Test Report

Product Name	：	Remote Control for Entertainment Dock 500 for iPod
Model No.	：	33350
FCC ID.	：	GV333350

Applicant	：	ACCO BRANDS, INC.
Address	：	333 Twin Dolphin Drive, 6th Floor

Date of Receipt	：	2005/12/27
Issued Date	：	2006/02/20
Report No.	：	061L009-RF-US-P07V01

The test results relate only to the samples tested.

Test Report Certification

Issued Date : 2006/02/20

Report No. : 061L009-RF-US-P07V01

QuieTek

Product Name	:	Remote Control for Entertainment Dock 500 for iPod
Applicant	:	ACCO BRANDS, INC.
Address	:	333 Twin Dolphin Drive, 6th Floor
Manufacturer	:	ACCO BRANDS, INC.
Model No.	:	33350
FCC ID.	:	GV333350
Rated Voltage	:	AC 120 V / 60 Hz
EUT Voltage	:	Battery 3V
Trade Name	:	ACCO, Kensington
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C Section 15.249:2005
		ANSI C63.4: 2003
Test Result	:	Complied

NVLAP Lab Code: 200533-0

The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Documented By	:	Grace Lin (Grace Lin)
Tested By	:	Tom Hsieh (Tom Hsieh)
Approved By	:	Gene Chang (Gene Chang)

CNLA 0914

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1. General Information

1.1. EUT Description

Product Name	Remote Control for Entertainment Dock 500 for iPod
Trade Name	ACCO, Kensington
Model No.	33350
Frequency Range	2450MHz
Type of Modulation	GFSK
Channel Control	N/A
Antenna Type	Soldered on PCB
Antenna Gain	-3.02dBi

Center Frequency of Each Channel

Channel	Frequency
1	2450MHz

Note:

1. The EUT is a Remote Control for Entertainment Dock 500 for iPod and has a 2.4GHz transmitter and a 2.4GHz receiver.
2. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.249.
3. This device is a composite device in accordance with Part 15 regulations. The receiving function is measured and procedures a test report of report No：061L009-RF-US-P01V01 under Declaration of Conformity.

1.2. Operation Description

The EUT is a Remote Control for Entertainment Dock 500 for iPod and has a 2.4GHz transmitter and a 2.4GHz receiver. The EUT only operates at 2450MHz and the maximum data rate is 1Mbps. The EUT uses GFSK modulation.

1.3. Test Mode

QuieTek verified the construction and function in typical operation. All the test modes are carried out in normal operation and defined as:

Test Mode	
TX	Mode 1: Transmit

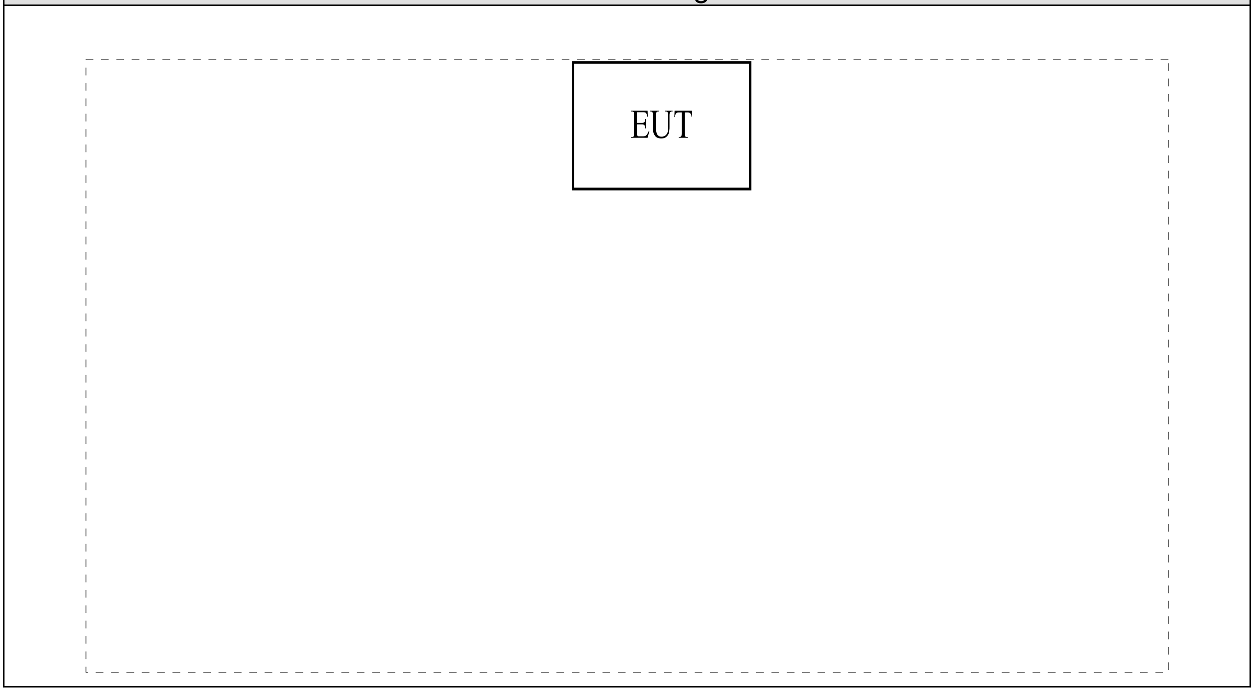
1.4. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
(1)	N/A	N/A	N/A	N/A	N/A	N/A

1.5. Configuration of tested System

Connection Diagram



1.6. EUT Exercise Software

1	Install batteries of the EUT
2	Setup the EUT as shown in section 1.5.
3	Press and hold a key.
4	Verify that the EUT transmits continuously.

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FCC PART 15 C 15.207 Conducted Emission	15 - 35	20
Humidity (%RH)		25 - 75	55
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.249 Band Edge	15 - 35	20
Humidity (%RH)		25 - 75	65
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.249 Radiated Emission	15 - 35	20
Humidity (%RH)		25 - 75	65
Barometric pressure (mbar)		860 - 1060	950-1000

Site Description: June 22, 2001 File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Reference 31040/SIT1300F2

0914

July 03, 2001 Accreditation on NVLAP
NVLAP Lab Code: 200533-0

Site Name: Quietek Corporation

Site Address: No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen,
Lin-Kou Shiang, Taipei,
Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

NVLAP Lab Code: 200533-0

2. Conducted Emission

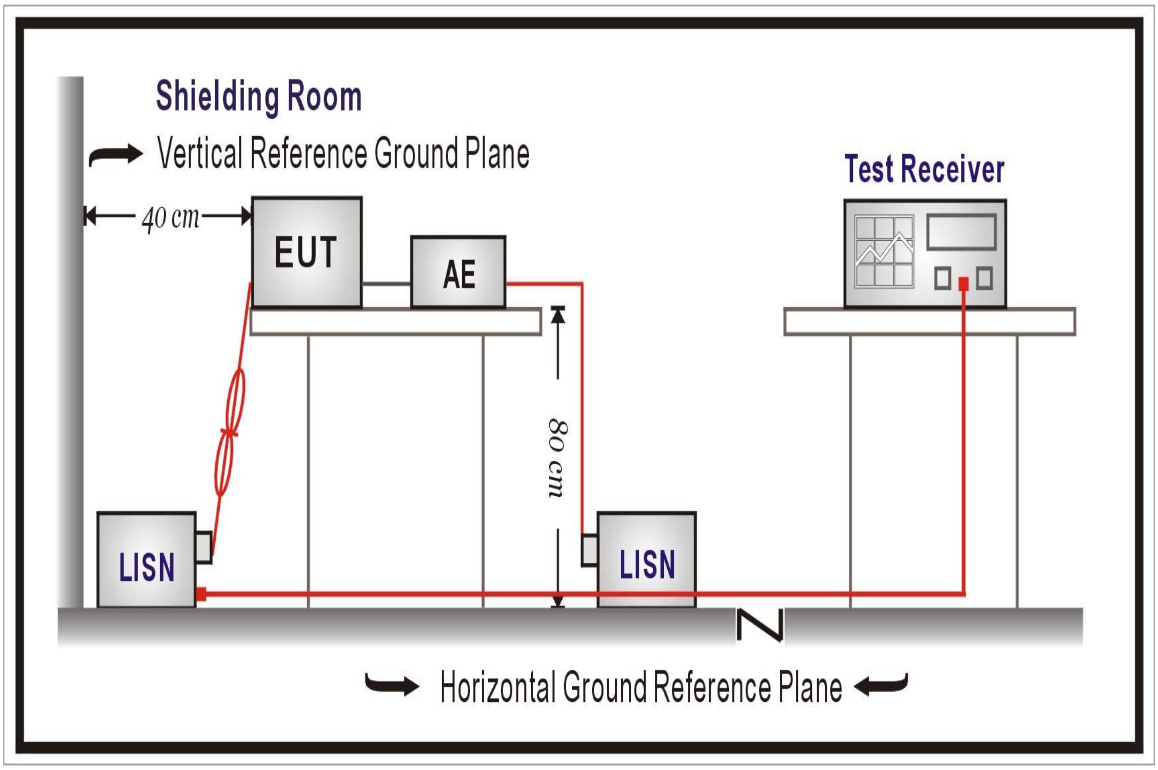
2.1. Test Equipment

The following test equipment are used during the test:

Item	Instrument	Manufacturer	Type No./Serial No	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/17	May, 2005	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2005	EUT
3	L.I.S.N.	R & S	KNW-407/8-1420-3	May, 2005	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2005	
5	No.1 Shielded Room				

Note: All instruments are calibrated every one year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency MHz	QP	AV
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks : In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

The measurement uncertainty is defined as ± 2.02 dB

2.6. Test Result

The EUT uses batteries. This test item is not performed.

3. Radiated Emission

3.1. Test Equipment

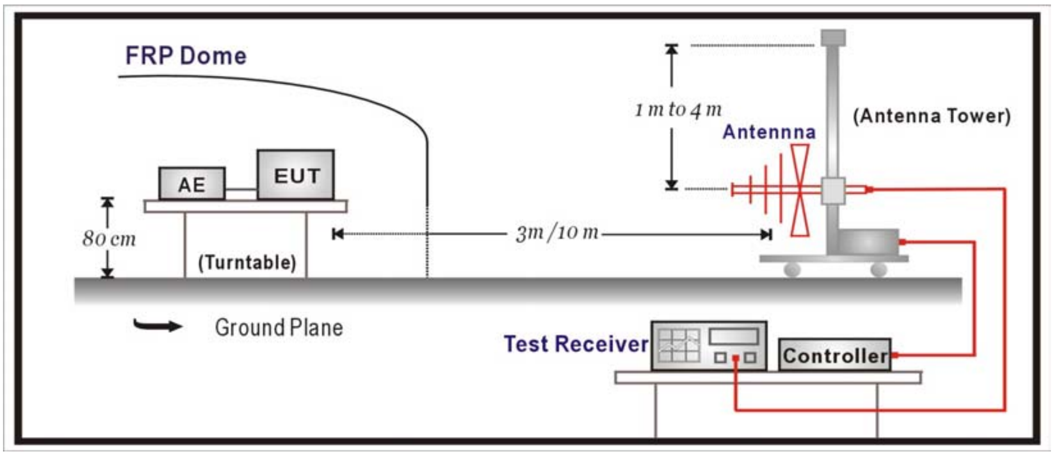
The following test equipment are used during the test:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒OATS 3	Test Receiver	R & S	ESI 26 / 838786 / 004	May, 2005
	Spectrum Analyzer	Advantest	R3162 / 120300652	May, 2005
	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2005
	Bilog Antenna	SCHAFFNER	CBL6112B / 2697	May, 2005
	Horn Antenna	ETS	3115 / 0005-6160	July, 2005
	Pre-Amplifier	QTK	QTK-AMP-01 / 0001	July, 2005

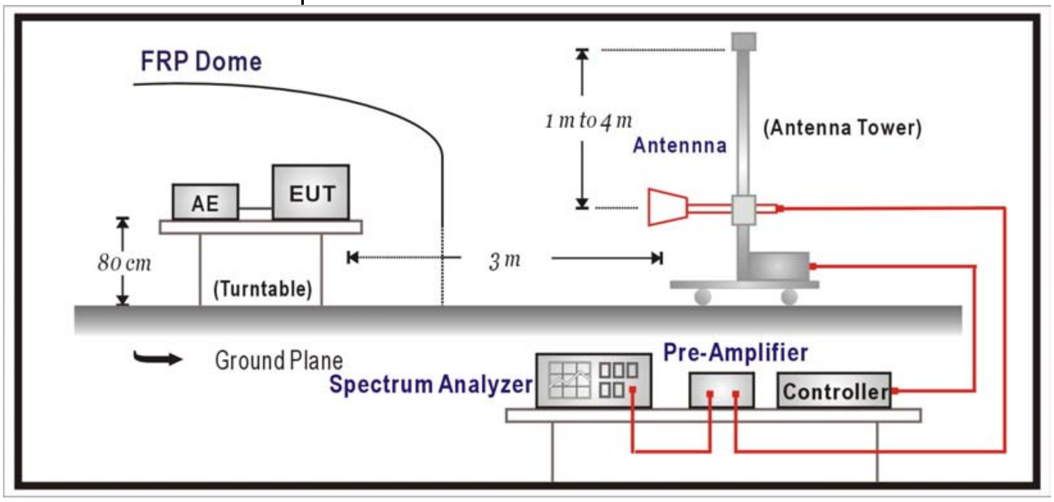
Note: 1. All instruments are calibrated every one year.
2. The test instruments marked "X" are used to measure the final test results.

3.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



3.3. Limits

➢ Fundamental and Harmonics Emission Limits

FCC Part 15 Subpart C Paragraph 15.249 Limits				
Fundamental Frequency MHz	Field Strength of Fundamental		Field Strength of Harmonics	
	mV/m	dBuV/m	uV/m	dBuV/m
902-928	50	94	500	54
2400-2483.5	50	94	500	54
5725-5875	50	94	500	54
24.0 – 24.25	250	108	2500	68

Remarks : 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

➢ Spurious electric field strength limits

FCC Part 15 Subpart C Paragraph 15.209 Limits			
Frequency MHz	uV/m	dBuV/m	Measurement distance (meter)
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Remarks : 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

3.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.

On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

3.5. Uncertainty

The measurement uncertainty is ± 3.8 dB below 1GHz and is ± 3.9 dB above 1GHz.

3.6. Test Result

Product	Remote Control for Entertainment Dock 500 for iPod		
Test Item	Radiated Emission (Fundamental)		
Test Mode	Mode 1: Transmit		
Date of Test	2006/02/17	Test Site	No.3 OATS

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Fundamental Radiated Emission					
Horizontal					
Peak					
2450.000	-2.088	58.447	56.360	-57.640	114.000

Note:

1. All Readings Levels are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement is not performed when the peak value is under the average limit. If the readings given are average, peak measurement should also be supplied.

Product	Remote Control for Entertainment Dock 500 for iPod		
Test Item	Radiated Emission (Fundamental)		
Test Mode	Mode 1: Transmit		
Date of Test	2006/02/17	Test Site	No.3 OATS

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Fundamental Radiated Emission					
Vertical					
Peak					
2450.000	-2.088	70.297	68.210	-45.790	114.000

Note:

1. All Readings Levels are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement is not performed when the peak value is under the average limit. If the readings given are average, peak measurement should also be supplied.

Product	Remote Control for Entertainment Dock 500 for iPod		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2006/01/13	Test Site	No.3 OATS

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector					
4900.000	3.988	58.530	62.517	-11.483	74.000
7350.000	9.730	45.440	55.171	-18.829	74.000
9800.000	11.793	40.990	52.784	-21.216	74.000
Average Detector					
4900.000	3.988	41.330	45.317	-8.683	54.000
7350.000	9.730	32.880	42.611	-11.389	54.000
9800.000	11.793	30.020	41.814	-12.186	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak and/or average as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Measurement Level = Reading Level + Correct Factor.
3. The average measurement is not performed when the peak value is under the average limit. If the readings given are average, peak measurement should also be supplied.

Product	Remote Control for Entertainment Dock 500 for iPod		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2006/01/13	Test Site	No.3 OATS

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Vertical					
Peak Detector					
4900.000	3.988	60.750	64.737	-9.263	74.000
7350.000	9.730	51.080	60.811	-13.189	74.000
9800.000	11.793	42.060	53.854	-20.146	74.000
Average Detector					
4900.000	3.988	41.540	45.527	-8.473	54.000
7350.000	9.730	34.540	44.271	-9.729	54.000
9800.000	11.793	30.770	42.564	-11.436	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak and/or average as necessary.
2. Receiver setting (Peak Detector) : RBW:1MHz; VBW:1MHz; Span:100MHz.
3. Receiver setting (AVG Detector) : RBW:1MHz; VBW:30Hz; Span:20MHz.
4. Measurement Level = Reading Level + Correct Factor.
5. The average measurement is not performed when the peak value is under the average limit. If the readings given are average, peak measurement should also be supplied.

Product	Remote Control for Entertainment Dock 500 for iPod		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2006/01/13	Test Site	No.3 OATS

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
265.200	14.033	15.800	29.833	-16.167	46.000
308.890	13.786	11.900	25.686	-20.314	46.000
391.300	16.001	16.400	32.401	-13.599	46.000
515.100	18.952	16.430	35.382	-10.618	46.000
*595.030	20.078	17.030	37.108	-8.892	46.000
881.100	22.144	6.020	28.164	-17.836	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak and/or average as necessary.
2. “ * ” means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product	Remote Control for Entertainment Dock 500 for iPod		
Test Item	Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2006/01/13	Test Site	No.3 OATS

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Vertical:					
257.900	14.270	16.500	30.770	-15.230	46.000
262.800	14.735	7.030	21.765	-24.235	46.000
342.830	14.668	16.560	31.227	-14.773	46.000
379.200	16.655	11.230	27.885	-18.115	46.000
*689.600	20.441	15.110	35.551	-10.449	46.000
755.080	23.113	5.590	28.703	-17.297	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak and above 1GHz are peak and/or average as necessary.
2. " * " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

4. Band Edge

4.1. Test Equipment

The following test equipment are used during the test:

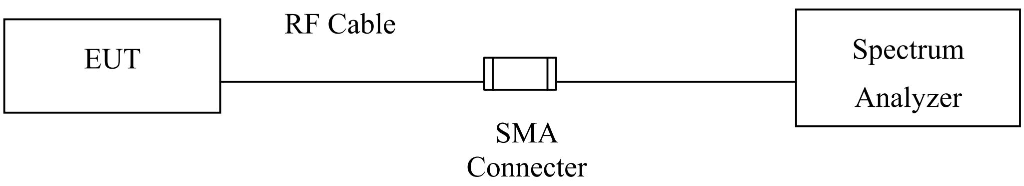
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	HP	E4407B / US39440758	May, 2005
X	Test Receiver	R & S	ESCS 30 / 825442/14	May, 2005
X	Spectrum Analyzer	Advantest	R3261C / 71720140	May, 2005
X	Pre-Amplifier	HP	8447D/3307A01812	May, 2005
X	Bilog Antenna	Chase	CBL6112B / 12452	Sep., 2005
X	Horn Antenna	EM	EM6917 / 103325	May, 2005

Note: 1. All instruments are calibrated every one year.

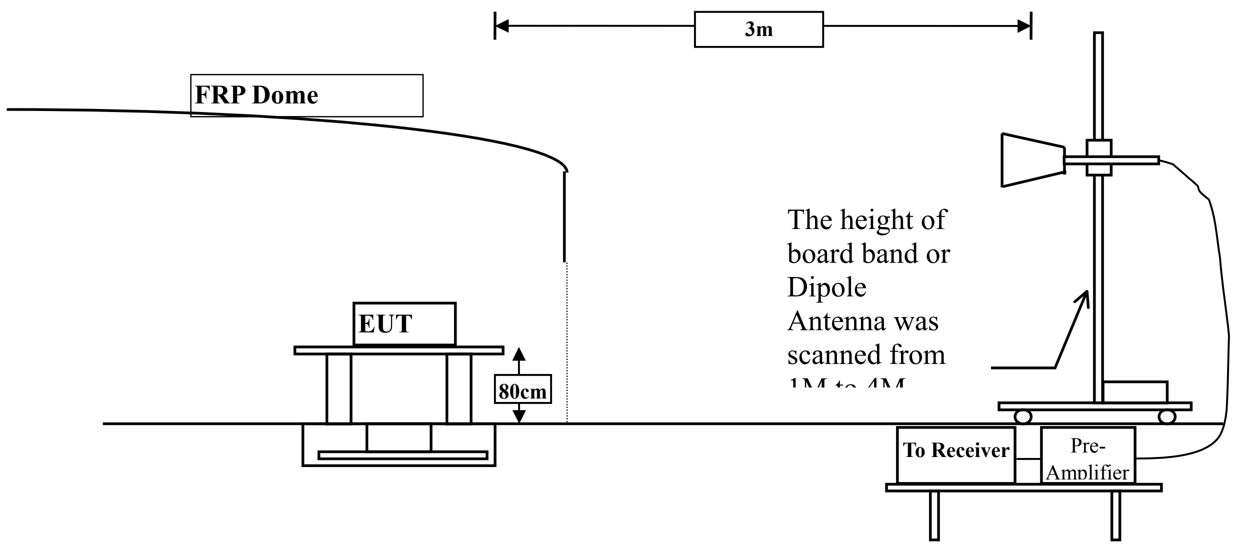
2. The test instruments marked "X are used to measure the final test results.

4.2. Test Setup

RF Conducted Measurement:



RF Radiated Measurement:



4.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 50 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.
The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.
The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz.

4.5. Uncertainty

The conducted measurement uncertainty is ± 1 MHz. The radiated measurement is ± 3.9dB above 1GHz.

4.6. Test Result

Product	Remote Control for Entertainment Dock 500 for iPod		
Test Item	Band Edge		
Test Mode	Mode 1: Transmit		
Date of Test	2006/01/13	Test Site	No.3 OATS

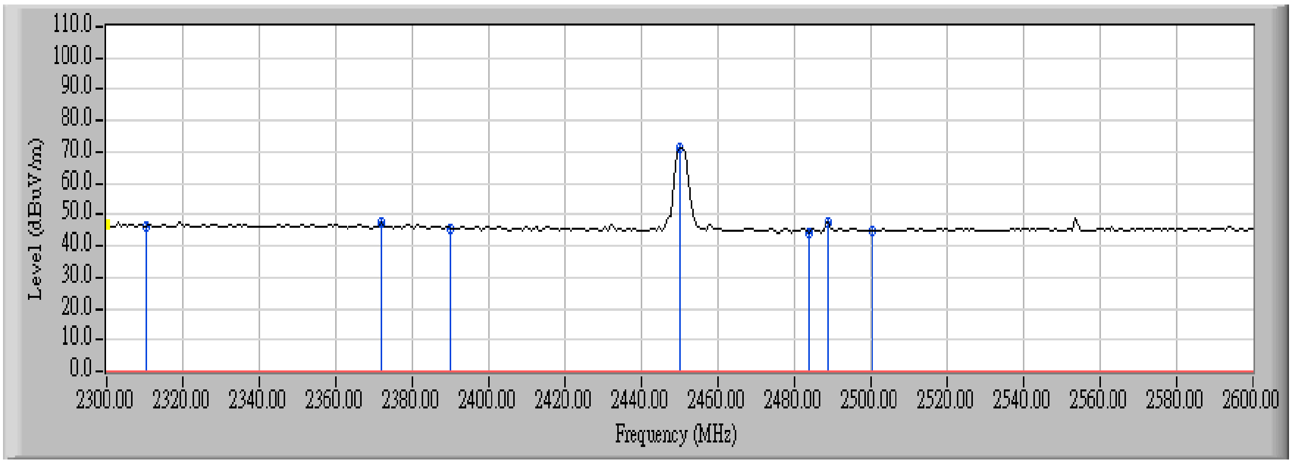
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
1 (Horizontal)	<2400	>20	Pass

RF Radiated Measurement (Horizontal):

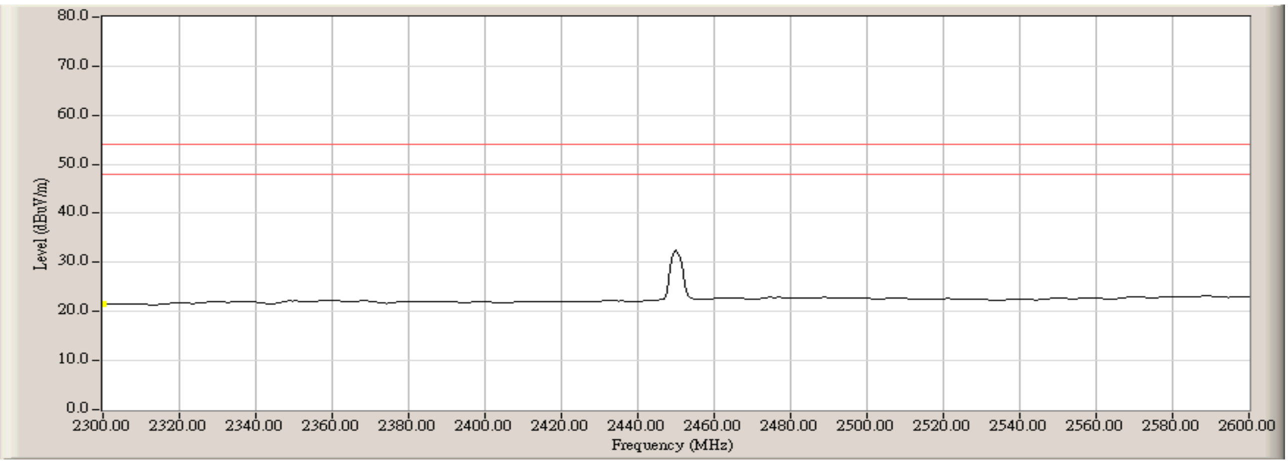
Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
1 (Peak)	2372.000	48.283	47.330	74.00	54.00	Pass
1 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 1: Horizontal (Peak)



Note:
RBW=1MHz, VBW=1MHz, Sweep=500ms.

Figure Channel 1: Horizontal (Average)



Note:
RBW=1MHz, VBW=30Hz, Sweep=AUTO

Product	Remote Control for Entertainment Dock 500 for iPod		
Test Item	Band Edge		
Test Mode	Mode 1: Transmit		
Date of Test	2006/01/13	Test Site	No.3 OATS

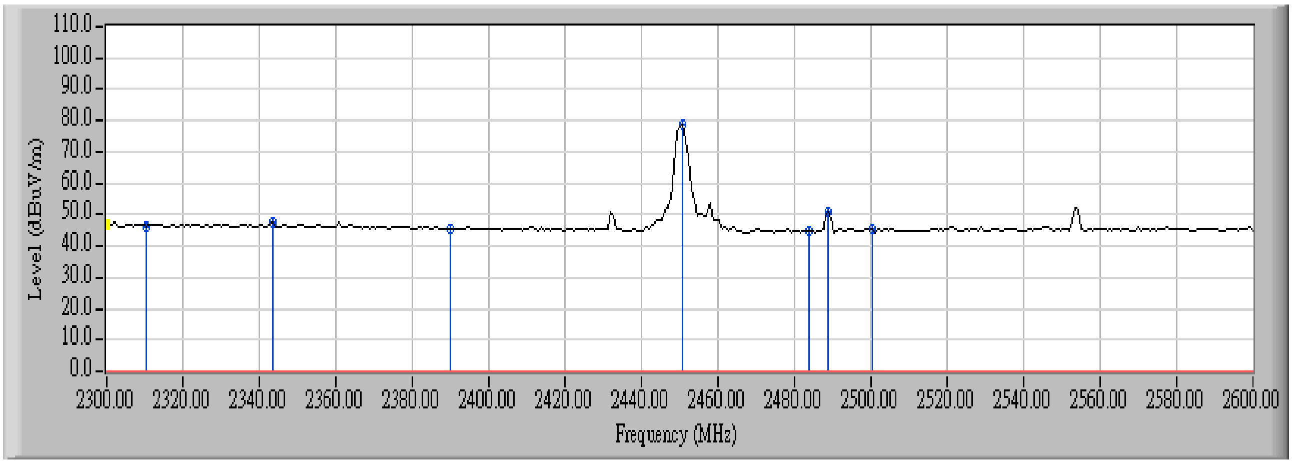
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
1 (Vertical)	<2400	>20	Pass

RF Radiated Measurement (Vertical):

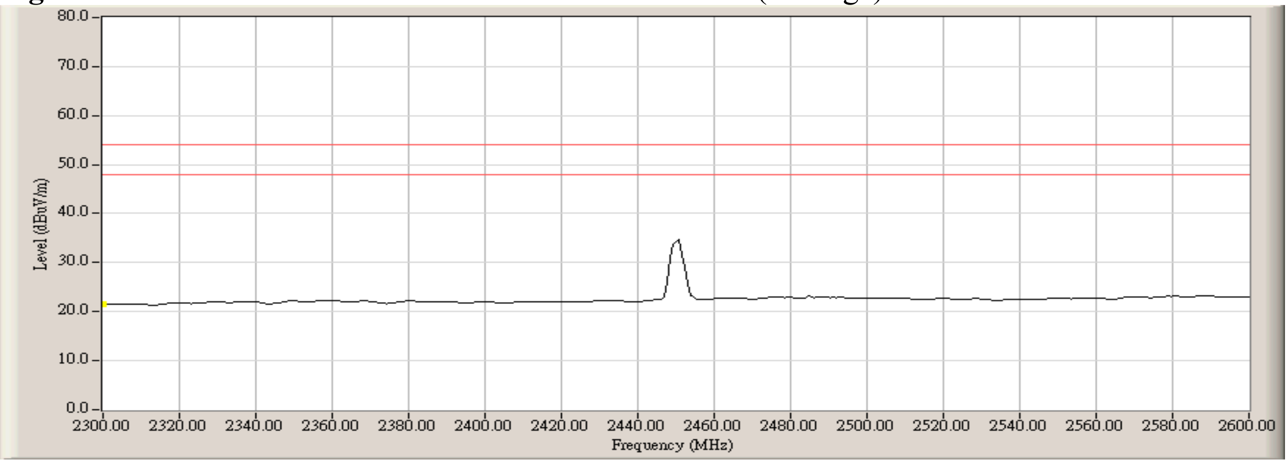
Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Arerage Limit (dBuV/m)	Result
1 (Peak)	2489.000	49.674	47.530	74.00	54.00	Pass
1 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 1: Vertical (Peak)



Note:
RBW=1MHz, VBW=1MHz, Sweep=500ms.

Figure Channel 1: Vertical (Average)



Note:
RBW=1MHz, VBW=30Hz, Sweep=AUTO