



**JAPAN QUALITY ASSURANCE ORGANIZATION**

21-25, KINUTA 1-CHOME, SETAGAYA-KU, TOKYO 157-8573 JAPAN

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JQA APPLICATION NO.: 400-30353

Issue Date : August 5, 2003

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## **EMI TEST REPORT**

JQA APPLICATION NO. : 400-30353

Model No. : RP7460H

Type of Equipment : Radio Controlled Toy  
(Superregenerative Type)

Regulations Applied : CFR 47 FCC Rules and Regulations Part 15

FCC ID : CVTRP7460H

Applicant : NIKKO CO., LTD.

Address : 1-7-14, Mizumoto, Katsushika-ku,  
Tokyo 125-0032, Japan

Manufacturer : NIKKO TEC INTERNATIONAL LTD.

Address : Rm. 601-603, Houston Center, 63, Mody Road,  
Tsimshatsui East, Kowloon, Hong Kong

Received date of EUT : July 30, 2003

**Final Judgment : Passed**

Test results in this report are obtained in use of equipment that is traceable to National Institute of Advanced Industrial Science and Technology (AIST) of Japan and Communication Research Laboratory (CRL) of Japan.

The test results only respond to the tested sample. This report should not be reproduced except in full, without the written approval of JQA EMC Engineering Dept. Testing Div.

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## **1 DOCUMENTATION**

### **1.1 TEST REGULATION**

FCC Rules and Regulations Part 15 Subpart A and B Superregenerative Receiver

#### **Test procedure :**

AC power line conducted emission, radiated emission and antenna conducted power tests were performed according to the procedures in ANSI C63.4-1992.

### **1.2 GENERAL INFORMATION**

#### **1.2.1 Test facility :**

1) Test Facility located at EMC Engineering Dept. Testing Div. :

- No.2 and 3 Anechoic Chambers( 3 meters Site ).
- Shielded Enclosure.

Expiration date of FCC test facility filing : May 27, 2005

2) EMC Engineering Dept. Testing Div. is recognized under the National Voluntary Laboratory accreditation Program for satisfactory compliance established in title 15, Part 285 Code of Federal Regulations.

NVLAP Lab Code : 200189-0 (Effective through : June 30, 2004)

#### **1.2.2 Description of the Equipment Under Test (EUT) :**

- |                                      |                              |
|--------------------------------------|------------------------------|
| 1) Type of Equipment                 | : Radio Controlled Toy       |
| 2) Product Type                      | : Production                 |
| 3) Category                          | : Superregenerative Receiver |
| 4) EUT Authorization                 | : Certification              |
| 5) FCC ID                            | : CVTRP7460H                 |
| 6) Trade Name                        | : NIKKO                      |
| 7) Model No.                         | : RP7460H                    |
| 8) Tuning Frequency Range            | : 49.830 MHz - 49.890 MHz    |
| 9) Highest Frequency Used in the EUT | : -                          |
| 10) Serial No.                       | : None                       |
| 11) Date of Manufacture              | : None                       |
| 12) Power Rating                     | : 1.2 VDC(Ni-MH Battery)     |
| 13) EUT Grounding                    | : None                       |

#### **1.2.3 Definitions for symbols used in this test report :**

- x   - indicates that the listed condition, standard or equipment is applicable for this report.
- indicates that the listed condition, standard or equipment is not applicable for this report.

### 1.3 TEST CONDITION

#### 1.3.1 The measurement of the AC Power Line Conducted Emission

☐ - was performed in the following test site.

☒ - was not applicable.

##### Test location :

Safety & EMC Center EMC Engineering Dept. Testing Div.

21-25, Kinuta 1-chome, Setagaya-ku, Tokyo 157-8573, Japan

☐ - Shielded Enclosure

☐ - Anechoic Chamber No. 2 (portable Type)

##### Used test instruments :

##### Type

##### Number of test instruments (Refer to Appendix)

Test Receiver

Spectrum Analyzer

Cable

AMN(for EUT)

AMN(for Peripheral)

Termination

COPY

### 1.3.2 The measurement of the Radiated Emission(30 MHz - 1000 MHz)

  x   - was performed in the following test site.

       - was not applicable.

#### Test location :

Safety & EMC Center EMC Engineering Dept. Testing Div.

21-25, Kinuta 1-chome, Setagaya-ku, Tokyo 157-8573, Japan

  x   - Anechoic Chamber No. 2 (3 meters)

       - Anechoic Chamber No. 3 (3 meters)

#### Validation of Site Attenuation :

1) Last Confirmed Date :March, 2003

2) Interval :1 year

#### Used test instruments :

##### Type

Test Receiver

Antenna

Cable

RF Amplifier

Signal Generator

##### Number of test instruments (Refer to Appendix)

TR05

AN02, AN06, AN08

CA01

N/A

SG05

### 1.3.3 The measurement of the Radiated Emission(Above 1000 MHz)

\_\_\_ - was performed in the following test site.

x - was not applicable.

#### Test location :

Safety & EMC Center EMC Engineering Dept. Testing Div.  
21-25, Kinuta 1-chome, Setagaya-ku, Tokyo 157-8573, Japan

\_\_\_ - No. 2 site (3 meters)

\_\_\_ - No. 3 site (3 meters)

#### Validation of Site Attenuation :

1) Last Confirmed Date :N/A

2) Interval :N/A

#### Used test instruments :

##### Type

Test Receiver  
Spectrum Analyzer  
Cable  
Antenna  
RF Amplifier

Number of test instruments  
(Refer to Appendix)

#### 1.3.4 The measurement of the Antenna Conducted Power

☐ - was performed in the following test site.

☒ - was not applicable.

#### Test location :

Safety & EMC Center EMC Engineering Dept. Testing Div.  
21-25, Kinuta 1-chome, Setagaya-ku, Tokyo 157-8573, Japan

☐ - Shielded Enclosure

☐ - Anechoic Chamber No. 2 (portable Type)

#### Used test instruments :

##### Type

##### Number of test instruments (Refer to Appendix)

Test Receiver

Spectrum Analyzer

Cable

RF Amplifier

COPY

**1.4 EUT MODIFICATION / Deviation from Standard****1.4.1 EUT MODIFICATION**

- ☒ - No modifications were conducted by JQA to achieve compliance to Class B levels.  
☐ - To achieve compliance to Class B levels, the following changes were made by JQA during the compliance test.

The modifications will be implemented in all production models of this equipment.

Applicant :

Date :

Typed Name :

Position :

**1.4.2 Deviation from Standard:**

- ☒ - No deviations from the standard described in clause 1.1.  
☐ - The following deviations were employed from the standard described in clause 1.1:

\_\_\_\_\_  
\_\_\_\_\_

## 1.5 TEST RESULTS / UNCERTAINTY

**AC Power Line Conducted Emission** ☐ - Applicable ☒ - NOT Applicable

The requirements are ☐ - PASSED ☐ - NOT PASSED

Min. Limit Margin dB at MHz

Max. Limit Exceeding dB at MHz

Uncertainty of Measurement Results +/- 2.4 dB (level of confidence:95%)

Remarks :

**Radiated Emission [§15.109(a)]**

☒ - Applicable ☐ - NOT Applicable

The requirements are ☒ - PASSED ☐ - NOT PASSED

Min. Limit Margin 22.1 dB at 50.50 MHz

Max. Limit Exceeding dB at MHz

Uncertainty of Measurement Results  
Biconical Antenna +/- 3.8 dB (level of confidence:95%)

Log-Periodic Antenna +/- 4.7 dB (level of confidence:95%)

Half Wave Dipole Antenna +/- 3.4 dB (level of confidence:95%)

Remarks:

**Antenna Conducted Power [§15.111]**

☐ - Applicable ☒ - NOT Applicable

The requirements are ☐ - PASSED ☐ - NOT PASSED

Min. Limit Margin dB at MHz

Max. Limit Exceeding dB at MHz

Uncertainty of Measurement Results +/- 2.1 dB (level of confidence:95%)

Remarks:

## 1.6 SUMMARY

### General Remarks :

The EUT was tested according to the requirements of FCC Rules and Regulations Part 15 Subpart A and B under the test configuration, as shown in clause 1.7 to 1.10. The conclusion for the test items which are required by the applied regulation is indicated under the final judgment.

### Final Judgment :

The "as received" sample;

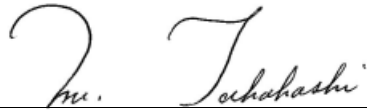
- x   - fulfill the test requirements of the regulation mentioned on clause 1.1.
- fulfill the test requirements of the regulation mentioned on clause 1.1, but with certain qualifications.
- doesn't fulfill the test regulation mentioned on clause 1.1.

Begin of testing : July 30, 2003

End of testing : July 30, 2003

### - JAPAN QUALITY ASSURANCE ORGANIZATION -

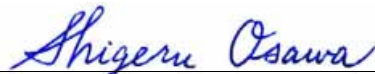
Approved by:



Masaaki Takahashi  
Senior Manager  
JQA EMC Engineering Dept.

Signatories:

Issued by:



Shigeru Osawa  
Assistant Manager  
JQA EMC Engineering Dept.

## 1.7 TEST CONFIGURATION / OPERATION OF EUT

### 1.7.1 Test Configuration

The equipment under test (EUT) consists of :

| Symbol | Item                 | Manufacturer                    | Model No. | FCC ID     | Serial No. |
|--------|----------------------|---------------------------------|-----------|------------|------------|
| A      | Radio Controlled Toy | NIKKO TEC<br>INTERNATIONAL LTD. | RP7460H   | CVTRP7460H | None       |

### 1.7.2 Operating condition

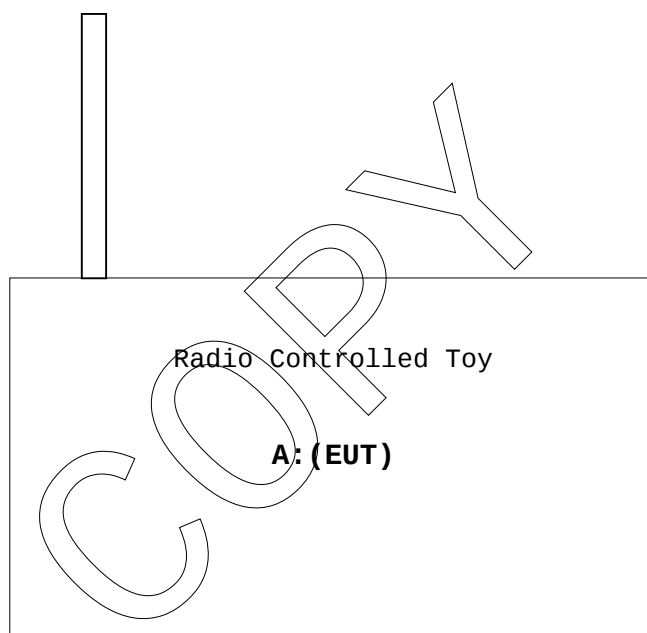
Power supply Voltage : 1.2 VDC(Ni-MH Battery)

The tests have been carried out under the receiving condition.

### 1.7.3 Generating and Operating frequency of EUT

N/A

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**1.8 EUT ARRANGEMENT (DRAWINGS)**

## 1.9 PRELIMINARY TEST AND TEST-SETUP (DRAWINGS)

### 1.9.1 AC Power Line Conducted Emission ( 150 kHz - 30 MHz ) :

According to description of ANSI C63.4-1992 sec.7.2.3, the AC power line preliminary conducted emissions measurements were carried out.

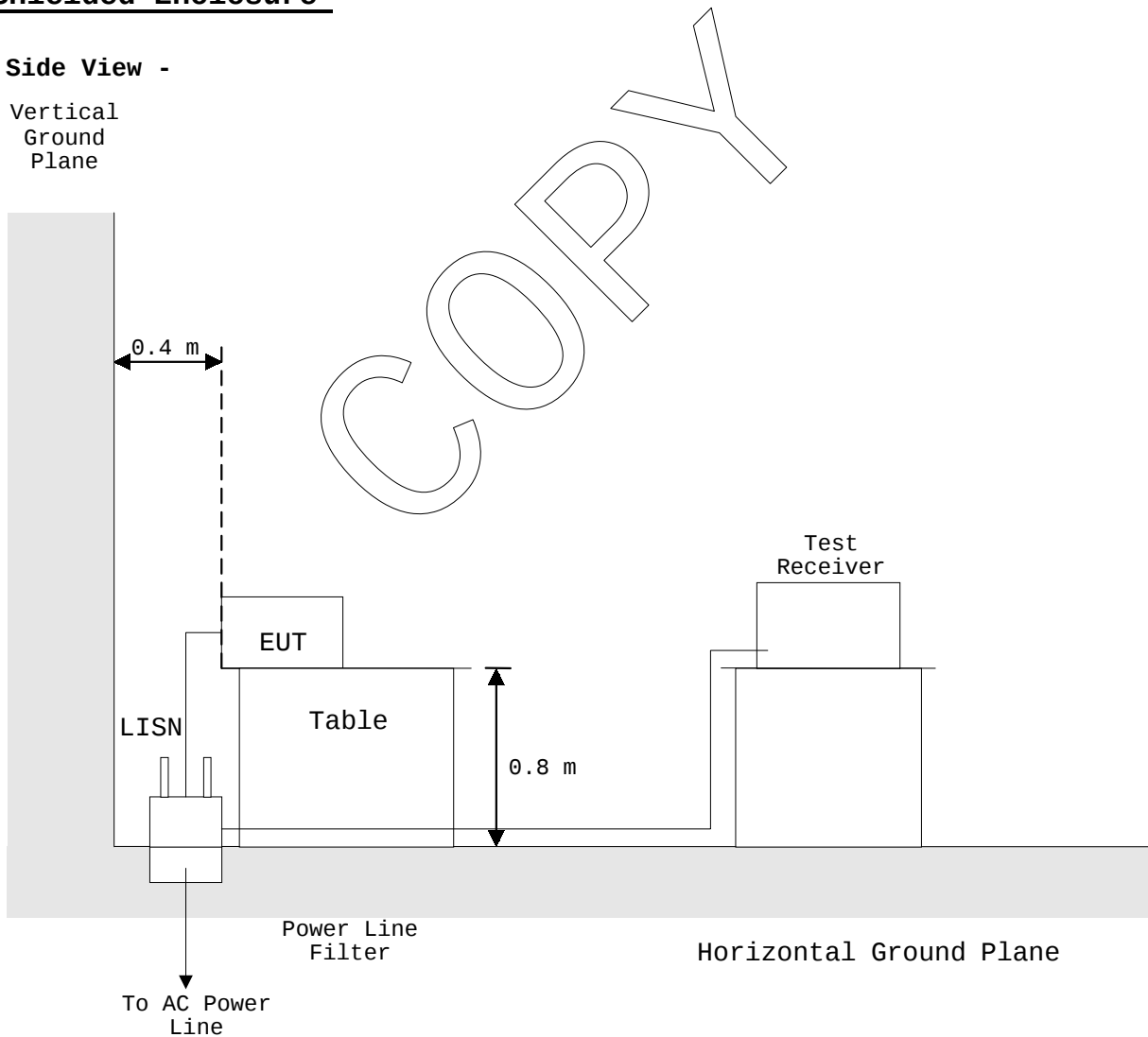
The preliminary conducted measurements were performed using the spectrum analyzer to observe the emission characteristics of the EUT.

The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions. These configurations were used for final AC power line conducted emissions measurements.

### Shielded Enclosure

#### - Side View -

Vertical  
Ground  
Plane



### 1.9.2 Radiated Emission ( 30 MHz - 1000 MHz ) :

According to description of ANSI C63.4-1992 sec.8.3.1.1, the preliminary radiated emissions measurements 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.

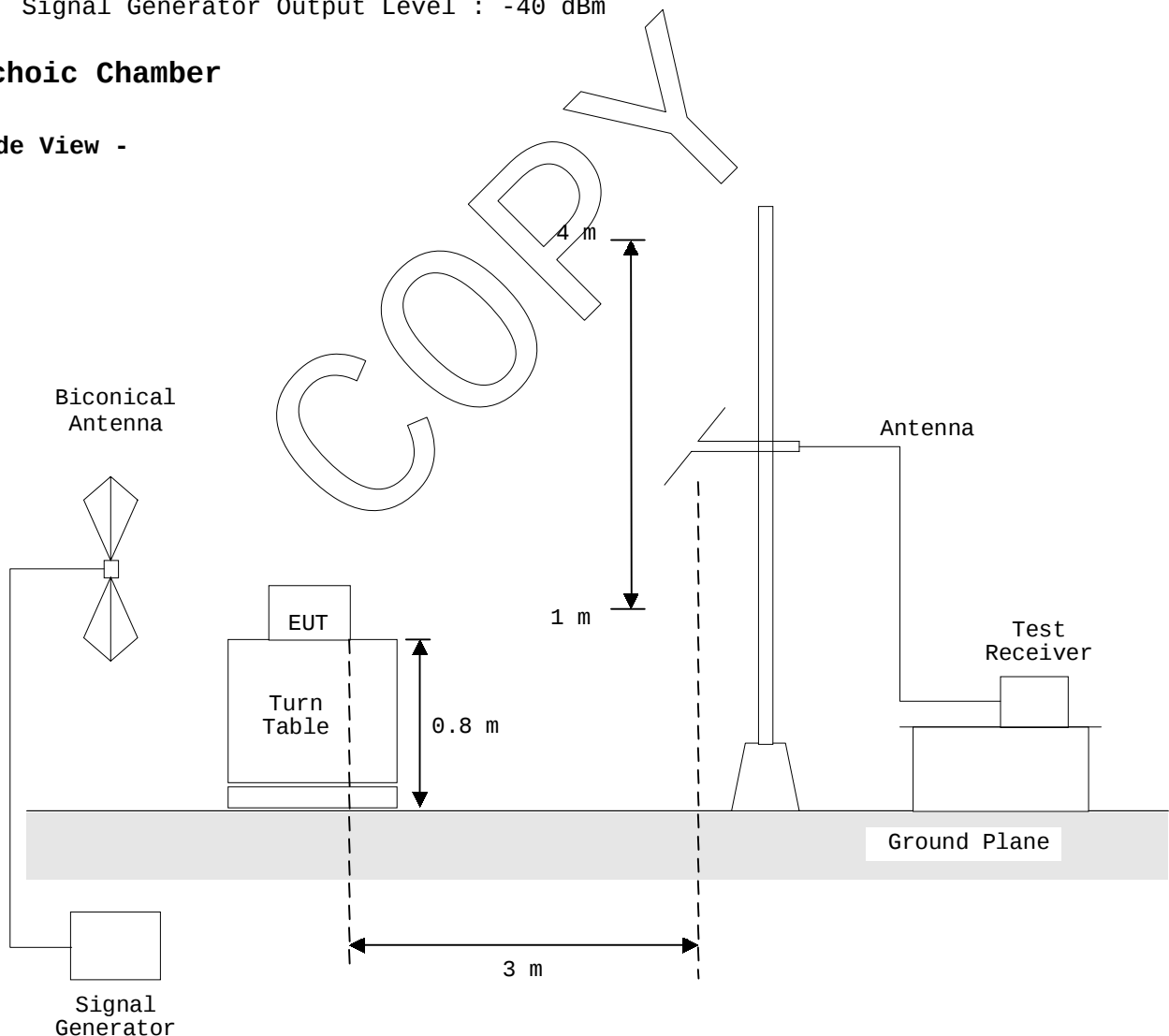
The EUT is a superregenerative receiver. The radiated measurements were carried out according to ANSI C63.4-1992 sec.12.1.1.1. Refer to the "cohere" plot below.

Signal Generator Frequency : 49.86 MHz

Signal Generator Output Level : -40 dBm

### Anechoic Chamber

- Side View -



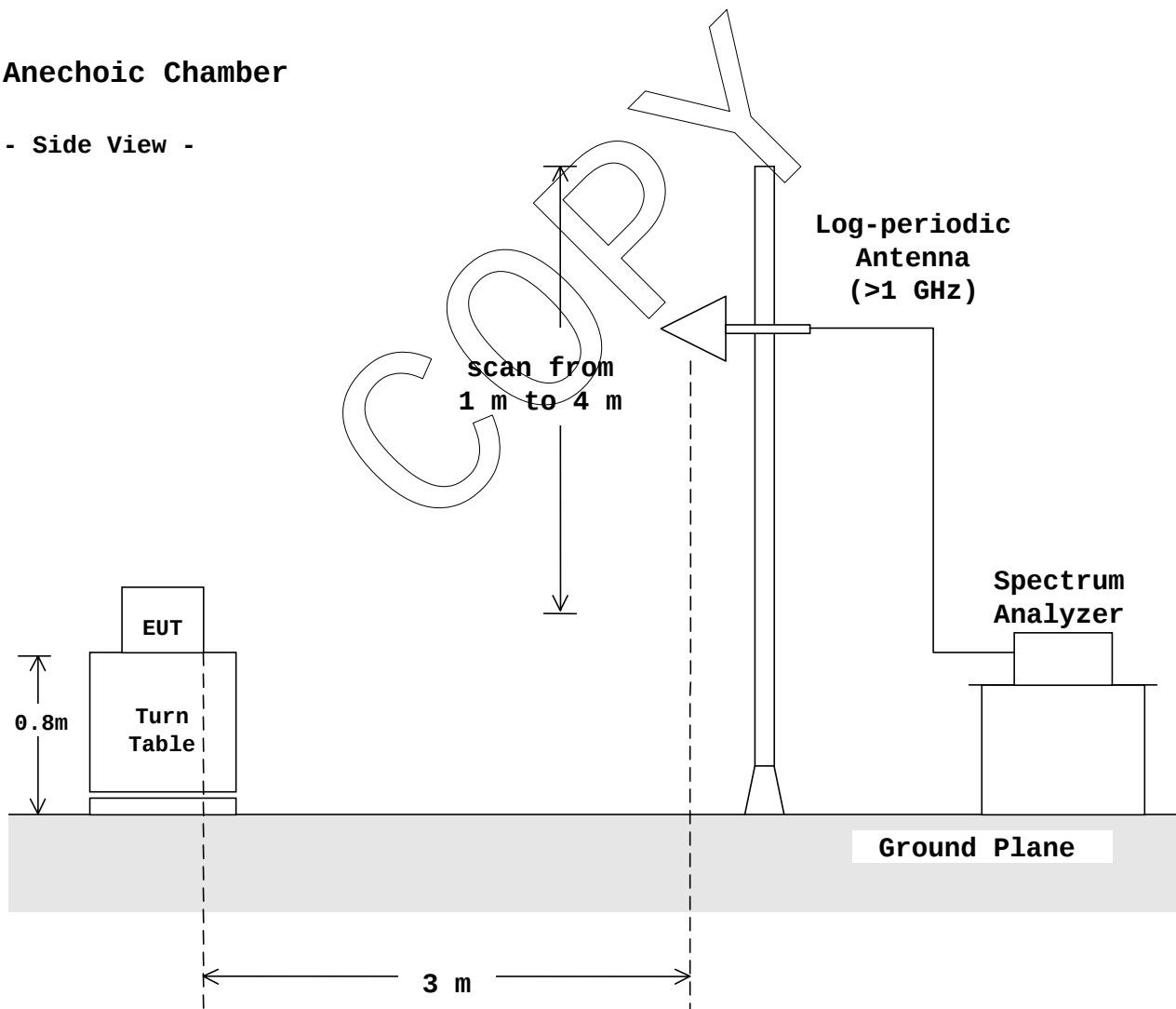
### 1.9.3 Radiated Emission (Above 1 GHz) :

According to description of ANSI C63.4-1992 sec.8.3.1.1, the preliminary radiated emissions measurements 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.

#### Anechoic Chamber

- Side View -



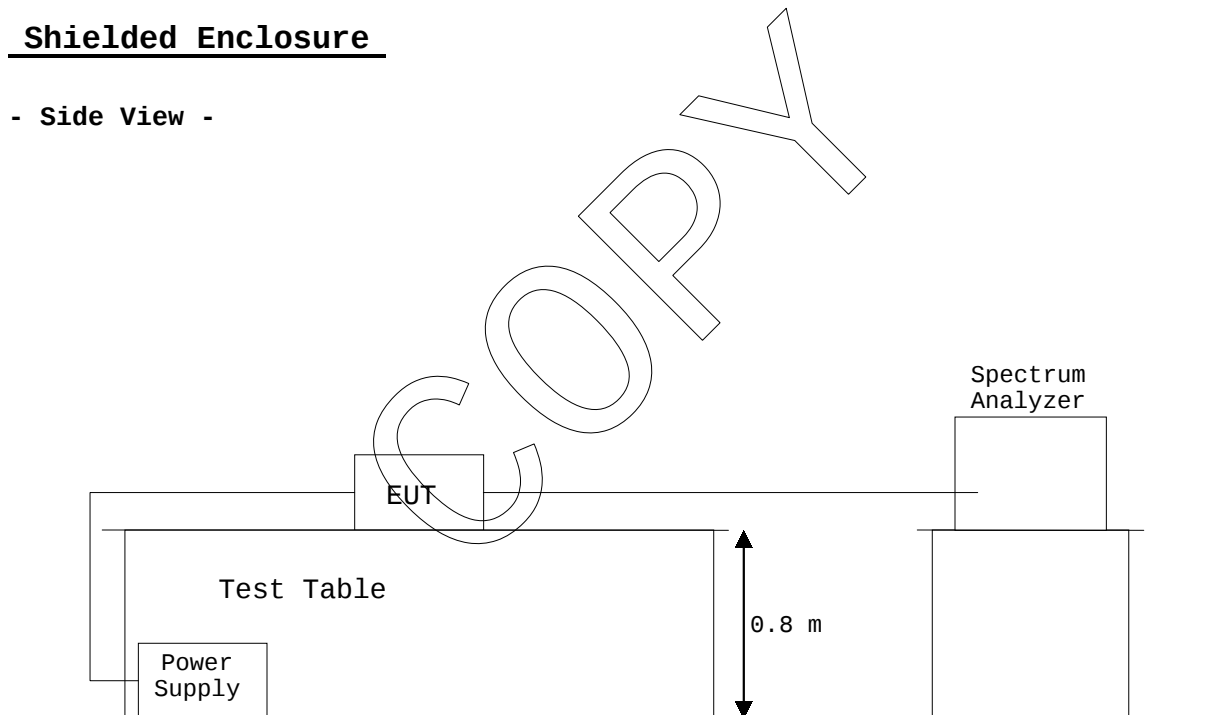
#### 1.9.4 Antenna Conducted Power :

According to description of ANSI C63.4-1992 sec.12.1.5, the antenna conducted power measurements were carried out.

Antenna-conducted power measurements shall be performed with the EUT antenna terminals connected directly to either a spectrum analyzer or another measuring instrument, if the antenna impedance matches the impedance of the measuring instrument. Otherwise, use a balun or impedance-matching network to connect the measuring instrument to antenna terminals of the EUT. Losses in decibels in any balun or impedance-matching network used shall be added to the measured value in dB $\mu$ V.

#### Shielded Enclosure

- Side View -



**1.10 TEST ARRANGEMENT (PHOTOGRAPHS)****PHOTOGRAPHS OF EUT CONFIGURATION FOR RADIATED EMISSIONS MEASUREMENT**

Photograph present configuration with maximum emission



## 2 TEST DATA

### 2.1 AC Power Line Conducted Emissions

Note : This test was not applicable.

### 2.2 Radiated Emissions Measurement

Tuning Frequency : 49.86 MHz  
 Distance of Measurement : 3.0 meters

Date : July 30, 2003

Temp. : 24 °C Humi. : 78 %

| Frequency<br>(MHz) | P-A<br>Factor<br>(dB) | Correction<br>Factor<br>(dB) | Polarization | Meter Reading<br>(dBuV) |    |      | Limits<br>(dBuV/m) |      | Emission Levels<br>(dBuV/m) |      | Margins<br>(dB) |      |
|--------------------|-----------------------|------------------------------|--------------|-------------------------|----|------|--------------------|------|-----------------------------|------|-----------------|------|
|                    |                       |                              |              | QP                      | AV | Peak | QP/AV              | Peak | QP/AV                       | Peak | QP/AV           | Peak |
| 50.50              | 0.0                   | 11.3                         | V            | 6.6                     | -  | -    | 40.0               | -    | 17.9                        | -    | 22.1            | -    |
| 52.00              | 0.0                   | 10.8                         | V            | 4.6                     | -  | -    | 40.0               | -    | 15.4                        | -    | 24.6            | -    |

Notes :

- 1) The spectrum was checked from 30 MHz to 1000 MHz.
- 2) The cable loss, amp. gain and antenna factor are included in the correction factor.
- 3) The symbol of "<" means "or less".
- 4) The symbol of ">" means "or greater".
- 5) A sample calculation(QP/AV) was made at 50.5 (MHz).  
 $PA + Cf + Mr = 0 + 11.3 + 6.6 = 17.9 \text{ (dBuV/m)}$   
 PA = Peak to Average Factor(P-A Factor)  
 Cf = Correction Factor  
 Mr = Meter Reading

6) Measuring Instrument Setting :

| Detector function | Resolution Bandwidth | Video Bandwidth |
|-------------------|----------------------|-----------------|
| Quasi-peak(QP)    | 120 kHz              | -               |
| Average(AV)       | 1 MHz                | 10 Hz           |
| Peak              | 1 MHz                | 1 MHz           |

Tested by :

*Y. Nakajima*

Yoichi Nakajima  
 Testing Engineer

### 2.3 Antenna Conducted Power Measurement

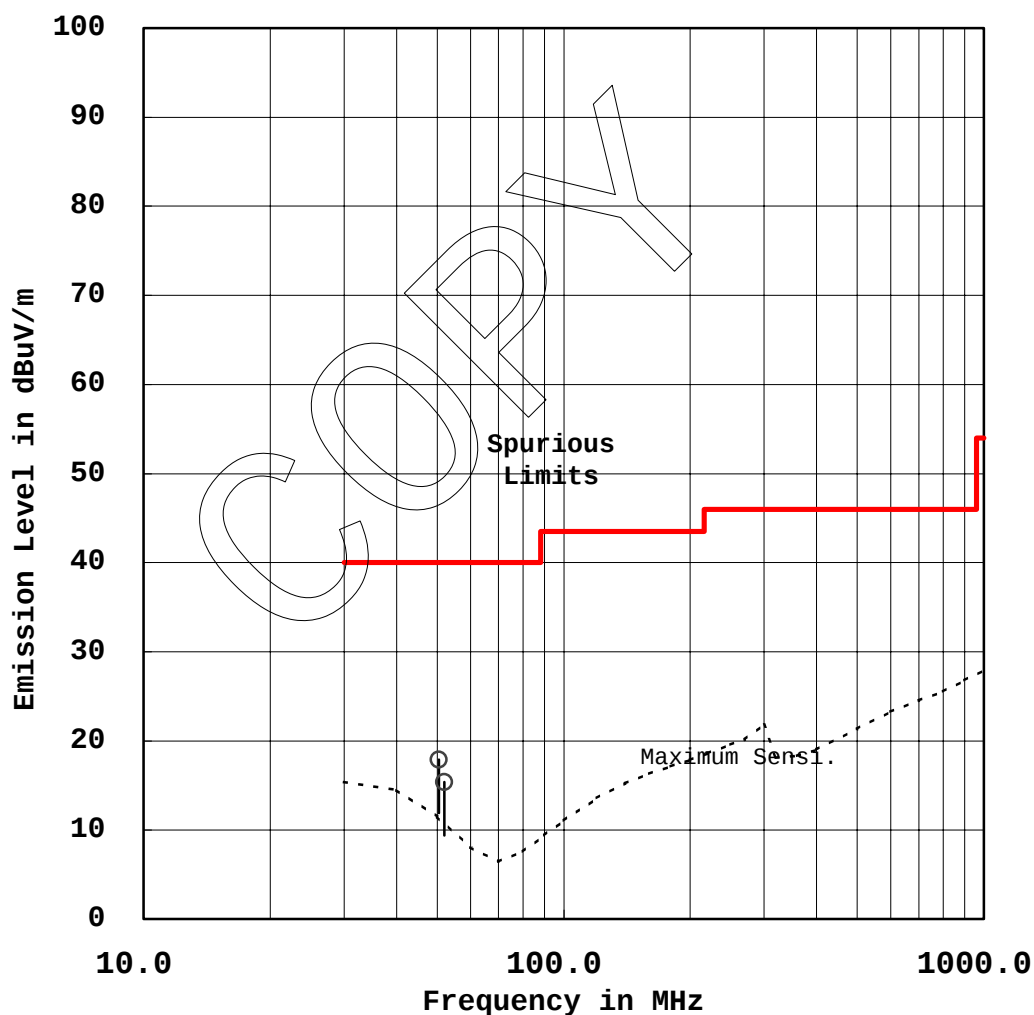
Note : This test was not applicable

## RADIATED EMISSION MEASUREMENT

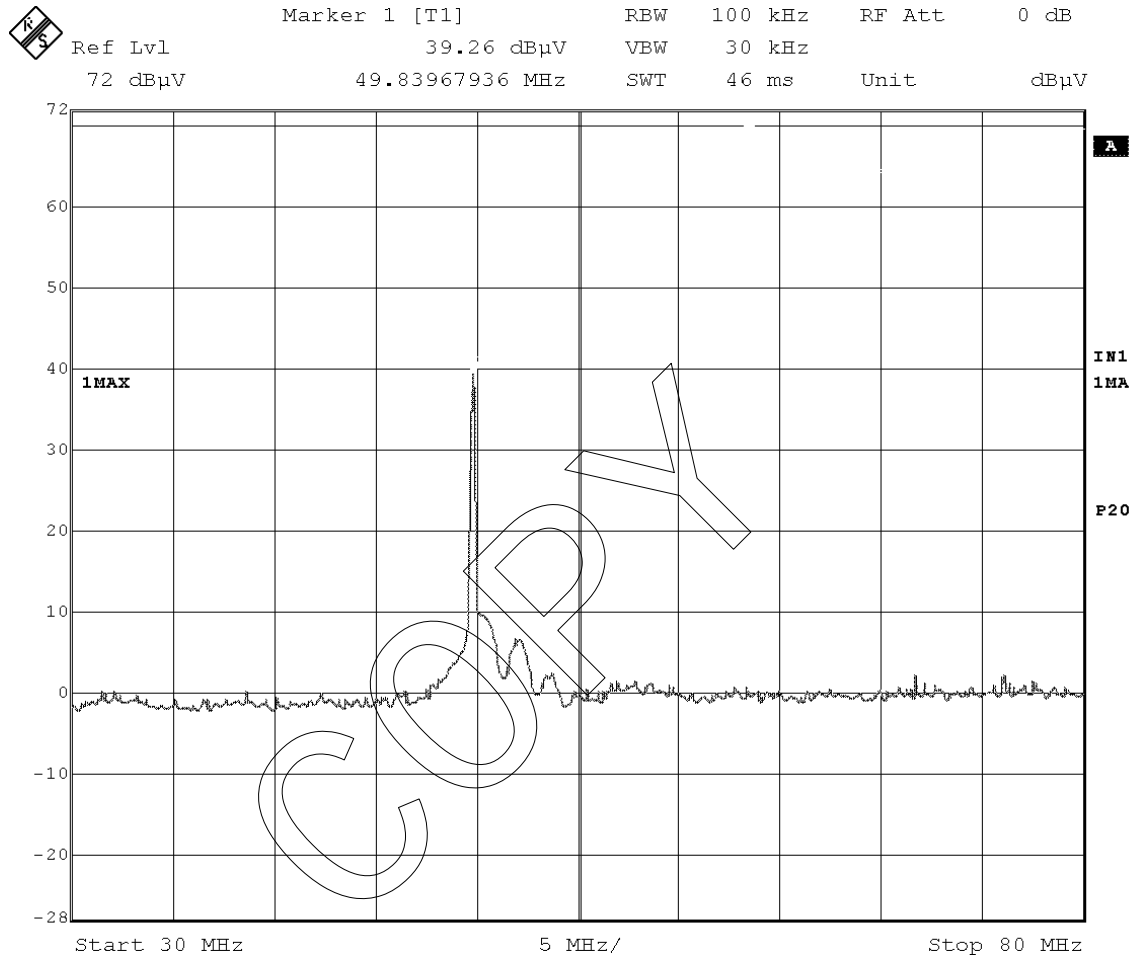
Model No. : RP7460H

Standard : CFR 47 FCC Rules Part 15 0 QP/AV

Tuning Frequency(MHz) : 49.86



## Coherent Emission Plot



# Appendix

## Test Instruments List

COPY

August 5, 2003

## Test Receivers

| No.  | Type          | Model  | Manufacturer    | Serial     | ID           | Last Cal. | Interval |
|------|---------------|--------|-----------------|------------|--------------|-----------|----------|
| TR01 | Test Receiver | ESH2   | Rohde & Schwarz | 880370/016 | 119-01-503E0 | May 2003  | 1 Year   |
| TR02 | Test Receiver | ESH3   | Rohde & Schwarz | 881460/030 | 119-01-023E0 | May 2003  | 1 Year   |
| TR03 | Test Receiver | ESHS10 | Rohde & Schwarz | 835871/004 | 119-01-505E0 | May 2003  | 1 Year   |
| TR04 | Test Receiver | ESV    | Rohde & Schwarz | 872148/039 | 119-03-008E0 | May 2003  | 1 Year   |
| TR05 | Test Receiver | ESVS10 | Rohde & Schwarz | 826148/002 | 119-03-504E0 | May 2003  | 1 Year   |
| TR06 | Test Receiver | ESVS10 | Rohde & Schwarz | 832699/001 | 119-03-506E0 | May 2003  | 1 Year   |
| TR07 | Test Receiver | ESI26  | Rohde & Schwarz | 100043     | 119-04-511E0 | Aug. 2003 | 1 Year   |

## Spectrum Analyzers

| No.  | Type              | Model  | Manufacturer    | Serial     | ID           | Last Cal. | Interval |
|------|-------------------|--------|-----------------|------------|--------------|-----------|----------|
| SA01 | Spectrum Analyzer | 8560E  | Hewlett Packard | 3240A00189 | 122-02-504E0 | Oct. 2002 | 1 Year   |
| SA02 | Spectrum Analyzer | 8566B  | Hewlett Packard | 2140A01091 | 122-02-501E0 | Oct. 2002 | 1 Year   |
| SA03 | RF Pre-selector   | 85685A | Hewlett Packard | 2648A00522 | 122-02-503E0 | Oct. 2002 | 1 Year   |
| SA04 | Spectrum Analyzer | 8566B  | Hewlett Packard | 2747A05855 | 122-02-517E0 | Apr. 2003 | 1 Year   |
| SA05 | RF Pre-selector   | 85685A | Hewlett Packard | 2901A00933 | 122-02-519E0 | Apr. 2003 | 1 Year   |
| SA06 | Spectrum Analyzer | R3132  | ADVANTEST       | 120500072  | 122-02-520E0 | Sep. 2002 | 1 Year   |
| SA07 | Spectrum Analyzer | R3182  | ADVANTEST       | 120600581  | 122-02-521E0 | Feb. 2003 | 1 Year   |

## Antennas

| No.  | Type              | Model     | Manufacturer     | Serial      | ID           | Last Cal. | Interval |
|------|-------------------|-----------|------------------|-------------|--------------|-----------|----------|
| AN01 | Loop Antenna      | HFH2-Z2   | Rohde & Schwarz  | 881058/62   | 119-05-033E0 | Jun. 2003 | 1 Year   |
| AN02 | Dipole Antenna    | KBA-511   | Kyoritsu         | 0-170-1     | 119-05-506E0 | Nov. 2002 | 1 Year   |
| AN03 | Dipole Antenna    | KBA-511A  | Kyoritsu         | 0-201-13    | 119-05-504E0 | Nov. 2002 | 1 Year   |
| AN04 | Dipole Antenna    | KBA-611   | Kyoritsu         | 0-147-14    | 119-05-507E0 | Nov. 2002 | 1 Year   |
| AN05 | Dipole Antenna    | KBA-611   | Kyoritsu         | 0-201-5     | 119-05-505E0 | Nov. 2002 | 1 Year   |
| AN06 | Biconical Antenna | BBA9106   | Schwarzbeck      | VHA91031150 | 119-05-111E0 | Nov. 2002 | 1 Year   |
| AN07 | Biconical Antenna | BBA9106   | Schwarzbeck      | -           | 119-05-078E0 | Nov. 2002 | 1 Year   |
| AN08 | Log-peri. Antenna | UHALP9107 | Schwarzbeck      | -           | 119-05-079E0 | Nov. 2002 | 1 Year   |
| AN09 | Log-peri. Antenna | UHALP9107 | Schwarzbeck      | -           | 119-05-110E0 | Nov. 2002 | 1 Year   |
| AN10 | Log-peri. Antenna | HL025     | Rohde & Schwarz  | 340182/015  | 119-05-100E0 | Jan. 2003 | 1 Year   |
| AN11 | Horn Antenna      | 3115      | EMC Test Systems | 6442        | 119-05-514E0 | Jan. 2003 | 1 Year   |
| AN12 | Horn Antenna      | 3116      | EMC Test Systems | 2547        | 119-05-515E0 | May 2003  | 1 Year   |

## Networks

| No.  | Type | Model    | Manufacturer | Serial   | ID           | Last Cal. | Interval |
|------|------|----------|--------------|----------|--------------|-----------|----------|
| NE01 | LISN | KNW-407  | Kyoritsu     | 8-833-6  | 149-04-052E0 | Apr. 2003 | 1 Year   |
| NE02 | LISN | KNW-407  | Kyoritsu     | 8-855-2  | 149-04-055E0 | Apr. 2003 | 1 Year   |
| NE03 | LISN | KNW-407  | Kyoritsu     | 8-1130-6 | 149-04-062E0 | Apr. 2003 | 1 Year   |
| NE04 | LISN | KNW-242C | Kyoritsu     | 8-837-13 | 149-04-054E0 | Apr. 2003 | 1 Year   |

## Cables

| No.  | Type               | Model         | Manufacturer    | Serial   | ID           | Last Cal. | Interval |
|------|--------------------|---------------|-----------------|----------|--------------|-----------|----------|
| CA01 | RF Cable           | 5D-2W         | Fujikura        | -        | 155-21-001E0 | Feb. 2003 | 1 Year   |
| CA02 | RF Cable           | 5D-2W         | Fujikura        | -        | 155-21-002E0 | Feb. 2003 | 1 Year   |
| CA03 | RF Cable           | 3D-2W         | Fujikura        | -        | 155-21-005E0 | Apr. 2003 | 1 Year   |
| CA04 | RF Cable           | 3D-2W         | Fujikura        | -        | 155-21-006E0 | Apr. 2003 | 1 Year   |
| CA05 | RF Cable           | 3D-2W         | Fujikura        | -        | 155-21-007E0 | Apr. 2003 | 1 Year   |
| CA06 | RF Cable           | RG-213/U      | Rohde & Schwarz | -        | 155-21-010E0 | Apr. 2003 | 1 Year   |
| CA07 | RF Cable(10m)      | S 04272B      | Suhner          | -        | 155-21-011E0 | May 2003  | 1 Year   |
| CA08 | RF Cable(2m 18GHz) | SUCOFLEX 104  | Suhner          | -        | 155-21-012E0 | May 2003  | 1 Year   |
| CA09 | RF Cable(1m 18GHz) | SUCOFLEX 104  | Suhner          | -        | 155-21-013E0 | May 2003  | 1 Year   |
| CA10 | RF Cable(1m N)     | S 04272B      | Suhner          | -        | 155-21-015E0 | May 2003  | 1 Year   |
| CA11 | RF Cable(1m 26GHz) | SUCOFLEX 104  | Suhner          | 182811/4 | 155-21-016E0 | Dec. 2002 | 1 Year   |
| CA12 | RF Cable(4m 26GHz) | SUCOFLEX 104  | Suhner          | 190630   | 155-21-017E0 | Dec. 2002 | 1 Year   |
| CA13 | RF Cable(10m)      | F130-S1S1-394 | MEGA PHASE      | 10510    | 155-21-018E0 | Dec. 2002 | 1 Year   |

## Amplifiers

| No.  | Type         | Model                  | Manufacturer    | Serial     | ID           | Last Cal. | Interval |
|------|--------------|------------------------|-----------------|------------|--------------|-----------|----------|
| AM01 | AF Amplifier | P-500L                 | Accuphase       | BOY806     | 127-01-501E0 | Feb. 2003 | 1 Year   |
| AM02 | RF Amplifier | 8447D                  | Hewlett Packard | 1937A02168 | 127-01-065E0 | May 2003  | 1 Year   |
| AM03 | RF Amplifier | 8447D                  | Hewlett Packard | 2944A07289 | 127-01-509E0 | May 2003  | 1 Year   |
| AM05 | RF Amplifier | DBP-0102N553           | DBS Microwave   | 012        | 127-02-504E0 | Jun. 2003 | 1 Year   |
| AM06 | RF Amplifier | WJ-6882-814            | Watkins-Johnson | 0414       | 127-04-017E0 | Jun. 2003 | 1 Year   |
| AM07 | RF Amplifier | WJ-5315-556            | Watkins-Johnson | 106        | 127-04-006E0 | Jun. 2003 | 1 Year   |
| AM08 | RF Amplifier | WJ-5320-307            | Watkins-Johnson | 645        | 127-04-005E0 | Jun. 2003 | 1 Year   |
| AM09 | RF Amplifier | JS4-00102600<br>-28-5A | MITEQ           | 669167     | 127-04-502E0 | Apr. 2003 | 1 Year   |

## Signal Generators

| No.  | Type               | Model    | Manufacturer             | Serial     | ID           | Last Cal. | Interval |
|------|--------------------|----------|--------------------------|------------|--------------|-----------|----------|
| SG01 | Function Generator | 3325B    | Hewlett Packard          | 2847A03284 | 118-08-124E0 | Jul. 2003 | 1 Year   |
| SG02 | Function Generator | VP-7422A | Matsushita Communication | 050351E122 | 118-08-503E0 | Jul. 2003 | 1 Year   |
| SG03 | Signal Generator   | 8664A    | Hewlett Packard          | 3035A00140 | 118-03-014E0 | Jun. 2003 | 1 Year   |
| SG04 | Signal Generator   | 8664A    | Hewlett Packard          | 3438A00756 | 118-04-502E0 | Jun. 2003 | 1 Year   |
| SG05 | Signal Generator   | 6061A    | Gigatronics              | 5130593    | 118-04-024E0 | Mar. 2003 | 1 Year   |

## Auxiliary Equipment

| No.  | Type                | Model          | Manufacturer    | Serial     | ID           | Last Cal. | Interval |
|------|---------------------|----------------|-----------------|------------|--------------|-----------|----------|
| AU01 | Termination(50)     | -              | Suhner          | -          | 154-06-501E0 | Jan. 2003 | 1 Year   |
| AU02 | Termination(50)     | -              | Suhner          | -          | 154-06-502E0 | Jan. 2003 | 1 Year   |
| AU03 | Power Meter         | 436A           | Hewlett Packard | 1725A01930 | 100-02-501E0 | Apr. 2003 | 1 Year   |
| AU04 | Power Sensor        | 8482A          | Hewlett Packard | 1551A01013 | 100-02-501E0 | Apr. 2003 | 1 Year   |
| AU05 | Power Sensor        | 8485A          | Hewlett Packard | 2942A08969 | 100-04-021E0 | Apr. 2003 | 1 Year   |
| AU06 | FM Linear Detector  | MS61A          | Anritsu         | M77486     | 123-02-008E0 | Oct. 2002 | 1 Year   |
| AU07 | Level Meter         | ML422C         | Anritsu         | M87571     | 114-02-501E0 | Jun. 2003 | 1 Year   |
| AU08 | Measuring Amplifier | 2636           | B & K           | 1614851    | 082-01-502E0 | Jun. 2003 | 1 Year   |
| AU09 | Microphone          | 4134           | B & K           | 1269477    | 147-01-503E0 | May 2003  | 1 Year   |
| AU10 | Preamplifier        | 2639           | B & K           | 1268763    | 127-01-504E0 | May 2003  | 1 Year   |
| AU11 | Pistonphone         | 4220           | B & K           | 1165008    | 147-02-501E0 | Mar. 2003 | 1 Year   |
| AU12 | Artificial Mouth    | 4227           | B & K           | 1274869    | -            | N/A       | N/A      |
| AU13 | Frequency Counter   | 53131A         | Hewlett Packard | 3546A11807 | 102-02-075E0 | May 2003  | 1 Year   |
| AU14 | Oven                | -              | Ohnishi         | -          | 023-02-018E0 | May 2003  | 1 Year   |
| AU15 | DC Power Supply     | 6628A          | Hewlett Packard | 3224A00284 | 072-05-503E0 | Jun. 2003 | 1 Year   |
| AU16 | Band Reject Filter  | BRM12294       | Micro-tronics   | 003        | 149-01-501E0 | Jan. 2003 | 1 Year   |
| AU17 | High Pass Filter    | F-100-4000-5-R | RLC Electronics | 0149       | 149-01-502E0 | Feb. 2003 | 1 Year   |
| AU18 | Attenuator          | 43KC-10        | Anritsu         | -          | 148-03-506E0 | Feb. 2003 | 1 Year   |
| AU19 | Attenuator          | 43KC-20        | Anritsu         | -          | 148-03-507E0 | Feb. 2003 | 1 Year   |
| AU20 | Attenuator          | 355D           | Hewlett Packard | 219-10782  | 148-03-065E0 | Apr. 2003 | 1 Year   |
| AU21 | FFT Analyzer        | R9211C         | Advantest       | 02020253   | 122-02-506E0 | June 2003 | 1 Year   |
| AU22 | Noise Meter         | MN-446         | Meguro          | 53030478   | 082-01-144E0 | Apr. 2003 | 1 Year   |