

EXHIBIT D

Issue Date : February 4, 1998
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EMI TEST REPORT

JQA APPLICATION NO. : 80 71057
Applicant : PENTEL Co., Ltd.
: 4-1 8, Yoshi-cho, Soka-shi, Saitama-ken, 340, Japan
Manufacturer : PENTEL Co., Ltd.
: 4-1-8, Yoshi-cho, Soka shi, Saitama-ken, 340, Japan
Description of Equipment : Hand Held Terminal
Model No. : PHT-16TP
FCC ID : EU65UCPIIT 16TP
Regulations Applied : FCC Rules and Regulations Part 15 Subpart B
Total Pages of this Report : 13 Pages (including this page)
Place of Measurement : JQA EMC Engineering Dept. Testing Div.
NVLAP Lab. Code : 200189-0 (Effective through : June 30, 1998)

TEST FACILITY : This test facility is recognized the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations.

TEST RESULTS IN THIS REPORT are obtained in use of equipment that is traceable to Electrotechnical Lab. of MITI Japan and Communications Research Lab. of PTT Japan.
The test results only responds to the tested sample.
It is not allowed to copy this report even partly without the allowance of the JQA EMC Engineering Dept. Testing Div.

Signed:


Tetsuo Kato, Manager
JQA EMC Engineering Dept.

This report must not used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

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JQA Application No. : 80 71057 Standard : FCC15 Sub.B
Model No. : PH1-16TP Issue Date : February 4, 1998
FCC ID : EU65UCPH1-16TP Page 2 of 13

GENERAL EQUIPMENT INFORMATION :

DESCRIPTION OF EQUIPMENT:

- 1) Type of Equipment tested : Pre-production
- 2) Category : Class B Digital device
- 3) Equipment Authorization : Certification
- 4) FCC ID : EU65UCPH1-16TP
- 5) Trade Name : -
- 6) Model No. : PH1-16TP
- 7) Fundamental Frequency Generated in the Equipment : 7.3728 MHz
- 8) Highest Frequency Used in the Equipment : 7.3728 MHz
- 9) Serial No. : 00001
- 10) Date of Manufacture : January 14, 1998
- 11) Power Rating : 7.2 VDC(Battery)

TEST CONDITION OF EQUIPMENT :

- 1) Configuration of Equipment : Refer to Page 5, 6, 9, 10, 11, 12
- 2) Operating Condition : Refer to Page 5
- 3) Equipment Grounding : None
- 4) Equipment Warm-up Time : 5 minutes

CONCLUSIONS OF THE TEST RESULTS:

The data shown in this report were made in accordance with the procedures given in ANSI C63.4-1992. And the Equipment Under Test complied with the requirements of FCC Rules Part15 subpart B 109 as detailed from page 3 to page 13

	Results	Page
Radiated Emissions Measurement	: PASSED	
Minimum margin with respect to the Limits	: 0.8 dB at 199.1 MHz	7
Measurement Uncertainty	: + 3.2 dB	
Tested by: <u>Y. Nakajima</u> Yoichi Nakajima Testing Engineer	Date: <u>January 28, 1998</u> Temp: <u>22°C</u> Humi: <u>40%</u>	

JQA Application No. : 80-71057
Model No. : PHIT 16TP
FCC ID : EU65UCPHIT 16TP

Standard : FCC15 Sub. B
Issue Date : February 4, 1998
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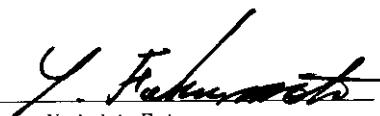
EQUIPMENT(EUT) MODIFICATION:

No modifications were conducted by JQA to achieve compliance to Class B levels.

I HEREBY CERTIFY THAT : The data shown in this report were made in accordance with the procedures Given in ANSI C63.4 1992 and the energy emitted by the equipment was found to be within the limits Applicable.

I assume full responsibility for accuracy and completeness of these data.

Approved Signatory :



Yuichi Fukumoto
Deputy Manager

TEST CONDITIONS AND CONFIGURATION OF EUT

1. The equipment under test (EUT) consists of:

	<u>Item</u>	<u>Manufacturer</u>	<u>Model No.</u>	<u>FCC ID</u>	<u>Serial No.</u>
A	Hand held Terminal	Pentel Co., Ltd.	PHIT 16TP	EU65UCPHIT 16TP	00001

Note. DC power for the EUT was operated with a battery.

2. The measurement was carried out with the following equipment and accessories connected:

	<u>Item</u>	<u>Manufacturer</u>	<u>Model No.</u>	<u>FCC ID</u>	<u>Serial No.</u>
B	Personal Computer	Dell Computer Corp.	OptiPlexGXWT5166	E2KSTNGRMT	S333L
C	Color Graphic Monitor	Dell Computer Corp.	D1025HT	AK8GDM17SE2T	2522416
D	Printer	Hewlett Packard	3630A	BSD8533630A	3040A75370
E	Keyboard	Dell Computer Corp.	SK D100M	GYUR93SK	M9605 1179
F	Mouse	Microsoft Corp.	Mouse 2.0A	C3KSMP1	03573533
G	AC Adaptor(for Printer)	International Japan	3301D	N/A	104376663

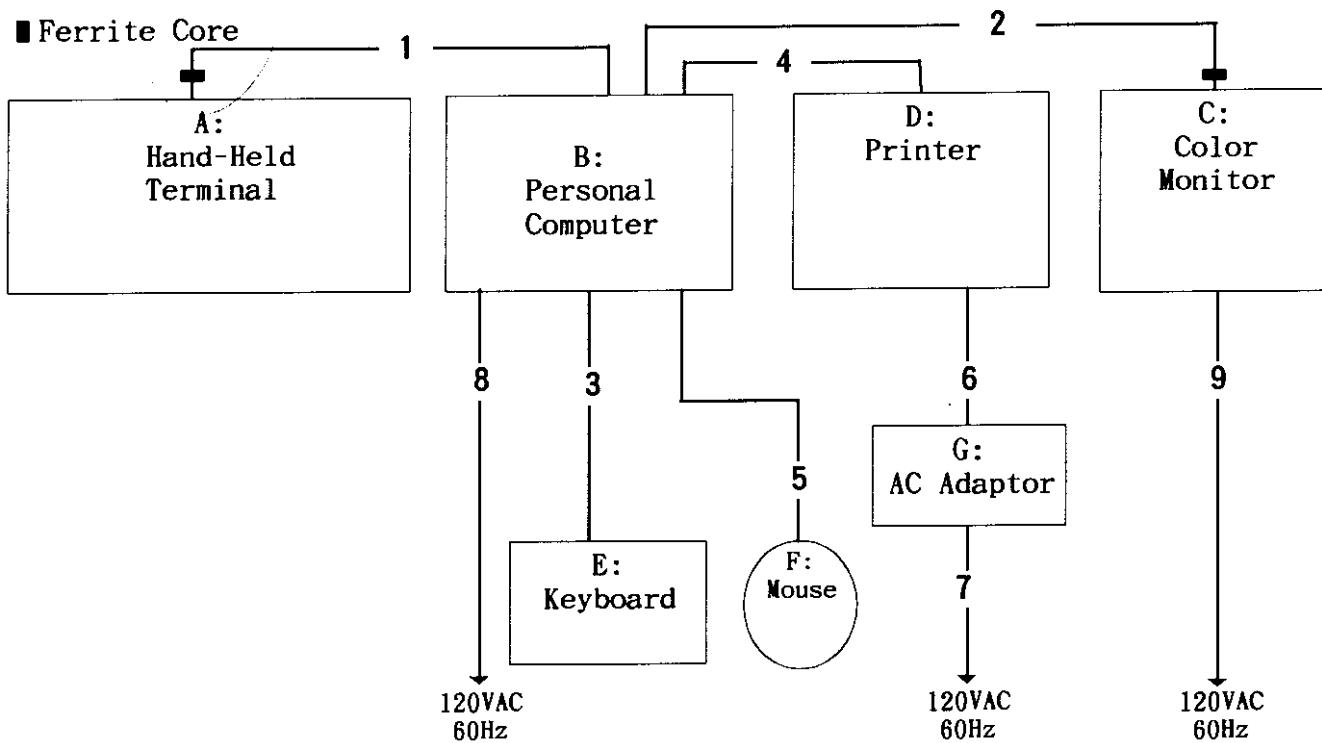
3. Configuration of the equipment under test

Radiated Emissions Measurement : Refer to page 5, 6, 9, 10, 11, 12

4. Operating Condition

Running with the program prepared by the applicant.

(Communication to computer/ "H" Pattern Displayed/ "H" Pattern Printing both EUT and Printer)

CONFIGURATION OF TESTED SYSTEM

Port Description:
Equipment

Hand Held Terminal(A)/ Personal Computer(B)
 Personal Computer(B)/ Monitor(C)
 Personal Computer(B)/ Mouse(F)
 Personal Computer(B)/ Keyboard(E)
 Personal Computer(B)/ Printer(D)

Port Connection

RS232C Port / RS232C Port(1)
 Video Port/ -
 Mouse Port/ -
 Keyboard Port/ -
 Parallel Port/ -

Cable Description:

<u>Cable No.</u>	<u>Description</u>	<u>Manufacturer</u>	<u>Shielded</u>	<u>Ferrite</u>	<u>Length</u>	<u>Connector</u>
1	RS232C Cable	Shinkou Seisen Co., Ltd.	YES	YES	2.1	Non-metallic
2	Display Cable	Deli Computer Corporation	YES	YES	2.0	Non-metallic
3	Keyboard Cable	Dell Computer Corporation	YES	NO	1.5	Non-metallic
4	Printer Cable	Hitachi	YES	NO	2.3	Non-metallic
5	Mouse Cable	Microsoft	YES	NO	2.1	Non-metallic
6	AC Adaptor Cable(for Printer)	-	NO	NO	2.2	Non-metallic
7	AC Power Cable(for Printer)	KAWASAKI	NO	NO	2.2	Non-metallic
8	AC Power Cable(for PC)	Taiko	NO	NO	2.2	Non-metallic
9	AC Power Cable(for Monitor)	Taiko	NO	NO	2.2	Non-metallic

RADIATED EMISSIONS MEASUREMENT :

According to description of ANSI C63.4-1992 sec.8.3.1.1, the preliminary radiated emissions measurement were carried out. The preliminary radiated measurements were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT. The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for the final radiated emissions measurements.

Frequency (MHz)	Antenna Factor (dB/m)	Meter Reading at 3 m		Limits		Emission Levels at 3 m		Margins	
		Horiz. (dB/uV)	Vert. (dB/uV)	Horiz. (dB/uV/m)	Vert. (dB/uV/m)	Horiz. (dB)	Vert. (dB)	Horiz. (dB)	Vert. (dB)
31.8	0.0	14.6	16.7	40.0	14.6	16.7	25.4	23.3	
39.4	2.0	20.0	27.3	40.0	22.0	29.3	18.0	10.7	
47.8	3.8	18.4	18.7	40.0	22.2	22.5	17.8	17.5	
55.7	5.2	25.6	25.3	40.0	30.8	30.5	9.2	9.5	
77.4	8.4	29.5	28.4	40.0	37.9	36.8	2.1	3.2	
81.1	8.8	29.3	29.0	40.0	38.1	37.8	1.9	2.2	
88.5	9.7	28.2	27.2	43.5	37.9	36.9	5.6	6.6	
106.9	11.6	24.8	23.2	43.5	36.4	34.8	7.1	8.7	
114.3	12.3	26.8	27.3	43.5	39.1	39.6	4.4	3.9	
129.0	13.5	21.6	17.5	43.5	35.1	31.0	8.4	12.5	
147.5	14.9	20.9	18.1	43.5	35.8	33.0	7.7	10.5	
165.9	16.1	16.9	11.2	43.5	33.0	27.3	10.5	16.2	
199.1	18.0	24.7	17.4	43.5	42.7	35.4	0.8	8.1	
217.5	18.9	21.6	10.6	46.0	40.5	29.5	5.5	16.5	
245.9	20.3	17.7	7.8	46.0	38.0	28.1	8.0	17.9	
265.9	21.1	9.2	5.7	46.0	30.3	26.8	15.7	19.2	
332.4	23.6	5.0	0.5	46.0	28.6	24.1	17.4	21.9	
432.1	26.5	11.7	5.1	46.0	38.2	31.6	7.8	14.4	
522.5	28.7	2.2	1.3	46.0	30.9	30.0	15.1	16.0	
598.3	30.5	8.3	1.2	46.0	38.8	31.7	7.2	14.3	
664.8	31.9	7.8	3.0	46.0	39.7	34.9	6.3	11.1	

Notes:

- 1). The spectrum was checked from 30 MHz to 1000 MHz.
- 2). The symbol of '<' means 'or less'.
- 3). The symbol of '>' means 'or greater'.
- 4). The cable(14.0 m length) loss is included in the antenna factor.
- 5). A sample calculation was made at 31.8 MHz.

$$Af + Mr = 0.0 + 14.6 = 14.6 \text{ dB/uV/m}$$

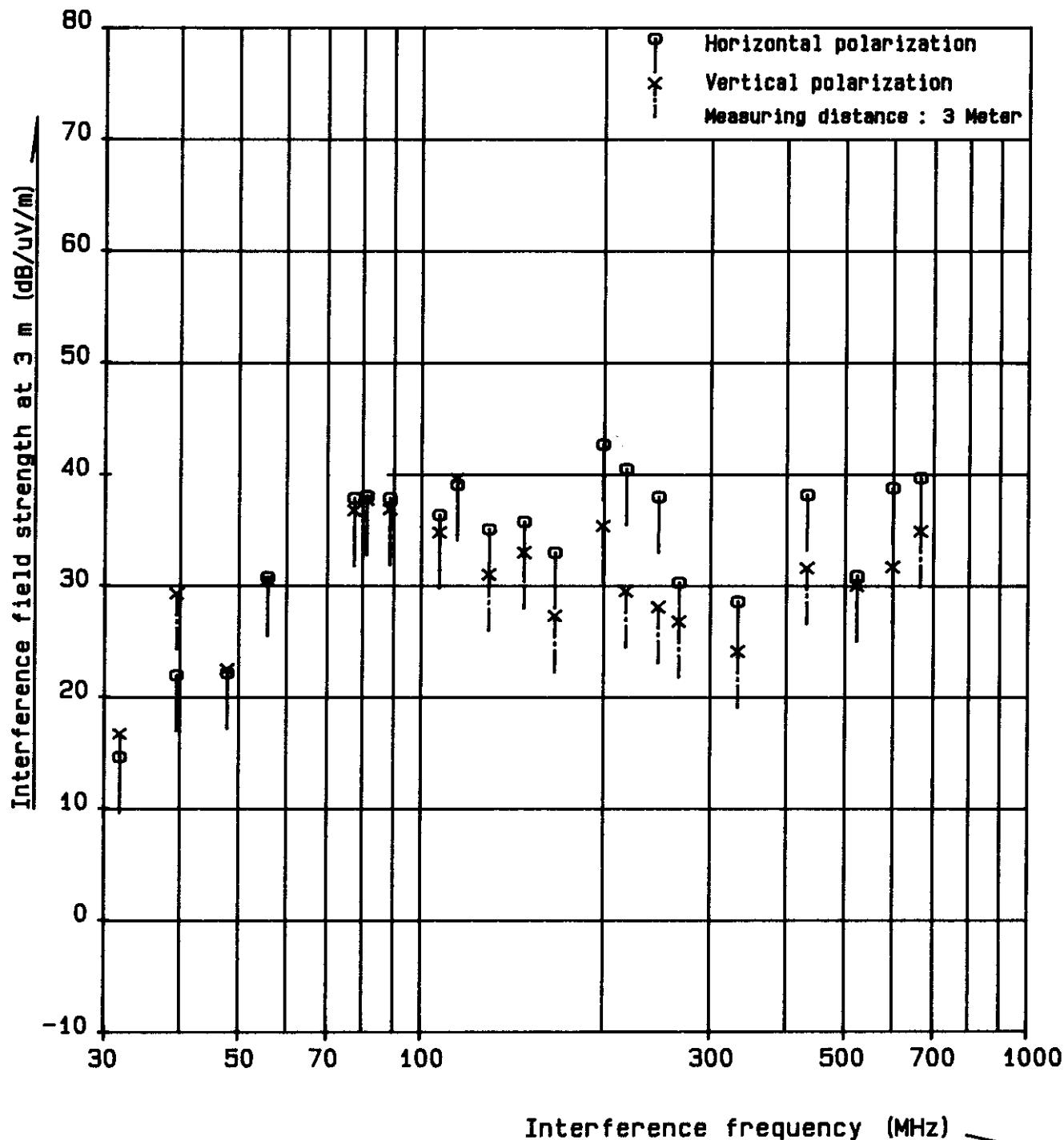
Where,

Af : Antenna Factor

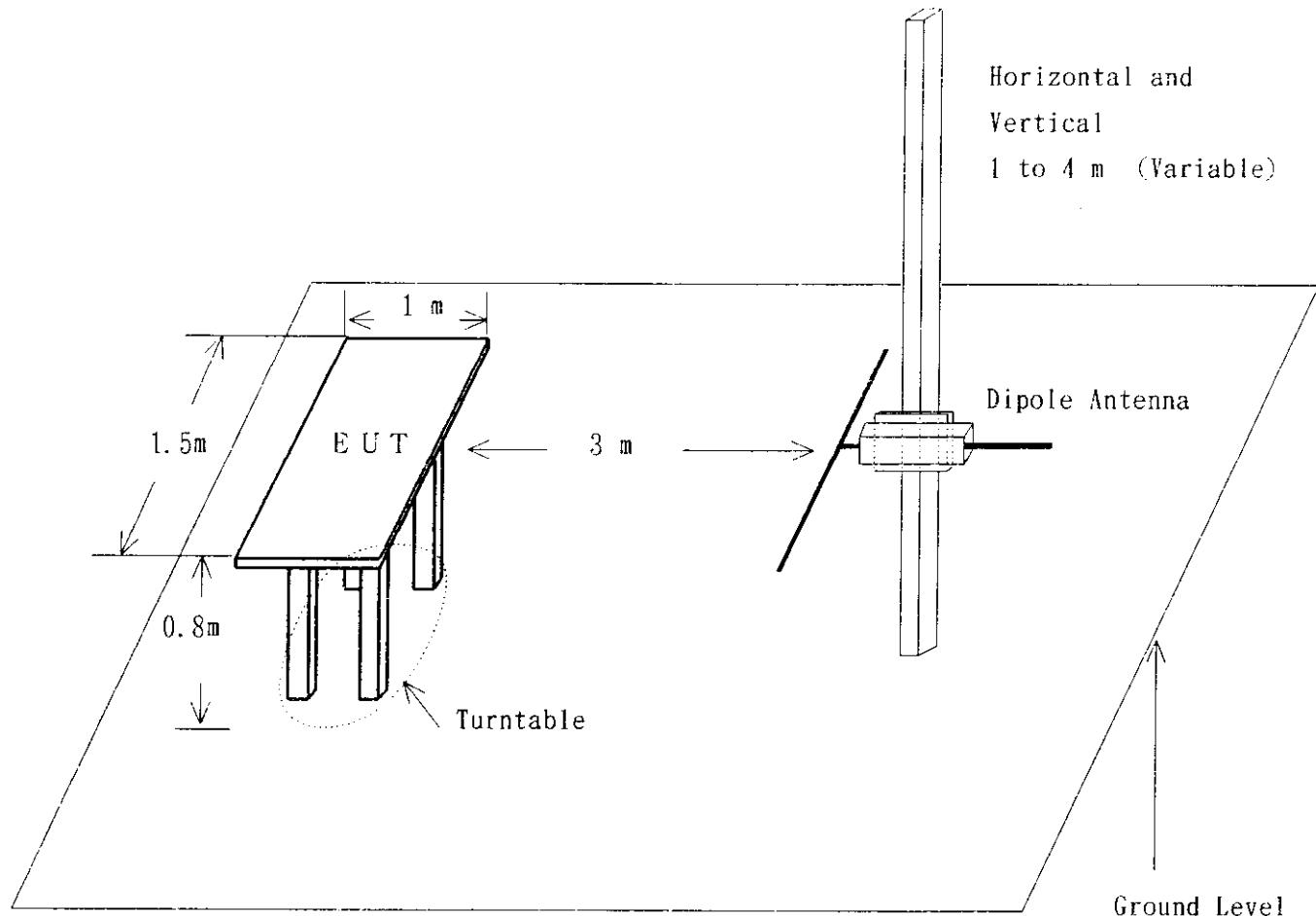
Mr : Meter Reading

RADIATED EMISSIONS MEASUREMENT

MODEL NO.: PHT-16TP



TEST SET-UP SKETCH FOR RADIATED EMISSIONS MEASUREMENT



Test Instrumentation Used, Radiated Emissions Measurement:

Type	Manufacturer Model No.	Serial No.	Last Cal.	Cal. Interval
Receiver(*)	Rohde & Schwarz ESVP	881487/004	May 1997	1 year
Antenna	Kyoritsu Electrical KBA 511A	0-201 13	Nov 1997	1 year
Antenna	Kyoritsu Electrical KBA 611	0 210 5	Nov 1997	1 year
Site	TDK Co., Ltd. Anechoic Chamber	NO. 3	May 1997	1 year
RF Cable	Fujikura 5D2W	155-21 002	May 1997	1 year

(*) Setting of measuring instrument:

Detector Function : CISPR Quasi Peak
IF Bandwidth : 120 kHz (30 MHz 1000 MHz)