

EXHIBIT 4
RFI/EMI TEST REPORT



EMC

TEST REPORT

REPORT NO. : F88011202
MODEL NO. : 5133U
DATE OF TEST : Jan. 22, 1999

PREPARED FOR: BEHAVIOR TECH COMPUTER CORP.

ADDRESS : 2F, NO.51, TUNG HSING. 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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TABLE OF CONTENTS

| | |
|---|----|
| 1. CERTIFICATION | 3 |
| 2. GENERAL INFORMATION | 4 |
| 2.1 GENERAL DESCRIPTION OF EUT | 4 |
| 2.2 DESCRIPTION OF SUPPORT UNITS | 5 |
| 2.3 TEST METHODOLOGY AND CONFIGURATION | 5 |
| 3. TEST INSTRUMENTS | 6 |
| 3.1 TEST INSTRUMENTS (EMISSION) | 6 |
| 3.2 LIMITS OF CONDUCTED AND RADIATED EMISSION | 7 |
| 4. TEST RESULTS (EMISSION) | 8 |
| 4.1 RADIO DISTURBANCE | 8 |
| 4.2 EUT OPERATION CONDITION | 8 |
| 4.3 TEST DATA OF CONDUCTED EMISSION | 9 |
| 4.4 TEST DATA OF RADIATED EMISSION | 10 |
| 5. PHOTOGRAPHS OF THE TEST CONFIGURATION WITH MINIMUM MARGIN | 12 |
| 6. APPENDIX - INFORMATION OF THE TESTING LABORATORY | 14 |



1.

CERTIFICATION

Issue Date: Jan. 26, 1999

Product : USB KEYBOARD
Trade Name : BTC
Model No. : 5133U
Applicant : BEHAVIOR TECH COMPUTER CORP.
Standard : FCC Part 15, Subpart B, Class B
ANSI C63.4-1992
CISPR 22: 1993+A1: 1995+A2: 1996

We hereby certify that one sample of the designation has been tested in our facility on Jan. 22, 1999. The test record, data evaluation and Equipment Under Test (EUT) configurations represent herein are true and accurate representation of the measurements of the sample's EMC characteristics under the conditions herein specified.

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: Johnny Liu , DATE: 1/26/99
(Johnny Liu)

CHECKED BY: Ariel Hsieh , DATE: 1/26/99
(Ariel Hsieh)

APPROVED BY: Mike Su , DATE: 1/26/99
(Mike Su)

ADVANCE DATA TECHNOLOGY CORPORATION**NVLAP**

Accredited Laboratory



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

| | | |
|--------------|---|-----------------|
| Product | : | USB KEYBOARD |
| Model No. | : | 5133U |
| Power Supply | : | DC 5V (from PC) |
| Data Cable | : | Shielded (1.4m) |

Note: The EUT has a PS2 mouse port.

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 | NTI | PII-233 | FCC DoC Approved | Nonshielded Power (1.8m) |
| 2 | MONITOR | ADI | PD-959 | FCC DoC Approved | Shielded Signal (1.2m) Nonshielded Power (1.8m) |
| 3 | PRINTER | HP | 2225C+ | DSI6XU2225 | Shielded Signal (1.2m) Nonshielded Power (2.0m) |
| 4 | MODEM | ACEEX | 1414 | IFAXDM1414 | Shielded Signal (1.2m) Nonshielded Power (2.0m) |
| 5 | MOUSE | DEXIN | A2P800A | NIYA2P800A | Shielded Signal (1.5m) |
| 6 | KEYBOARD | FORWARD | FDA-104GA | F4ZDA-104G | Shielded Signal (1.4m) |
| 7 | VGA CARD | CARDEX | CD-GX2A44T | ICUVGA-GW710 | N/A |

Note: Support unit 5 was connected to the mouse port of EUT.

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 | 8594E | 3412A01132 | Sept. 24, 1999 |
| CHASE Preamplifier | CPA9231A/4 | 3215 | Nov. 1, 1999 |
| ROHDE & SCHWARZ TEST RECEIVER | ESVS 30 | 841977/002 | Jan. 11, 2000 |
| SCHWARZBECK Tunable Dipole Antenna | VHA 9103 UHA 9105 | E101051 E101055 | Nov. 25, 1999 |
| CHASE BILOG Antenna | CBL6112 | 2074 | Dec. 25, 1999 |
| CHANCE Turn Table & Tower Controller | ACS-I | N/A | N/A |
| Open Field Test Site | Site 6 | ADT-R06 | Dec. 24, 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 | 828109/007 | July 22, 1999 |
| ROHDE & SCHWARZ Artificial Mains Network | ESH2-Z5 | 892107/003 | July 20, 1999 |
| EMCO L.I.S.N. | 3825/2 | 9504-2359 | July 20, 1999 |
| Shielded Room | Site 3 | ADT-C03 | 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 : 72 %
Atmospheric Pressure : 1003 mbar

| TEST RESULT | Remarks |
|-------------|---|
| PASS | Minimum passing margin of conducted emission: -14.0 dB at 3.780 MHz Minimum passing margin of radiated emission: - 3.1 dB at 48.23 MHz |

4.2 EUT OPERATION CONDITION

1. Turn on the power of all equipments.
2. PC runs a test program to enable all functions.
3. EUT sends "H" scan code to PC.
4. PC sends "H" messages to monitor 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: USB KEYBOARD

MODEL: 5133U

6 dB Bandwidth: 10 kHz

| Freq. | L Level | | N Level | | Limit | | Margin [dB (μV)] | | | |
|--------|-----------|----|-----------|----|-----------|------|------------------|----|-------|----|
| [MHz] | [dB (μV)] | | [dB (μV)] | | [dB (μV)] | | L | | N | |
| | QP | AV | QP | AV | QP | AV | QP | AV | QP | AV |
| 0.162 | 47.3 | - | 47.2 | - | 65.4 | 55.4 | -18.1 | - | -18.2 | - |
| 0.183 | 45.1 | - | 44.8 | - | 64.3 | 54.3 | -19.2 | - | -19.5 | - |
| 1.869 | 36.3 | - | 36.5 | - | 56.0 | 46.0 | -19.7 | - | -19.5 | - |
| 3.780 | 41.8 | - | 42.0 | - | 56.0 | 46.0 | -14.2 | - | -14.0 | - |
| 7.995 | 44.6 | - | 44.8 | - | 60.0 | 50.0 | -15.4 | - | -15.2 | - |
| 10.429 | 37.3 | - | 37.6 | - | 60.0 | 50.0 | -22.7 | - | -22.4 | - |

- 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

ADT CO. Shielded Room 3
CISPR 22 CLASS B

22. Jan 99 20:52

EUT: 5133U
Test Spec: LISN : L

Report No. F88011202

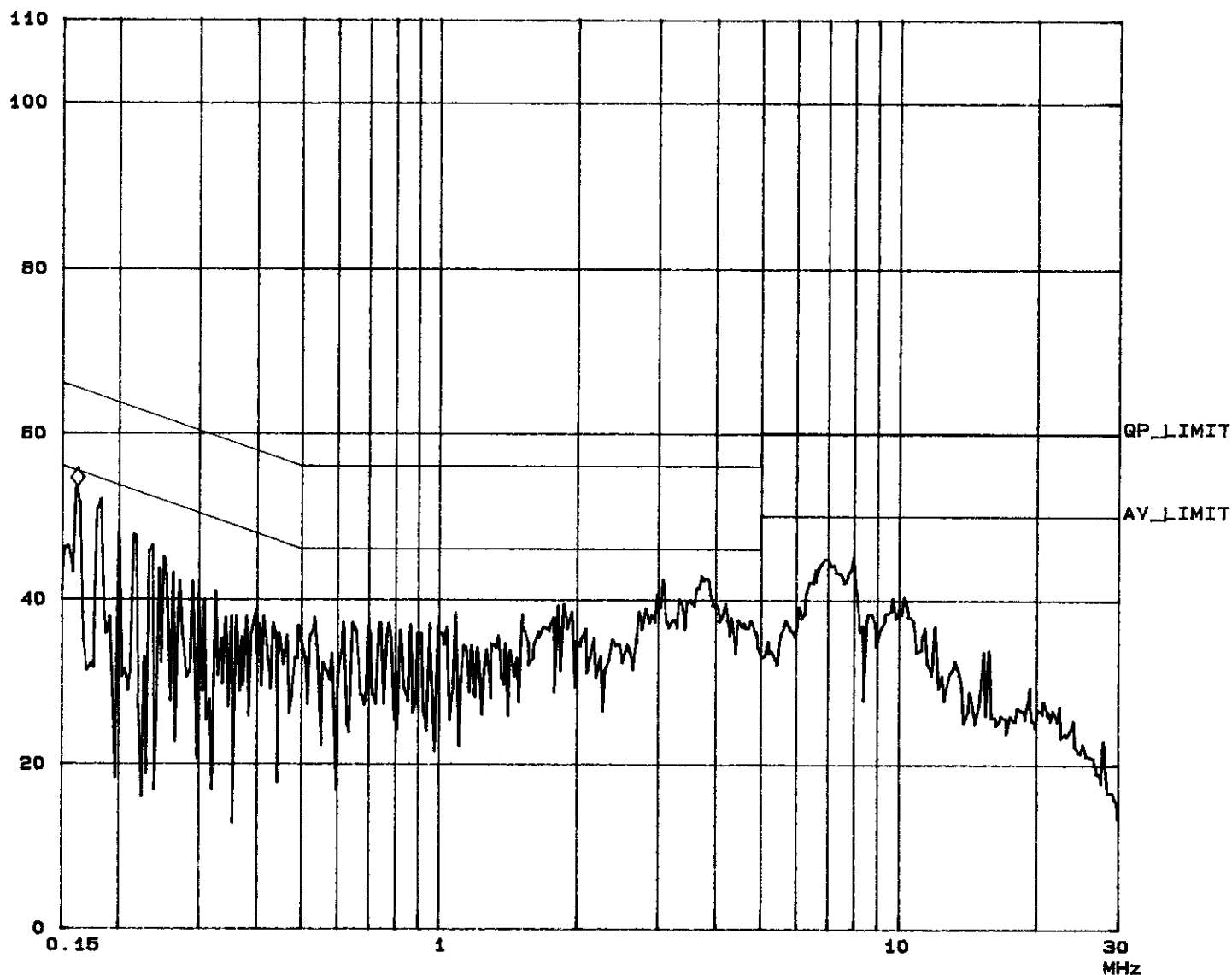
Page 9-1

Tested by Johnny Liu

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 53.5 dBuV



ADT CO. Shielded Room 3
CISPR 22 CLASS B

22. Jan 99 21:02

EUT: 5133U
Test Spec: LISN : N

Report No. F88011202

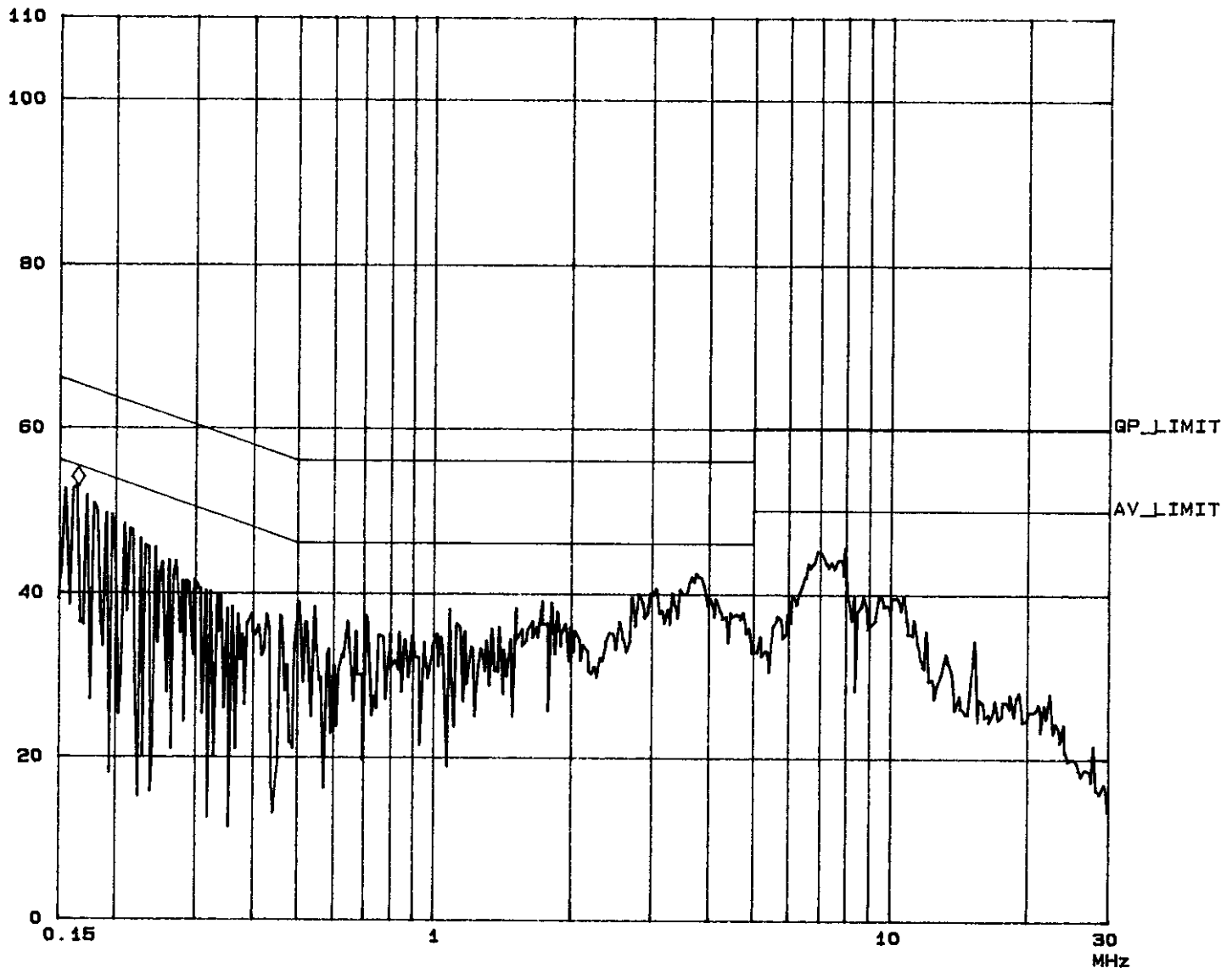
Page 9-2

Tested by Johnny Liu

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 | 10dBLN | OFF | 60dB |
| 450k | 5M | 3k | 10k | PK | 1ms | 10dBLN | OFF | 60dB |
| 5M | 30M | 3k | 10k | PK | 1ms | 10dBLN | OFF | 60dB |

dBuV ◇ Mkr : 165.00 kHz 52.9 dBuV





4.4 TEST DATA OF RADIATED EMISSION

EUT: USB KEYBOARDMODEL: 5133UANT. POLARITY: HorizontalDETECTOR 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) |
|--------------------|--------------------------------|---------------------------|-------------------------------|-------------------|----------------|
| 48.07 | 13.0 | 11.6 | 24.6 | 30.0 | -5.4 |
| 72.12 | 7.7 | 7.4 | 15.1 | 30.0 | -14.9 |
| 108.01 | 13.7 | 5.4 | 19.1 | 30.0 | -10.9 |
| 120.02 | 14.6 | 10.5 | 25.1 | 30.0 | -4.9 |
| 168.04 | 10.8 | 10.9 | 21.7 | 30.0 | -8.3 |
| 171.84 | 10.8 | 6.5 | 17.3 | 30.0 | -12.7 |
| 180.57 | 10.9 | 8.4 | 19.3 | 30.0 | -10.7 |
| 211.74 | 12.2 | 9.5 | 21.7 | 30.0 | -8.3 |
| 216.06 | 12.6 | 9.3 | 21.9 | 30.0 | -8.1 |
| 240.05 | 14.9 | 8.7 | 23.6 | 37.0 | -13.4 |
| 270.86 | 16.6 | 6.1 | 22.7 | 37.0 | -14.3 |

- 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: USB KEYBOARDMODEL: 5133UANT. 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) |
|--------------------|--------------------------------|---------------------------|-------------------------------|-------------------|----------------|
| 48.23 | 10.1 | 16.8 | 26.9 | 30.0 | -3.1 |
| 60.29 | 7.2 | 15.2 | 22.4 | 30.0 | -7.6 |
| 84.40 | 9.0 | 15.2 | 24.2 | 30.0 | -5.8 |
| 108.01 | 12.9 | 9.7 | 22.6 | 30.0 | -7.4 |
| 120.03 | 12.3 | 12.3 | 24.6 | 30.0 | -5.4 |
| 143.99 | 13.6 | 7.2 | 20.8 | 30.0 | -9.2 |
| 168.03 | 12.3 | 12.6 | 24.9 | 30.0 | -5.1 |
| 180.56 | 10.8 | 11.5 | 22.3 | 30.0 | -7.7 |
| 192.03 | 11.6 | 9.3 | 20.9 | 30.0 | -9.1 |
| 211.73 | 12.6 | 12.0 | 24.6 | 30.0 | -5.4 |
| 216.05 | 12.7 | 11.0 | 23.7 | 30.0 | -6.3 |
| 240.03 | 13.4 | 9.6 | 23.0 | 37.0 | -14.0 |
| 336.07 | 18.4 | 9.3 | 27.7 | 37.0 | -9.3 |

- 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

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
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: Harris W. Lai

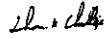
Re: Measurement facility located at above address, Site No. 1
(3 and 10 meters)

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

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
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: Harris Lai

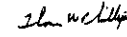
Re: Measurement facility located at Lin Kou, Sites 2 & 3
(3 & 10 meters)

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

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
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 E. Rd.
Taipei, Taiwan, R.O.C.

Attention: Harris W. Lai

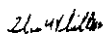
Re: Measurement facility located at above address
Site No. 4 (3 and 10 meters)

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.

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Sincerely,



Thomas W. Phillips
Electronics Engineer
Customer Service Branch

Enclosure:
PAL PN

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
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: Harris W. Lai

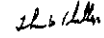
Re: Measurement facility located at above address, Site No. 5
(3 and 10 meters)

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

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
Facsimile: 301-344-3030

February 25, 1998

IN REPLY REFER TO
31040/SIT
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. 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 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/eeo/info/databases/testsite/.

Sincerely,

Thomas W. Phillips

Thomas W. Phillips
Electronics Engineer
Customer Service Branch

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-218)
Facsimile: 301-344-3030

July 16, 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: Harris W. Lai

Re: Measurement facility located at Hsin Chu (3 & 10 meter site)

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.

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Sincerely,

Thomas W. Phillips

Thomas W. Phillips
Electronics Engineer
Customer Service Branch

FEDERAL COMMUNICATIONS COMMISSION

Equipment Authorization Division
7435 Oakland Mills Road
Columbia, MD 21046

December 23, 1998

Registration Number: 92753

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

Attention: Harris Lai

Re: Measurement facility located at Hsin-Chu, Site B
3 & 10 meter site

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 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.

If requested, the above mentioned facility has been added to our list of those who perform these measurement services for the public on a fee basis. An up-to-date list of such public test facilities is available on the internet on the FCC Website at WWW.FCC.GOV, Electronic Filing, OET Equipment Authorization Electronic Filing.

Sincerely,

Thomas W. Phillips

Thomas W. Phillips
Electronics Engineer



Technischer Überwachungs-Verein Rheinland

Certificate

of Appointment

No. 1-9763928-9707

The applicant:

Advance Data Technology (ADT) Corporation
No. 47, 14 Ling, Chia Pan Tsuen, Lin Kow 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 60 555-2:1987, EN 61 000-3-1:1995, 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 801-5:1990, 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 61 001-1-1:1993

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 months,
at the discretion of TÜV Rheinland.

TÜV Rheinland Taiwan Ltd.
Taipei, 16.07.1997

Dr. Ing. G. Lübken
Vice General Manager
Product Safety Department

Dr. Ing. U. Meyer
Auditor



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: No.3 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*

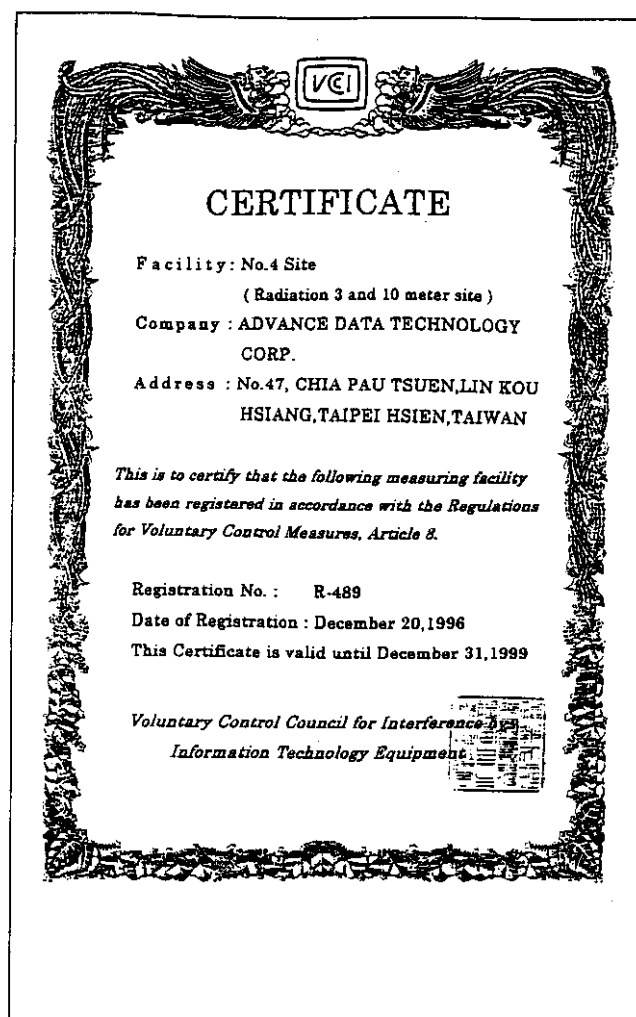
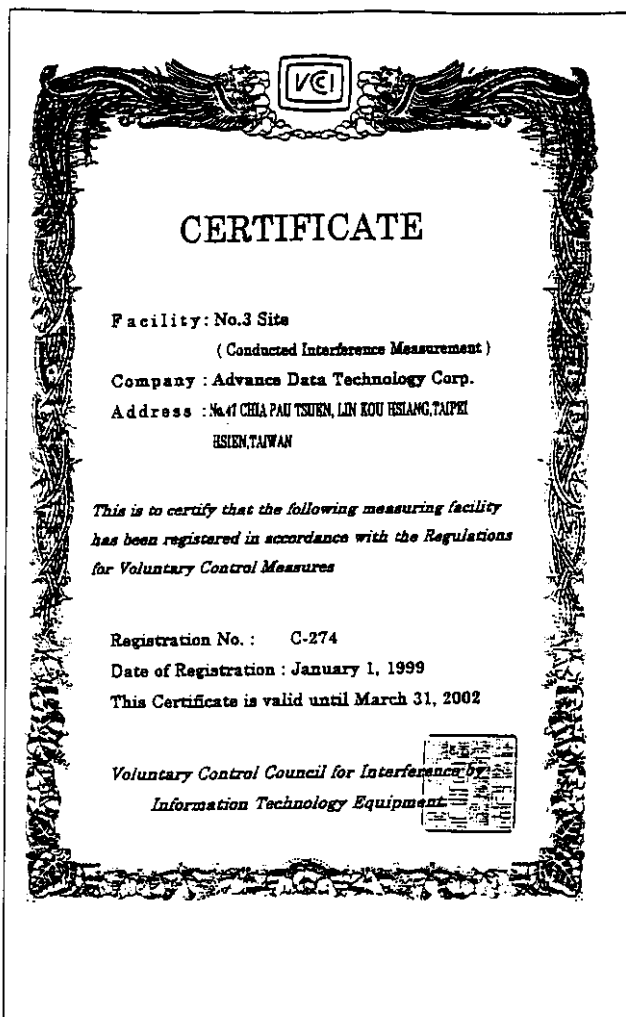
Registration No. : R-269

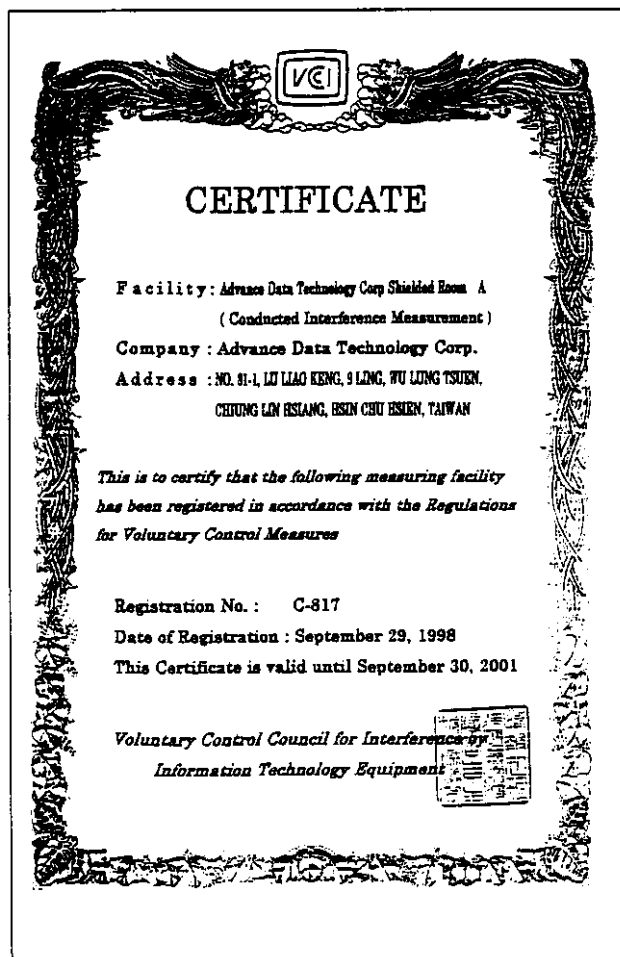
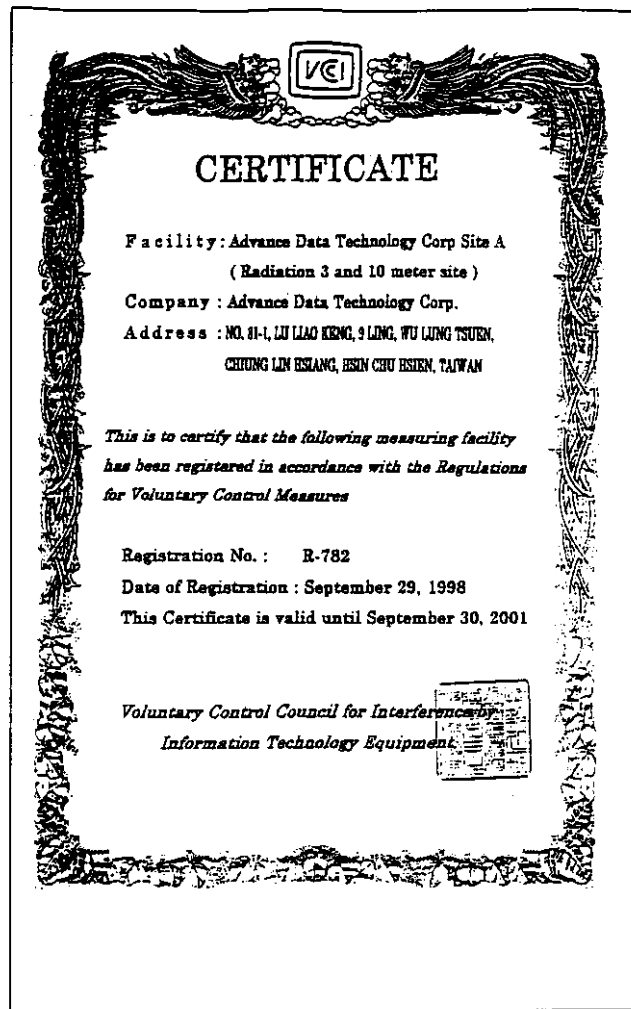
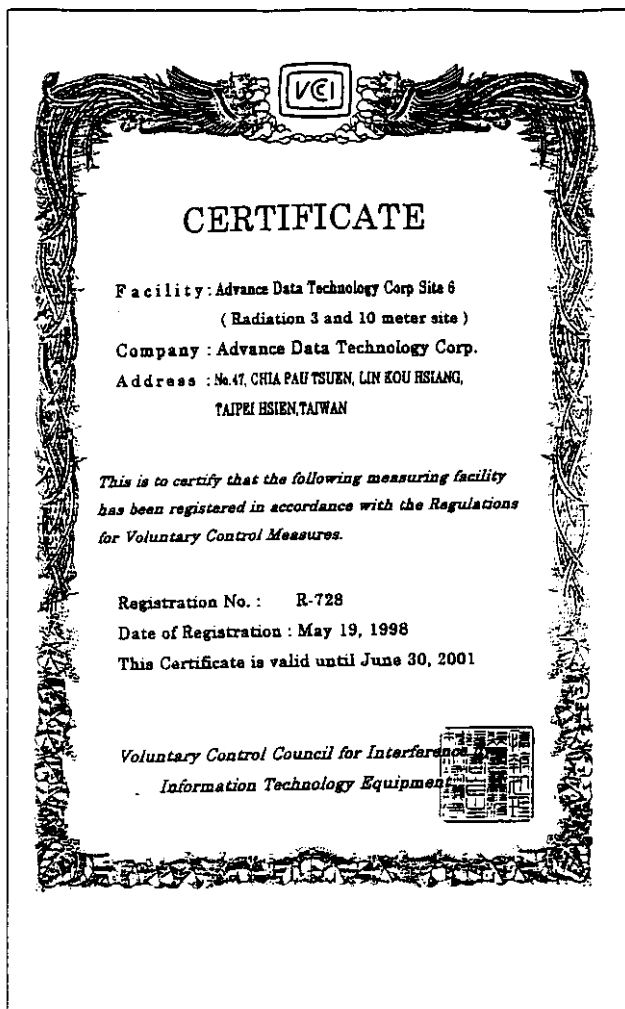
Date of Registration : January 1, 1999

This Certificate is valid until March 31, 2002

Voluntary Control Council for Interference
Information Technology Equipment









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 Kow 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 1998, an assessment was made of the relevant parts of your organisation - 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 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.

Oslo, 13 March 1998

For Nemko AS:

Kjell Bergh, Head of EMC Section

Postal address:
P.O. Box 75 Blindern
N-0407 OSLO, NORWAY

Telephone: +47 22 39 00 00
Fax: +47 22 39 00 00



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 301-2 | EN 61000-4-3, ENV 50140, ENV 50204, IEC 61000-4-3, IEC 301-3 | EN 61000-4-4, IEC 61000-4-4, IEC 301-4 |
| EN 61000-4-5, IEC 61000-4-5 | EN 61000-4-6, ENV 50141, IEC 61000-4-6 | 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

Postal address:
P.O. Box 75 Blindern
N-0407 OSLO, NORWAY

Telephone: +47 22 39 00 00
Fax: +47 22 39 00 00



World-wide Testing and Certification

ELA 4

EMC Laboratory

Authorization

Aut. No.: ELA 112-b

Hsin Chu EMC Laboratory

EMC Laboratory: ADT Advance Data Technology Corporation
Hsin Chu EMC Laboratory
No. 81-1, Lu Lin Kong, 9 Ling,
Wa Lung Tsen, Chung Lin Hsiang,
Hsin Chu 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. Based on submitted material, an assessment has been made of the relevant parts of your organisation - 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 the European Union EMC Directive.

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.

Oslo, 15 December 1998

For Nemko AS:

Kjell Bergh, Head of EMC Section

Postal address:
P.O. Box 75 Blindern

Telephone: +47 22 39 00 00
Fax: +47 22 39 00 00



World-wide Testing and Certification

ELA 4

EMC Laboratory Authorisation

Aut. No.: ELA 112-b

Hsin Chu EMC Laboratory

(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 55014-1, CISPR 14-1 (except discontinuous noise) | EN 55014-2, CISPR 14-2 | EN 55022, CISPR 22 |
| EN 55024, CISPR 24 | EN 60555-2, IEC 60555-2, EN 61000-3-2, IEC 61000-3-2 | EN 60555-3, IEC 60555-3, EN 61000-3-3, IEC 61000-3-3 |
| | | |

BASIC STANDARDS


| | | |
|-------------------------------|---|-----------------------------|
| EN 61000-4-2, IEC 61000-4-2 | EN 61000-4-3, IEC 61000-4-3, ENV 50204 | EN 61000-4-4, IEC 61000-4-4 |
| EN 61000-4-5, IEC 61000-4-5 | EN 61000-4-6, ENV 50141, IEC 61000-4-6 | EN 61000-4-8, IEC 61000-4-8 |
| EN 61000-4-11, IEC 61000-4-11 | | |
| | | |

Oslo, 15 December 1998

Kjell Bergh, Nemko EMC Services

Postal address:
P.O. Box 75 Blindern

Telephone: +47 22 39 00 00
Fax: +47 22 39 00 00



 National Institute of Standards and Technology
 National Voluntary Laboratory Accreditation Program

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 Ling, Chia Pau 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/T51 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-015 (11-98)

United States Department of Commerce
 National Institute of Standards and Technology



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

For the National Institute of Standards and Technology

NVLAP Lab Code: 200102-0



 MINISTRY OF COMMERCE
 To Masard Tsuchihatahoko

ENG 3/9
A/D

6th January 1998

Advance Data Technology Corporation
 No. 47
 14 Ling
 Chia Pau Tsuen
 Lin Kou Hsiang
 Taipei
 R.O.C.

Attention: Ms Sharon Hsiung

Dear Ms Hsiung

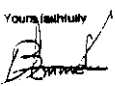
LABORATORY APPROVAL

Thank you for your submission of 5th January regarding the re-certification of your testing laboratory to the Ministry of Commerce's laboratory approval criteria.

I am pleased to advise that your submission has been successful and your approval has been extended until 30th June 1999. 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



Brian Emmett

Technical Officer (Regulatory)
e-mail: brian.emmett@moc.govt.nz

RADIO SPECTRUM MANAGEMENT GROUP
 Engineering and R&D Management Branch, Unit B, 52 Manukau Street, Auckland 1, New Zealand
 P.O. Box 5542, Auckland 1215, New Zealand



Certificate of Assessment

This is to Certify

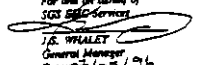
That ADVANCE DATA TECHNOLOGY CORP.

Has been approved as a supplier of
"EMC TESTING SERVICES"
 in accordance with specifications implemented by

The EC DIRECTIVE on EMC
 IN
 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 East Asia
 Singapore
 Co. Durham
 DHS 34D
 UNITED KINGDOM

Approved
 For and on behalf of
 SGS EMC Services

 J.A. WHALEY
 General Manager
 Date: 07/03/98

經濟部商品檢驗局(函)

中華民國八十五年十月十四日

附件如文

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(均附附件)

主旨：有關貴公司電腦相容性測試實驗室申請本局電腦相容性測試認可案，業經實地

說明：

一、復貴公司八十五年十月十四日未列字號函。

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腦相容性測試實驗室

實驗室地址：台北縣林口鄉廣福村二鄰二號

| 認可代號 | 認可產品類別 | 報告簽字人 |
|-----------|--------------------|-------|
| 22-1-E-03 | (一)資訊設備 | 賴輝煌 |
| 22-1-E-03 | (二)家庭用電器產品 | 賴輝煌 |
| 22-1-E-03 | (三)廣播接收機與相關產品(收音機) | 賴輝煌 |

檢驗標準：ISO Guide 25 (1990年版)

三、本實驗室認可期限三年，自八十五年十月二十二日起至八十八年十月二十一日止，計

滿週年每半年一次，得視需要增加檢查次數，惟首次檢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

論，且貴中心應依規定履行相關之責任與義務。

六、檢送「商品電腦相容性測試實驗室管理作業要點」乙份。

七、檢送「商品電腦相容性測試報告」格式乙份，請自行印製使用。

局長許鵬翔

依照分局負責規定授權單位主管執行

經濟部商品檢驗局(函)

中華民國八十六年二月二十一日

附件如文

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、資訊室(請刊登於國際網路)、秘書室(各四份、請刊登於國際網路)、檢驗處、各分局(均附附件)

主旨：有關貴公司電腦相容性測試實驗室申請本局電腦相容性測試認可案，業經實

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腦相容性測試實驗室

實驗室地址：台北縣林口鄉廣福村二鄰二號

| 認可代號 | 認可產品類別 | 報告簽字人 |
|-----------|---------------------------|-------|
| 22-1-E-03 | (一)廣播接收機與相關產品(收音機、電視、錄影機) | 賴輝煌 |
| 22-1-E-03 | (二)廣播接收機與相關產品(收音機) | 賴輝煌 |

檢驗標準：ISO Guide 25 (1990年版)

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止，計核准滿週年

每半年一次，得視需要增加檢查次數，惟首次檢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

論，且貴公司應依規定履行相關之責任與義務。

六、檢送「商品電腦相容性測試報告」格式乙份，請自行印製使用。

局長陳佐鎮

依照分局負責規定授權單位主管執行



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 : _____