FCC TEST REPORT

for

47 CFR, Part 15, Subpart C

Equipment	**: GamePad**
Trade Name	**: Genius**
Model No.	**: Wireless G-12X**
FCC ID	**: FSUGG0005**
Filing Type	**: Certification**
Applicant	**: KYE Systems Corp.** No. 492, Sec. 5, Chung Hsin Rd., San Chung Taipei Hsien, 241, Taiwan, R.O.C.

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- **Certificate or Test Report must not be used by the applicant to claim the product in this test report endorsement by NVLAP or any agency of U.S. government.**

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

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History of this test report

Original Report Issue Date: July 17, 2004

■ No additional attachment.

☐ Additional attachment were issued as following record:

Attachment No.	Issue Date	Description

Certificate No. : F462907

CERTIFICATE OF COMPLIANCE

for

47 CFR, Part 15, Subpart C

Equipment	**: GamePad**
Trade Name	**: Genius**
Model No.	**: Wireless G-12X**
FCC ID	**: FSUGG0005**
Filing Type	**: Certification**
Applicant	**: KYE Systems Corp.** No. 492, Sec. 5, Chung Hsin Rd., San Chung Taipei Hsien, 241, Taiwan, R.O.C.

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 - 2001** and the energy emitted by this equipment was ***passed*** all test items required in FCC Part 15 subpart C, relative to the equipment under test. Testing was carried out on July 09, 2004 at **SPORTON International Inc.** LAB.

Daniel Lee 7/19/2004

Daniel Lee
Manager

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

1. General Description of Equipment under Test

1.1. Applicant

KYE Systems Corp.
No. 492, Sec. 5, Chung Hsin Rd., San Chung Taipei Hsien, 241, Taiwan, R.O.C.

1.2. Manufacturer

Same as 1.1

1.3. Basic Description of Equipment under Test

Equipment	: GamePad
Trade Name	: Genius
Model No.	: Wireless G-12X
FCC ID	: FSUGG0005
Power Supply Type	: DC 5±0.5V (Rx) / DC 3V (Tx)

1.4. Feature of Equipment under Test

Transmitter

Product Feature & Specification	
Type of Modulation	FSK
Number of Channels	1
Carrier Frequency of each channel	27.045 MHz
Type of Antenna	Integral Antenna
Function Type	Transmitter
Power Rating (DC/AC, Voltage)	3 VDC

Receiver

Product Feature & Specification	
Type of Modulation	FSK
Number of Channels	1
Carrier Frequency of each channel	26.59 MHz
Type of Antenna	Integral Antenna
Function Type	Receiver
Power Rating (DC/AC, Voltage)	5 VDC

2. Test Configuration of Equipment under Test

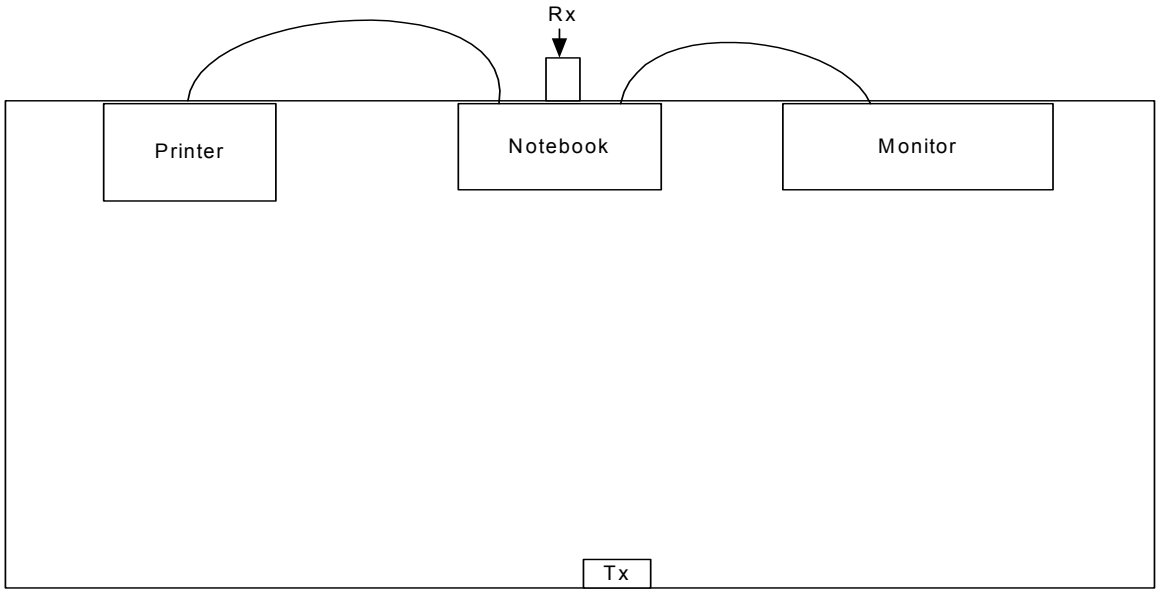
2.1. Test Manner

a. The EUT pursuant to ANSI C63.4-2001 and configuration operated in a manner which tended to maximize its emission characteristics in a typical application.
b. The complete test system included DELL Notebook, VIEWSONIC Monitor, EPSON Printer and EUT for EMI test.
c. The following test modes were tested for conduction test:
   Mode 1: Link mode for receiver
d. The following test modes were tested for radiation test:
   Mode 1: X Plan
   Mode 2: Y Plan
   Mode 3: Z Plan
e. Frequency range investigated: radiation 25 MHz to 1000MHz.

2.2. Description of Test System

Item	Asset	Model Name	Power Cord	S/N
1.	Notebook (DELL)	D500	N/A	SP0005
2.	Monitor (VIEWSONIC)	VCDTS21553-3P	Shielded, 1.7m	SP0007
3.	Printer (EPSON)	SYLUS COLRO 680	Shielded, 1.35m	SP0017

2.3. Connection Diagram of Test System



2.4. List of Measurements and Examinations

FCC Rule	Description of Test	Result
15.227(a)	Field Strength within band	Pass
15.227(b)	Field strength outside band	Pass

3. Test Software

The EUT kept transmitting signals at fixed frequency.

4. General Information of Test

4.1. Test Facility

Test Site Location : No. 52, Hwa Ya 1St Road, Hwa Ya Technology Park,
Kwei-Shan Hsiang, TaoYuan Hsien, Taiwan, R.O.C.
TEL : 886-3-3273456
FAX : 886-3-3180055

Test Site No. : 03CH03-HY

4.2. Test Voltage

DC 4.5V

4.3. Standard for Methods of Measurement

ANSI C63.4-2001

4.4. Frequency Range Investigated

FCC Part 15, Subpart C 15.227

4.5. Frequency Range Investigated

Radiation: from 25 MHz to 1000 MHz

4.6. Test Distance

The test distance of radiated emission from antenna to EUT is 3 M.

5. Test of Conducted Emission

Conducted emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 kHz and return leads of the EUT according to the methods defined in ANSI C63.4-2001 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

5.1. Major Measuring Instruments

● Test Receiver	(R&S ESCS 30)
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

5.2. Test Procedures

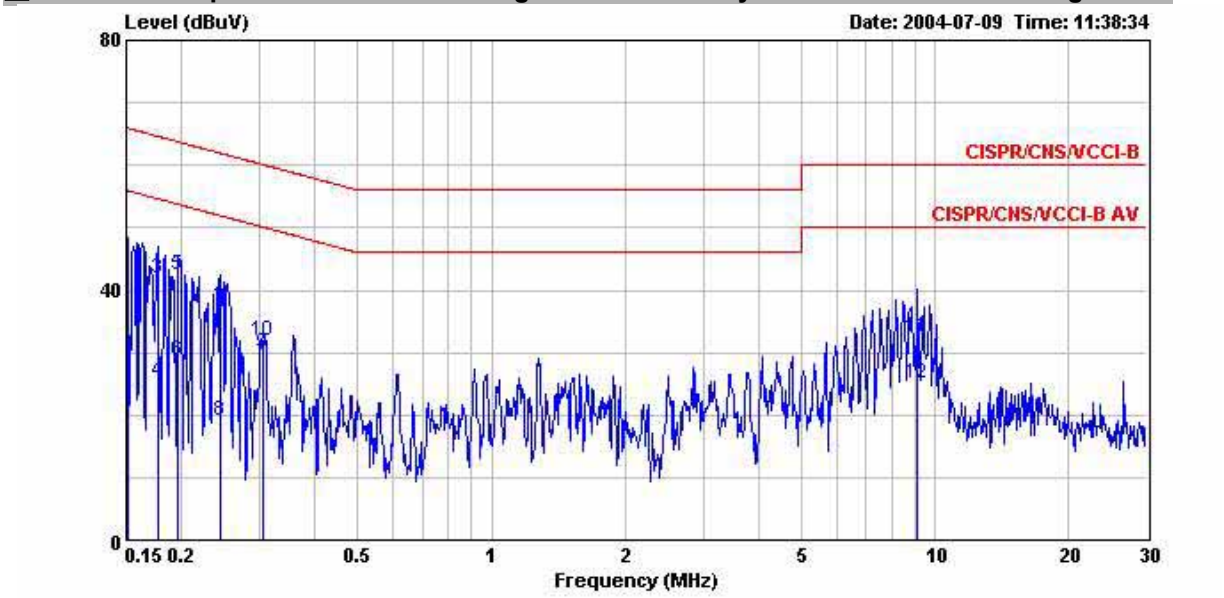
a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
b. Connect EUT to the power port of the line impedance stabilization network (LISN).
c. All the support units are connect to the other LISN.
d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
e. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
f. Both sides of AC line were checked for maximum conducted interference.
g. The frequency range from 150 kHz to 30 MHz was searched.
h. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

5.3. Test Result of Conducted Emission

5.3.1 Frequency Range of Test : 150kHz to 30 MHz

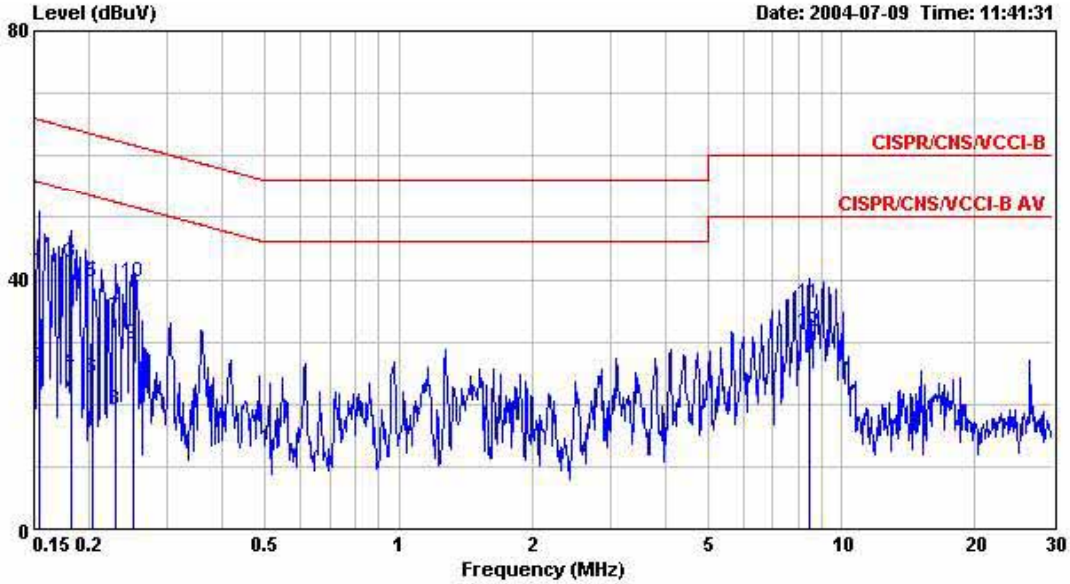
- Test Mode : Mode 1
- Temperature : 26°C
- Relative Humidity : 53 %

The test that passed at minimum margin was marked by the frame in the following table.



Site : site
Condition : CISPR/CNS/VCCI-B 2004 2001/004 LINE
EUT : 27MHz Receiver
POWER: AC 110V / 60Hz
MODEL : WG-12X
MEMO : Link mode

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1507970	42.62	-23.34	65.96	42.51	0.10	0.01	QP
2	0.1507970	27.10	-28.86	55.96	26.99	0.10	0.01	Average
3	0.1767760	41.99	-22.65	64.64	41.88	0.10	0.01	QP
4	0.1767760	25.42	-29.22	54.64	25.31	0.10	0.01	Average
5	0.1965370	42.46	-21.30	63.76	42.35	0.10	0.01	QP
6	0.1965370	28.65	-25.11	53.76	28.54	0.10	0.01	Average
7	0.2442230	36.98	-24.97	61.95	36.87	0.10	0.01	QP
8	0.2442230	19.15	-32.80	51.95	19.04	0.10	0.01	Average
9	0.3050910	29.98	-20.12	50.10	29.86	0.10	0.02	Average
10	0.3050910	31.87	-28.23	60.10	31.75	0.10	0.02	QP
11	9.160	32.47	-27.53	60.00	32.16	0.20	0.11	QP
12	9.160	25.02	-24.98	50.00	24.71	0.20	0.11	Average



Site : site
Condition : CISPR/CNS/VCCI-B 2004 2001/004 NEUTRAL
EUT : 27MHz Receiver
POWER: AC 110V / 60Hz
MODEL : WG-12X
MEMO : Link mode

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1540270	41.23	-24.55	65.78	41.12	0.10	0.01	QP
2	0.1540270	25.79	-29.99	55.78	25.68	0.10	0.01	Average
3	0.1815220	42.77	-21.65	64.42	42.66	0.10	0.01	QP
4	0.1815220	25.47	-28.95	54.42	25.36	0.10	0.01	Average
5	0.2028850	39.64	-23.85	63.49	39.53	0.10	0.01	QP
6	0.2028850	24.30	-29.19	53.49	24.19	0.10	0.01	Average
7	0.2291780	33.94	-28.54	62.48	33.83	0.10	0.01	QP
8	0.2291780	19.09	-33.39	52.48	18.98	0.10	0.01	Average
9	0.2507790	29.68	-22.05	51.73	29.57	0.10	0.01	Average
10	0.2507790	39.66	-22.07	61.73	39.55	0.10	0.01	QP
11	8.460	36.22	-23.78	60.00	35.94	0.18	0.10	QP
12	8.460	31.73	-18.27	50.00	31.45	0.18	0.10	Average

Test Engineer : Jay

6. Test of Radiated Emission

Radiated emissions from 25 MHz to 1 GHz were measured with a bandwidth of 120 kHz according to the methods defines in ANSI C63.4-2001. The EUT was placed on a nonmetallic stand, 0.8 meter above the ground plane, as shown in section 6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

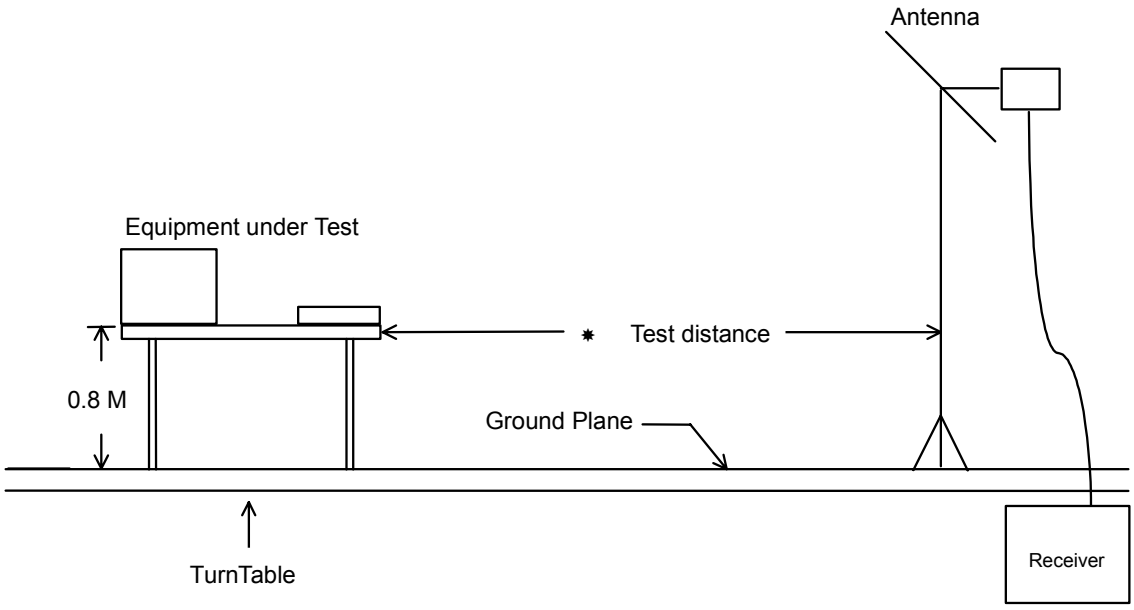
6.1. Major Measuring Instruments

• Amplifier	(HP 8447D)
RF Gain	30 dB
Signal Input	100 KHz to 1.3 GHz
• Test Receiver	(SCHAFFNER SCR3501)
Resolution Bandwidth	120 KHz
Frequency Band	9 K – 1 GHz
Quasi-Peak Detector	ON for Quasi-Peak Mode OFF for Peak Mode

6.2. Test Procedures

a. The EUT was placed on a rotatable table top 0.8 meter above ground.
b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
c. The table was rotated 360 degrees to determine the position of the highest radiation.
d. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.

6.3. Typical Test Setup Layout of Radiated Emission



6.4. Test Result of Radiated Emission

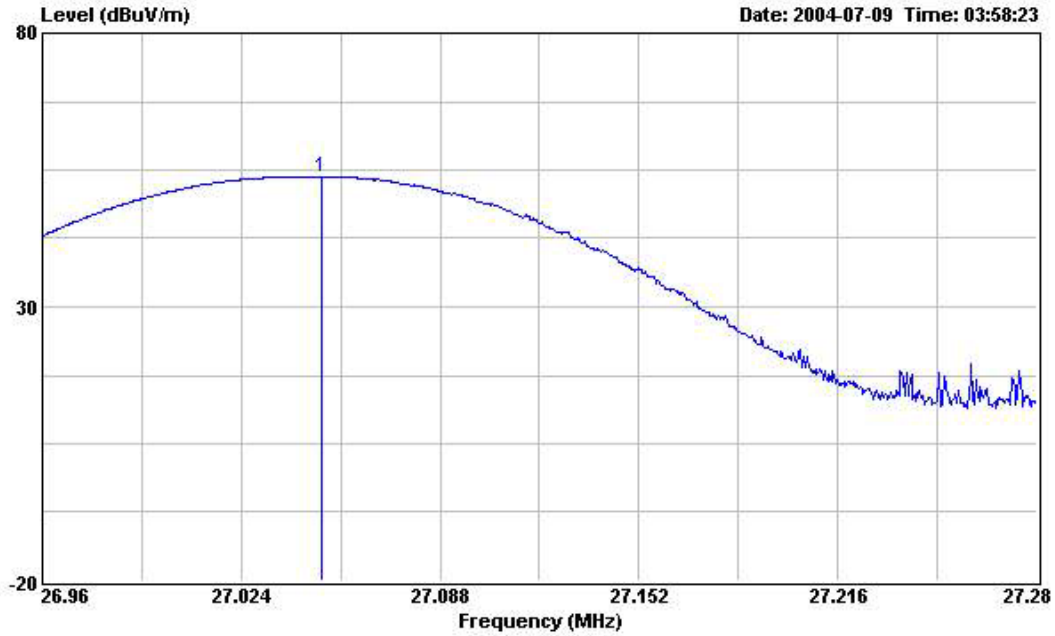
6.4.1 Test Mode: Mode 1

- Frequency Range of Test: from 30 MHz to 1000 MHz
- Test Distance: 3m
- Temperature: 26℃
- Relative Humidity: 53%
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

■ The test that passed at the minimum margin was marked by a frame in the following data

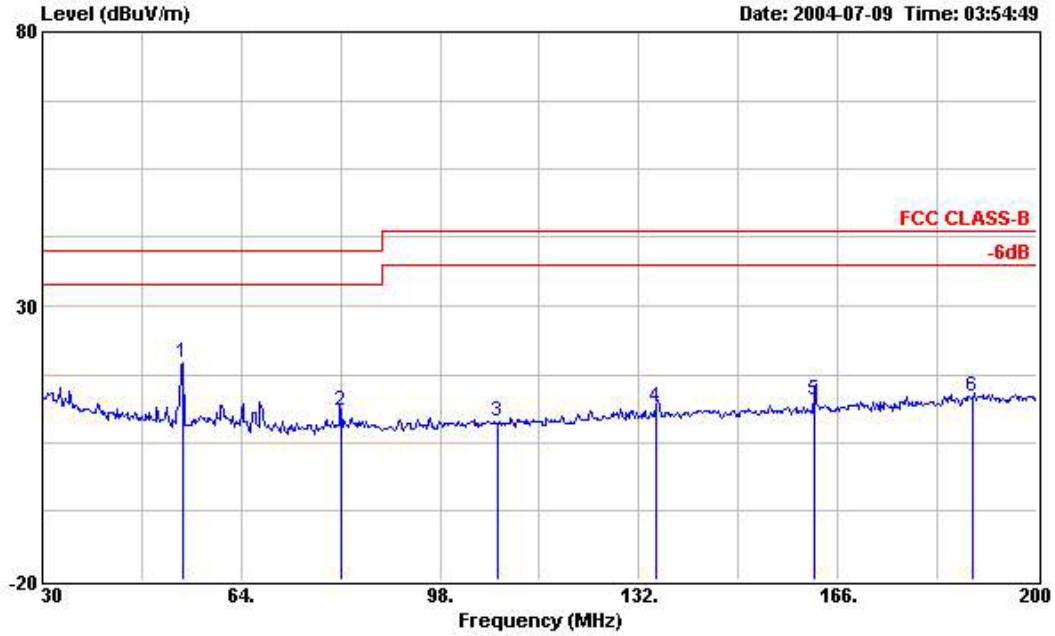
Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 HORIZONTAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : X Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	27.040	47.78	------	------	60.97	14.83	0.04	28.06	Peak	---	---



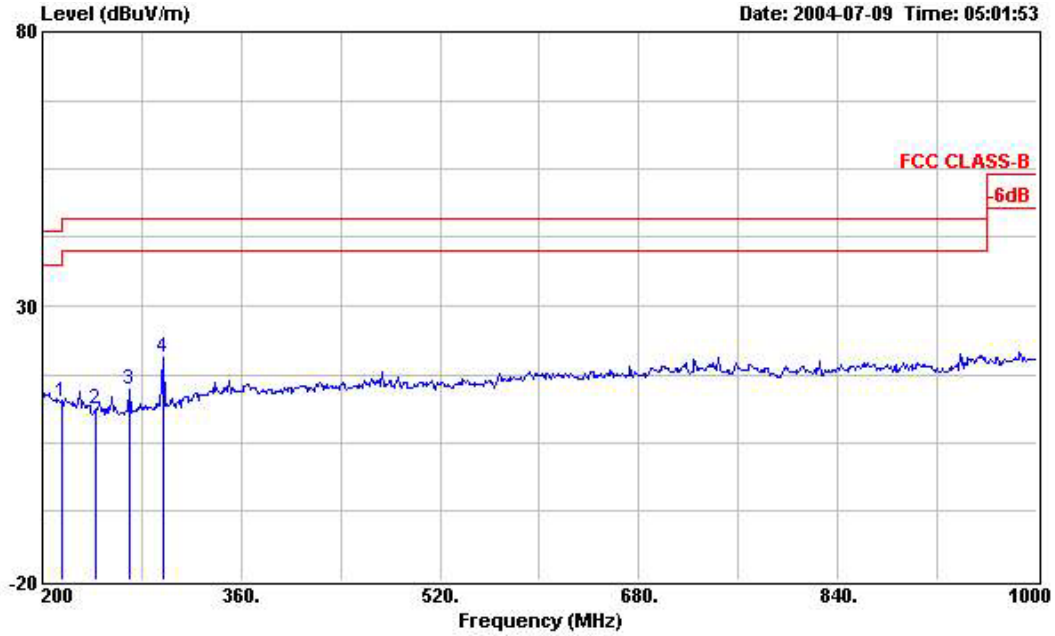
Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 VERTICAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : X Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	27.050	53.86	------	------	67.06	14.82	0.04	28.06	Peak	---	---



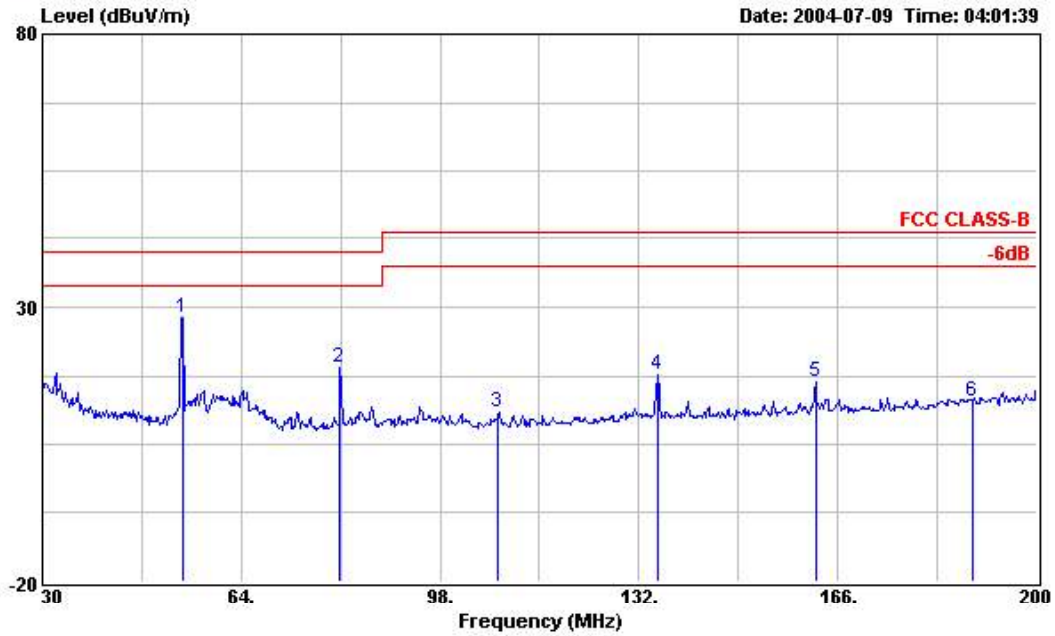
Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 HORIZONTAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : X Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	54.140	19.61	-20.39	40.00	37.06	10.19	0.35	27.99	Peak	---	---
2	81.000	10.78	-29.22	40.00	28.71	9.57	0.44	27.94	Peak	---	---
3	108.000	8.76	-34.74	43.50	25.79	10.31	0.54	27.88	Peak	---	---
4	135.000	11.65	-31.85	43.50	27.25	11.56	0.67	27.83	Peak	---	---
5	162.000	12.88	-30.62	43.50	27.16	12.79	0.71	27.78	Peak	---	---
6	189.000	13.31	-30.19	43.50	25.75	14.46	0.82	27.72	Peak	---	---



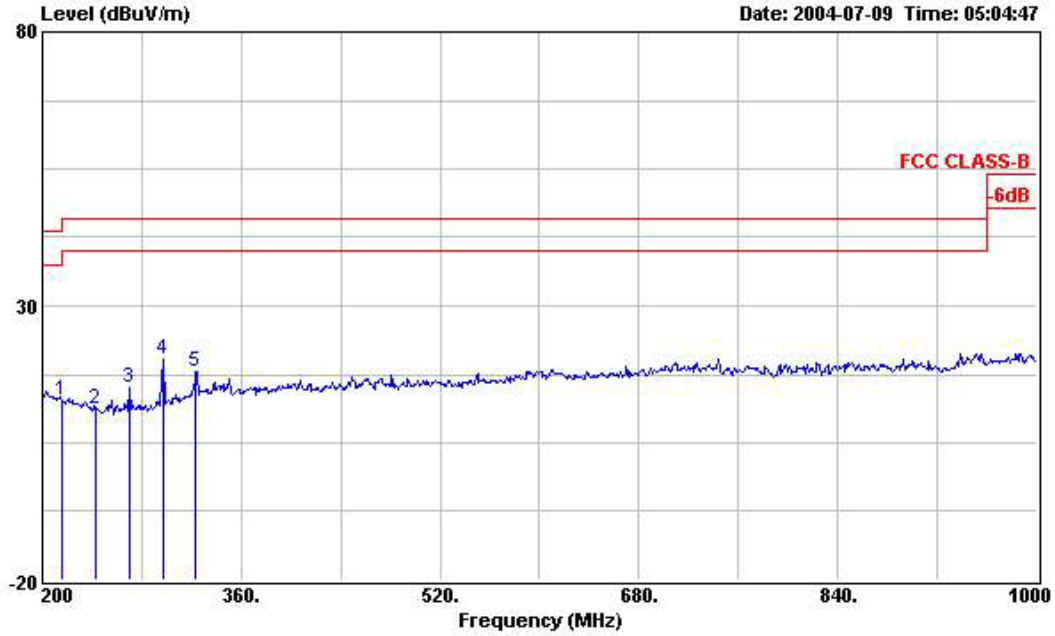
Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 HORIZONTAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : X Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	216.000	12.42	-31.08	43.50	24.89	14.36	0.81	27.64	Peak	---	---
2	243.000	11.04	-34.96	46.00	24.95	12.69	0.93	27.53	Peak	---	---
3	270.000	14.67	-31.33	46.00	28.46	12.54	1.09	27.42	Peak	---	---
4	297.600	20.69	-25.31	46.00	33.82	13.14	1.04	27.31	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 VERTICAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : X Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	54.140	28.10	-11.90	40.00	45.55	10.19	0.35	27.99	Peak	---	---
2	80.830	18.96	-21.04	40.00	36.89	9.56	0.45	27.94	Peak	---	---
3	108.000	10.94	-32.56	43.50	27.97	10.31	0.54	27.88	Peak	---	---
4	135.230	17.59	-25.91	43.50	33.19	11.56	0.67	27.83	Peak	---	---
5	162.260	16.29	-27.21	43.50	30.53	12.81	0.72	27.77	Peak	---	---
6	189.000	12.76	-30.74	43.50	25.20	14.46	0.82	27.72	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 VERTICAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : X Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	216.000	12.63	-30.87	43.50	25.10	14.36	0.81	27.64	Peak	---	---
2	243.000	11.15	-34.85	46.00	25.06	12.69	0.93	27.53	Peak	---	---
3	269.600	15.18	-30.82	46.00	28.98	12.53	1.09	27.42	Peak	---	---
4	297.600	20.25	-25.75	46.00	33.38	13.14	1.04	27.31	Peak	---	---
5	323.200	18.03	-27.97	46.00	29.87	14.52	1.06	27.42	Peak	---	---

Test Engineer : Jay

6.4.2 Test Mode: Mode 2

- Frequency Range of Test: from 30 MHz to 1000 MHz
- Test Distance: 3m
- Temperature: 26℃
- Relative Humidity: 53%
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

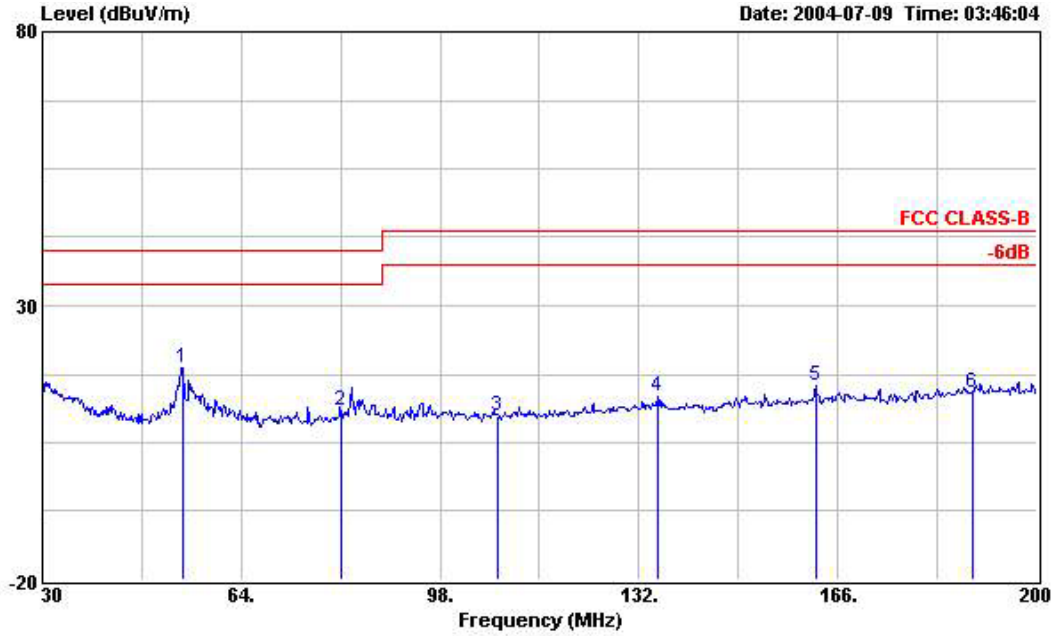
■ The test that passed at the minimum margin was marked by a frame in the following data

Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 HORIZONTAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : Y Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	27.050	43.42	------	------	55.77	14.82	0.89	28.06	Peak	---	---

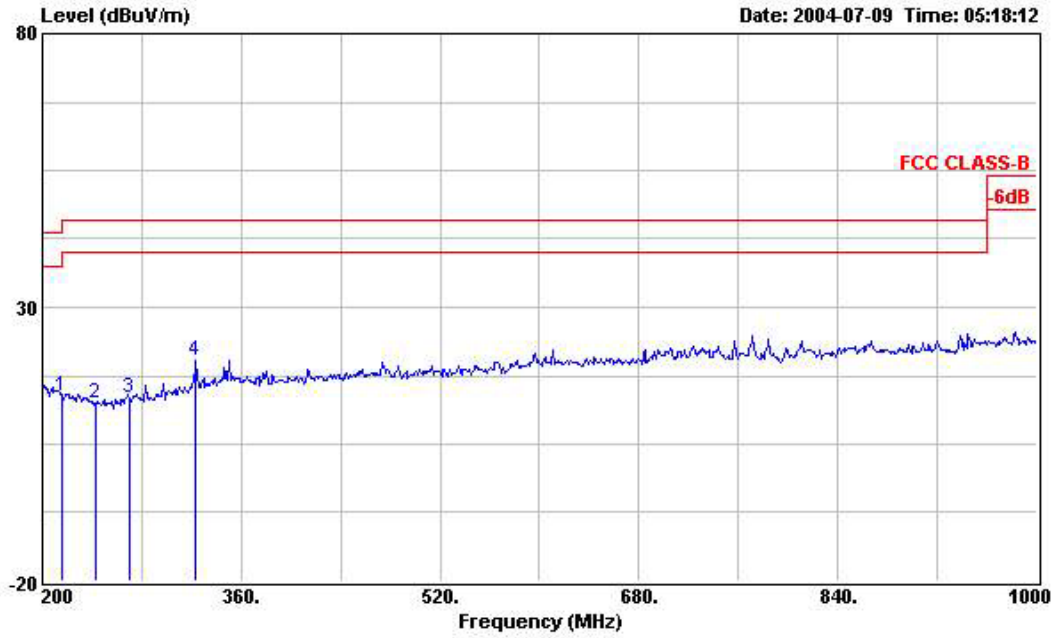
Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 VERTICAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : Y Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	27.040	44.31	------	------	56.65	14.83	0.89	28.06	Peak	---	---



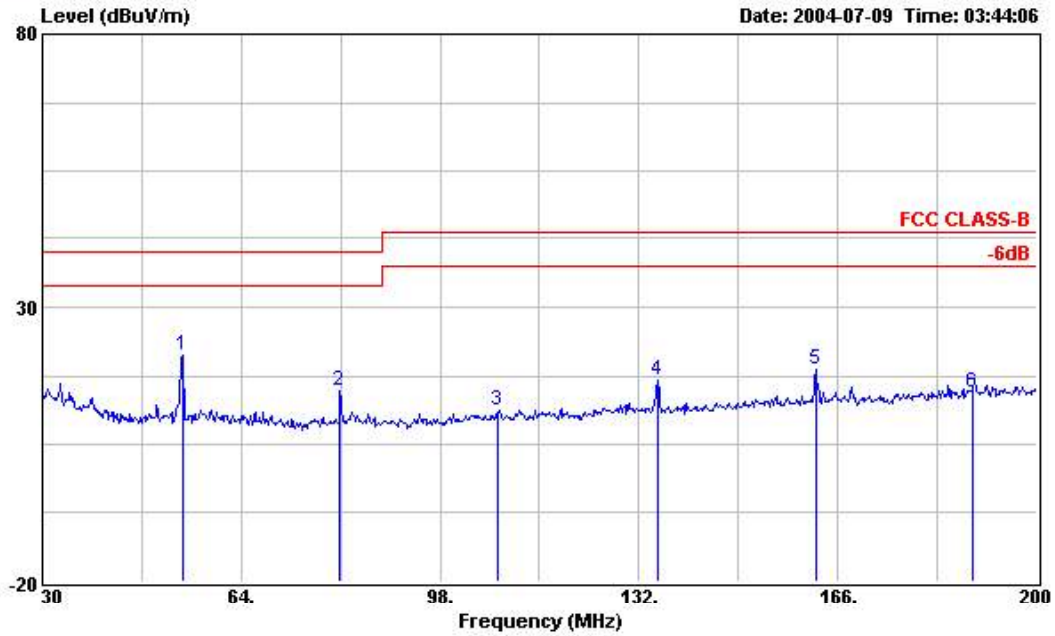
Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 HORIZONTAL
EUT : 27MHz無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : Y Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	54.000	18.55	-21.45	40.00	35.11	10.18	1.25	27.99	Peak	---	---
2	81.000	10.81	-29.19	40.00	27.63	9.57	1.55	27.94	Peak	---	---
3	108.000	9.78	-33.72	43.50	25.50	10.31	1.85	27.88	Peak	---	---
4	135.230	13.29	-30.21	43.50	27.57	11.56	1.99	27.83	Peak	---	---
5	162.260	15.36	-28.14	43.50	28.00	12.81	2.32	27.77	Peak	---	---
6	189.000	14.06	-29.44	43.50	24.85	14.46	2.47	27.72	Peak	---	---



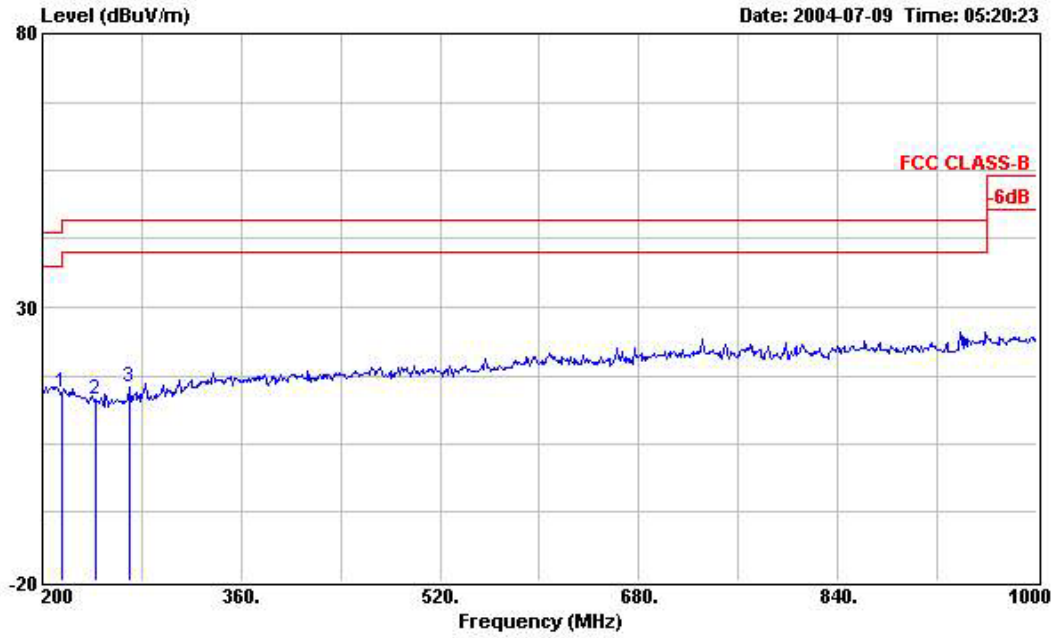
Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 HORIZONTAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : Y Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	216.000	13.73	-29.77	43.50	24.37	14.36	2.64	27.64	Peak	---	---
2	243.000	12.51	-33.49	46.00	24.54	12.69	2.81	27.53	Peak	---	---
3	270.000	13.55	-32.45	46.00	25.47	12.54	2.96	27.42	Peak	---	---
4	323.200	20.42	-25.58	46.00	30.14	14.52	3.18	27.42	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 VERTICAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : Y Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	54.140	21.14	-18.86	40.00	37.69	10.19	1.25	27.99	Peak	---	---
2	80.830	14.74	-25.26	40.00	31.57	9.56	1.55	27.94	Peak	---	---
3	108.000	11.23	-32.27	43.50	26.95	10.31	1.85	27.88	Peak	---	---
4	135.230	16.57	-26.93	43.50	30.85	11.56	1.99	27.83	Peak	---	---
5	162.260	18.74	-24.76	43.50	31.38	12.81	2.32	27.77	Peak	---	---
6	189.000	14.45	-29.05	43.50	25.24	14.46	2.47	27.72	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 VERTICAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : Y Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	216.000	14.45	-29.05	43.50	25.09	14.36	2.64	27.64	Peak	---	---
2	243.000	13.08	-32.92	46.00	25.11	12.69	2.81	27.53	Peak	---	---
3	270.000	15.47	-30.53	46.00	27.39	12.54	2.96	27.42	Peak	---	---

Test Engineer : Jay

6.4.3 Test Mode: Mode 3

- Frequency Range of Test: from 30 MHz to 1000 MHz
- Test Distance: 3m
- Temperature: 26℃
- Relative Humidity: 53%
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

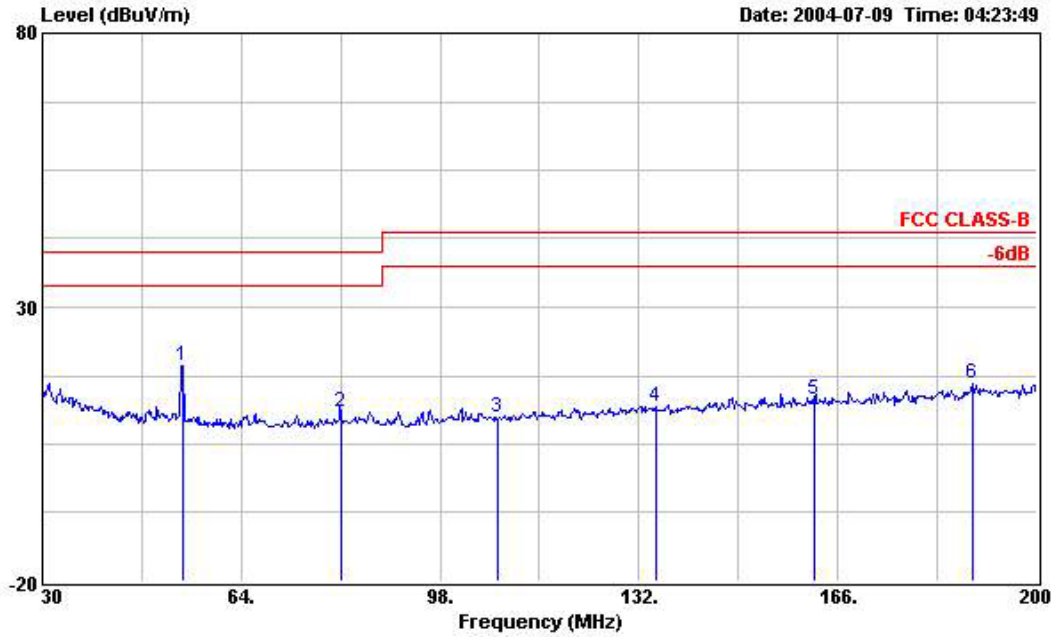
■ The test that passed at the minimum margin was marked by a frame in the following data

Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 HORIZONTAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : Z Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	27.050	48.36	------	------	60.71	14.82	0.89	28.06	Peak	---	---

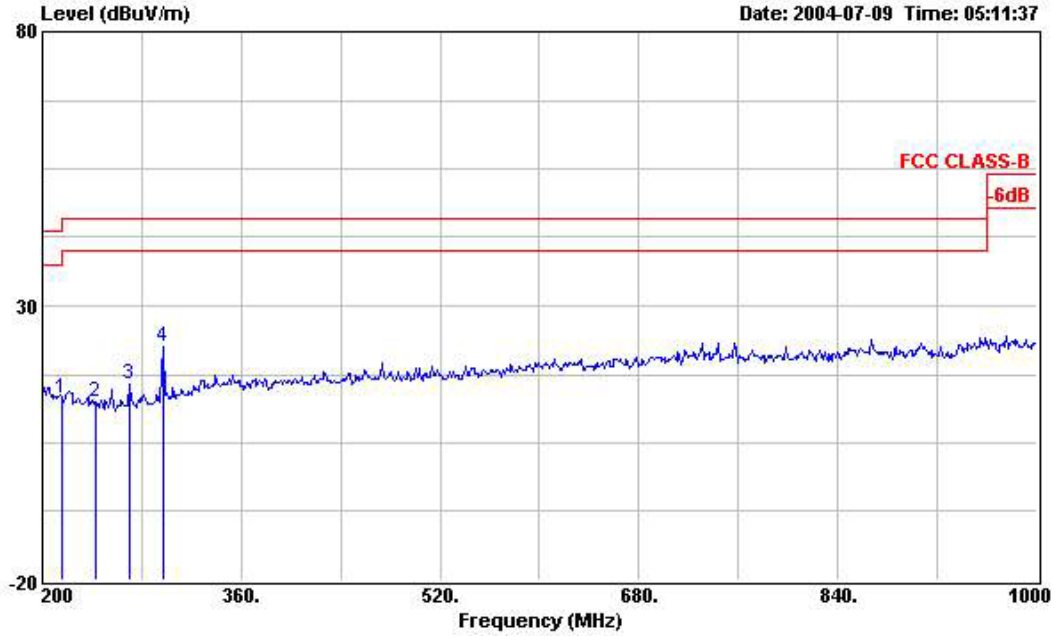
Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 VERTICAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : Z Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	27.040	42.75	------	------	55.09	14.83	0.89	28.06	Peak	---	---



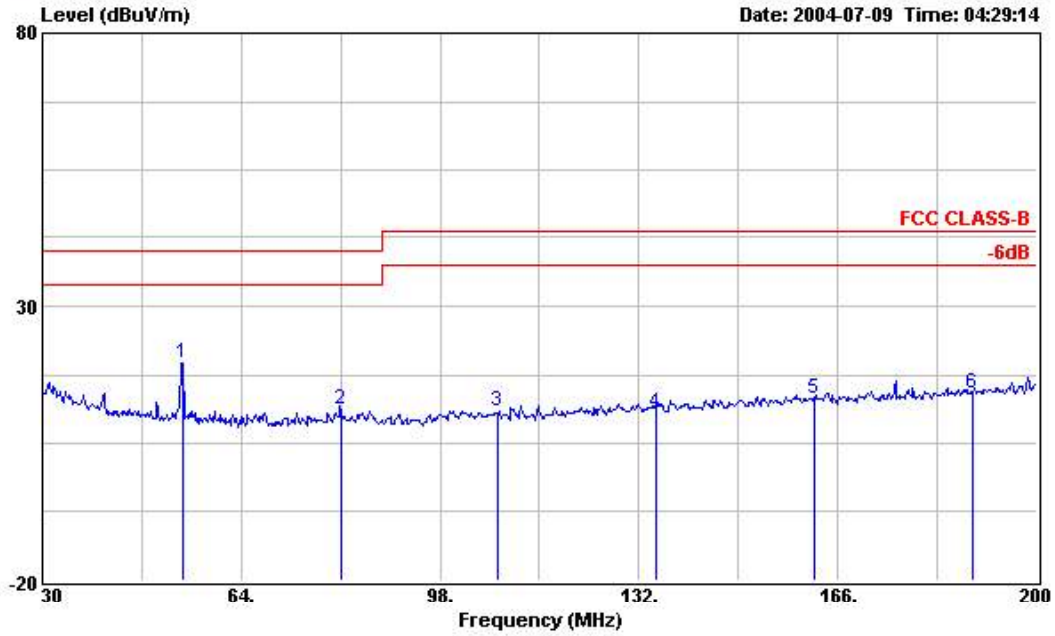
Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 HORIZONTAL
EUT : 27MHz無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : Z Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	54.140	19.42	-20.58	40.00	35.97	10.19	1.25	27.99	Peak	---	---
2	81.000	10.75	-29.25	40.00	27.57	9.57	1.55	27.94	Peak	---	---
3	108.000	9.79	-33.71	43.50	25.51	10.31	1.85	27.88	Peak	---	---
4	135.000	11.75	-31.75	43.50	26.03	11.56	1.99	27.83	Peak	---	---
5	162.000	13.07	-30.43	43.50	25.75	12.79	2.31	27.78	Peak	---	---
6	189.000	15.94	-27.56	43.50	26.73	14.46	2.47	27.72	Peak	---	---



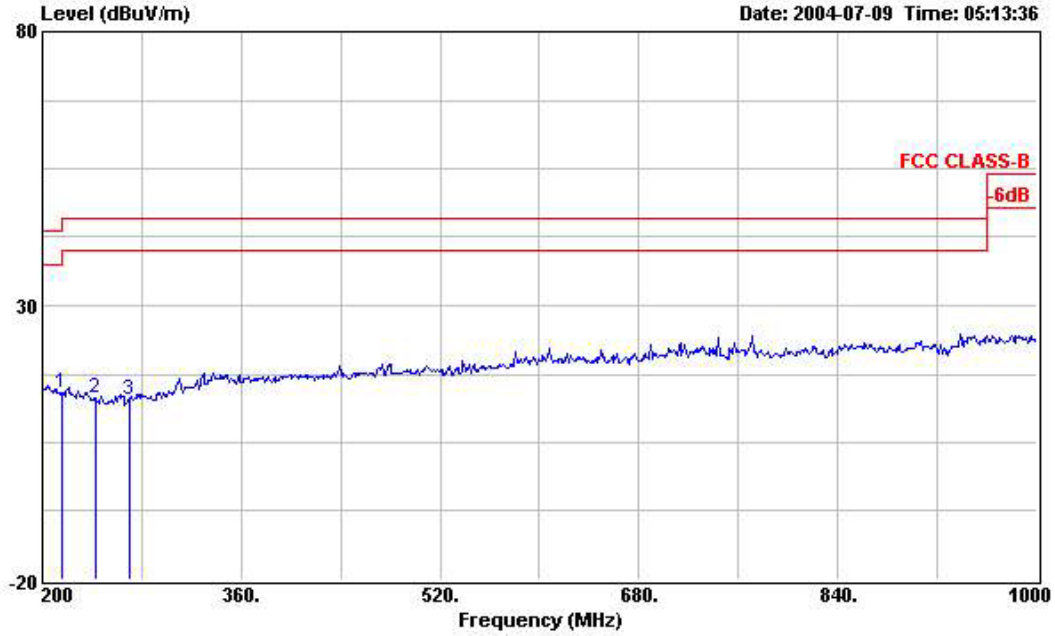
Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 HORIZONTAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : Z Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	216.000	13.14	-30.36	43.50	23.78	14.36	2.64	27.64	Peak	---	---
2	243.000	12.58	-33.42	46.00	24.61	12.69	2.81	27.53	Peak	---	---
3	269.600	15.67	-30.33	46.00	27.61	12.53	2.95	27.42	Peak	---	---
4	297.600	22.69	-23.31	46.00	33.79	13.14	3.07	27.31	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 VERTICAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : Z Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	54.140	19.66	-20.34	40.00	36.21	10.19	1.25	27.99	Peak	---	---
2	81.000	11.08	-28.92	40.00	27.90	9.57	1.55	27.94	Peak	---	---
3	108.000	10.88	-32.62	43.50	26.60	10.31	1.85	27.88	Peak	---	---
4	135.000	10.63	-32.87	43.50	24.91	11.56	1.99	27.83	Peak	---	---
5	162.000	13.14	-30.36	43.50	25.82	12.79	2.31	27.78	Peak	---	---
6	189.000	14.21	-29.29	43.50	25.00	14.46	2.47	27.72	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 VERTICAL
EUT : 27MHz 無線搖桿
Model : WG-12X
Power : 120Vac/60Hz
Memo : Z Plan

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	216.000	14.16	-29.34	43.50	24.80	14.36	2.64	27.64	Peak	---	---
2	243.000	13.21	-32.79	46.00	25.24	12.69	2.81	27.53	Peak	---	---
3	270.000	12.92	-33.08	46.00	24.84	12.54	2.96	27.42	Peak	---	---

Test Engineer : _____
Jay

6.4.4 Photographs of Radiated Emission Test Configuration

- The photographs show the configuration that generates the maximum emission.

FRONT VIEW

REAR VIEW

X Plan

Y Plan

Z Plan

7. Antenna Factor & Cable Loss

Frequency (MHz)	Antenna Factor (dB)	Cable Loss (dB)	Frequency (MHz)	Antenna Factor (dB)	Cable Loss (dB)
30	15.35	4.50	1000	24.10	3.92
35	13.63	1.13	2000	27.40	5.66
40	11.11	1.18	3000	30.00	7.20
45	10.59	1.26	4000	32.60	9.36
50	6.47	1.31	5000	33.40	9.16
55	5.83	1.34	6000	34.20	10.70
60	5.18	1.43	7000	35.30	12.16
65	4.81	1.52	8000	36.90	13.12
70	4.43	1.56	9000	38.10	13.81
75	5.10	1.57	10000	39.00	14.83
80	5.91	1.60	11000	38.60	15.83
85	7.33	1.66	12000	39.50	17.11
90	8.74	1.75	13000	39.30	17.62
95	9.05	1.76	14000	41.60	18.37
100	9.36	1.83	15000	40.60	19.10
110	9.65	1.86	16000	37.20	19.72
120	9.97	1.92	17000	40.20	21.98
130	10.51	2.00	18000	48.90	21.22
140	10.32	2.11	19000	37.60	23.90
150	9.42	2.18	20000	37.30	24.07
160	8.09	2.22	21000	37.00	25.49
170	7.43	2.26	22000	38.00	24.92
180	7.60	2.31	23000	38.70	25.60
190	7.43	2.37	24000	38.60	25.70
200	7.26	2.43	25000	24.10	3.92
220	9.11	2.56	14000	27.40	5.66
240	10.88	2.70	15000	30.00	7.20
260	11.75	2.83	16000	32.60	9.36
280	11.55	2.93	17000	33.40	9.16
300	11.36	3.03	18000	34.20	10.70
320	12.03	3.13	19000	35.30	12.16
340	12.69	3.23	20000	36.90	13.12
360	13.33	3.32	21000	38.10	13.81
380	14.00	3.41	22000	39.00	14.83
400	14.63	3.48	23000	38.60	15.83
450	15.33	3.71	24000	39.50	17.11
500	16.03	3.85	25000	39.30	17.62
550	16.65	4.03			
600	17.29	4.32			
650	17.64	4.51			
700	18.00	4.54			
750	18.39	4.90			
800	18.79	5.04			
850	19.10	5.04			
900	19.42	5.20			
950	19.58	5.28			
1000	19.75	5.58			

8. List of Measuring Equipments Used

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	10032	9 KHz – 2.75 GHz	Jun. 23, 2004	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/008	9 KHz – 30 MHz	May 03, 2004	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/009	9 KHz – 30 MHz	Apr. 19, 2004	Conduction (CO01-HY)
EMI Filter	LINDGREN	LRE-2060	1004	< 450 Hz	N/A	Conduction (CO01-HY)
EMI Filter	LINDGREN	N6006	201052	0 ~ 60 Hz	N/A	Conduction (CO01-HY)
RF Cable-CON	Suhner Switzerland	RG223/U	CB029	9KHz~30MHz	Dec. 24, 2003	Conduction (CO01-HY)

※ Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz 3m	Jun. 21, 2004	Radiation (03CH03-HY)
Spectrum analyzer	R&S	FSP40	100004	9KHZ~40GHz	Aug. 23, 2003	Radiation (03CH03-HY)
Amplifier	HP	8447D	2944A09072	100KHz – 1.3GHz	Nov. 05, 2003	Radiation (03CH03-HY)
Biconical Antenna	SCHWARZBECK	VHBB 9124	301	30MHz –200MHz	Jul. 24, 2003	Radiation (03CH03-HY)
Log Antenna	SCHWARZBECK	VUSLP 9111	221	200MHz -1GHz	Jul. 24, 2003	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30MHz~1GHz	Dec. 03, 2003	Radiation (03CH03-HY)
Amplifier	MITEQ	AFS44	879981	100MHz~26.5GHz	Jul. 23, 2003	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6821	1GHz – 18GHz	Sep. 12, 2003	Radiation (03CH03-HY)
Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	Radiation (03CH03-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	Radiation (03CH03-HY)
Horn Antenna	Schwarzbeck	BBHA9170	154	15GHz~40GHz	Jun. 09, 2004	Radiation (03CH03-HY)
RF Cable-HIGH	Jye Bao	RG142	CB030-HIGH	1GHz~29.5GHz	Dec. 05, 2003	Radiation (03CH03-HY)

※ Calibration Interval of instruments listed above is one year, except for Horn Antenna, BBHA9170.

※ Calibration Interval of Horn Antenna, BBHA9170, is three years.

9. Uncertainty of Test Site

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.10	Normal(k=2)	0.05
Cable loss	0.10	Normal(k=2)	0.05
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.39	Rectangular	0.80
Mismatch **Receiver VSWR Γ1=** **LISN VSWR Γ2=** **Uncertainty=20log(1-Γ1*Γ2)**	+0.34/-0.35	U-shape	0.24
combined standard uncertainty Uc(y)	**1.13**		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	**2.26**		

Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.41	Normal(k=2)	0.21
Antenna factor calibration	0.83	Normal(k=2)	0.42
Cable loss calibration	0.25	Normal(k=2)	0.13
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.43	Rectangular	0.83
Mismatch Receiver VSWR Γ1= 0.20 Antenna VSWR Γ2= 0.23 Uncertainty=20log(1-Γ1*Γ2)	+0.39/-0.41	U-shaped	0.28
combined standard uncertainty Uc(y)	**1.27**		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	**2.54**		