In case of applications for Product Certification(s) to be issued by Nemko, your EMC Laboratory's test reports(s) will be accepted by Nemko if they are enclosed with the Application Form submitted by the manufacturer.

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.

Oslo, 13 March 1998

For Nemko AS:



Kjell Bergh, Head of EMC Section

Phone number: +47 22 54 50 20
 Fax: +47 22 54 50 20
 Telex: 202222, 202222



Worldwide Testing and Certification

ELA 4

EMC Laboratory Authorization

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, ENV 50140, ENV 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 61000-4-4, ENV 50141, IEC 61000-4-4	EN 61000-4-8, IEC 61000-4-8
EN 61000-4-11, IEC 61000-4-11		

Oslo, 13 March 1998



Kjell Bergh, Nemko EMC Services

Phone number: +47 22 54 50 20
 Fax: +47 22 54 50 20
 Telex: 202222, 202222

ISO/IEC GUIDE 25:1990
ISO 9002:1987 **Scope of Accreditation**



Page: 1 of 1

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS NVLAP LAB CODE 200102-0

ADVANCE DATA TECHNOLOGY CORPORATION
No. 47, 14 Liang, Chia Pui Tsuen,
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 clauses 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

[Signature]
For the National Institute of Standards and Technology

NVLAP-018 (11-88)

NVLAP Certificate of Accreditation



ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

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 suppliers 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

[Signature]
For the National Institute of Standards and Technology
NVLAP Lab Code: 200102-0

ENG 300
AJD

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 telecommunications 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 1999.

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

Yours faithfully

[Signature]
Andrew Dyke
Senior Technical Officer(Regulatory)

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

SGS EMC Services
South End Est
Bromley
Ch Durbam
DN8 5AD
UNITED KINGDOM

Scanned
For and on behalf of
SGS EMC Services
[Signature]
J.A. WHALEY
General Manager
Date: 02/03/98




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-505
 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 by
 Information Technology Equipment



臺灣

經濟部商品檢驗局(函)

中華民國八十五年十月四日

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、秘書室(各四份)、檢驗處、各分局(均為附件)

說明：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

一、復 貴公司八十五年十月四日未列字號函。

二、認可查證範圍如下：

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：台北縣林口鄉馬寶村二鄰二號

認可領域代號	認可產品類別	報告簽字人
52-A1-E-03 (I)	資訊設備	賴振雄
52-A1-E-03 (IV)	家用用電器產品	賴振雄
52-A1-E-03 (V)	廣播接收機	賴振雄
52-A1-E-03 (VI)	廣播接收機	賴振雄
52-A1-E-03 (VII)	廣播接收機	賴振雄
52-A1-E-03 (VIII)	廣播接收機	賴振雄
52-A1-E-03 (IX)	廣播接收機	賴振雄
52-A1-E-03 (X)	廣播接收機	賴振雄
52-A1-E-03 (XI)	廣播接收機	賴振雄
52-A1-E-03 (XII)	廣播接收機	賴振雄
52-A1-E-03 (XIII)	廣播接收機	賴振雄
52-A1-E-03 (XIV)	廣播接收機	賴振雄
52-A1-E-03 (XV)	廣播接收機	賴振雄
52-A1-E-03 (XVI)	廣播接收機	賴振雄
52-A1-E-03 (XVII)	廣播接收機	賴振雄
52-A1-E-03 (XVIII)	廣播接收機	賴振雄
52-A1-E-03 (XIX)	廣播接收機	賴振雄
52-A1-E-03 (XX)	廣播接收機	賴振雄
52-A1-E-03 (XXI)	廣播接收機	賴振雄
52-A1-E-03 (XXII)	廣播接收機	賴振雄
52-A1-E-03 (XXIII)	廣播接收機	賴振雄
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52-A1-E-03 (XXVII)	廣播接收機	賴振雄
52-A1-E-03 (XXVIII)	廣播接收機	賴振雄
52-A1-E-03 (XXIX)	廣播接收機	賴振雄
52-A1-E-03 (XXX)	廣播接收機	賴振雄

三、本實驗室認可期限自八十五年十月二十二日起至八十八年十月二十一日止，外埠送查頻率每年乙次，得視需要增加檢查次數，惟首次送查作業於六個月內執行。

四、上開已認可領域如有變更事項，請於變更日起二週內函送相關資料至本局辦理。

五、貴中心執行本局指定之檢驗業務，依「商品檢驗法」第二十六條規定以執行公務，且貴中心應依規定履行相關之責任與義務。

六、檢送「商品電磁相容性試驗報告」格式乙份，請自行印製使用。

七、檢送「商品電磁相容性試驗報告」格式乙份，請自行印製使用。

局長許鵬翔

依照分層負責規定授權單位主管執行

附件如文

20823

臺灣

經濟部商品檢驗局(函)

中華民國八十六年二月二十一日

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、秘書室(各四份)、檢驗處、各分局(均為附件)

說明：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

一、復 貴公司八十六年二月二十一日未列字號函。

二、認可查證範圍如下：

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：台北縣林口鄉馬寶村二鄰二號

認可領域代號	認可產品類別	報告簽字人
52-A1-E-03 (I)	資訊設備	賴振雄
52-A1-E-03 (IV)	家用用電器產品	賴振雄
52-A1-E-03 (V)	廣播接收機	賴振雄
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52-A1-E-03 (XXIX)	廣播接收機	賴振雄
52-A1-E-03 (XXX)	廣播接收機	賴振雄

三、本實驗室認可期限自八十六年七月七日起至八十八年十月二十一日止，外埠送查頻率每年乙次，得視需要增加檢查次數，惟首次送查作業於六個月內執行。

四、上開已認可領域如有變更事項，請於變更日起二週內函送相關資料至本局辦理。

五、貴公司執行本局指定之檢驗業務，依「商品檢驗法」第二十六條規定以執行公務，且貴公司應依規定履行相關之責任與義務。

六、檢送「商品電磁相容性試驗報告」格式乙份，請自行印製使用。

局長陳佐鎮

依照分層負責規定授權單位主管執行

1295



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 : _____
