

Title Measurements of radio frequency interference from
EasyCom 10/100 X62 403

Test object EasyCom 10/100 X62 403

Report no. DANAK-194566

Project no. K220944-1

Dates of test 1999-06-08

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Contact person Mr. Kim Boll Jensen

Manufacturer i-data International A/S

Specification FCC Rules and Regulations part 15, subpart B, class B

Test personnel Henrik Egeberg Nielsen
Allan Puggaard

Results The emission from the EasyCom 10/100 X62 403 was below
the limit of FCC Rules and Regulations part 15, subpart B,
class B.

Date 1999-06-23

Project manager


Per Hansen, Facility Manager, EMC
DELTA Electronics Testing

Responsible


Jørgen Duvald Christensen
Department Manager, EMC
DELTA Electronics Testing

Title Measurements of radio frequency interference from
PlusCom X62 106

Test object PlusCom X62 106

Report no. DANAK-194567

Project no. K220959-1

Dates of test 1999-06-08

Client i-data International A/S
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Contact person Mr. Kim Boll Jensen

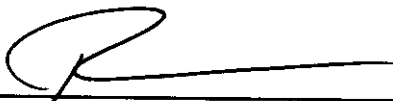
Manufacturer i-data International A/S

Specification FCC Rules and Regulations part 15, subpart B, class B

Test personnel Henrik Egeberg Nielsen
Allan Puggaard

Results The emission from the PlusCom X62 106 was below the
limit of FCC Rules and Regulations part 15, subpart B, class
B.

Date 1999-06-23

Project manager 
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Responsible 
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Department Manager, EMC
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DANAK was established in 1991 in pursuance of the Industry and Trade Promotion Act No. 294 of 11 June 1989. The scheme is a continuation of the accreditation scheme established in 1973 in the auspices of the former Danish National Testing Board (STP).

The requirements to the accredited testing laboratories are laid down in the Danish Agency for Development of Trade and Industry Statutory Order No. 258 of 14 April 1991 on accreditation of laboratories to perform technical testing, etc.

The standards DS EN 45001 and DS EN 45002 (General criteria for the assessment of technical laboratories) are integrated parts of the statutory order.

In order to obtain accreditation to perform technical testing it is, among other things, required:

- that the testing laboratory and its personnel are free from any commercial, financial and other pressures which might influence their technical judgement
- that the testing laboratory operates a quality system which is documented
- that the testing laboratory is furnished with all items of

equipment required for correct performance of the tests and measurements which the laboratory is accredited to perform

- that the testing laboratory has sufficient personnel, having the necessary education, training, technical knowledge and experience for their assigned functions,
- that the testing laboratory has procedures for traceable calibration of equipment used for accredited testing,
- that accredited testing is performed after fully documented method
- that the testing laboratory has records which contain sufficient information to permit repetition of the test,
- that the testing laboratory is assessed and surveyed by DANAK on a regular basis,
- that the accredited laboratory shall take out an insurance which will cover liability in connection with accredited testing

Test reports carrying the logo of DANAK are used to report accredited testing and the logo shows that the testing has been performed in accordance with the rules of accreditation.

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1. SUMMARY OF TEST RESULTS

The results of the emission tests can be summarised as follows:

Emission tests	FCC Rules and Regulations part 15, subpart B, class B
Conducted emission, AC mains	Passed
Radiated electromagnetic field	Passed

Abbreviations : Passed : The emission was below the limit.
 Not done : No test was performed.
 N/A : Not applicable.
 Not relevant : The test was not relevant for the test object.

The test results relate only to the specimen tested.

2. TEST SPECIMEN

Category	:	Printer server
Manufacturer	:	i-data International A/S
Model/Type	:	PlusCom X62 106
Part no.	:	962409-130
Serial no.	:	00320827
Supply voltage	:	12 VDC from 115 VAC adapter
Operational mode	:	Normal operation

3. GENERAL TEST CONDITIONS

3.1 Test set-up

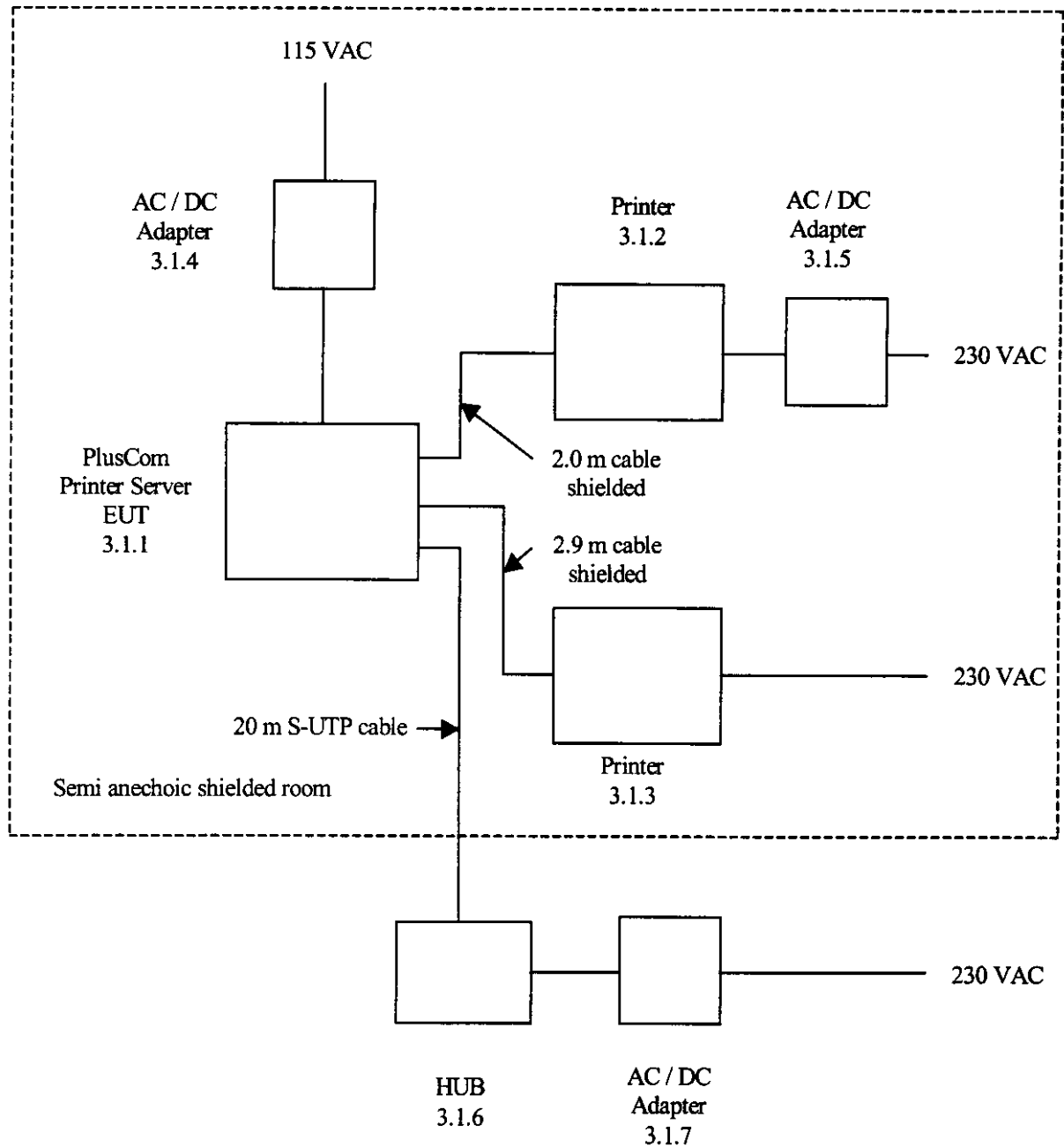


FIG. 1 Test set-up including test object and peripheral equipment.

The complete system used during the tests consisted of the following units:

- 3.1.1 Printer Server EUT**
- | | | |
|--------------|---|--------------------------|
| Manufacturer | : | i-data International A/S |
| Model/type | : | PlusCom X62 106 |
| Part no. | : | 962409-130 |
| Serial no. | : | 00320827 |
| FCC ID. | : | - |
- 3.1.2 Printer**
- | | | |
|--------------|---|-----------------|
| Manufacturer | : | Hewlett Packard |
| Model/type | : | C6410A |
| Part no. | : | - |
| Serial no. | : | SG89A2W2HT |
| FCC ID | : | (DoC) |
- 3.1.3 Printer**
- | | | |
|--------------|---|-----------------|
| Manufacturer | : | Hewlett Packard |
| Model/type | : | C1676A |
| Part no. | : | - |
| Serial no. | : | SGC5302456 |
| FCC ID | : | B94C1676 |
- 3.1.4 AC / DC Adapter**
- | | | |
|--------------|---|---------|
| Manufacturer | : | - |
| Model/type | : | FW3288 |
| Part no. | : | 1811609 |
| Serial no. | : | 1798 |
| FCC ID | : | - |
- 3.1.5 AC / DC Adapter**
- | | | |
|--------------|---|--|
| Manufacturer | : | Hewlett Packard (DELTA Electronics Inc.) |
| Model/type | : | C6409 - 60014 (ADP-20HB,Rev. A) |
| Part no. | : | |
| Serial no. | : | T5838041928 |
| FCC ID | : | - |
- 3.1.6 HUB (Fast Ethernet Hub)**
- | | | |
|--------------|---|-------------|
| Manufacturer | : | Level One |
| Model/type | : | FHU-0401TXS |
| Part no. | : | - |
| Serial no. | : | - |
| FCC ID | : | - |

3.1.7 AC / DC Adapter

Manufacturer	:	-
Model/type	:	A41211G
Part no.	:	15507
Serial no.	:	-
FCC ID	:	-

4. TESTS AND RESULTS

4.1 Conducted emission, AC mains (FCC part 15, subpart B, class B)

	Requirements
Specification	FCC Rules and Regulations part 15, subpart B, class B
Test method	FCC Rules and Regulations part 15, subpart B, class B
Test set-up	ANSI C63.4:1992
Frequency range	0.45-30 MHz
Limit: (quasi-peak)	0.45-30 MHz: 48 dB μ V
Test record sheets and photos	
Annex 2	

Results:

The emission was within the specified limits.

Comments:

The conducted emission was measured at AC mains on AC / DC adapter.
The supply voltage was 115 VAC to AC / DC adapter.

4.2 Radiated electromagnetic field (FCC part 15, subpart B, class B)

	Requirements	
Specification	FCC Rules and Regulations part 15, subpart B, class B	
Test method	FCC Rules and Regulations part 15, subpart B, class B	
Test set-up	ANSI C63.4:1992	
Measuring distance	3 m	
Frequency range	30-1000 MHz	
Limit: (quasi-peak)	30-88 MHz:	40 dB μ V/m
	88-216 MHz:	43.5dB μ V/m
	216-960 MHz:	46 dB μ V/m
	960-1000 MHz:	54 dB μ V/m
Test record sheets and photos	<i>Annex 3</i>	

Results:

The emission was within the specified limits.

Comments:

The supply voltage was 115 VAC to AC / DC adapter.

ANNEX 1

List of instruments

(1 page)

LIST OF INSTRUMENTS

EC NO.	INSTRUMENT	MANUFACTURER	TYPE
29985	BILOG ANTENNA, 26-2000 MHz	CHAFFNER / CHASE	6140A
29461	ARTIFICIAL MAINS NETWORK	ROHDE & SCHWARZ	ESH2-Z5
29916	AUTOMATIC EMI RECEIVER	ROHDE & SCHWARZ	ESCS-30
29861	EMI-SOFTWARE Ver. 1.50c	ROHDE & SCHWARZ	ES-K1, PART: 1026.6790.02

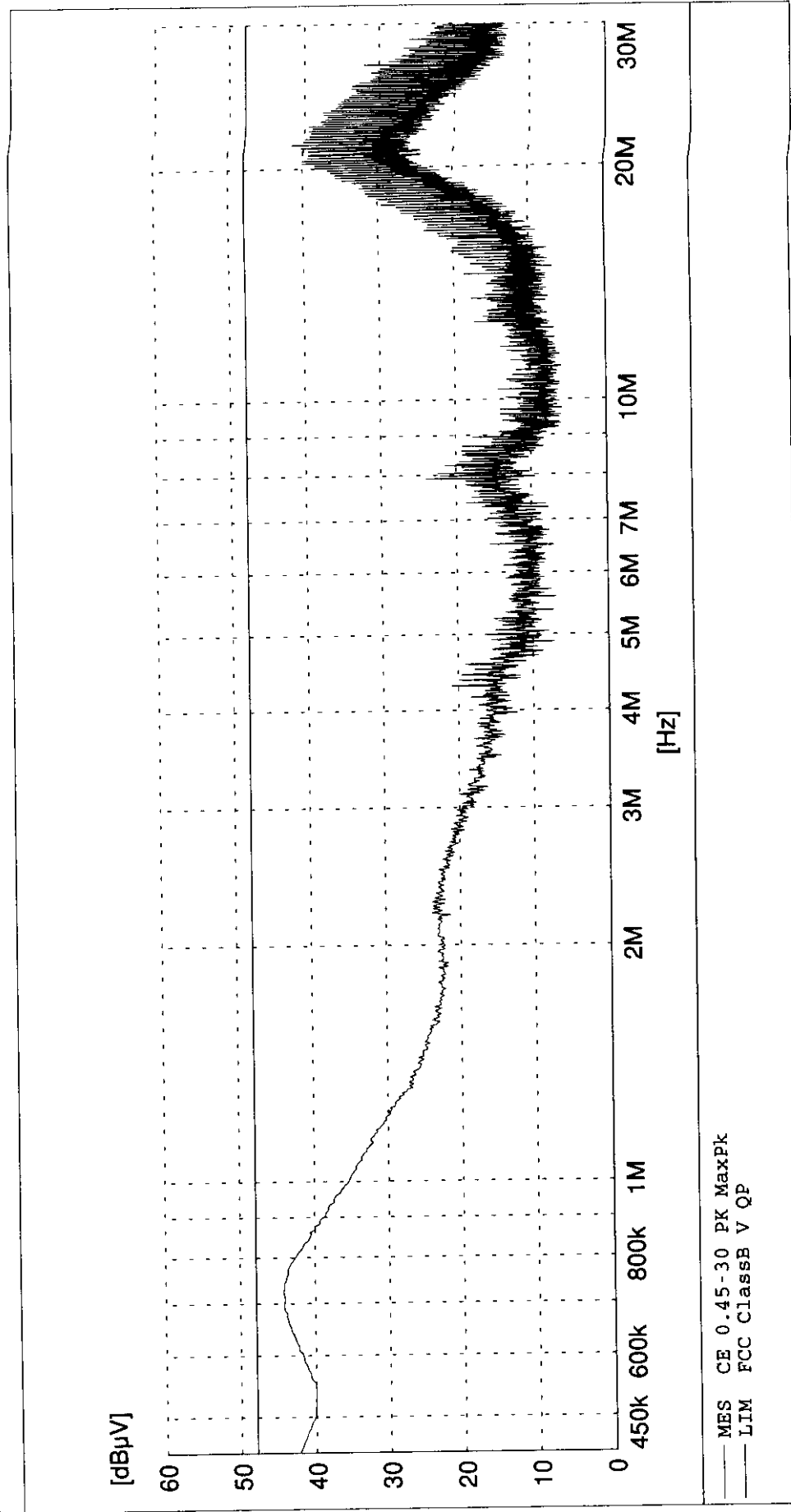
ANNEX 2

Test record sheets and photos regarding
conducted emission, AC mains (FCC part 15, subpart B, class B)

(4 pages)

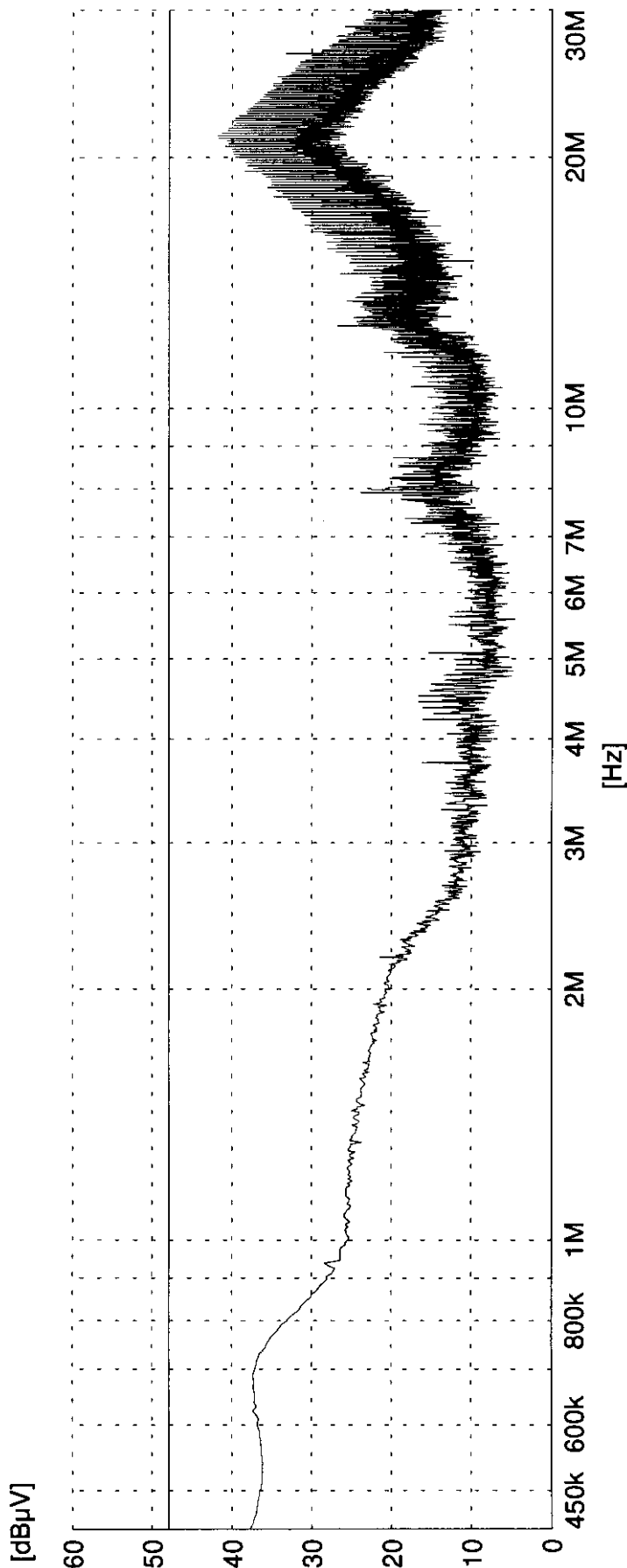
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EUT: PlusCom. S-UTP cable.
 Manufacturer: I-DATA
 Operating Condition: Neutral, 115 Vac.
 Test Site: EMC-5
 Operator: AP-K220954
 Test Specification: FCC class B.
 Comment: Sheet 20
 Start of Test: 1999-06-08



DELTA Electronics Testing

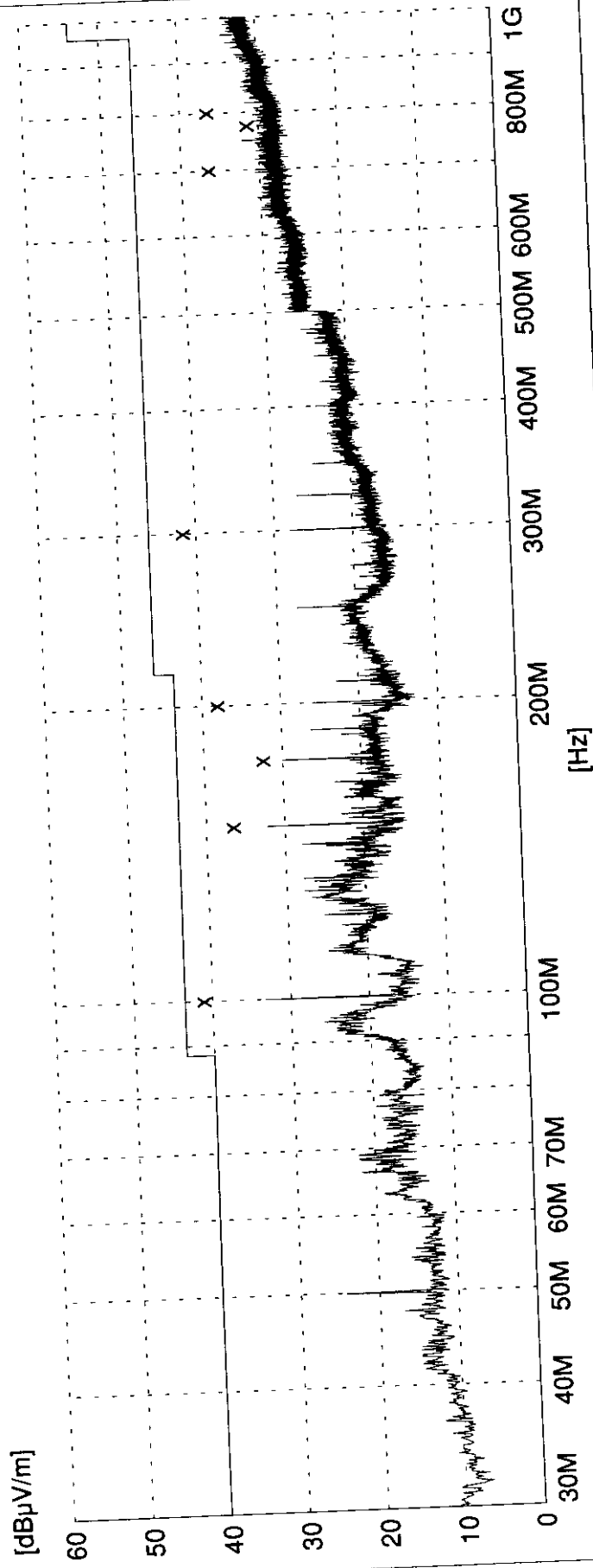
EUT: PlusCom. S-UTP cable.
 Manufacturer: I-DATA
 Operating Condition: Line 1, 115 Vac.
 Test Site: EMC-5
 Operator: AP-K220959
 Test Specification: FCC class B.
 Comment: Sheet 21
 Start of Test: 1999-06-08



— MES CE 0.45-30 PK MaxPk
 — LIM FCC ClassB V QP

DELTA Electronics Testing

EUT: PlusCom. S-UTP cable.
 I-DATA
 Manufacturer: ant 4 m horizontal, 115 Vac.
 Operating Condition: EMC-5
 Test Site: AP-K220959
 Operator: FCC class B.
 Test Specification: Sheet 19
 Comment: 1999-06-08
 Start of Test:



--- MES RE 4mh 30-1000 MaxPk
 x x : MES field_0001_fin QP
 --- LIM FCC ClassB F QP/AV FCC ClassB, field strength 3m

MEASUREMENT RESULT: "field_0001_fin_QP"

08-06-99 16:21

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Height cm	Azimuth deg	Polarisation
100.000000	41.40	10.4	43.5	2.0	150.0	256.00	VERTICAL
150.000000	36.90	10.0	43.5	6.5	102.0	9.00	VERTICAL
175.000000	32.80	10.8	43.5	10.6	102.0	0.00	VERTICAL
200.000000	38.40	12.2	43.5	5.0	102.0	324.00	VERTICAL
300.000000	42.00	15.0	46.0	3.9	102.0	184.00	HORIZONTAL
700.000000	36.90	25.2	46.0	9.0	124.0	23.00	HORIZONTAL
775.000000	31.80	25.9	46.0	14.1	112.0	4.00	VERTICAL
800.000000	36.90	26.5	46.0	9.0	113.0	176.00	VERTICAL