

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

Telephone: (03) 3406-2934 Facsimiles: (03) 3406-9967

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FCC ID: F5GFP-6900

Part 15 Sub.part B Class B Digital Device

# 6. TESTED SYSTEM DETAILS

## 6.1 Peripherals and Others:

Description	Model Name	Serial No.	Manufacturer	FCC ID
Personal Computer	12XL212	V08FHNJE1N5	Compaq Computer Co., Ltd.	DOC
PC Monitor	M2978	CY52401HF3CV	LG Electronics, Inc.	BEJCA500
Video Monitor	PVM-8040	2029411	Sony Corp.	N/A
Scanner	AS-1	0009	Fuji Photo Film Co., Ltd.	F5GAS-1
Mouse	M-BB48	LZE01271677	Logitech	DOC
AC Adapter (for PC	C) LE-9702B-0	1 177625-001	Compaq Computer Co., Ltd.	N/A
AC Adaptor (for EU	UT) AC-5VS	9956	Fuji Photo Film Co., Ltd.	N/A

(for AC Adapter of EUT, Input: 120VAC, 60Hz / Output: 5VDC)

### 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
Mouse / Personal Computer	1.9 m	Shielded	N/A
AC Power Cord (PC Monitor)	1.7 m	Non-shielded	N/A
PC Monitor / Personal Computer	1.65 m	Shielded	Provided
Scanner / Personal Computer	1.5 m	Shielded	Provided
EUT / Personal Computer	1.5 m	Shielded	Add
DC Power Cord (PC/AC adaptor)	1.5 m	Shielded	Provided
AC Power Cord (PC/AC adapter)	1.7 m	Non-shielded	N/A
DC Power Cord (EUT/AC adaptor)	1.9 m	Shielded	Add
AC Power Cord (Scanner)	1.8 m	Non-shielded	N/A
EUT / Video Monitor	1.4 m	Shielded	Add
AC Power Cord (Video Monitor)	1.5 m	Non-shielded	N/A

#### Note:

<sup>\*</sup> Provided: The cable is an accessory for Personal Computer, Scanner or PC Monitor which was attached a ferrite core.



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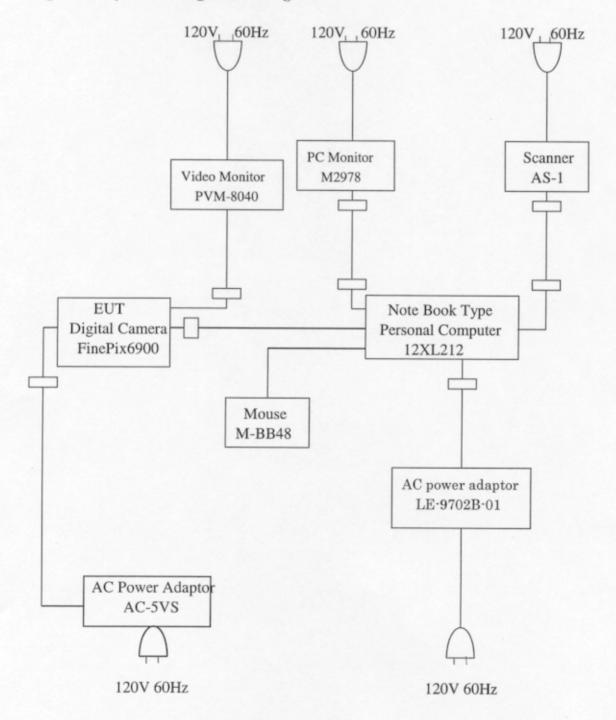
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Figure 6-1 System Configuration Diagram:





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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 Date of measurement: March 16, 2001
Test Procedure: ANSI C63.4-1992 Temperature: 15 degree C

Humidity: 58 %

Frequency	Results Meter Reading.		Results	Limit	Margin
			Emission Level		
	VA.	VB.			
(MHz)	(dBuV/m)		(dBuV/m)	(dBuV/m)	(dBuV/m)
0.4800	38.1	36.4	38.1	47.9	9.8
1.3100	37.5	37.5	37.5	47.9	10.4
2.4800	34.3	36.3	36.3	47.9	11.6
3.4100	37.6	36.8	37.6	47.9	10.3
5.2500	32.2	32.3	32.3	47.9	15.6
14.9900	27.8	20.4	27.8	47.9	20.1

#### Note:

- Emission Levels are higher levels of VA or VB of Meter Readings + Correction Factor.
- 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: USB Mode

Test Procedure: ANSI C63.4-1992

Date of measurement: March 16, 2001

Temperature: 15 degree C Humidity: 62 %

Frequency Correction Factor			rults Reading.	Results Emission Level	Limit	Margin
(Mhz)	(dB)	(dBuV/m)		(dBuV/m)	(dBuV/m)	(dBuV/m)
		Hori.	Vert.			
63.840	8.4	22.4	28.5	28.5	40.0	11.5
75.170	7.4	-	31.4	31.4	40.0	8.6
133.000	15.9	23.0	27.5	27.5	43.5	16.0
220.030	20.0	32.2	17.7	32.2	46.0	13.8
272.040	21.2	35.2	18.2	35.2	46.0	10.8
304.260	19.2	37.6	-	37.6	46.0	8.4
311.420	19.4	39.5	-	39.5	46.0	6.5
319.090	19.6	-	26.7	26.7	46.0	19.3
320.050	19.6	37.2	-	37.2	46.0	8.8
336.020	19.9	31.9	27.0	31.9	46.0	14.1
499.890	22.8	-	36.4	36.4	46.0	9.6
540.080	23.8	35.0	32.6	35.0	46.0	11.0
558.410	24.2	35.6	30.9	35.6	46.0	10.4
787.500	27.9	-	34.2	34.2	46.0	11.8
899.000	31.0	-	42.2	42.2	46.0	3.8

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.