

26-30, NISHIAZABU 2-CHOME, MINATO-KU, TOKYO 106, JAPAN

Telephone: (03) 3506-2934 Facsimiles: (03) 3506-9967

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FCC ID: F5GFP-30I

Part 15 Sub.part B Class B Digital Device

# 6. TESTED SYSTEM DETAILS

# 6.1 Peripherals and Others:

Description	Model Nam	e Serial No.	Manufacturer	FCC ID
Personal Computer	12XL212	1V08FHNJE1N5	Compaq Computer Co., Ltd.	DOC
Mouse	M-BB48	LZE01271677	Logitech	DOC
PC Monitor	M2978	CY5430HF3CV	LG Electronics, Inc.	BEJCA500
Scanner	AS-1	0009	Fuji Photo Film Co., Ltd.	F5GAS-1
Head Phone Control	ller -	-	Mitsumi	N/A
Head Phone Speake	r -		Mitsumi	N/A
AC Adapter (for PC	) LE-9702B-	-01 177625-001	Compaq Computer Co., Ltd.	N/A
AC Adaptor (for EU	JT) AC-3V	0044	Fuji Photo Film Co., Ltd.	N/A

(for AC Adapter of EUT, Input: 120VAC, 60Hz / Output: 3VDC)

#### Note:

<sup>\*</sup>DOC: Declaration of Conformity by Manufacturer, Compaq Computer Co., Ltd., or Logitech.

<sup>\*</sup> N/A: Equipment required for the Verification.



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#### 6.2 List of Cables:

Description	Length	Type of shield	Ferrite Core
EUT / Personal Computer	1.2 m	Shielded	Add
DC Power Cord (EUT/AC adaptor)	1.9 m	Non-shielded	Add
Scanner / Personal Computer	1.5 m	Shielded	Provided
PC Monitor / Personal Computer	1.65 m	Shielded	Provided
Mouse / Personal Computer	1.9 m	Shielded	N/A
DC Power Cord (PC/AC adaptor)	1.55 m	Non-shielded	Provided
AC Power Cord (Scanner)	1.8 m	Non-shielded	N/A
AC Power Cord (PC Monitor)	1.7 m	Non-shielded	N/A
Headphone Cable	0.8 m	Shielded	N/A
Head Set Cable	1.11 m	Shielded	N/A

#### Note:

<sup>\*</sup> Provided: The cable is an accessory for Personal Computer, Digital Camera, Scanner or PC

Monitor which was attached a ferrite core.



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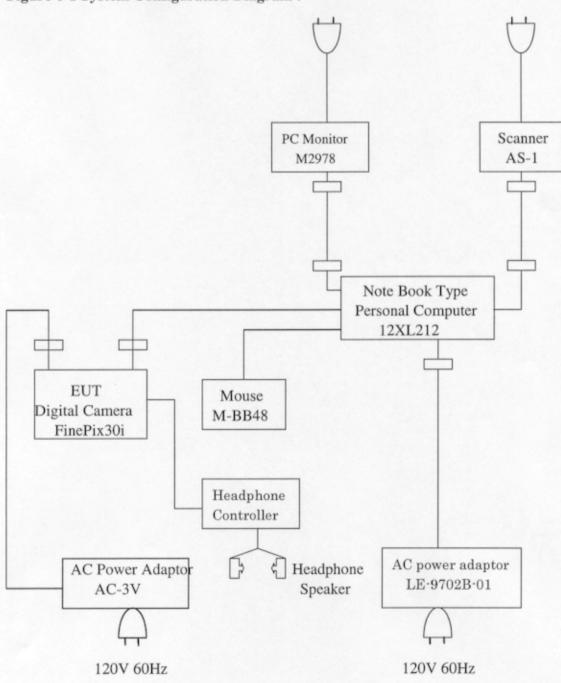
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Figure 6-1 System Configuration Diagram:





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## 7. TEST RESULTS

#### 7.1 Conducted Radio Noise Measurement

#### 7.1.1 Measurement Instrumentation Used:

(Model / Serial No. / Manufacturer)

Test Receiver ----- (ESCS 30 / 825788-007 / Rohde & Schwarz)

L. I. S. N ----- (KNW-407 / 8-823-10 / Kyoritsu Electrical)

L. I. S. N ----- (KNW-407 / 8-680-7 / Kyoritsu Electrical)

Spectrum Analyzer System ----- (8568S / 2445A00924 / Hewlett Packard)

### 7.1.2 Measurement Procedure:

The power line conducted interference measurements were performed in a shield enclosure with peripherals placed on a table, 80cm high over a metal floor. It was located more than required distance away from the shielded enclosure wall. The EUT was plugged into the L.I.S.N. and the frequency range of interest scanned.



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#### 7.1.3 Test Data

## Table 7.1-1 Conducted Radio Noise Measurement Results:

Operating mode: Camera Mode Da

Test Procedure: ANSI C63.4-1992

Date of measurement: July 31, 2001

Temperature: 22 degree C Humidity: 62 %

Frequency	Re.	sults	Results	Limit	Margin
	Meter Reading.		Emission Level		
	VA.	VB.			
(MHz)	MHz) (dBuV/m)		(dBuV/m)	(dBuV/m)	(dBuV/m)
0.5600	40.1	32.7	40.1	47.9	7.8
1.0100	34.5	37.8	37.8	47.9	10.1
1.3900	34.5	29.4	34.5	47.9	13.4
3.2400	23.7	18.5	23.7	47.9	24.2
9.5600	13.4	11.8	13.4	47.9	34.5
18.0000	21.3	19.7	21.3	47.9	26.6

#### Note:

- 1) Emission Levels are higher levels of VA or VB of Meter Readings + Correction Factor.
- 2) VA: Between one end of the power cable and the grounded.

VB: Between the other end of power cable and the grounded.

# 7.1.4 Conducted Radio Noise Calculation

The conducted radio noise is calculated by adding the calibration factor to the measured reading. The basic equation and a sample calculation are as follows:

CRN = TRM + CF

Margin = Limit - CRN

where CRN = Conducted Radio Noise (dBuV)

TRM = Test Receiver Reading (dBuV)

CF: Correction Factor (dB/m)

The Correction factor includes cable loss and LISN factor.



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#### 7.2 Radiated Radio Noise Measurement

#### 7.2.1 Measurement Instrumentation Used:

(Model / Serial No. / Manufacturer)

Test Receiver ----- (ESCS 30 / 834115-020 / Rohde & Schwarz)

Bi-Conical Antenna ----- (BBA9106 / D-6901 No.2 / Schwarzbeck)

Log-Periodic Antenna ----- (UHALP9107 / 424-517 / Schwarzbeck)

Spectrum Analyzer System ----- (8568S / 2445A00924 / Hewlett Packard)

### 7.2.2 Measurement Procedure:

The EUT was placed in a 80cm high table along with the peripherals.

The turntable was separated from the antenna at a distance of 3 meter. Cables were placed in a position to produce maximum emission as determined by experimentation, and operation mode was selected for maximum.

The frequencies and amplitudes of maximum emission were measured at varying azimuths, antenna heights and antenna polarities.



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### 7.2.3 Test Data

### Table 7.2-1 Radiated Radio Noise Measurement Results:

Operating mode: Audio Mode

Test Procedure: ANSI C63.4-1992

Date of measurement: July 31, 2001

Temperature: 31degree C

Humidity: 48%

Frequency	Correction Factor	Results Meter Reading.		Results Emission Level	Limit	Margin
(Mhz)	(dB)		RuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)
		Hori.	Vert.			
30.000	19.9	-	28.3	28.3	40.0	11.7
52.370	11.7	-	25.5	25.5	40.0	14.5
68.890	7.9	25.9	28.5	28.5	40.0	11.5
74.890	7.7	-	25.3	25.3	40.0	14.7
178.980	18.4	-	24.1	24.1	43.5	19.4
196.360	19.2	28.9	-	28.9	43.5	14.6
220.030	20.3	33.8	-	33.8	46.0	12.2
240.040	20.7	35.3	-	35.3	46.0	10.7
304.260	19.7	35.8	-	35.8	46.0	10.2
311.420	19.8	36.5	29.6	36.5	46.0	9.5
329.320	20.2	32.0	29.5	32.0	46.0	14.0
499.740	23.6	37.8	38.2	38.2	46.0	7.8
501.130	23.6	35.0	33.0	35.0	46.0	11.0
528.030	24.2	-	31.3	31.3	46.0	14.7
540.840	24.4	-	34.9	34.9	46.0	11.1
899.110	31.8	43.6	42.1	43.6	46.0	2.4

Note: 1) Meter Readings are corrected by all Correction Factors.

<sup>2)</sup> Emission Levels are higher levels of Hori. or Vert. of Meter Readings.

<sup>3)</sup> Margin = Limit - Emission Level.



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# 7.2.4 Radiated Radio Noise Calculation

The radiated radio noise is calculated by adding the correction factor to the measured reading. The basic equation and a sample of calculation are as follows;

RRN = TRM + CF Margin = Limit - RRN

where RRN = Radiated Radio Noise (dBuV)

TRM = Test Receiver Reading (dBuV)

CF: Correction Factor (dB/m), The correction factor includes pre-amplifier gain, cable loss and antenna factor.