(e) Report of Measurement

-- Under FCC Rules and Regulations Parts 2 and 74 --

Report Date : June 17, 1998

Manufacturer:	Sony Corporation
Manufacturer's Address:	7-35 Kitashinagawa 6-chome Shinagawa-ku, Tokyo, 141-0001 JAPAN
Trade Name:	SONY
Model Number:	WRT-800A(66) (FCC ID: AK8WRT800A66)
Commodity:	UHF SYNTHESIZED WIRELESS MICROPHONE
Test Method:	All Measurements were performed in accordance with the applicable sections in FCC Rules and Regulations Part 2 and 74.

I hereby state that the measurements shown in this report were made in accordance with the procedures indicated. I assume full responsibility for the accuracy of these measurements and vouch for the qualifications of all persons taking them.

Signed by:	Name (Print): K. Nakayama for K. Nakayama	Title: Manager, Product Safety Quality Assurance Department Broadcasting & Professional Systems Company
Company Name: Sony Corporation	Address: 7-35 Kitashinagawa 6-chome Shinagawa-ku, Tokyo, Japan	

2.985 RF power output (The effective radiated power output)

A. Measurement procedure

1. The measurement shall be made on an open field test site which is free from reflecting objects that may affect the measurement results.

2. For radiated power output of the equipment, the measuring antenna was raised and lowered to obtain a maximum reading on the spectrum analyzer with the antenna vertically and horizontally polarized. The turntable was rotated a minimum of 360° to further increase the reading on the spectrum analyzer. Then field strength was recorded in dBμV/m.

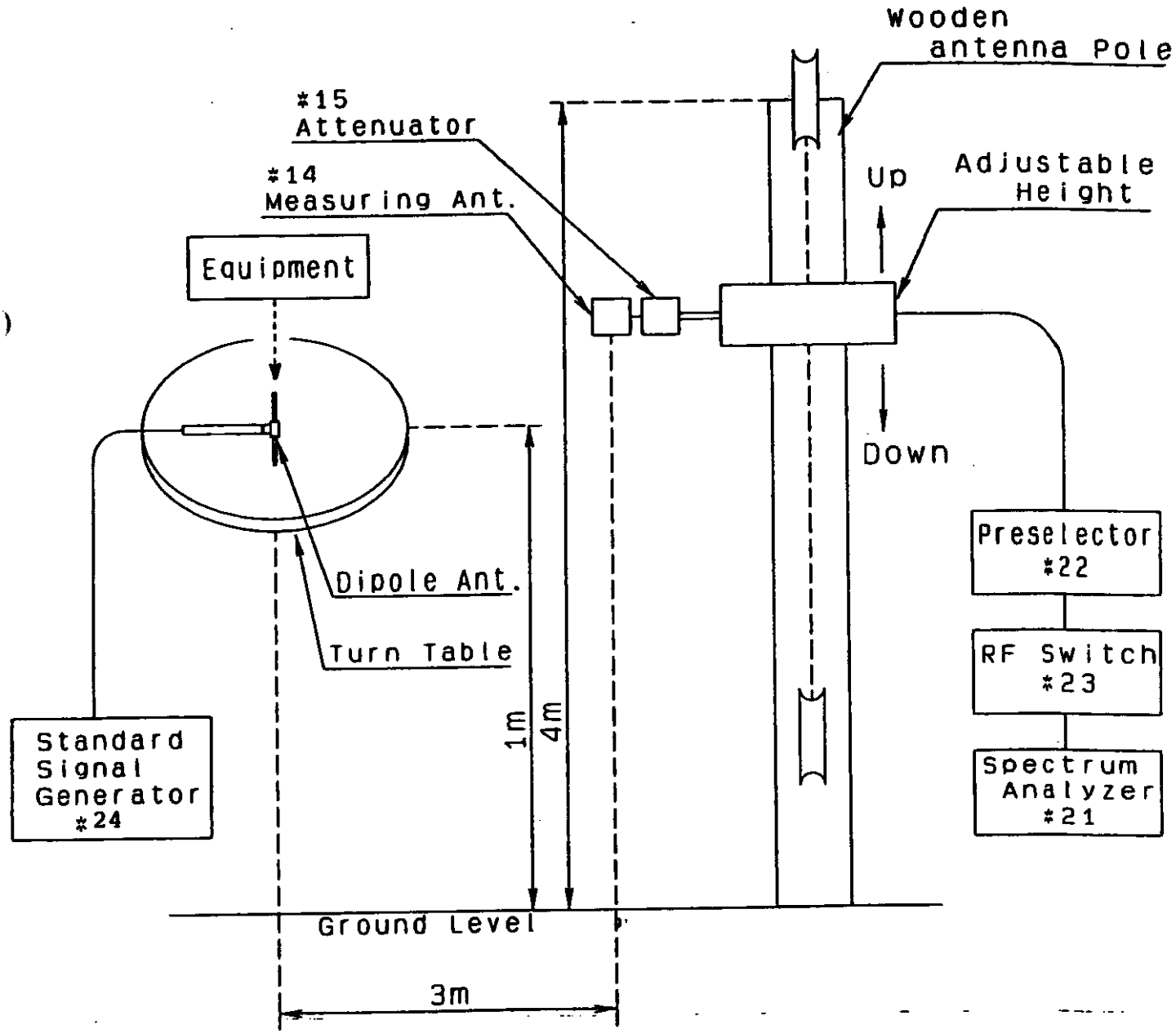
3. The unit was removed and replaced with a dipole antenna. (The antenna was adjusted to a half-wave of transmitting frequency.) The center of the dipole antenna was placed approximately at the same location as the center of the unit.

4. The dipole antenna at the unit end was connected to a signal generator with a coaxial cable. With the antennas at both ends vertically and horizontally polarized and signal generator tuned to the transmitting frequency, the level of the signal generator output was adjusted to the previously recorded maximum reading for this set of conditions was obtained.

5. The input power into the dipole antenna was calculated from the coaxial cable loss and the signal generator output voltage obtained in these readings.

6. After changed from the wire type antenna to the helical one, the unit should be re-measured according to the above Item 2-5.

For the setup, refer to the diagram below.



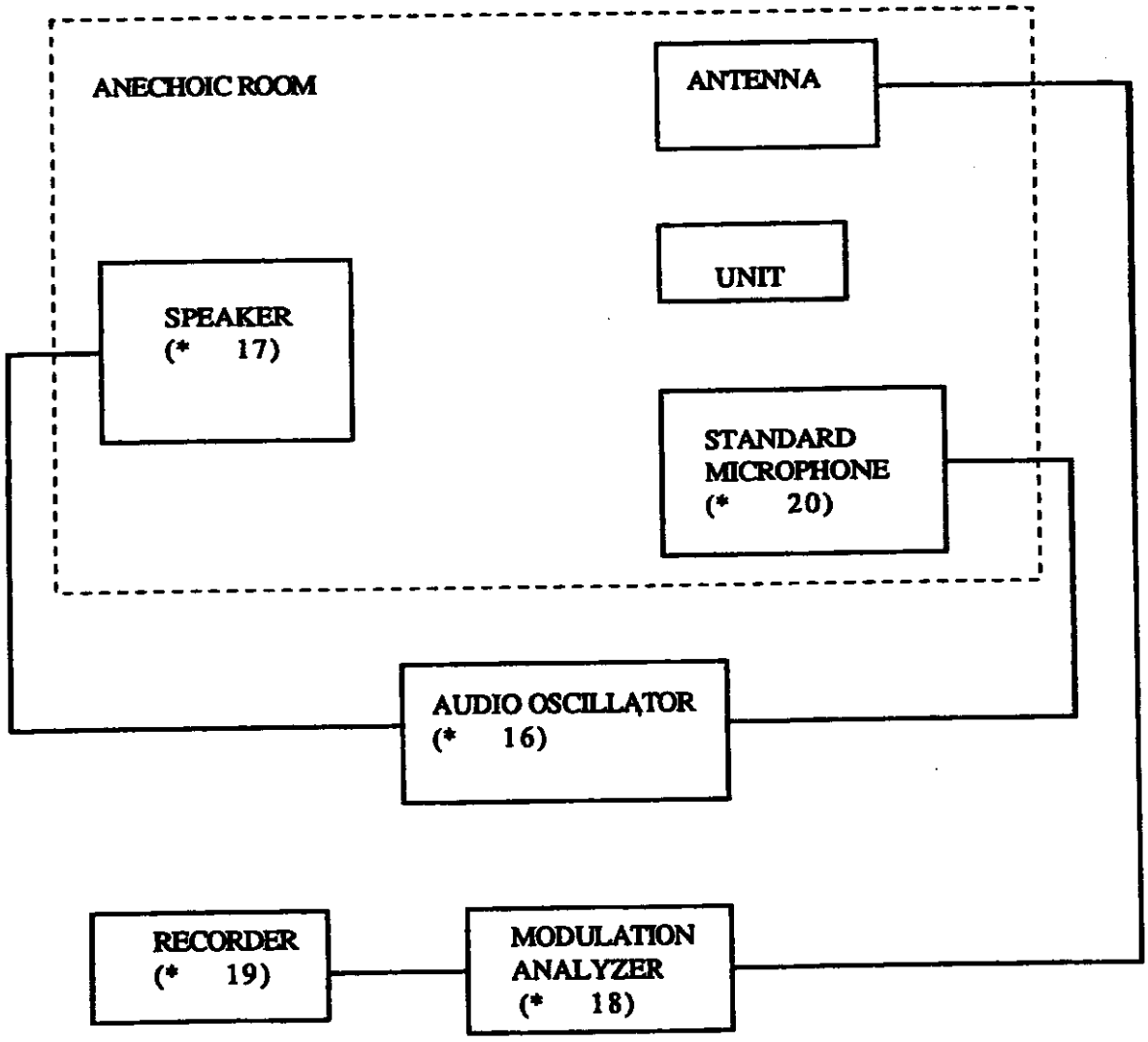
Measuring site
Distance between Antenna ---- 3 meters
Location ---- Atsugi Technology Center, Kanagawa, Japan

B. For the measured data, refer to Page 29

2.987 Modulation characteristics

A-1. Measurement procedure (Acoustical Frequency Response)

The test sound signal was applied to the unit in the anechoic chamber.
The sound pressure level was made 94 dB constant.
A Modulation analyzer was connected to the antenna and the level recorder.
The test sound signal frequency was swept 100 Hz to 15 kHz and output of the modulation analyzer was recorded.
For the test set-up, refer to the diagram below.



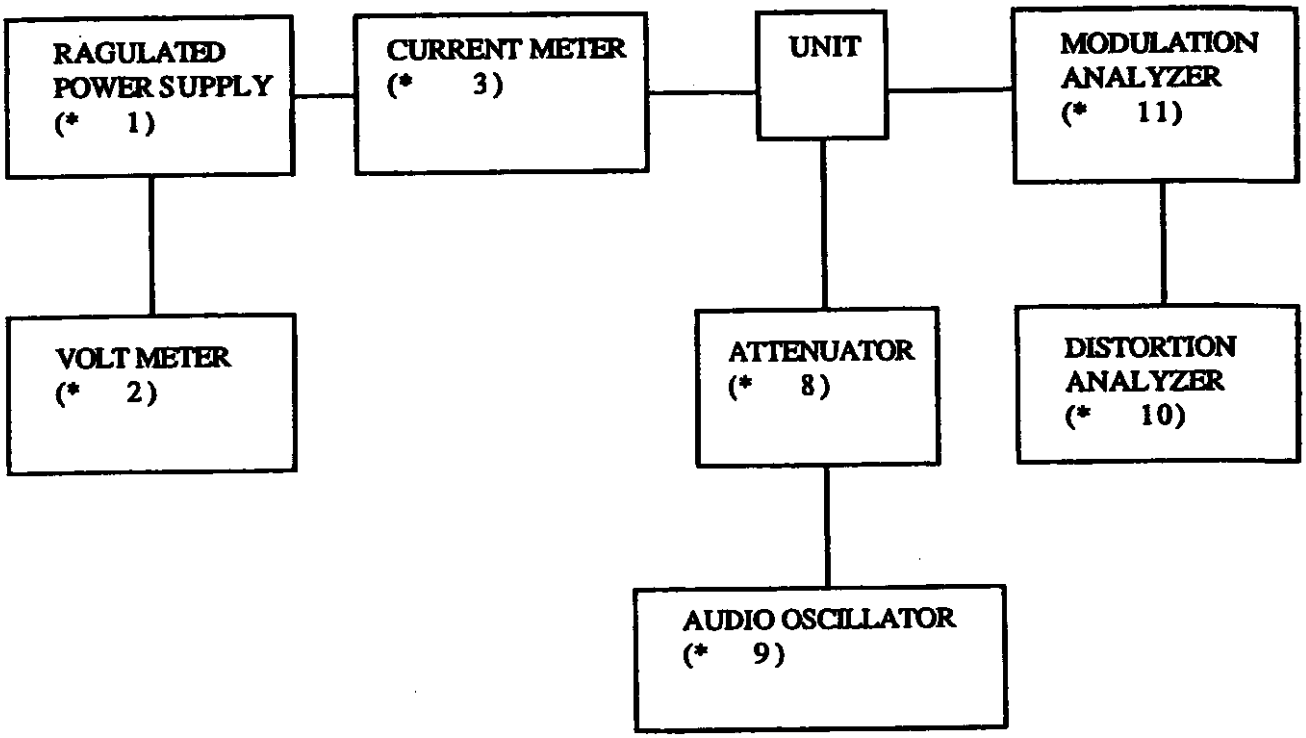
B-1. For the measured data, refer to Page 30 - 32.

2.987 Modulation characteristics

A-2. Measurement procedure

The test signal was applied to the audio input terminal of the transmitter.
A modulation analyzer was connected to the output terminals of the transmitter.
The test signal frequency was switched over 100Hz, 2.5kHz and 15kHz.

For the test set-up, refer to the diagram below.

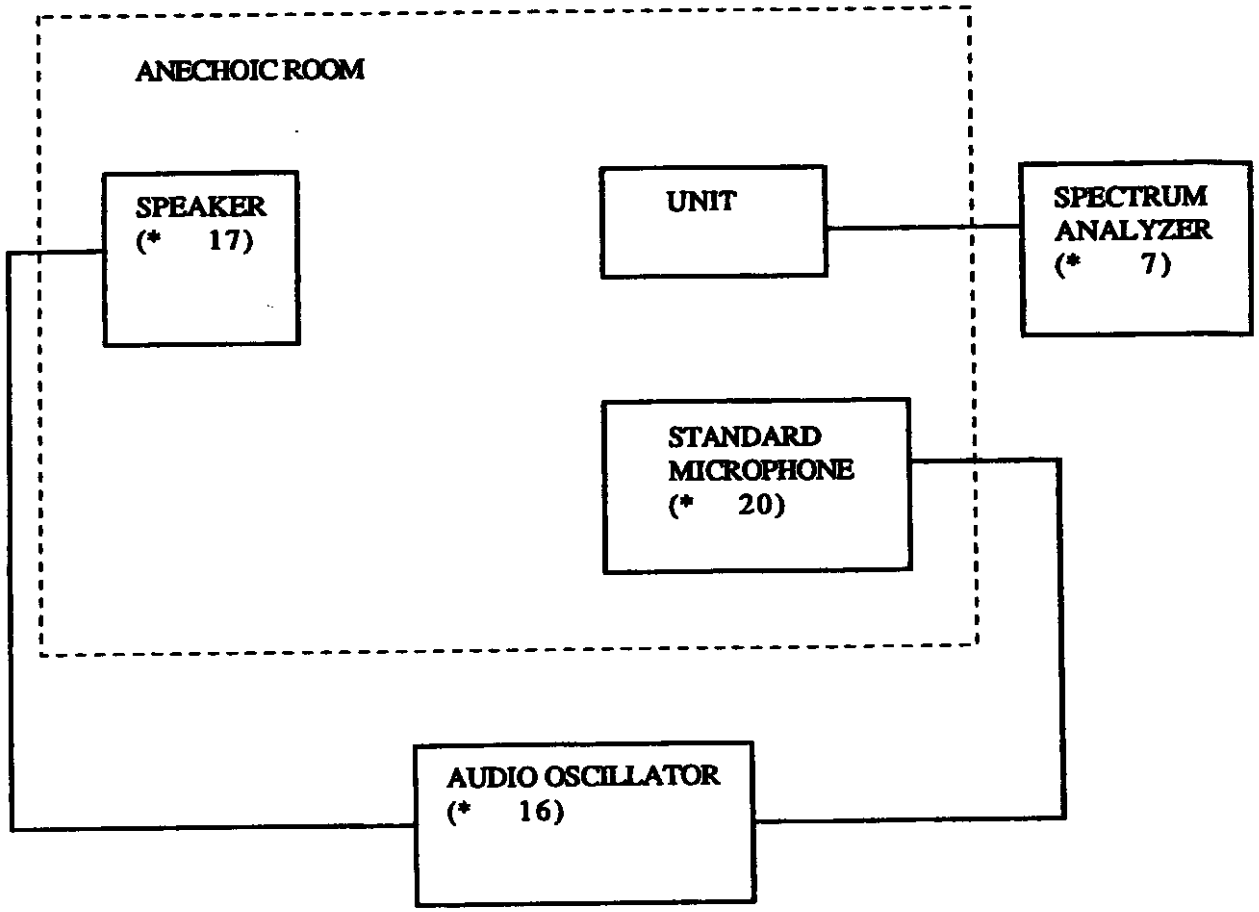


B-2. For the measured data, refer to Page 33 - 35.

2.989 Occupied bandwidth

A. Measurement procedure

Manufacturer's necessary bandwidth is 110KHz.
A spectrum analyzer was connected to the output terminals.
The unit was modulated by a 15000Hz tone with an acoustic source of sufficient level to produce at least 85 percent modulation.
The occupied band width was measured with the spectrum analyzer set at 50KHz/div. scan and 10dB/div.
For the test setup, refer to the diagram below.



For the measured data, refer to Page 36 - 37.

2.991 Spurious emissions at antenna terminals

A. Measurement procedure

The conducted spurious test is not applicable because this device does not have output terminal which can be connected to spectrum analyzer.

2.993 Field strength of spurious radiation

A-1. Measurement procedure (from lowest frequency to 1000MHz)

1. The measurement shall be made on an open field test site which is free from reflecting objects that may affect the measurement results.

2. This procedure was intended to determine the level of spurious emission radiated from the antenna and the unit chassis. The radio frequency spectrum was scanned from lowest frequency generated in the equipment to 1000MHz.

3. For each spurious or harmonic measurement, the measuring antenna was adjusted to the correct length for the frequency involved. This length was made from the lowest frequency generated in the equipment to 1000MHz.

4. For each frequency generated in the equipment, the measuring antenna was raised and lowered to obtain a maximum reading on the spectrum analyzer with the antenna vertically polarized. The turntable was rotated a minimum of 360° to further increase the reading on the spectrum analyzer. Then field strength was recorded in dBμV/m.

5. The unit was removed and replaced with a dipole antenna. (The antenna was adjusted to a half-wave of transmitting frequency.) The center of the dipole antenna was placed approximately at the same location as the center of the unit.

6. The dipole antenna at the unit end was fed with a signal generator. With the antennas at both ends vertically polarized and signal generator tuned to the transmitting frequency, the level of the signal generator output was adjusted to the previously recorded maximum reading for this set of conditions was obtained.

7. The entire procedure for each spurious and harmonics frequency with the FSM antenna horizontally polarized was repeated.

8. The input power into the dipole antenna was calculated from the impedance and the signal generator voltage obtained in these readings.

9. After changed from the wire type antenna to the helical one, the unit should be re-measured according to the above Item 2-8.

For the measured data, refer to the page 38-1 and 38-2.

2.993 Field strength of spurious radiation

A-2 Measurement procedure (from 1GHz to 10 GHz)

1. The measurement shall be made on an open field which is free from reflecting objects that may affect the measurement results.

2. This procedure was intended to determine the level of spurious emission radiated from the antenna and the unit chassis. The radio frequency spectrum was scanned from 1GHz frequency generated in the equipment to 10GHz.

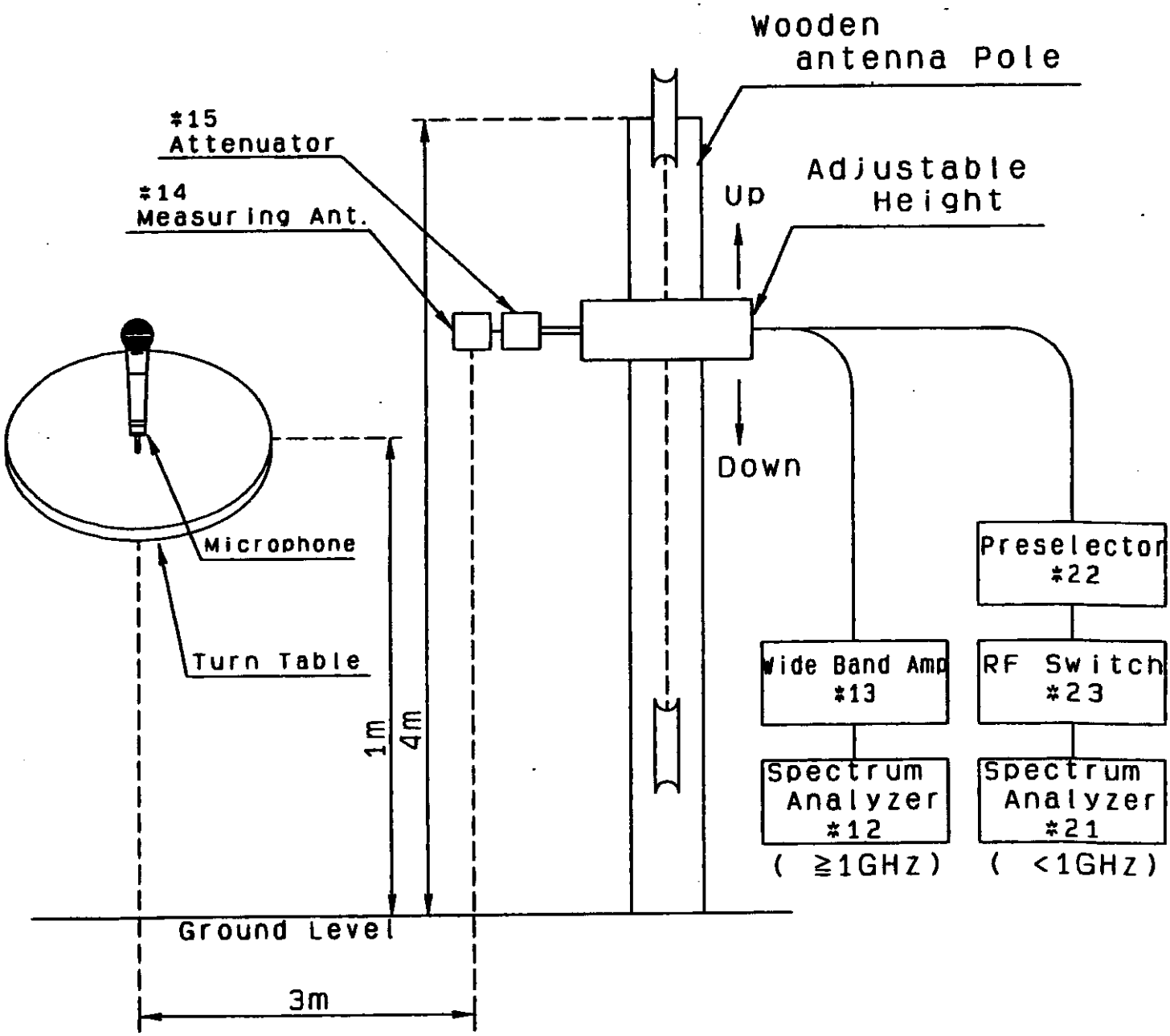
3. For each spurious or harmonic measurement, the measuring antenna was changed according to frequency range.

4. For each frequency generated in the equipment, the measuring antenna was raised and lowered to obtain a maximum reading on the spectrum analyzer with the antenna vertically polarized. The turntable was rotated a minimum of 360° to further increase the reading on the spectrum analyzer. Then field strength was recorded in dBμV/m.

5. After changed from the wire type antenna to the helical one, the unit should be re-measured according to the above Item 2-4.

For the measured data, refer to Page 38-1 and 38-2.

For the setup, refer to the diagram below.



Measuring site

Distance between Antenna	---- 3 meters
Location	---- Atsugi Technology Center, Kanagawa, Japan

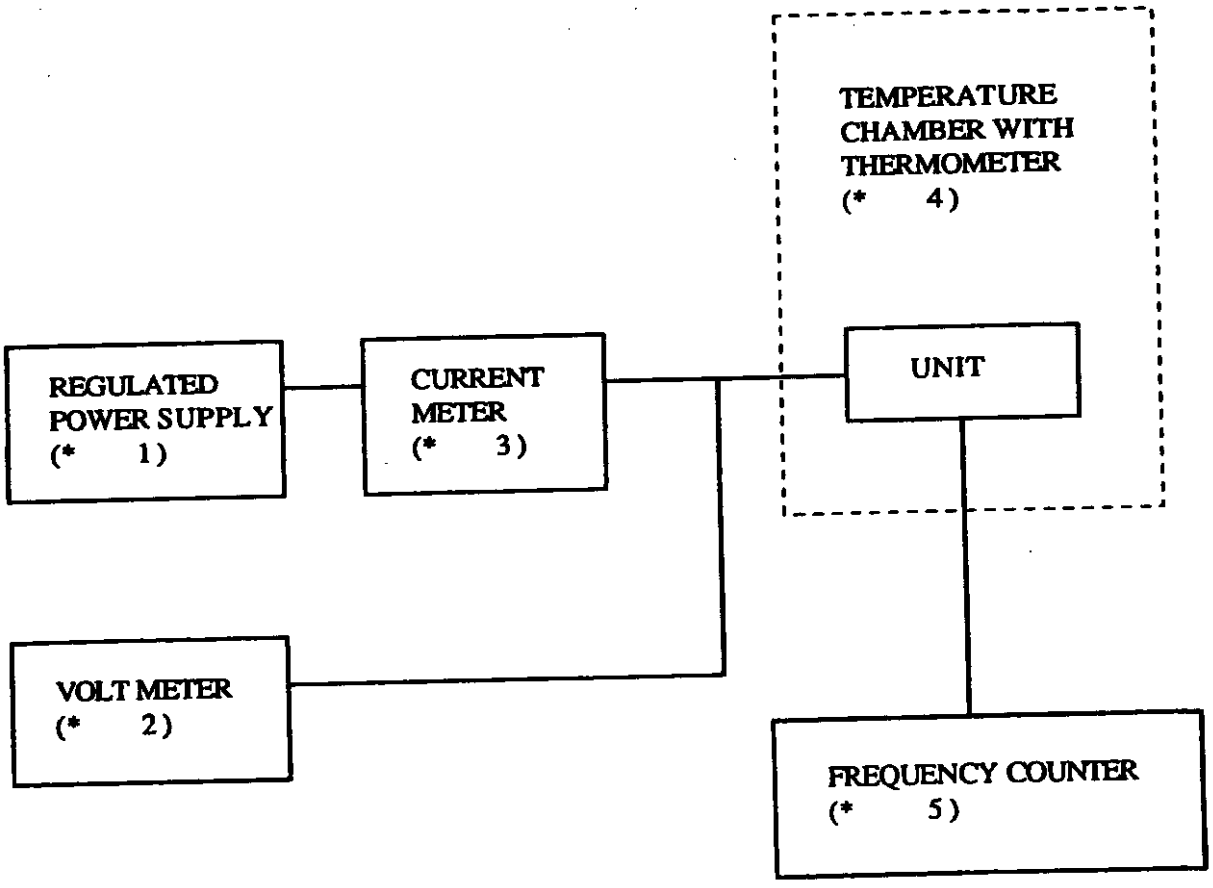
For the measured data, refer to Page 38-1 and 38-2.

2.995 Frequency stability

(1) Frequency vs. Ambient temperature

A. Measurement procedure

The unit was placed in the temperature cycle chamber and was kept at a temperature of -30° ±1° for 1 hour. The rated test voltage was applied for two minutes. The transmitting frequency was measured during this period and recorded. A similar measurement was performed with the temperatures changed 10℃ each time up to maximum of 50℃.
For the test setup, refer to the diagram below.



For the measured data, refer to the Page 40 - 41.

2.995 Frequency stability

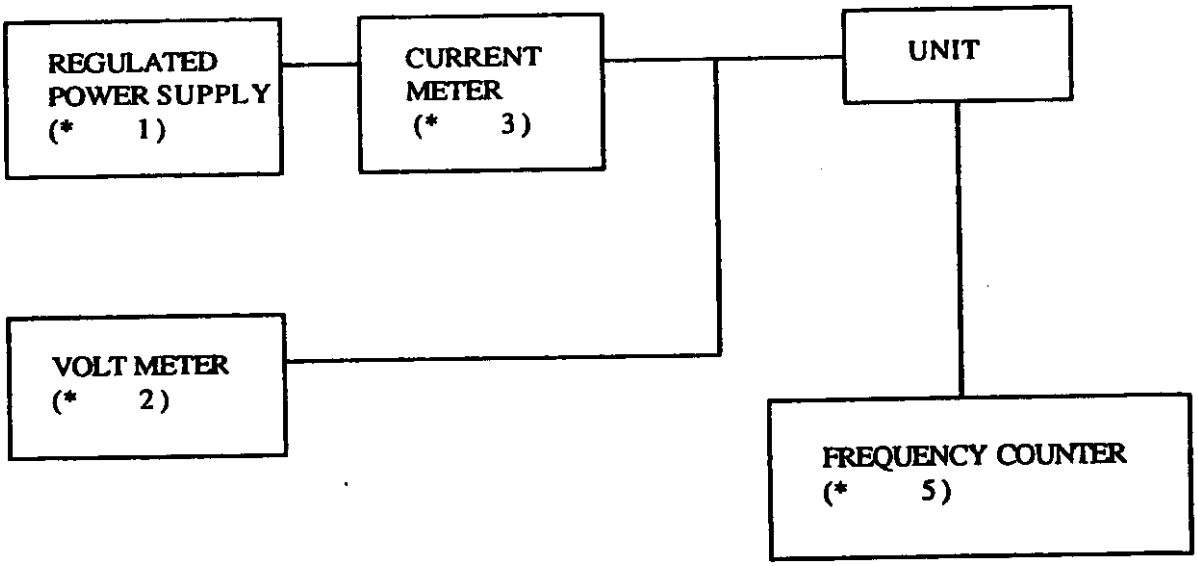
(2) Frequency vs. Supply voltage

A. Measurement procedure

The power supply voltage to the unit under test is varied from 1.0V to 1.725V.

Nominal Value	1.50 V
85% of the nominal value	1.275 V
115% of the nominal value	1.725 V
Battery operating end point which shall be specified by the manufacturer	1.00 V

For the test setup, refer to the diagram below.



For the measured data, refer to the Page 40 - 41.

2.985 RF power output (The effective radiated power output)

Model: WRT-800A(66)
FCC ID: AK8WRT800A66
POWER SUPPLY: 1.50V DC
Antenna : 1/4 wavelength Wire

Frequency (MHz)	CH No.	ERP (mW)
782.125	66-01	4.2
788.125	67-01	4.4
793.875	67-47	3.8

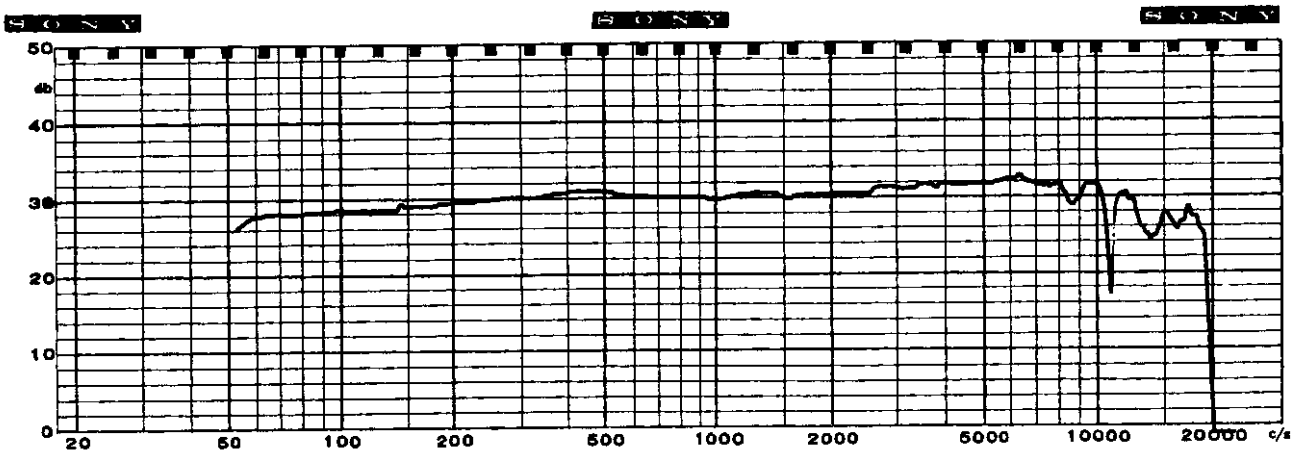
Model: WRT-800A(66)
FCC ID: AK8WRT800A66
POWER SUPPLY: 1.50V DC
Antenna : 1/4 wavelength Helical

Frequency (MHz)	CH No.	ERP (mW)
782.125	66-01	4.0
788.125	67-01	4.0
793.875	67-47	3.5

2.987 Modulation characteristics

B-1. Modulation Frequency Response (Acoustical Frequency Response)

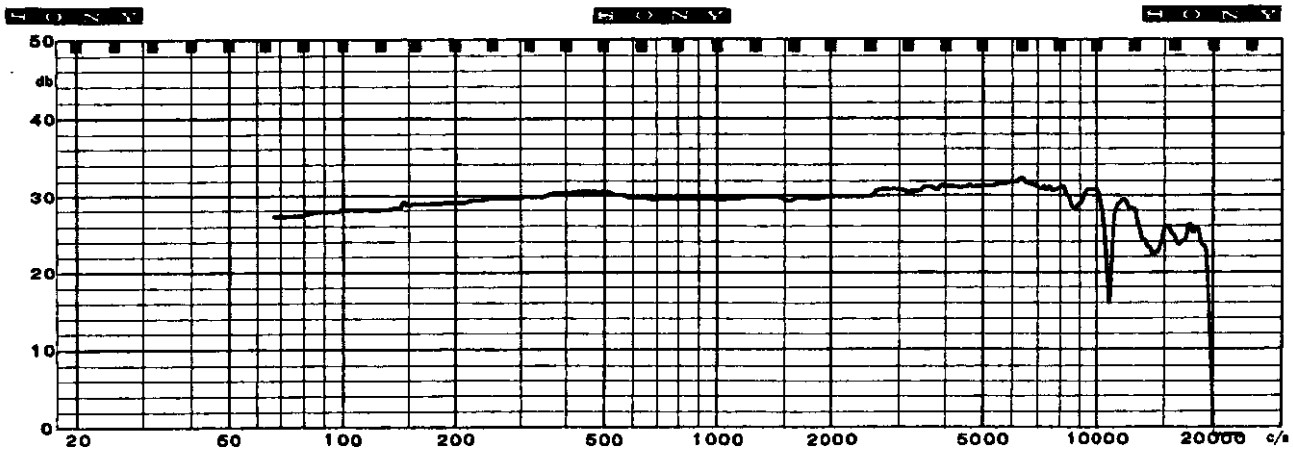
Model:	WRT-800A(66)
FCC ID:	AK8WRT800A66
Transmitting Freq.:	782.125MHz (CH No. 66-01)



2.987 Modulation characteristics

B-1. Modulation Frequency Response (Acoustical Frequency Response)

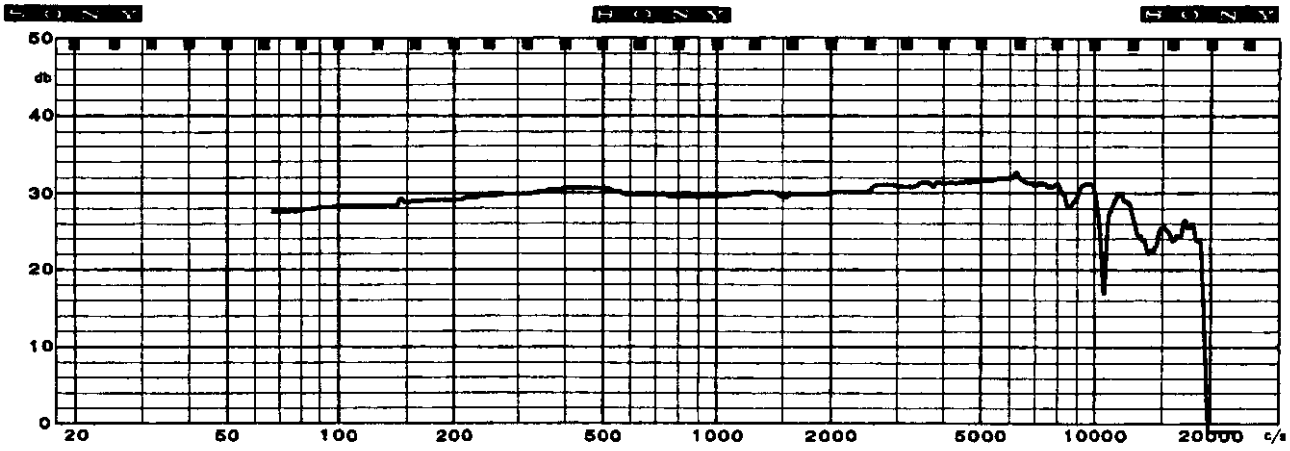
Model:	WRT-800A(66)
FCC ID:	AK8WRT800A66
Transmitting Freq.:	788.125MHz (CH No. 67-01)



2.,987 Modulation characteristics

B-1. Modulation Frequency Response (Acoustical Frequency Response)

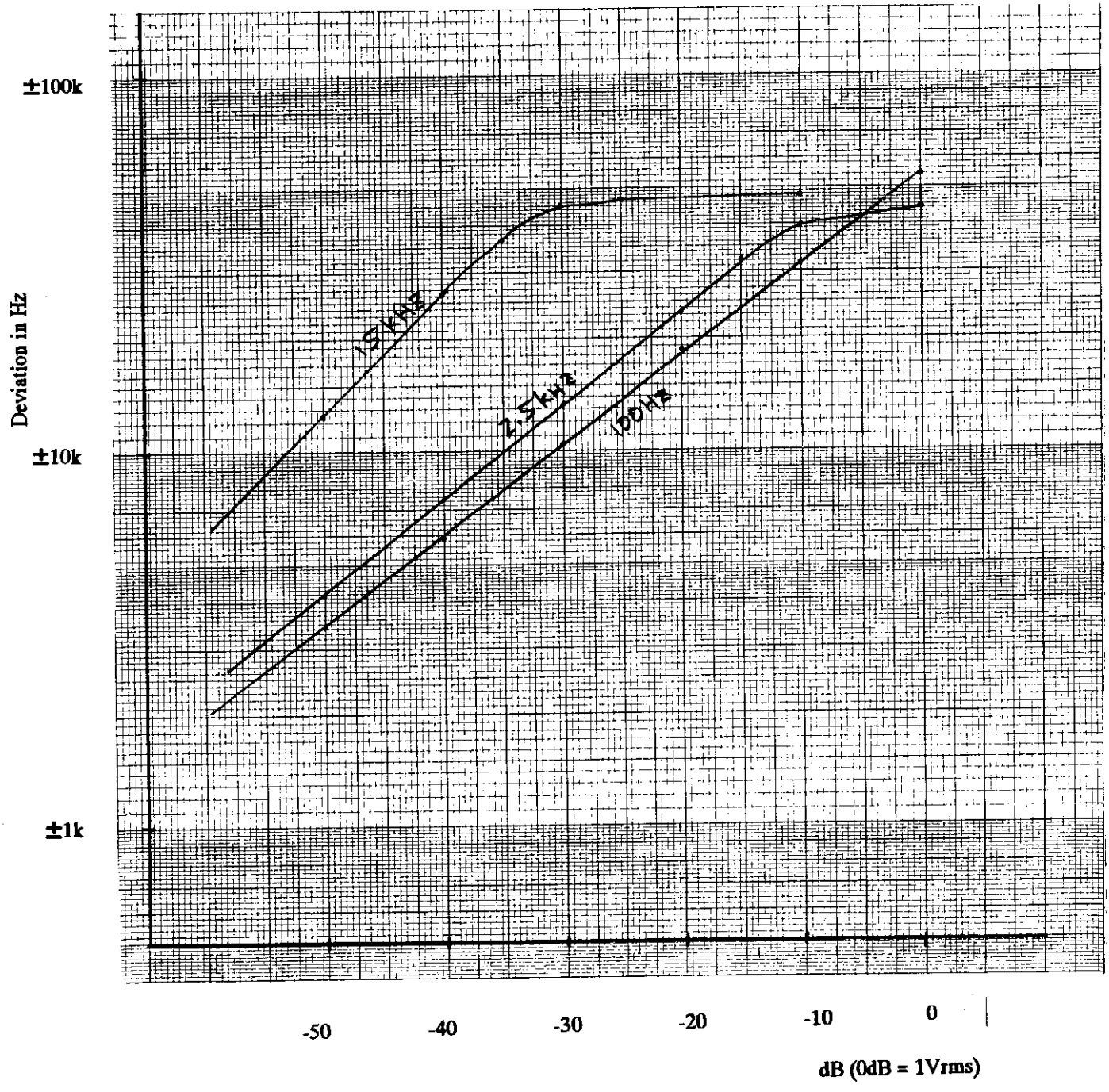
Model:	WRT-800A(66)
FCC ID:	AK8WRT800A66
Transmitting Freq.:	793.875MHz (CH No. 67-47)



2.,987 Modulation characteristics

B-2. Deviation VS. Input Level

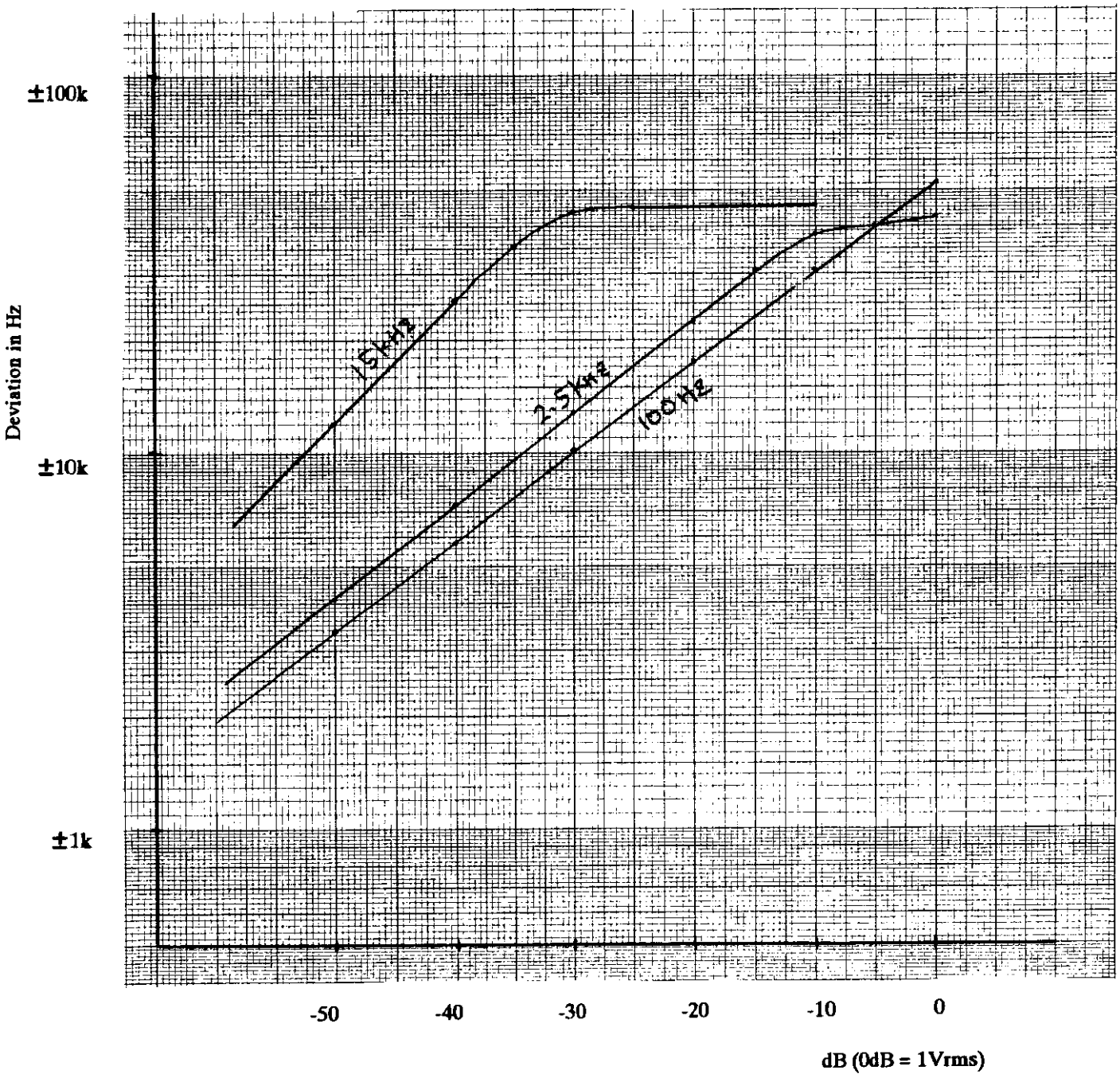
Model:	WRT-800A(66)
FCC ID:	AK8WRT800A66
Transmitting Freq.:	782.125MHz (CH No. 66-01)



2.,987 Modulation characteristics

B-2. Deviation VS. Input Level

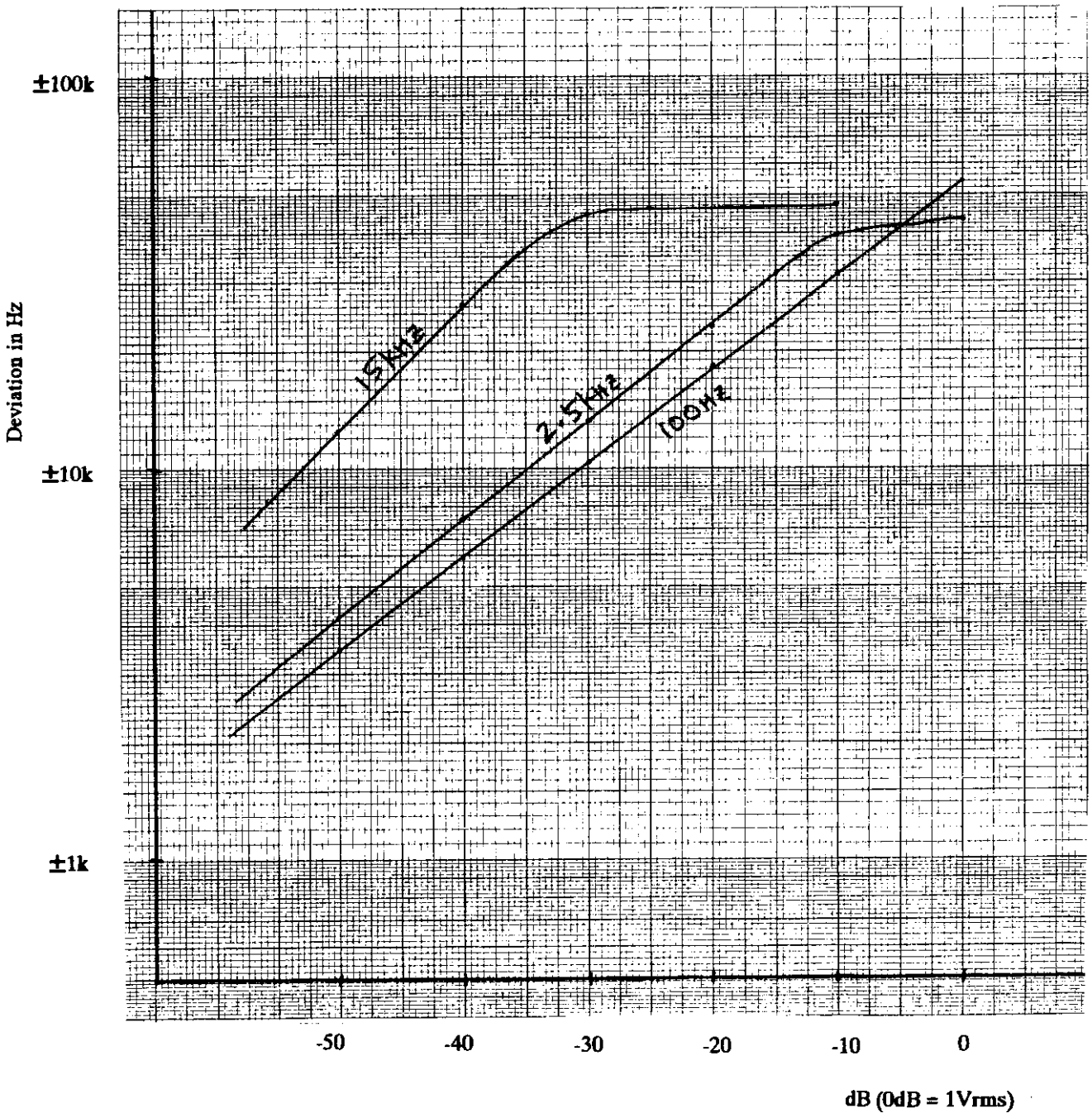
Model:	WRT-800A(66)
FCC ID:	AK8WRT800A66
Transmitting Freq.:	788.125MHz (CH No. 67-01)



2.,987 Modulation characteristics

B-2. Deviation VS. Input Level

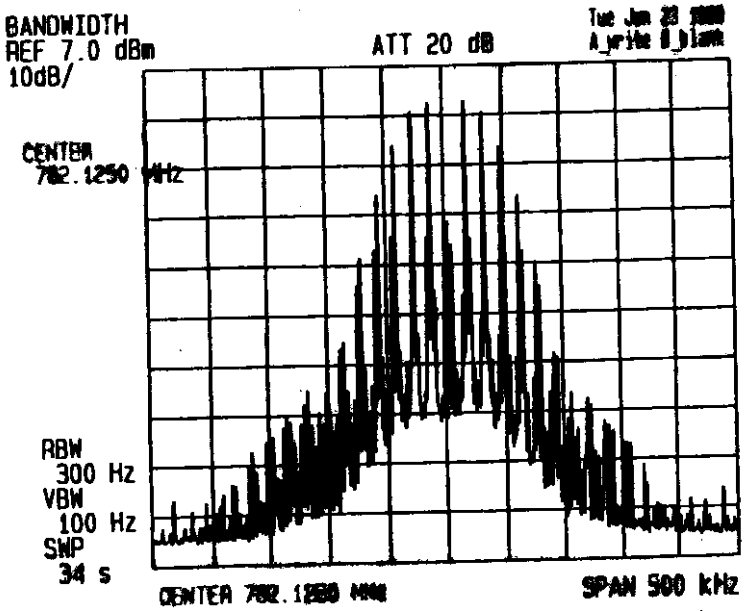
Model:	WRT-800A(66)
FCC ID:	AK8WRT800A66
Transmitting Freq.:	793.875MHz (CH No. 67-47)



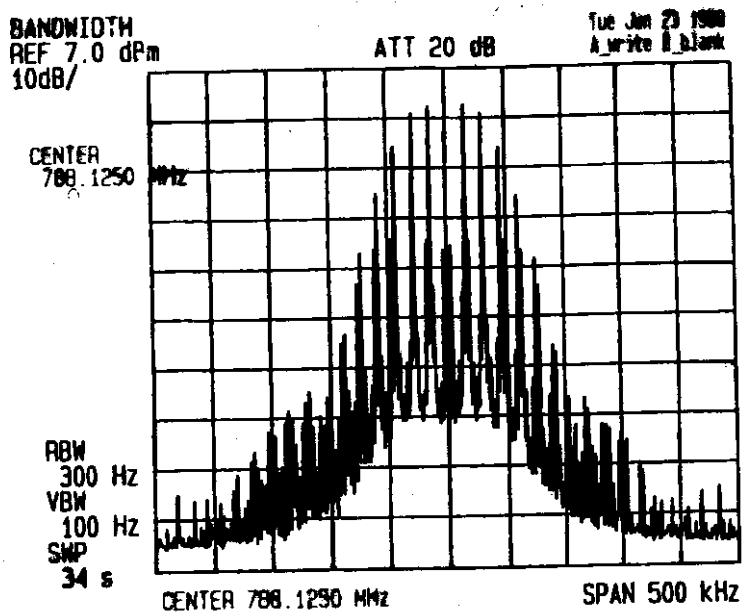
2..989 Occupied bandwidth

Model: WRT-800A(66)
FCC ID: AK8WRT800A66

Center Frequency
782.125 MHz (CH No. 66-01)
Modulating frequency: 15kHz



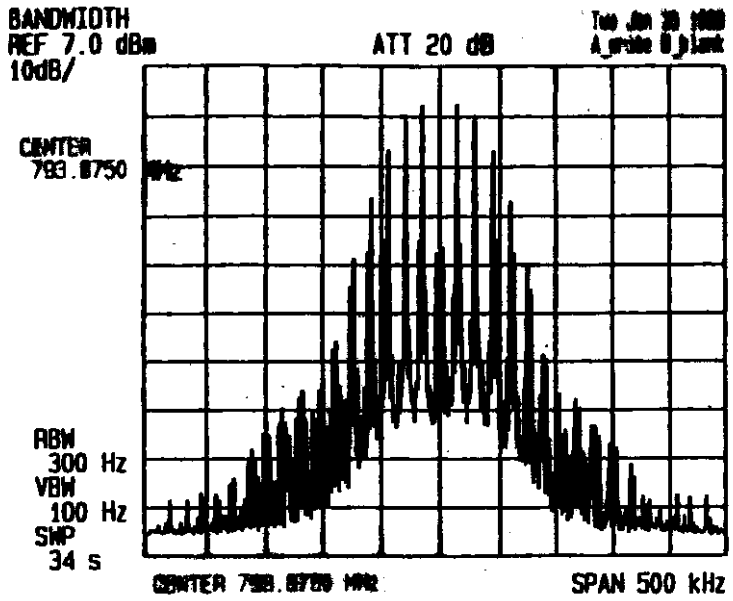
Center Frequency
788.125MHz (CH No. 67-01)
Modulating frequency: 15kHz



2.,989 Occupied bandwidth

Model: WRT-800A(66)
FCC ID: AK8WRT800A66

Center Frequency
793.875MHz (CH No. 67-47)
Modulating frequency: 15kHz



2.993 Field strength of spurious radiation

Model: WRT-800A(66)
FCC ID: AK8WRT800A66
Antenna: 1/4 wavelength Wire

Frequency: 782.125MHz (CH No. 66-01)
Power supply: AA size battery x1 1.5V

Frequency (MHz)	Field strength (dBμV/m)
** 782.125	104.0 (*0.0)
3128.500	46.38 (- 58.5)

Frequency: 788.125MHz (CH No. 67-01)
Power supply: AA size battery x1 1.5V

Frequency (MHz)	Field strength (dBμV/m)
** 788.125	104.3 (*0.0)
3152.500	48.09 (- 55.9)

Frequency: 793.875MHz (CH No. 67-47)
Power supply: AA size battery x1 1.5V

Frequency (MHz)	Field strength (dBμV/m)
** 793.875	103.7 (*0.0)
3175.500	49.69 (- 54.0)

Note: * In parenthesis figure shows spurious and harmonic emission level.
Unit: dB (0dB = carrier level)
** Carrier frequency

2.993 Field strength of spurious radiation

Model: WRT-800A(66)
FCC ID: AK8WRT800A66
Antenna: 1/4 wavelength Helical

Frequency: 782.125MHz (CH No. 66-01)
Power supply: AA size battery x1 1.5V

Frequency (MHz)	Field strength (dBμV/m)
** 782.125	103.8 (*0.0)
3128.500	45.16 (- 59.2)

Frequency: 788.125MHz (CH No. 67-01)
Power supply: AA size battery x1 1.5V

Frequency (MHz)	Field strength (Dbμ V/m)
** 788.125	103.8 (*0.0)
3152.500	44.63 (- 59.4)

Frequency: 793.875MHz (CH No. 67-47)
Power supply: AA size battery x1 1.5V

Frequency (MHz)	Field strength (dBμV/m)
** 793.875	103.2 (*0.0)
3175.500	44.53 (- 54.0)

Note: * In parenthesis figure shows spurious and harmonic emission level.
Unit: dB (0dB = carrier level)
** Carrier frequency

Method of Calculating Field Strength

1. "Substitution Method" is employed in case that reading of spectrum analyzer is extremely higher than the noise level.

   Field Strength [dBμV/m] = S.S.G. Output Level [dBμV/m] (at 50Ω)
   + Balun Loss of Reception Antenna [dB]
   + Antenna Factor [dB]

2. Following calculation is employed in case that S.S.G. is not employed.

   Field Strength [dBμV/m] = Meter Reading [dBμV]
   + Antenna Factor (including Balun Loss) [dB]
   + Cable Loss + 20log(3m/10m) [dB]

2.995 Frequency stability

Nominal frequency : 782.125MHz (CH No. 66-01)

Power supply	Frequency stability (%)			
Ambient temperature(℃)	1.000V DC	1.275V DC	1.500V DC	1.725V DC
-30	0.00004	0.00005	0.00005	0.00006
-20	0.00060	0.00061	0.00061	0.00061
-10	0.00078	0.00079	0.00079	0.00079
0	0.00074	0.00075	0.00075	0.00077
10	0.00041	0.00042	0.00042	0.00042
20	0.00004	0.00005	0.00005	0.00005
30	-0.00050	-0.00049	-0.00049	-0.00047
40	-0.00084	-0.00083	-0.00083	-0.00083
50	-0.00137	-0.00136	-0.00136	-0.00134

Nominal frequency : 788.125MHz (CH No. 67-01)

Power supply	Frequency stability (%)			
Ambient temperature(℃)	1.000V DC	1.275V DC	1.500V DC	1.725V DC
-30	0.00005	0.00006	0.00006	0.00008
-20	0.00060	0.00060	0.00061	0.00061
-10	0.00079	0.00080	0.00081	0.00081
0	0.00075	0.00076	0.00077	0.00077
10	0.00042	0.00043	0.00043	0.00044
20	0.00005	0.00005	0.00008	0.00008
30	-0.00049	-0.00048	-0.00047	-0.00046
40	-0.00082	-0.00081	-0.00081	-0.00080
50	-0.00134	-0.00133	-0.00133	-0.00132

2.995 Frequency stability

Nominal frequency : 793.875MHz (CH No. 67-47)

Power supply	Frequency stability (%)			
Ambient temperature(℃)	1.000V DC	1.275V DC	1.500V DC	1.725V DC
-30	0.00005	0.00006	0.00006	0.00009
-20	0.00059	0.00060	0.00060	0.00062
-10	0.00078	0.00079	0.00081	0.00083
0	0.00074	0.00076	0.00076	0.00078
10	0.00042	0.00044	0.00044	0.00045
20	0.00005	0.00006	0.00008	0.00010
30	-0.00049	-0.00048	-0.00047	-0.00045
40	-0.00082	-0.00082	-0.00081	-0.00078
50	-0.00134	-0.00132	-0.00132	-0.00131

2.999 List of Test Equipment

Equipment	Manufacturer	Type	Serial No.
*1 Regulated Power supply	TAKASAGO	NL035-5	9820333
*2 Volt Meter	Yokogawa	2051	10497U
*3 Current Meter	Yokogawa	2051	11384U
*4 Temperature Chamber	Tabai	PL-1	2223871
*5 Frequency Counter	Anritsu	MF76A	MT59216
*6 Power Meter Power Sensor	Hewlett Packard Hewlett Packard	435B 8482A	2445A11826 2349A10440
*7 Spectrum Analyzer	ADVANTEST	R3371A	5863D14
*8 Attenuator	Anritsu	MN-32A	M42522
*9 Audio Oscillator	Matsushita	VP-722A	529059
*10 Distortion Analyzer	Hewlett Packard	334A	1140A09384
*11 Modulation Analyzer	Hewlett Packard	8901A	1922A00235
*12 Spectrum Analyzer	ADVANTEST	R3265	15060251
*13 Wide Band Amplifier	Anritsu	A4H1002S	-
*14 Horn Antenna Log-Periodic Antenna	SCHWARZBECK SCHWARZBECK	BBHA 9120-B UHALP9107	102/93 -
*15 3dB Attenuator	Hewlett Packard	8491B	2708A
*16 Audio Oscillator	Bruel & Kjaer	2010	1037139
*17 Speaker	Coral	BEATA8	
*18 Modulation Analyzer	Anritsu	MS61B	M17096
*19 Recorder	Bruel & Kjaer	2307A	1146446
*20 Microphone Cartridge Preamplifier	Bruel & Kjaer	4133 2619	810279 593729
*21 Spectrum Analyzer	ADVANTEST	TR4172	60690030
*22 Preselector	ADVANTEST	TR14307	68360004
*23 RF Switch	ADVANTEST	TR14308	8604004
*24 Standard Signal Generator	Anritsu	MG645B1	M54866