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Cable:FUJIFILM TOKYO



## 6. TESTED SYSTEM DETAILS

### 6.1 Peripherals and Others:

| Description | Model Name | Serial No. | Manufacture | FCC ID |
|---|---|---|---|---|
| Personal Computer | PC 743 | TB42634595 | DEC Corp. | A09-PC74XWW |
| Keyboard | PCXAJ-BA | TB41403360 | DEC Corp. | N/A |
| Mouse | PC7XS-AA | LT40510969 | DEC Corp. | DZL210513 |
| CRT Display | GDM17SEIT | 2003751 | SONY Corp. | AK8GDM17SE1 |
| Printer | BJ-200 | SXS19225 | Canon Corp. | AZDK10110A |
| Label Writer | XL PLUSE | C944110071E | Costar Corp. | I73LWXL |
| AC Adapter | 6100-031 | N/A | Costar Corp. | N/A |
| PC Card Reader | CR-500 | 5200384 | FUJI FILM CO., LTD. | L5NPCD001 |

Note:
* 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 | 1.0 | Shielded | N/A |
| AC Power Cord(EUT) | 1.8 | Non-shielded | N/A |
| EUT/PC Card Reader | 1.8 | Shielded | N/A |
| AC Power Cord(PC Card Reader) | 1.8 | Non-shielded | N/A |
| AC Power Cord(Personal Computer) | 1.8 | Non-shielded | N/A |
| CRT Display/Personal Computer | 1.8 | Shielded | Provided |
| AC Power Cord(CRT Display) | 1.8 | Non-shielded | N/A |
| Keyboard/Personal Computer | 1.3 | Shielded | N/A |
| Mouse/Personal Computer | 1.85 | Shielded | N/A |
| Printer/Personal Computer | 1.0 | Shielded | N/A |
| Label Writer/Personal Computer | 1.8 | Non-shielded | N/A |
| AC Adapter(Label Writer) | 1.9 | Shielded | N/A |
| AC Power Cord(PC Card Reader) | 1.9 | Non-shielded | N/A |

Note:
*Provided: The cable is an accessory for CRT Display that was attached a ferrite core.

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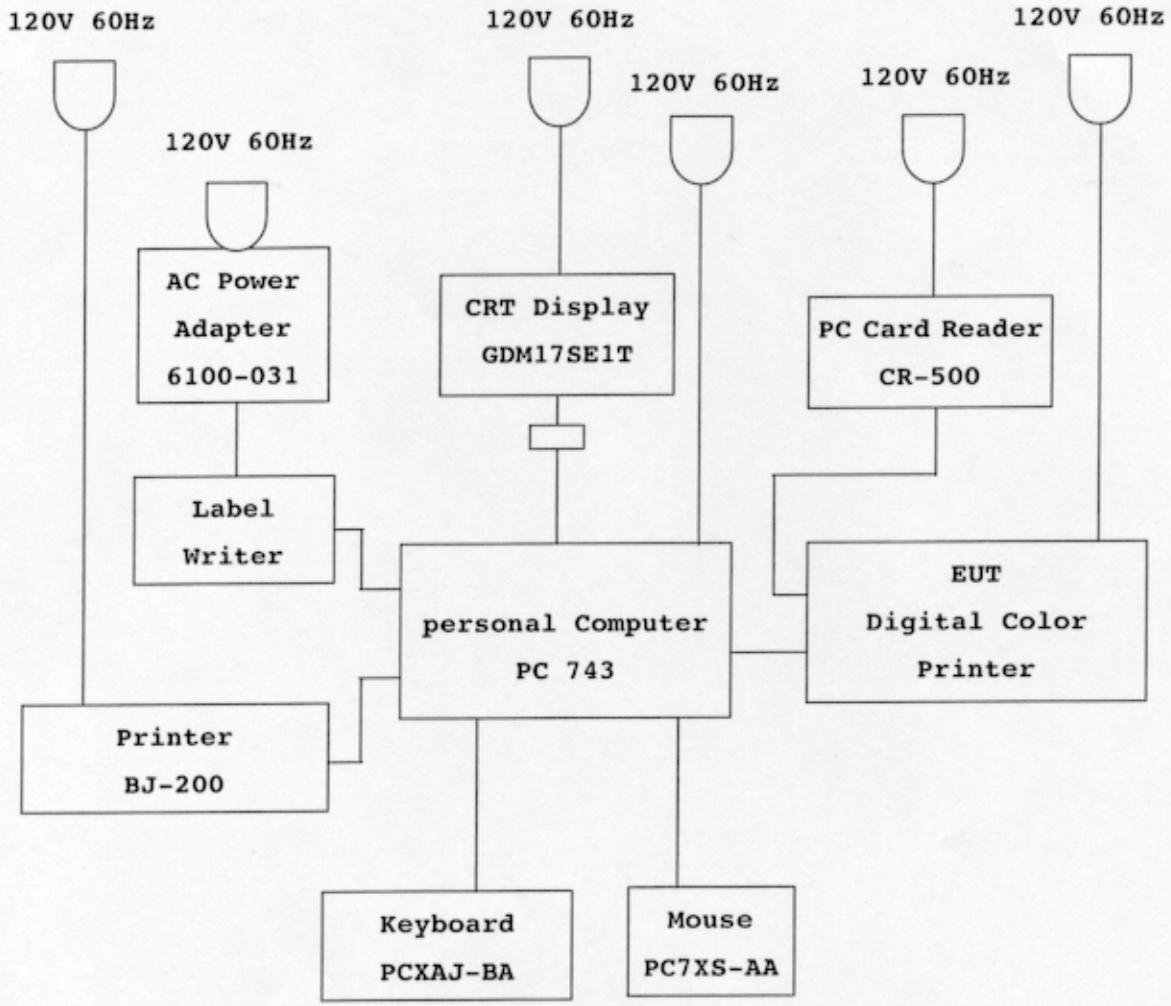
Figure 6-1 System Configuration Diagram:



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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 | (ESHS30 / 842053-001 / Rohde & Schwarz) |
| L.I.S.N | (KNW-407 / 8-833-5 / Kyoritsu Electrical) |
| L.I.S.N | (KNW-407 / 8-680-14 / Kyoritsu Electrical) |

### 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: Printing Date of measurement: July 2, 2002
Test Procedure: ANSI C63.4-1992 clause 11.5.2 Temperature: 23 degree C
Humidity: 83 %

| Frequency | Results Meter Reading. VA. | VB. | Results Emission Level | Limit | Margin |
|---|---|---|---|---|---|
| (MHz) | (dBuV/m) | | (dBuV/m) | (dBuV/m) | (dBuV/m) |
| 0.45 | 16.1 | 12.3 | 16.2 | 48.0 | 31.8 |
| 0.49 | 28.3 | 24.7 | 28.4 | 48.0 | 19.6 |
| 0.79 | 21.3 | 22.9 | 23.0 | 48.0 | 25.0 |
| 0.99 | 21.9 | 25.6 | 25.7 | 48.0 | 22.3 |
| 1.38 | 21.8 | 25.0 | 25.1 | 48.0 | 22.9 |
| 1.48 | 22.2 | 24.6 | 24.7 | 48.0 | 23.3 |
| 1.78 | 22.3 | 25.4 | 25.5 | 48.0 | 22.5 |
| 2.27 | 23.6 | 25.0 | 25.1 | 48.0 | 22.9 |
| 2.99 | 37.1 | 37.5 | 37.6 | 48.0 | 10.4 |
| 3.39 | 46.2 | 46.4 | 46.5 | 48.0 | 1.5 |
| 3.79 | 42.9 | 42.8 | 43.0 | 48.0 | 5.0 |
| 5.09 | 33.0 | 31.2 | 33.1 | 48.0 | 14.9 |
| 7.38 | 28.4 | 27.4 | 28.5 | 48.0 | 19.5 |
| 9.58 | 28.5 | 28.5 | 28.6 | 48.0 | 19.4 |
| 10.85 | 30.1 | 31.1 | 31.3 | 48.0 | 16.7 |
| 14.73 | 31.6 | 31.8 | 32.1 | 48.0 | 15.9 |
| 17.53 | 38.3 | 39.2 | 39.6 | 48.0 | 8.4 |
| 20.00 | 28.8 | 29.5 | 29.9 | 48.0 | 18.1 |
| 23.04 | 20.2 | 24.9 | 25.4 | 48.0 | 22.6 |
| 25.00 | 13.7 | 10.6 | 14.2 | 48.0 | 33.8 |
| 30.00 | 12.1 | 13.7 | 14.3 | 48.0 | 33.7 |

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.

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## 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 | (ESVS10 / 84231-004 / Rohde & Schwarz) |
| Bi-Conical Antenna | (BBA9106 / 11905065-2 / Schwarzbeck) |
| Log-Periodic Antenna | (UHALP9107 / 91031436 / Schwarzbeck) |

### 7.2.2 Measurement Procedure:

The EUT was placed in an 80cm high table along with the peripherals.
The turntable was separated from the antenna at a distance of 3 meter. Cable 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: Printing Date of measurement: July 2, 2002

Test Procedure: ANSI C63.4-1992 sec. 8.3.1.1 Temperature: 28 degree C

Humidity: 78 %

| Frequency (MHz) | Correction Factor (dB) | Results Meter Reading. (dBuV/m) Hor. | Vert. | Results Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dBuV/m) |
|---|---|---|---|---|---|---|
| 32.1 | 19.0 | < -2.0 | 5.1 | 24.1 | 40.0 | 15.9 |
| 44.0 | 14.8 | 11.1 | 9.4 | 25.9 | 40.0 | 14.1 |
| 55.0 | 11.4 | 2.0 | 13.7 | 25.1 | 40.0 | 14.9 |
| 61.6 | 9.6 | 5.9 | 15.0 | 24.6 | 40.0 | 15.4 |
| 99.9 | 12.3 | 10.5 | 7.8 | 22.8 | 43.5 | 20.7 |
| 115.6 | 14.7 | 6.9 | 8.2 | 22.9 | 43.5 | 20.6 |
| 150.0 | 17.6 | 11.8 | 10.4 | 29.4 | 43.5 | 14.1 |
| 168.0 | 18.8 | 12.7 | 12.2 | 31.5 | 43.5 | 12.0 |
| 187.0 | 19.6 | 2.8 | 4.0 | 23.6 | 43.5 | 19.9 |
| 225.0 | 20.8 | 8.0 | 14.0 | 34.8 | 46.0 | 11.2 |
| 244.0 | 21.5 | 5.0 | 2.5 | 26.5 | 46.0 | 19.5 |
| 262.5 | 22.4 | 14.5 | 11.3 | 36.9 | 46.0 | 9.1 |
| 299.9 | 23.9 | 10.0 | 9.4 | 33.9 | 46.0 | 12.1 |
| 333.1 | 21.7 | 10.2 | 10.3 | 32.0 | 46.0 | 14.0 |
| 360.0 | 22.3 | 10.0 | 12.4 | 34.7 | 46.0 | 11.3 |
| 407.9 | 23.0 | 14.0 | 10.2 | 37.0 | 46.0 | 9.0 |
| 450.0 | 24.4 | 10.2 | 11.1 | 35.5 | 46.0 | 10.5 |
| 487.5 | 25.5 | 10.0 | 16.8 | 42.3 | 46.0 | 3.7 |
| 525.0 | 26.4 | 7.9 | 14.0 | 40.4 | 46.0 | 5.6 |
| 637.5 | 28.7 | 5.2 | 6.5 | 35.2 | 46.0 | 10.8 |
| 850.0 | 32.7 | < -2.0 | < -2.0 | < 30.7 | 46.0 | > 15.3 |
| 1000.0 | 34.9 | < -2.0 | < -2.0 | < 32.9 | 54.0 | > 21.1 |

Note:

1) Meter Readings are corrected by all Correction Factors.
2) Emission Levels are higher levels of Hori. Or Vert. Of Meter Readings.
3) 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.