

Philips Consumer Electronics
EMC Competence Centre
Building SFH-p 015
Eindhoven, The Netherlands

EMC TEST REPORT

Rep.No: AR6-877119

PRODUCT CONFIGURATION DESCRIPTION

List of tested equipment: (CONFIGURATION)

- EUT Dig. Recorder: OnStream DP30 (Connected to HP-vecra test computer)
- Computer HP Vectra VL5 Series 5DT; system number: D5636E
- Monitor Philips Monitor, model nbr.: 17A8808Q, FCC ID: A3KM060
- Keyboard Philips Part#: P2818; FCC ID: GJK35U101WN-2
- Mouse Logitech M-SF14-6MD; FCC ID: DZLMSF14R
- Audio system Philips USB loudspeaker system DSS350/17 (As load for the USB-bus)
- Headphone Philips headphone SBC3178 (As load for the headphone terminal at the front of the used computer)
- Mouse (Second) Genius: Mouse Too; model: Serial; FCC ID: FSUGMZA7
(As load for the Com-port A of the computer)
- EUT-supply UC0512-2510 of ANOMA ELECTRIC CO.,LTD.
- Printer Deskjet 690C of HP; FCCID: B94C2164X (Model: C4562A)

Operation of ONSTREAM DP30 during tests

During the measurements the Digital Recorder operating to write the information to the tape.

The, by the development, local made program Digitest have been used to let operate the OnStream for some hours.

The information of progress and errors have been displayed at the monitor during testing.

Operation Environment requirements:

- Power supply : 120 Volt AC $\pm 10\%$
- Temperature : $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$
- Rel.humidity : 50 % (30-60%)
- Atm. Pressure : 1000 mbar (860-1060 mbar)

Measuring procedure:

- Ansi C63.4 - 1992; To measure the emission, the configuration has been adjusted at each frequency.

Connections made:

- 3 phase mainscord to the Anoma supply and from there an unscreened supply cable to the OnStream
- Standard cable to the monitor.
- Screened parallel-port cable to the Onstream DP30
- Mouse cable to the mouse terminal of the computer.
- Keyboard cable to the keyboard-terminal of the computer.
- Screened mouse cable to the Com-port A of the computer.
(The Logitech mouse has been used as load for the Com-port A of the computer)
- Screened loudspeaker system cable connected to one of the USB-terminals of the computer.
(USB-Audio system connected as load for one of the USB terminals)
- Headphone cable to the headphone terminal of the computer.(At front)
- Standard HP printer cable from DP30 to Deskjet 690 printer.

Used Clock-frequencies DP30:

- | | | |
|-----------|-----------------|------------|
| Main PCB: | Xtal: | 40 MHz |
| | Variable clock: | 10..40 MHz |
| | Variable clock: | 4.5..9 MHz |
| EPP PCB: | Xtal: | 12 MHz |

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EMC TEST REPORT

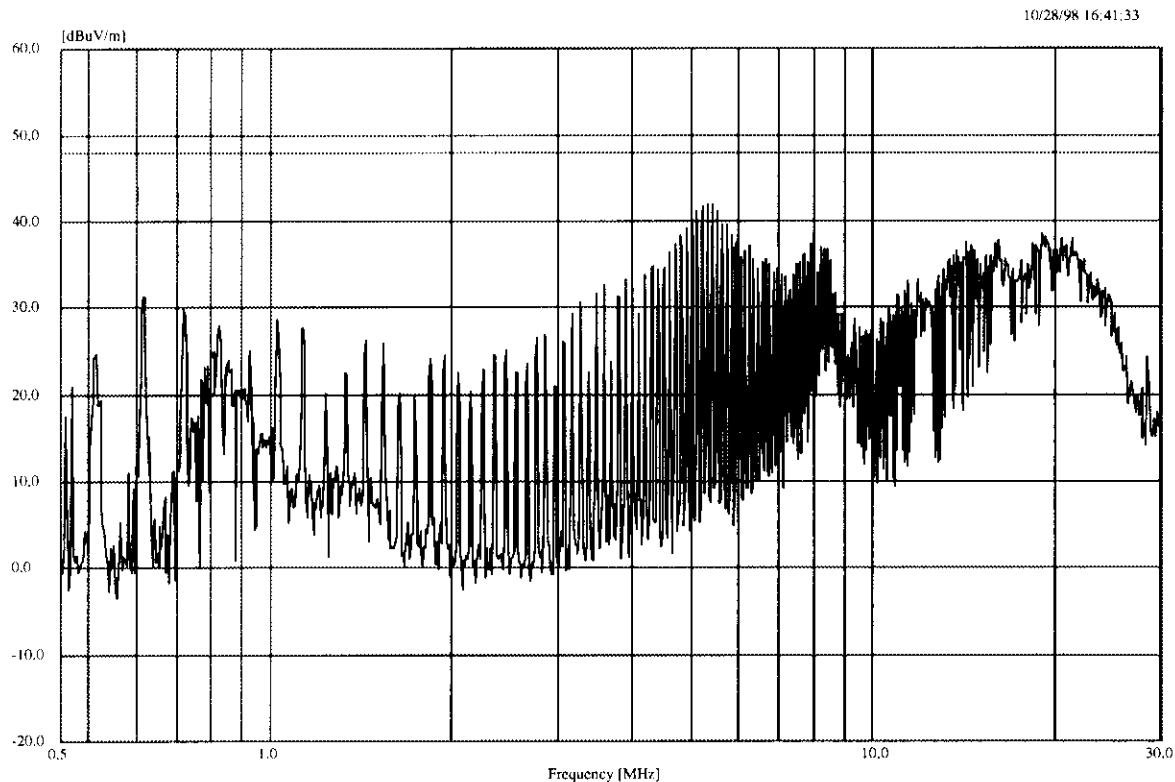
Rep.No: AR6-877119

MAINS DISTURBANCE TEST

Equipment Under Test:	ONSTREAM DP30	Serial Number:	
Test according to:	FCC part 15 (Re-measured with HP deskjet 690 printer)		
Test equipment used:	Calibrated EMCO LISN's and HP 8546A of EMC Comp. Centre		
Climatic conditions:	Tamb: 20°C	RH: 50 %	Air press: 990 mbar
Mode of operation:	Functional.; writing data to the tape.		

TEST RESULTS MEASURED AT NEATRAL:

Composite Trace



Pretest [14/574]

Frequency MHz	Freq Unc MHz	Peak dBuV	QP dBuV	QP Lmt dBuV	DelLim-QP dB	Time YYMMDDHHMMSS
5.040674	0.000210	41.87	40.53	48.00	-7.47	981028:16:57:38
5.150618	0.000210	42.56	41.30	48.00	-6.70	981028:17:00:41
5.256099	0.000210	42.67	40.60	48.00	-7.40	981028:17:03:45
5.352532	0.000210	42.79	15.60	48.00	-32.40	981028:17:06:50
5.457823	0.000210	42.34	13.42	48.00	-34.58	981028:17:09:5
5.503875	0.000210	42.95	5.65*	48.00	-42.35	981028:17:13:00

Positive; All measured values below limit.

Tested by:	v.Oosten	Test date:	28-Oct.-'98
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EMC TEST REPORT

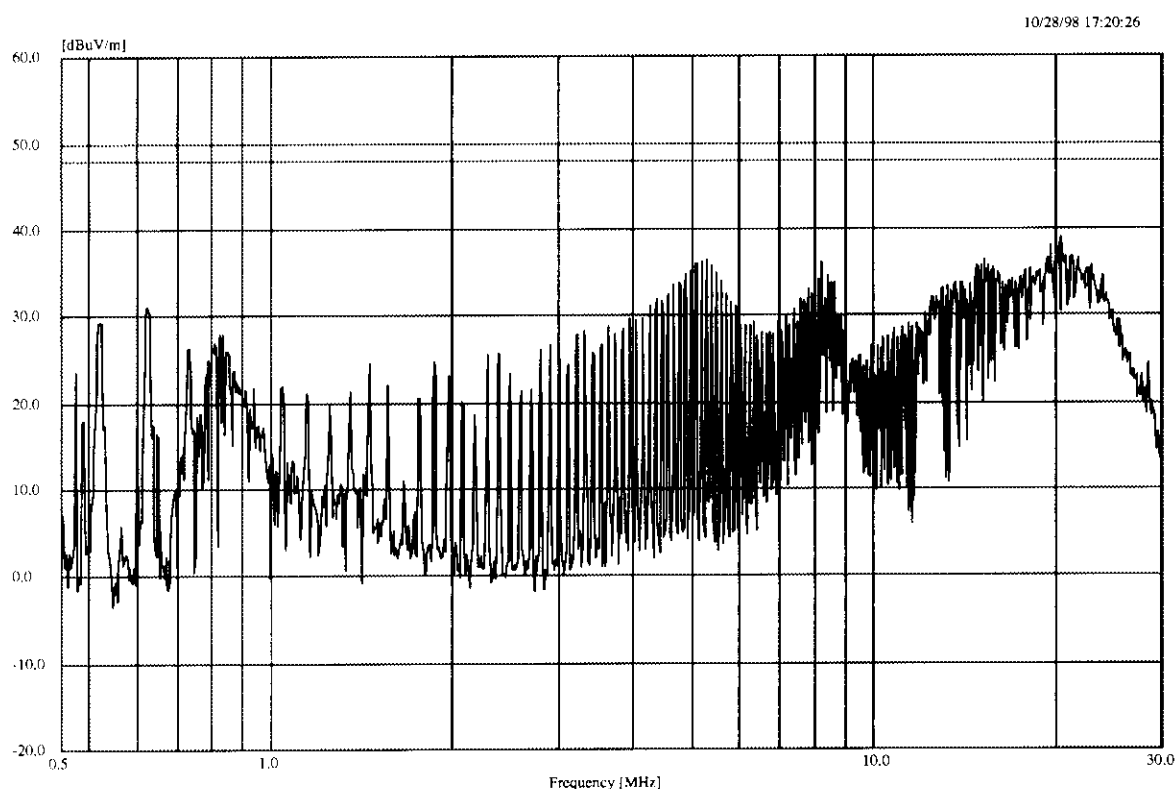
Rep.No: AR6-877119

MAINS DISTURBANCE TEST

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Test according to:	FCC part 15 (Re-measured with HP deskjet 690 printer)		
Test equipment used:	Calibrated EMCO LISN's and HP 8546A of EMC Comp. Centre		
Climatic conditions:	Tamb: 20°C	RH: 50 %	Air press: 990 mbar
Mode of operation:	Functional.; writing data to the tape.		

TEST RESULTS MEASURED AT LINE:

Composite Trace



Pretest [3/574]

Frequency MHz	Freq Unc MHz	Peak dBuV	QP dBuV	QP Lmt dBuV	DelLim-QP dB	Time YYMMDDHHMMSS
19.646932	0.000210	42.13	34.79	48.00	-13.21	981028:17:28:03
20.373851	0.000210	41.96	29.49	48.00	-18.51	981028:17:29:24
20.490757	0.000210	43.34	37.32	48.00	-10.68	981028:17:30:36

RESULT:

Positive; All measured values below limit.

Tested by:	v.Oosten	Test date:	28-Oct.-'98
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RADIATED EMISSION TEST

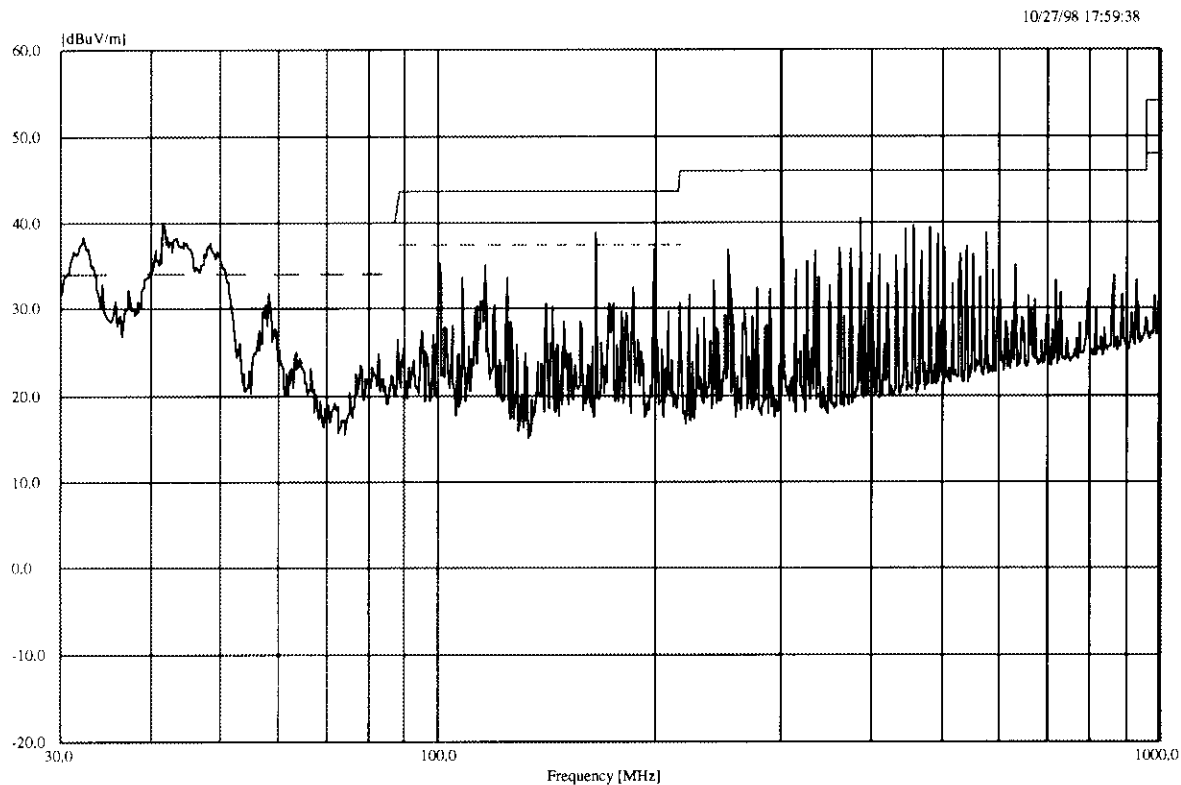
Equipment Under Test:	ONSTREAM DP30	Serial Number:	
Test according to:	FCC part 15 (Re-measured with HP deskjet 690 printer)		
Test equipment used:	Calibrated Immunity set up in the Anechoic-chamber of EMC Comp. Centre		
Climatic conditions:	Tamb: 20°C	RH: 50 %	Air press: 1020 mbar
Mode of operation:	Functional; writing data to the tape.		

TEST DESCRIPTION:

The ONSTREAM DP30 has been placed at 0.8 meter above the earth reference plane (Cage floor). The table dimension at which the ONSTREAM DP30 has been placed is 2 by 1 meter. The table as well as the antenna (height and polarity) have been tuned for max. emission. The supply cables routed over the middle of the table downwards to the 230 Volt supply. The routing of the cables at the table has been changed 5 times for searching the most vulnerable position concerned for radiated emission. Scanned with the receiver aerial, from 30 up to 1000 MHz to tune to the frequencies at which the emission of the ONSTREAM DP30 is maximised. The test has been executed with horizontal and vertical polarisation of the reception aerial. The worst levels of the horizontal and vertical polarisation have been registered.

TEST RESULTS:

Composite Trace



Tested by: v.Oosten

Test date:

28-Oct.-'98

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RADIATED EMISSION TEST

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Test according to:	FCC part 15 (Re-measured with HP deskjet 690 printer)		
Test equipment used:	Calibrated Immunity set up in the Anechoic-chamber of EMC Comp. Centre		
Climatic conditions:	Tamb: 20°C	RH: 50 %	Air press: 1020 mbar
Mode of operation:	Functional; writing data to the tape.		

CONTINUATION OF TEST RESULTS:

Pretest [29/681]

Frequency MHz	Freq Unc MHz	Peak dBuV/m	Peak Lmt dBuV/m	DelLim-Pk dB	Pol	Hgt cm	Angle deg	Time YYMMDDHHMMSS
32.200000	2.420000	38.33	40.00	-1.67	Vert	100	343	981027:17:39:47
37.200000	2.420000	32.29	40.00	-7.71	Vert	100	200	981027:17:39:47
41.600000	2.420000	40.01	40.00	0.01	Vert	100	355	981027:17:39:47
48.400000	2.420000	37.12	40.00	-2.88	Vert	100	358	981027:17:39:47
58.200000	2.420000	31.84	40.00	-8.16	Vert	100	248	981027:17:39:47
100.600000	2.420000	35.14	43.50	-8.36	Horz	200	83	981027:17:39:47
108.400000	2.420000	33.57	43.50	-9.93	Horz	200	108	981027:17:39:47
116.075000	2.720000	35.00	43.50	-8.50	Vert	99	224	981027:17:44:43
124.625000	2.720000	33.65	43.50	-9.85	Vert	99	200	981027:17:44:43
166.475000	2.720000	38.77	43.50	-4.73	Horz	200	275	981027:17:44:43
199.775000	2.720000	36.79	43.50	-6.71	Horz	200	160	981027:17:44:43
253.125000	7.520000	36.85	46.00	-9.15	Horz	149	242	981027:17:49:42
301.250000	7.520000	38.13	46.00	-7.87	Horz	99	38	981027:17:49:42
333.750000	7.520000	36.71	46.00	-9.29	Horz	99	258	981027:17:49:42
361.250000	7.520000	36.93	46.00	-9.07	Horz	99	87	981027:17:49:42
373.750000	7.520000	36.75	46.00	-9.25	Horz	99	87	981027:17:49:42
385.625000	7.520000	40.32	46.00	-5.68	Horz	99	234	981027:17:49:42
409.375000	7.520000	36.27	46.00	-9.73	Horz	99	160	981027:17:49:42
433.750000	7.520000	36.02	46.00	-9.98	Horz	99	185	981027:17:49:42
445.625000	7.520000	39.13	46.00	-6.87	Horz	99	160	981027:17:49:42
456.875000	8.270000	39.64	46.00	-6.36	Horz	199	169	981027:17:54:38
468.562500	8.270000	36.56	46.00	-9.44	Horz	199	169	981027:17:54:38
480.937500	8.270000	39.12	46.00	-6.88	Horz	199	169	981027:17:54:38
492.625000	8.270000	38.69	46.00	-7.31	Horz	199	169	981027:17:54:38
505.687500	8.270000	37.03	46.00	-8.97	Horz	199	145	981027:17:54:38
529.750000	8.270000	36.19	46.00	-9.81	Horz	149	165	981027:17:54:38
541.437500	8.270000	37.23	46.00	-8.77	Horz	149	165	981027:17:54:38
553.812500	8.270000	36.12	46.00	-9.88	Horz	199	169	981027:17:54:38
577.875000	8.270000	38.72	46.00	-7.28	Horz	149	190	981027:17:54:38

Tested by:	v.Oosten	Test date:	28-Oct.-'98
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RADIATED EMISSION TEST

Equipment Under Test:	ONSTREAM DP30	Serial Number:	
Test according to:	FCC part 15 (Re-measured with HP deskjet 690 printer)		
Test equipment used:	Calibrated Immunity set up in the Anechoic-chamber of EMC Comp. Centre		
Climatic conditions:	Tamb: 20°C	RH: 50 %	Air press: 990 mbar
Mode of operation:	Functional; writing data to the tape.		

CONTINUATION OF TEST RESULTS:

Maximized Signals [29/885]

Frequency MHz	Peak dBuV/m	Hgt cm	Pol	Angle deg	QP dBuV/m	QP Lmt dBuV/m	DelLim-QP dB
32.006456	37.81	99	Vert	339	34.28	40.00	-5.72
37.294382	32.02	170	Vert	208	24.08	40.00	-15.92
41.527671	40.23	100	Vert	354	38.35	40.00	-1.65
47.988809	37.60	99	Vert	357	34.28	40.00	-5.72
58.121041	33.26	223	Vert	247	29.88	40.00	-10.12
100.215743	36.94	290	Horz	89	35.00	43.50	-8.50
107.967943	36.76	273	Horz	107	35.43	43.50	-8.07
116.270161	35.53	100	Vert	233	34.68	43.50	-8.82
124.573250	35.39	100	Vert	200	34.60	43.50	-8.90
166.095757	37.66	224	Horz	283	36.87	43.50	-6.63
199.316871	38.25	160	Horz	160	37.83	43.50	-5.67
251.998389	37.23	146	Horz	242	36.60	46.00	-9.40
300.000650	39.49	100	Horz	38	38.83	46.00	-7.17
332.183848	38.87	101	Horz	257	36.75	46.00	-9.25
359.998670	38.49	99	Horz	86	37.89	46.00	-8.11
372.002263	38.09	99	Horz	86	37.41	46.00	-8.59
384.022415	42.12	100	Horz	233	39.94	46.00	-6.06
407.999757	37.43	100	Horz	160	36.74	46.00	-9.26
432.007837	37.07	101	Horz	184	35.07	46.00	-10.93
443.999667	40.35	99	Horz	159	39.68	46.00	-6.32
455.999090	41.16	99	Horz	167	40.64	46.00	-5.36
467.999269	38.39	99	Horz	168	37.68	46.00	-8.32
479.999242	41.22	208	Horz	168	40.32	46.00	-5.68
491.999583	39.47	198	Horz	159	38.67	46.00	-7.33
503.999205	38.83	168	Horz	154	37.90	46.00	-8.10
527.997725	39.39	173	Horz	165	38.60	46.00	-7.40
539.998920	38.24	163	Horz	165	37.32	46.00	-8.68
551.999436	37.65	173	Horz	169	36.62	46.00	-9.38
575.997983	40.27	160	Horz	179	39.46	46.00	-6.54

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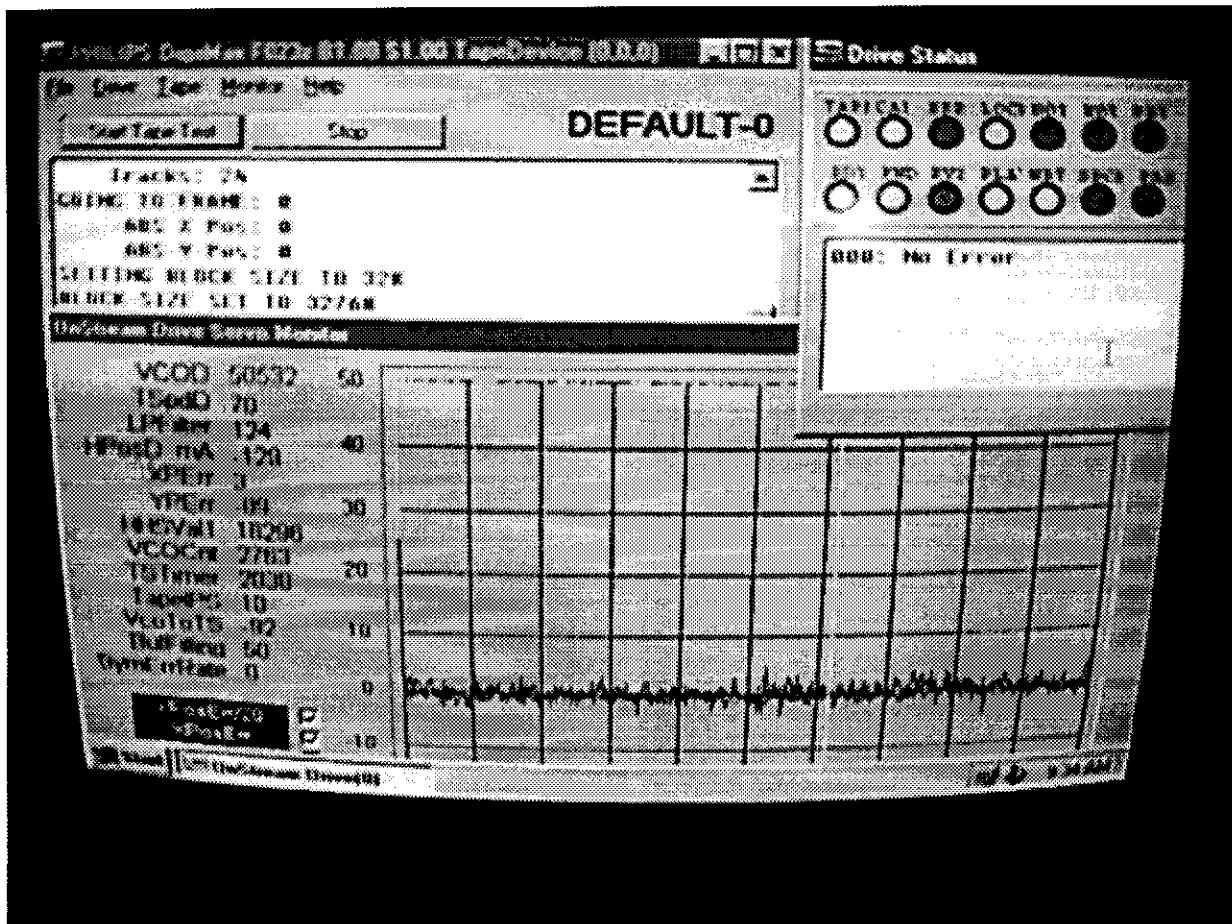


FIGURE 6

Monitor picture during measurements in “write mode”.

FCC ID: EENDP309807

Onstream product

EXHIBIT NEEDED FOR FCC CERTIFICATION
EUT: OnStream; Type: DP30

Measuring report

DATE 22-August-'98 FCC Exhibit 8 OnStream DP30

Customer:

Onstream; Magnetic Recording Lab.; Mr.: A.Ooms
Lodewijkstraat 1, Building DBC, P.O.Box 80002
5600JB Eindhoven
The Netherlands

Requirements:

Acc.: Standards : FCC part 15: 1997

Results:

According to testing performed at Philips ASA-Lab. EMC Competence Centre, the in this report mentioned Equipment Under Test is **IN COMPLIANCE** with the Electromagnetic compatibility requirements defined in the standards.

Philips ASA-Lab. EMC Competence Centre reports apply only to the specific sample tested under stated test conditions.

It is the manufacturer's responsibility to assure the continued compliance of production units of this model.

Philips ASA-Lab. EMC Competence Centre, shall have no liability for any deductions, inferences or generalisations drawn by the client or others from Philips ASA-Lab. EMC Competence Centre issued reports.

Measurements:

See overview at sheet 2

Table of contents:

See overview at sheet 3

Equipment Under Test

Onstream DP30

(Digital Recorder)

FCC ID: EENDP309807

Kind of test:

FCC-Certification

Short description of the tested device:

Can be connected to all kind of computing devices.

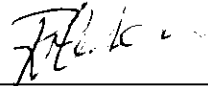
OnStream DP30 is a quiet and high speed drive, which to your PC looks just like another storage device, so you can use it just like you do your hard drive in windows explorer. With each cartridge holding 15 GBytes, it's simple and fast to back up all your files. Typically, a 3 GByte hard drive can be backed up in around 25 minutes. There's no easier way to protect all your valuable data. And OnStream DP30 has another interesting feature in that it can, in conjunction with a MPEG compatible video card, play and record MPEG2 digital video bitstreams with data rates up to 16 Mbit's. This gives unsurpassed video quality for all multimedia purposes.

OnStream DP30 is a Plug-and-Play device suitable for PC's which are running Windows 95 or Windows NT. This makes it very easy to install and get running.

Remarks: *The Anoma supply has to be certified together with the Onstream DP30*

Eindhoven,
The Netherlands

A.A. Janssen/T.v.Til
EMC Test Engineer


P.J. van Oosten
Supervisor EMC Test Lab.

Philips Electronics N.V. 1998

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Philips Consumer Electronics EMC Competence Centre Building SFH-p 015 Eindhoven, The Netherlands	EMC TEST REPORT	Rep.No: AR6-877119
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EXECUTED MEASUREMENTS / TESTS:

Nature of measurement or test	Restriction fulfilled ? Yes / No	Results	Acc. Requirements of:
GENERATED DISTURBANCES OF THE ENVIRONMENT:			
Mains terminal disturbance voltage	Yes	No infringements of the requirements	FCC part 15
Local oscillator radiation	./.	Not applicable	EN55013
Spurious radiation	Yes	No infringements of the requirements	FCC part 15
Local oscillator voltage on aerial terminals	./.	Not applicable	EN55013
Spurious local osc. Volt on aerial terminals	./.	Not applicable	EN55013
Disturbance radiation 1 GHz - 25 GHz	./.	Not applicable	EN55013
IMMUNITY:			
Input immunity	./.	Not applicable for IT equipment	EN55020
Immunity against conducted voltages	./.	Not applicable for IT equipment	EN55020
Immunity against conducted currents	./.	Not applicable for IT equipment	EN55020
Immunity against radiated interference	./.	Not applicable for IT equipment	EN55020
Screen attenuation of the coax aerial input	./.	Not applicable for IT equipment	EN55020
Imm. against radiated interf. 80 - 1000 MHz	./.	Not applicable for FCC	EN61000-4-3
Conducted disturbances induced by EM-fields	./.	Not applicable for FCC	EN61000-4-6
OTHER:			
Static Electricity Discharge (ESD)	./.	Not applicable for FCC	EN61000-4-2
Fast transient burst	./.	Not applicable for FCC	EN61000-4-4
Mains supply voltage, variations & voltage dips/short interruptions	./.	Not applicable for FCC	EN61000-4-11
Slow high energy voltage surge	./.	Not applicable for FCC	EN61000-4-5
Mains harmonics	./.	Not applicable for FCC	EN61000-3-2
Audio frequency common mode test	./.	Not applicable for FCC	ETS300-683

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List of test equipment Used measuring site(s)	06	
Description and results of the Mains terminal disturbance voltage test	07 & 08	Emission
Description and results of the Spurious Radiation test	09, 10 & 11	Emission
Description and results of the Radiated interference test 80 - 1000 MHz	N.A.	Immunity
Description and results of the Conducted disturbances induced by EM-field tests	N.A.	Immunity
Description and results of the ESD test	N.A.	Immunity
Description and results of the Fast transient/burst test	N.A.	Immunity
Description and results of the Mains supply voltage variations & voltage dips/short interruptions test	N.A.	Immunity
Description and results of the Slow/High energy voltage Surge test	N.A.	Immunity
Description and results of the Mains Harmonic tests	N.A.	Immunity
Photo's of connection scheme and test/measuring set-up's	12 up to & incl.: 15	

EVALUATION OF THE ONSTREAM DP30 TEST RESULTS:

The Digital Recorder OnStream DP30 has been considered as "Peripheral of a computing device" for consumer use; Class B.

That's why this Digital recorder has been tested according the FCC part 15, Class B, for radiated and conducted disturbances.

This ONSTREAM DP30 has been tested in a full configured system with all ports connected to their relevant cables and the cables connected to their specified load-impedance's.

See the measuring set-up's.

During and directly after the tests no infringements of the requirements have been found.

For more detailed information concerning photo session of the measuring set-up's see page 3 (Table of contents).

Radiation measurements; Explanation of terms used:

FREQ :Frequency at which an emission has been found.

ANT :Type of used aerial: BILOG aerial (30 - 1000 MHz)

Pol. :HOR; Horizontal polarity of the antenna. VERT; Vertical polarity of the antenna.

Values :Values measured from the spectrum analyser (Including all corrections from site, antenna, cable and amplifier) expressed in dBuV/m (Quasi Peak).

The spurious radiation has been checked in the anechoic chamber (3 meter test site)

Conducted disturbances:

Highest value measured in Quasi peak mode: 38.5 dBuV at 8.37 MHz.

Limit: 48 dBuV,(Quasi Peak) Margin: > 9.4 dBuV;

The EMC behaviour of this ONSTREAM DP30 is good as far as judged according the requirements for achieving FCC-certification Class B.

In case this ONSTREAM DP30 (type number) is extended with other sub-units/functions or options not included in this report, a new report has to be issued with the EMC-behaviour of the added parts included; unless it can be proven that the added part(s) does not influence the EMC-behaviour of the system.

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List of tested equipment: (CONFIGURATION)

- EUT Dig. Recorder: OnStream DP30 (Connected to HP-vectra test computer)
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- Audio system Philips USB loudspeaker system DSS350/17 (As load for the USB-bus)
- Headphone Philips headphone SBC3178 (As load for the headphone terminal at the front of the used computer)
- Mouse (Second) Genius: Mouse Too; model: Serial; FCC ID: FSUGMZA7
(As load for the Com-port A of the computer)
- EUT-supply UC0512-2510 of ANOMA ELECTRIC CO.,LTD.

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The information of progress and errors have been displayed at the monitor during testing.

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- Power supply : 120 Volt AC $\pm 10\%$
- Temperature : $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$
- Rel.humidity : 50 % (30-60%)
- Atm. Pressure : 1000 mbar (860-1060 mbar)

Measuring procedure:

- Ansi C63.4 - 1992; To measure the emission, the configuration has been adjusted at each frequency.

Connections made:

- 3 phase mains cord to the Anoma supply and from there an unscreened supply cable to the OnStream
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- Keyboard cable to the keyboard-terminal of the computer.
- Screened mouse cable to the Com-port A of the computer.
(The Logitech mouse has been used as load for the Com-port A of the computer)
- Screened loudspeaker system cable connected to one of the USB-terminals of the computer.
(USB-Audio system connected as load for one of the USB terminals)
- Headphone cable to the headphone terminal of the computer.(At front)

Used Clock-frequencies DP30:

Main PCB:	Xtal:	40 MHz
	Variable clock:	10..40 MHz
	Variable clock:	4.5..9 MHz
EPP PCB:	Xtal:	12 MHz

EMC TEST REPORT

Rep.No: AR6-877119

LIST OF USED TEST EQUIPMENT

Description according standard		Calibration up to
SPURIOUS RADIATION: The calibrated radiated measuring set up in the SIEPEL Anechoic- chamber of the EMC Competence Centre (Measuring Institute):	X	Nov '98
AERIAL TYPE: CHASE BIOLOG BROADBAND : CL611A / 30 - 1000 MHz	X	May '99
RHODE & SCHWARZ BICONICAL : HUF Z2 / 30 - 200 MHz		May '99
RHODE & SCHWARZ LOG. PER. : HUF Z3 / 200 - 1000 MHz		May '99
SCHWARZBECK BROADBAND HORN : BA9120-B / 1 - 10 GHz		May '99
HP85462A Spectrum Analyser 9 kHz - 6.5 GHz. (EMI receiver)	X	June '99
MAIN DISTURBANCES: EMCO TYPE 3810/2 LISN 250V/10A Artificial network	X	March '99
EMCO TYPE 3810/2 LISN 250V/10A Artificial network	X	March '99
STATIC ELECTRICITY DISCHARGE (ESD): Minizap Keytek ESD Simulator Locally calibrated with ESD test equipment.		Febr '99
IMMUNITY AGAINST RADIATED INTERFERENCE: The calibrated Immunity set up in the Anechoic-chamber of the EMC Competence Centre. (Measuring Institute) AT1080 Log. Per. Antenna of Amplifier of Amplifier Research 80 - 1000 MHz. 100W1000M2A 100 Watt HF-amplifier of Amplifier Research. FP3000A Isotropic field probe 10 kHz - 1 GHz. FP3080A Isotropic field probe 80 MHz - 40 GHz.		Oct '98 June '98 June '98 June '99 June '99
FAST TRANSIENTS COMMON MODE: MV2616 & UCS500 Transient Generator of EM-test.		July '99
SURGE for Slow and High energy voltage. MV2616 & UCS500 Surge Generator of EM-test.		July '99
CONDUCTED DISTURBANCES induced by electromag. Field Injection EM clamp of MEB and CDN's of Lüthi & MEB Local calibrated with calibrated HP-equipment		Oct '98
MAINS supply voltage VARIATIONS & DIPS interruptions MV2616 & UCS500 Power Fail Generator of EM-test.		July '98
MAINS HARMONICS: HP6842A Harmonic Flicker tester.		June '99

ADDRESS MEASURING SIDE

EMC COMPETENCE CENTRE

Philips Consumer Electronics
Buildings: SFHp-015
Glaslaan 2
P.O. Box 80002

5600 JB Eindhoven
The Netherlands
Tel: +31 40 2732680
Fax: +31 40 2736177

EMC TEST REPORT

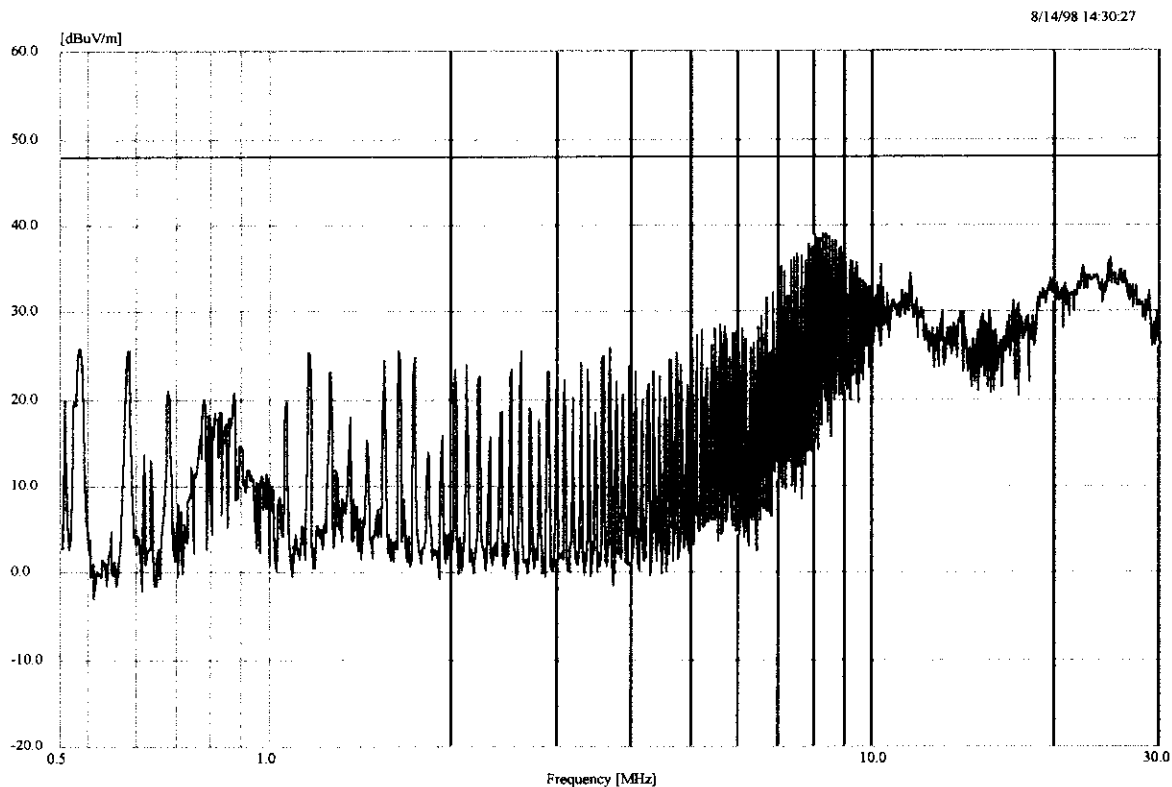
Rep.No: AR6-877119

MAINS DISTURBANCE TEST

Equipment Under Test:	ONSTREAM DP30	Serial Number:	
Test according to:	FCC part 15		
Test equipment used:	Calibrated EMCO LISN's and HP 8546A of EMC Comp. Centre		
Climatic conditions:	Tamb: 20°C	RH: 51 %	Air press: 1030 mbar
Mode of operation:	Functional.; writing data to the tape.		

TEST RESULTS MEASURED AT NEATRAL:

Composite Trace



Pretest [8/574]

Frequency MHz	Freq Unc MHz	Peak dBuV	QP dBuV	QP Lmt dBuV	DelLim-QP Avg dB	Avg Lmt dBuV	DelLim-Avg dB	Time YYMMDDHHMMSS
7.985146	0.000010	40.53	37.07	48.00	-10.93	36.23	-11.77	980814:14:38:42
8.076779	0.000010	40.74	31.48	48.00	-16.52	26.39	-21.61	980814:14:39:04
8.179721	0.000010	40.85	38.32	48.00	-9.68	37.16	-10.84	980814:14:39:26
8.276120	0.000010	40.93	37.79	48.00	-10.21	36.76	-11.24	980814:14:39:48
8.374901	0.000010	41.06	38.51	48.00	-9.49	34.98	-13.02	980814:14:40:10
8.464545	0.000010	41.61	36.50	48.00	-11.50	35.65	-12.35	980814:14:40:49
8.554968	0.000010	41.45	26.81	48.00	-21.19	21.36	-26.64	980814:14:41:20
8.664476	0.000010	40.56	35.31	48.00	-12.69	28.39	-19.61	980814:14:41:44

RESULT:

Positive; All measured values below limit.

Tested by:	v.Oosten	Test date:	14-Aug.-'98
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EMC TEST REPORT

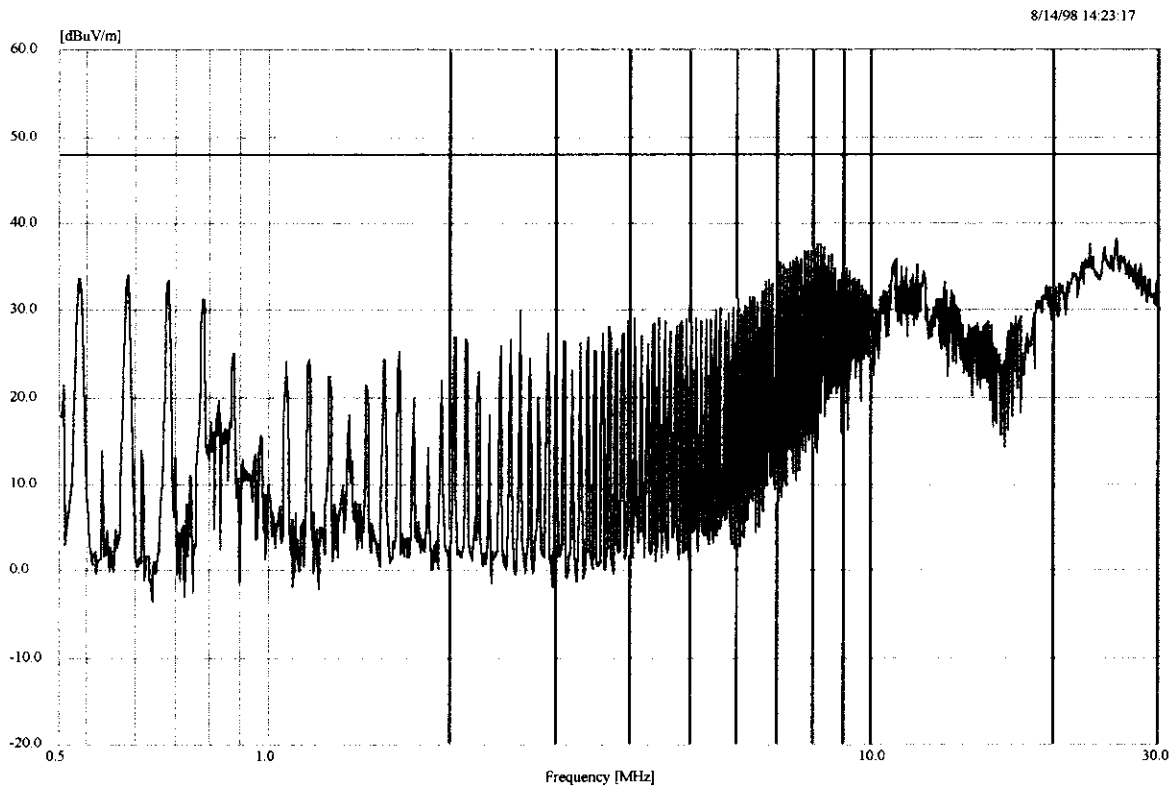
Rep.No: AR6-877119

MAINS DISTURBANCE TEST

Equipment Under Test:	ONSTREAM DP30	Serial Number:	
Test according to:	FCC part 15		
Test equipment used:	Calibrated EMCO LISN's and HP 8546A of EMC Comp. Centre		
Climatic conditions:	Tamb: 22°C	RH: 53 %	Air press: 1040 mbar
Mode of operation:	Functional.; writing data to the tape.		

TEST RESULTS MEASURED AT LINE:

Composite Trace



Pretest [1/574]

Frequency MHz	Freq Unc MHz	Peak dBuV	QP dBuV	QP Lmt dBuV	Dellim-QP dB	Avg dBuV	Avg Lmt dBuV	Dellim-Avg dB	Time YYMMDDHHMMSS
25.355566	0.000010	41.14	34.33	48.00	-13.67	28.05	48.00	-19.95	980814:14:25:41

RESULT:

Positive; All measured values below limit.

Tested by:	v.Oosten	Test date:	14-Aug.-'98
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EMC TEST REPORT

Rep.No: AR6-877119

RADIATED EMISSION TEST

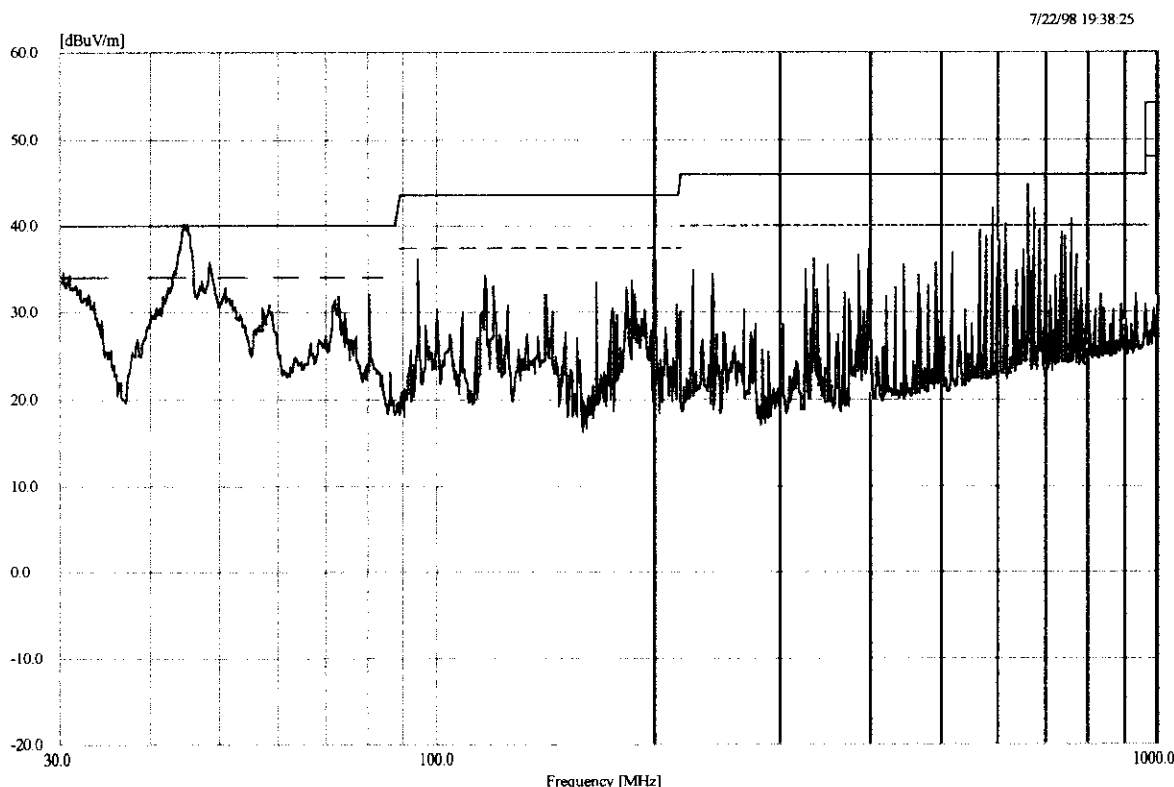
Equipment Under Test:	ONSTREAM DP30	Serial Number:	
Test according to:	FCC part 15		
Test equipment used:	Calibrated Immunity set up in the Anechoic-chamber of EMC Comp. Centre		
Climatic conditions:	Tamb: 20°C	RH: 50 %	Air press: 1020 mbar
Mode of operation:	Functional; writing data to the tape.		

TEST DESCRIPTION:

The ONSTREAM DP30 has been placed at 0.8 meter above the earth reference plane (Cage floor). The table dimension at which the ONSTREAM DP30 has been placed is 2 by 1 meter. The table as well as the antenna (height and polarity) have been tuned for max. emission. The supply cables routed over the middle of the table downwards to the 230 Volt supply. The routing of the cables at the table has been changed 5 times for searching the most vulnerable position concerned for radiated emission. Scanned with the receiver aerial, from 30 up to 1000 MHz to tune to the frequencies at which the emission of the ONSTREAM DP30 is maximised. The test has been executed with horizontal and vertical polarisation of the reception aerial. The worst levels of the horizontal and vertical polarisation have been registered.

TEST RESULTS:

Composite Trace



Philips Consumer Electronics
EMC Competence Centre
Building SFH-p 015
Eindhoven, The Netherlands

EMC TEST REPORT

Rep.No: AR6-877119

RADIATED EMISSION TEST

Equipment Under Test:	ONSTREAM DP30	Serial Number:	
Test according to:	FCC part 15		
Test equipment used:	Calibrated Immunity set up in the Anechoic-chamber of EMC Comp. Centre		
Climatic conditions:	Tamb: 20°C	RH: 50 %	Air press: 1020 mbar
Mode of operation:	Functional; writing data to the tape.		

CONTINUATION OF TEST RESULTS:

Pretest [40/720]

Angle deg	Frequency MHz	Freq Unc MHz	Peak dBuV/m	Peak Lmt dBuV/m	DelLim-Pk dB	Pol	Hgt cm	Time YYMMDDHHMMSS
0	48.129762	1.405714	35.78	40.00	-4.22	Vert	100	980722:17:28:58
0	199.403572	1.405714	41.54	43.50	-1.96	Horz	150	980722:17:48:26
70	57.252381	1.405714	30.37	40.00	-9.63	Vert	100	980722:17:28:58
70	225.616667	1.405714	34.63	46.00	-11.37	Horz	149	980722:17:55:00
81	187.971429	1.405714	31.97	43.50	-11.53	Horz	100	980722:17:48:26
95	58.176190	1.405714	30.62	40.00	-9.38	Vert	100	980722:17:28:58
97	124.459523	1.405714	30.63	43.50	-12.87	Horz	200	980722:17:42:01
104	119.725000	1.405714	32.97	43.50	-10.53	Horz	150	980722:17:35:31
105	99.632143	1.405714	30.30	43.50	-13.20	Horz	250	980722:17:35:31
110	648.259523	1.405714	37.11	46.00	-8.89	Horz	150	980722:18:52:56
118	116.260714	1.405714	34.27	43.50	-9.23	Horz	200	980722:17:35:31
121	141.203571	1.405714	32.06	43.50	-11.44	Horz	200	980722:17:42:02
129	93.858333	1.405714	36.21	43.50	-7.29	Horz	250	980722:17:35:31
183	166.261904	1.405714	33.40	43.50	-10.10	Horz	149	980722:17:42:02
185	684.288096	1.405714	39.56	46.00	-6.44	Horz	149	980722:18:59:24
186	174.922619	1.405714	30.38	43.50	-13.12	Horz	199	980722:17:48:26
186	186.239286	1.405714	33.69	43.50	-9.81	Horz	199	980722:17:48:26
194	660.269047	1.405714	44.77	46.00	-1.23	Horz	150	980722:18:52:56
194	672.278571	1.405714	41.89	46.00	-4.11	Horz	150	980722:18:52:56
194	756.229762	1.405714	40.76	46.00	-5.24	Horz	150	980722:19:05:49
196	144.090476	1.405714	30.16	43.50	-13.34	Vert	100	980722:17:42:02
205	576.317857	1.405714	38.73	46.00	-7.27	Horz	200	980722:18:40:09
205	588.327381	1.405714	41.97	46.00	-4.03	Horz	149	980722:18:46:34
205	600.336904	1.405714	38.28	46.00	-7.72	Horz	149	980722:18:46:34
205	612.346428	1.405714	40.26	46.00	-5.74	Horz	149	980722:18:46:34
213	72.841666	1.405714	31.93	40.00	-8.07	Horz	250	980722:17:28:58
214	182.775000	1.405714	32.75	43.50	-10.75	Horz	250	980722:17:48:26
216	732.326191	1.405714	39.24	46.00	-6.76	Horz	150	980722:19:05:49
233	80.347619	1.405714	31.97	40.00	-8.03	Vert	100	980722:17:35:31
238	72.033333	1.405714	31.18	40.00	-8.82	Horz	250	980722:17:28:58
239	215.916667	1.405714	30.01	43.50	-13.49	Horz	200	980722:17:55:00
242	214.877381	1.405714	30.81	43.50	-12.69	Horz	100	980722:17:55:00
268	564.308333	1.405714	39.32	46.00	-6.68	Horz	200	980722:18:40:09
269	200.558334	1.405714	30.02	43.50	-13.48	Horz	199	980722:17:48:26
297	194.322619	1.405714	30.19	43.50	-13.31	Horz	250	980722:17:48:26
315	107.946428	1.405714	30.05	43.50	-13.45	Horz	250	980722:17:35:31
352	744.335714	1.405714	38.84	46.00	-7.16	Vert	99	980722:19:05:49
355	44.665476	1.405714	40.27	40.00	0.27	Vert	100	980722:17:28:58
357	396.174999	1.405714	37.11	46.00	-8.89	Horz	100	980722:18:14:23
358	51.016667	1.405714	31.53	40.00	-8.47	Vert	150	980722:17:28:58

Tested by: v.Oosten

Test date:

22-july-'98

EMC TEST REPORT

Rep.No: AR6-877119

RADIATED EMISSION TEST

Equipment Under Test:	ONSTREAM DP30	Serial Number:	
Test according to:	FCC part 15		
Test equipment used:	Calibrated Immunity set up in the Anechoic-chamber of EMC Comp. Centre		
Climatic conditions:	Tamb: 20°C	RH: 50 %	Air press: 1020 mbar
Mode of operation:	Functional; writing data to the tape.		

CONTINUATION OF TEST RESULTS:

Maximized Signals [40/953]

Frequency MHz	Peak dBuV/m	Hgt cm	Pol	Angle deg	QP dBuV/m	QP Lmt dBuV/m	Dellim-QP dB
44.678780	40.22	110	Vert	353	36.70*	40.00	-3.30
47.967870	34.80	122	Vert	0	33.54*	40.00	-6.46
50.923659	31.15	99	Vert	348	27.54	40.00	-12.46
57.273421	30.86	325	Vert	69	27.65	40.00	-12.35
58.164329	32.96	350	Vert	94	31.92*	40.00	-8.08
72.009136	32.30	271	Horz	230	29.85*	40.00	-10.15
72.260398	32.93	246	Horz	213	26.57	40.00	-13.43
81.017234	25.41	123	Vert	233	21.20	40.00	-18.80
93.699482	37.46	311	Horz	128	35.82	43.50	-7.68
99.658210	33.71	309	Horz	113	31.74	43.50	-11.76
107.962400	32.66	271	Horz	314	31.38	43.50	-12.12
116.258324	37.53	263	Horz	118	36.06	43.50	-7.44
119.605744	34.50	326	Horz	103	31.99	43.50	-11.51
124.622234	31.34	147	Horz	97	29.53	43.50	-13.97
141.174003	32.81	223	Horz	121	32.09*	43.50	-11.41
144.024786	30.94	101	Vert	204	28.91	43.50	-14.59
166.095385	34.22	148	Horz	183	33.52	43.50	-9.98
174.281488	32.07	160	Horz	194	28.90*	43.50	-14.60
182.698060	34.34	194	Horz	210	33.62	43.50	-9.88
186.138537	34.32	173	Horz	189	33.39	43.50	-10.11
188.225659	22.83	225	Horz	80	18.57*	43.50	-24.93
194.879667	21.04	129	Horz	296	15.99	43.50	-27.51
199.309867	41.91	148	Horz	0	41.42	43.50	-2.08
200.469016	31.00	160	Horz	267	29.85	43.50	-13.65
214.776633	32.43	200	Horz	242	31.14	43.50	-12.36
215.917887	31.73	202	Horz	238	29.63	43.50	-13.87
225.541480	35.95	134	Horz	78	35.24	46.00	-10.76
396.124564	37.91	100	Horz	356	37.33	46.00	-8.67
564.169403	38.68	185	Horz	267	38.10	46.00	-7.90
576.161693	41.34	174	Horz	205	39.26	46.00	-6.74
588.179442	43.70	161	Horz	204	43.50	46.00	-2.50
600.177482	39.68	160	Horz	204	39.19	46.00	-6.81
612.185813	40.14	148	Horz	204	39.47	46.00	-6.53
648.195296	39.20	147	Horz	102	38.33	46.00	-7.67
660.204034	44.48	148	Horz	193	44.24	46.00	-1.76
672.205371	42.29	135	Horz	193	41.67	46.00	-4.33
684.206218	40.71	147	Horz	194	40.33	46.00	-5.67
732.221884	39.97	134	Horz	215	39.18	46.00	-6.82
744.229837	39.18	100	Vert	351	38.30	46.00	-7.70
756.230624	43.28	124	Horz	194	42.87	46.00	-3.13

Tested by: v.Oosten

Test date:

22-july-'98