Technical Information

APPLICAN	IT	MANUFACTURER			
Name:	X10 (USA), Inc.	Name: Address:	X-10 Electronics (Shenzhen) Co. Ltd.		
Address:	19823 58 th Place South		Together Rich Industrial Park B Sanwei Industrial District, Xixiang Town		
City, State	e, Zip: Kent, WA 98032	City, State	, Zip: Baoan County, Shenzhen, China		

Test Specifications: FCC Rules and Regulations Part 15, Subpart C, Section 15.249

FCC Rules and Regulations Part 15, Subpart B

Test Procedure: ANSI C63.4:2003

Test Sample Description

Test Sample: 2.4 GHz Wireless Audio/Video Sender with an Integrated 310 MHz

Superregenerative Receiver

Brandname(s): X10 (USA)
Model(s): VT44A
FCC ID: B4SVT44A

Type: Frequency Modulated Transmitter

Power Requirements: 6 VDC, 300 mA derived from external AC Adapter

Frequency Of Operation: 2400-2483.5 MHz

Applicable Rule Section: Part 15, Subpart C, Section 15.249

TESTS PERFORMED

Transmitter:

- 15.207(a) Conducted Emissions- 15.249(a) Occupied Bandwidth

- 15.249(c)/15.209 Radiated Emissions, Spurious Case

- 15.249(a) Radiated Emissions, Fundamental and Harmonics

Receiver:

- 15.107(a) Conducted Emissions- 15.109(a) Radiated Emissions

Test Results

Transmitter: 15.203:	The intentional radiator is designed to ensure that no antenna other than that furnished by the applicant can be used with the device.
15.207 (a):	The radio frequency voltage that was conducted back on to the AC power line on any frequency/frequencies within the bandwidth of 150 kHz to 30 MHz did not exceed Class B limits as specified in CISPR 22.
15.249 (a):	The unit operates in 2400 MHz to 2483.5 MHz band. The field strength of the fundamental did not exceed 50 mV/M avg. The field strength of the harmonics did not exceed 500 µV/M avg.
15.249 (b):	Field strength readings were taken at 3 meters unless otherwise noted.
15.249 (c):	Emissions radiated outside the specified frequency band were attenuated in accordance with the general radiated emissions limits of 15.209.
15.249 (d):	The peak field strength of any emission did not exceed the maximum permitted average field strength by more than 20 dB.
Receiver: 15.107 (a):	The radio frequency voltage that was conducted back on to the AC power line on any frequency/frequencies within the bandwidth of 150 kHz to 30 MHz did not exceed Class B limits as specified in CISPR 22.
15.109(a):	The field strength of spurious radiated emissions did not exceed Class B limits specified in paragraph 15.109(a).

GENERAL NOTES

1. All user accessible controls were adjusted to produce maximum emissions.

2. The device was tested with the following external accessories:

Panasonic VCR

Tri-RCA Cable; ¼ inch mini dim cable

3. Measurements of Conducted Emissions were performed utilizing a 50 ohm / 50 µhenry Line Impedance Stabilization Network (LISN).

		Channel A	Channel B	Channel C	Channel D
4.	The unit operates at the following frequencies:	2414 MHz	2431 MHz	2450 MHz	2467 MHz
	The unit was tested at the following frequencies:	2414 MHz	-	2450 MHz	2467 MHz

5. The frequency range was scanned from 30 MHz to 25 GHz. All emissions not reported were more than 20 dB under the specified limit.

Certification and Signatures

We certify that this report is a true representation of the results obtained from the tests of the equipment stated. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.

Donald C. Lerner EMC Test Engineer

Richard J. Reitz Laboratory Manager

NARTE Certified Engineer ATL-0036-E

Non-Warranty Provision

The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

Non-Endorsement

This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement or certification of the product or material tested. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

EQUIPMENT LIST Conducted Emissions

EN	Туре	Manufacturer	Description	Model No.	Cal Date	Due Date
078	LISN	Solar Electronics	10 kHz - 30 MHz	8028-50-TS24BNC	6/29/2006	6/29/2007
079	LISN	Solar Electronics	10 kHz - 30 MHz	8028-50-TS24BNC	6/29/2006	6/29/2007
091	Shielded Enclosure	Retlif	10 kHz - 1 GHz	Room 6	10/16/2006	10/16/2007
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	10/10/2006	4/10/2007
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	10/9/2006	4/9/2007
456	LISN	Solar Electronics	DC - 60 Hz	9409-50-R-24	10/28/2005	11/30/2006
574	AM/FM Signal Generator	Marconi Instru.	9 kHz - 2.4 GHz	2024	7/25/2006	7/25/2007
831	10 DB Atten. (50 ohm)	Narda	DC - 11 GHz, 20W	768-10	5/10/2006	5/10/2007
896	EMI Test Receiver	Rohde & Schwarz	20 Hz - 40 GHz	ESIB40	9/5/2006	9/5/2007

Occupied Bandwidth

EN	Туре	Manufacturer	Description	Model No.	Cal Date	Due Date
091	Shielded Enclosure	Retlif	10 kHz - 1 GHz	Room 6	10/16/2006	10/16/2007
128	Double Ridged Guide	Electro-Mechanics	1 GHz - 18 GHz	3105	3/27/2006	3/27/2007
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	10/10/2006	4/10/2007
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	10/9/2006	4/9/2007
141C	Cable	Retlif	1 GHz ~ 18 GHz	1 METER, BLUE	1/4/2006	1/4/2007
512	Graphics Plotter	Hewlett Packard	N/A	7470A	10/18/2006	10/18/2007
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	9/9/2005	9/9/2007

Radiated Emissions

EN	Туре	Manufacturer	Description	Model No.	Cal Date	Due Date
067	Open Area Test Site	Retlif	3 Meter	RNY	9/12/2006	9/12/2009
091	Shielded Enclosure	Retlif	10 kHz - 1 GHz	Room 6	10/16/2006	10/16/2007
128	Double Ridged Guide	Electro-Mechanics	1 GHz - 18 GHz	3105	3/27/2006	3/27/2007
129E	High Gain Horn Antenna	Microlab/FXR	18 GHz - 26.5 GHz	K638A	9/20/2006	9/20/2007
133	Broadband Pre-Amplifier	Electro-Metrics	10 kHz - 1 GHz, 26dB	BPA-1000	6/27/2006	6/27/2007
141	Spectrum Analyzer	Hewlett Packard	100 Hz - 40 GHz	8566B	10/10/2006	4/10/2007
141B	Quasi-Peak Adaptor	Hewlett Packard	100 Hz - 1 GHz	85650A	10/9/2006	4/9/2007
141C	Cable	Retlif	1 GHz ~ 18 GHz	1 METER, BLUE	1/4/2006	1/4/2007
141D	Cable	Retlif	1 GHz ~ 18 GHz	10 METER, BLACK	1/4/2006	1/4/2007
206B	6.0 dB Attenuator	Texscan	0 - 1.0 GHz	FP-50 - 6 dB	6/27/2006	6/27/2007
420	Amplifier	Hewlett Packard	2.0 GHz - 18 GHz	11975A	11/14/2006	11/14/2007
421	Harmonic Mixer	Hewlett Packard	18 GHz - 26.5 GHz	11970K	10/3/2006	10/3/2009
512	Graphics Plotter	Hewlett Packard	N/A	7470A	10/18/2006	10/18/2007
523	Biconilog	Electro-Mechanics	26 - 2000 MHz	3142B	11/10/2006	11/10/2007
543	Preamplifier	Hewlett Packard	1.0 GHz - 26.5 GHz	8449B	9/9/2005	9/9/2007
617	Interference Analyzer	Electro-Metrics	10 kHz - 1 GHz	EMC-30	2/21/2006	2/21/2007
712	EMI Test Receiver	Rohde & Schwarz	20 Hz - 26.5 GHz	ESI26	9/26/2006	9/26/2007
712A	Cable	Retlif	10 kHz - 18 GHz	R&S Analyzer	6/3/2006	6/3/2007
712B	Cable	Retlif	10 kHz - 18 GHz	R&S Analyzer	8/21/2006	8/21/2007
723	H.P. Filter	Mini-Circuits	1 GHz	BHP-1000	8/7/2006	8/7/2007
762	AM/FM Signal Generator	Marconi Instru.	10 kHz - 1.2 GHz	2023	7/25/2006	7/25/2007
767	Biconilog	EMCO	26 - 2000 MHz	3142B	10/12/2006	10/12/2007

Receiver Test Data

FCC Part 15, Subpart B, Section 15.107(a), Conducted Emissions, Power Leads, 150 kHz to 30 MHz Receiver Test Data

FCC Part 15 Subpart B, Conducted Emissions, 150 kHz to 30 MHz.

Customer: X-10 (USA), Inc.

Test Sample: 2.4 GHz Wireless Audio / Video Sender with an integrated 310MHz superregenerative receiver.

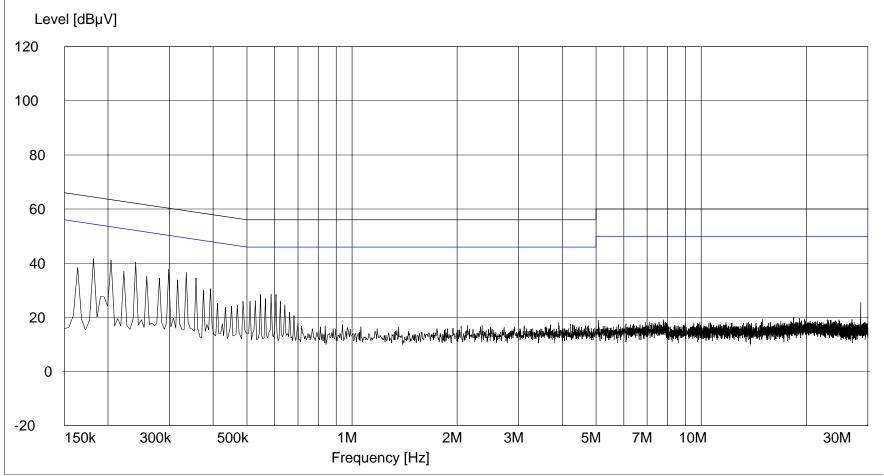
Model Number: VT44A ; Serial No.: N/A

Test Specification: FCC Part 15 Subpart B, 15.107(a) Class B.

Mode of Operation: Continuously receiving a 310 MHz CW signal, Receiver coherent.

Lead Tested: Hot input to AC adapter. Technician / Date: R. S / November 14, 2006.

Detector / Note: Peak / Peak passed average limit.



Page 1 of 2

FCC Part 15 Subpart B, Conducted Emissions, 150 kHz to 30 MHz.

Customer: X-10 (USA), Inc.

Test Sample: 2.4 GHz Wireless Audio / Video Sender with an integrated 310MHz superregenerative receiver.

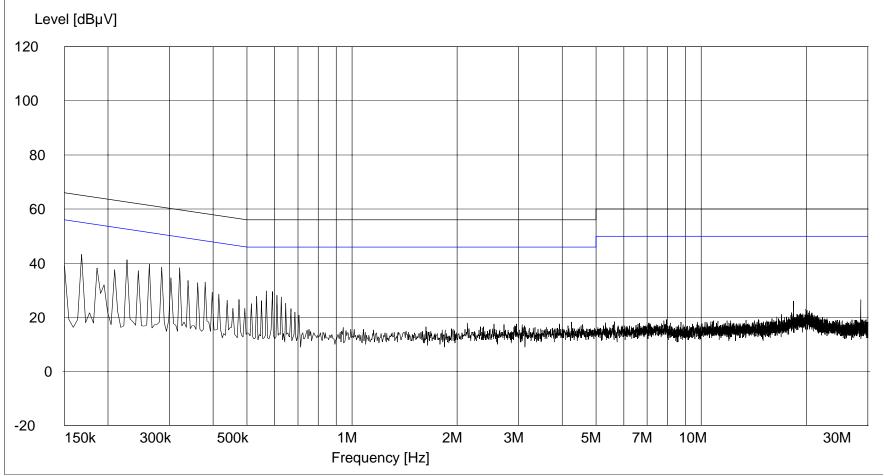
Model Number: VT44A ; Serial No.: N/A

Test Specification: FCC Part 15 Subpart B, 15.107(a), Class B.

Mode of Operation: Continuously receiving a 310 MHz CW signal, Receiver coherent.

Lead Tested: Neutral input to AC adapter. Technician / Date: R. S / November 14, 2006.

Detector / Note: Peak / Peak passed average limit.



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FCC Part 15, Subpart B, Class B, Radiated Emissions, 30 MHz to 2 GHz, Paragraph 15.109(a)

Receiver Test Data

Test Metho	d:	FCC P	art 15, Subpar	t B, Class B,	Radiated Em	issions, 3	30 MHz to 2 GI	Iz, Paragraph	15.109(a)
Customer:			JSA), Inc.	,,			Job No.		
Test Sampl	e:			lio / Video S	ender with an	Integrate	l .	perregenerativ	e receiver
Model No.:		VT44A		iio / Vidoo O	ondor with an	miograto	FCC ID:		0.100011011
Operating N	Node:		uously receivin	g a 310 MH	z CW signal F	Receiver		1011111	
Technician		R. Soo		9 4 5 . 5	g, .		Date:	November 1	8 2006
Notes:		l	: 3 Meters				Temp: 11°C	Humidity:	
Notes.			asi-Peak Belov	/ 1 GHz, Pea	ak above 1 GH	Нz	remp. IT C	riumiunty.	1370
		enna	EUT	Meter	Correction		ected	Converted	
Frequency		sition	Orientation	Readings	Factor	Reading		Reading	Limit
MHz	(V/H) /	Meters	Degrees	dBuV	dB		uV/m	uV/m	uV/m
	. , ,		-9						
30.00									100
<u> </u>									1
<u> </u>									
									i
88.00									100
88.00									150
<u> </u>									
İ									
150.0		1.0	45.0	10.0	10.7	2	0.7	10.8	
157.5	V/	1.0	68.0	10.0	11.1	2	1.1	11.4	ļ ļ
<u> </u>									
216									150
216									200
295.0	V	1.0	0.0	22.0	16.3	3:	8.3	82.2	
308.8		1.5	225.0	20.0	16.3		6.3	65.3	
311.2		1.0	180.0	27.0	16.6		3.6	151.4	İ
									!
<u> </u>									
<u> </u>									1
960.00									200
960.00									500
<u> </u>									
<u> </u>									1
2000.0									500
			nge was scanned						
			served from the E corded were more						
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Transmitter Test Data

FCC Part 15, Subpart B, Section 15.207(a), Conducted Emissions, Power Leads, 150 kHz to 30 MHz Transmitter Test Data

FCC Part 15 Subpart C, Conducted Emissions, 150 kHz to 30 MHz.

Customer: X-10 (USA), Inc.

Test Sample: 2.4 GHz Wireless Audio / Video Sender with an integrated 310MHz superregenerative receiver.

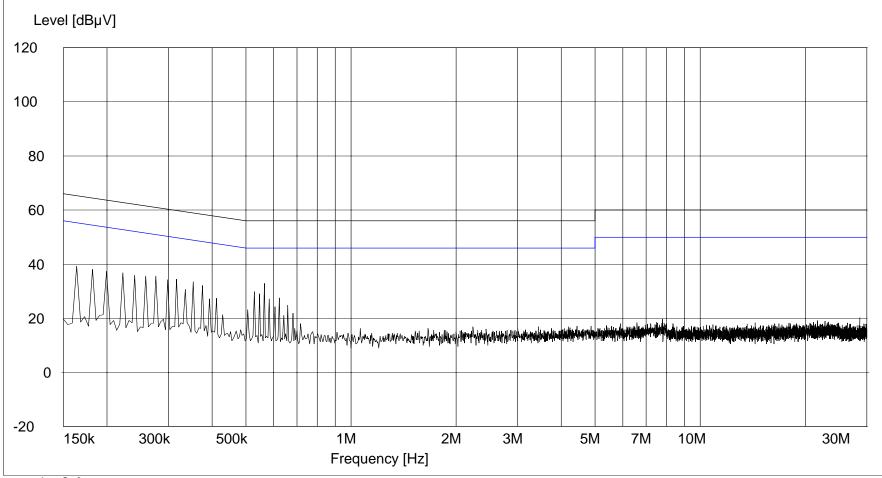
Model Number: VT44A ; Serial No.: N/A

Test Specification: FCC Part 15 Subpart B, 15.207(a)

Mode of Operation: Continuously transmitting a 2.414 GHz FM signal, Channel A.

Lead Tested: Hot input to AC adapter. Technician / Date: R. S / November 14, 2006.

Detector / Note: Peak / Peak passed average limit.



Page 1 of 2

FCC Part 15 Subpart C, Conducted Emissions, 150 kHz to 30 MHz.

Customer: X-10 (USA), Inc.

Test Sample: 2.4 GHz Wireless Audio / Video Sender with an integrated 310MHz superregenerative receiver.

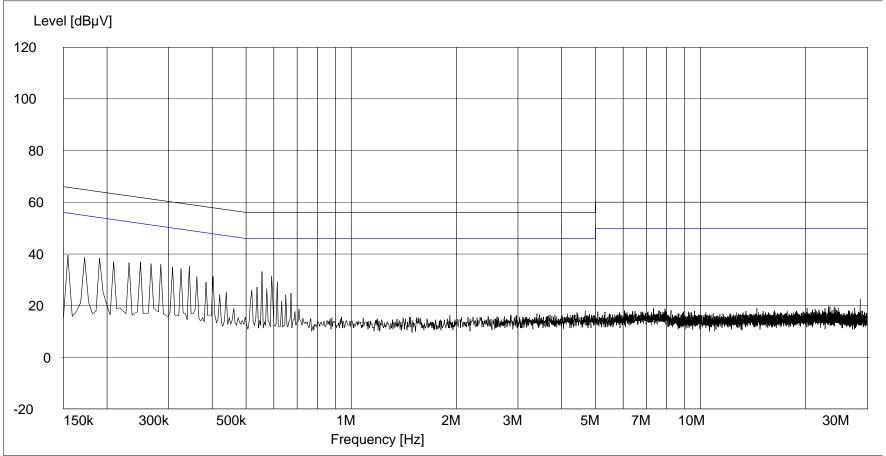
Model Number: VT44A ; Serial No.: N/A

Test Specification: FCC Part 15 Subpart B, 15.207(a)

Mode of Operation: Continuously transmitting a 2.414 GHz FM signal, Channel A.

Lead Tested: Neutral input to AC adapter. Technician / Date: R. S / November 14, 2006.

Detector / Note: Peak / Peak passed average limit.



Page 2 of 2

FCC Part 15 Subpart C, Conducted Emissions, 150 kHz to 30 MHz.

Customer: X-10 (USA), Inc.

Test Sample: 2.4 GHz Wireless Audio / Video Sender with an integrated 310MHz superregenerative receiver.

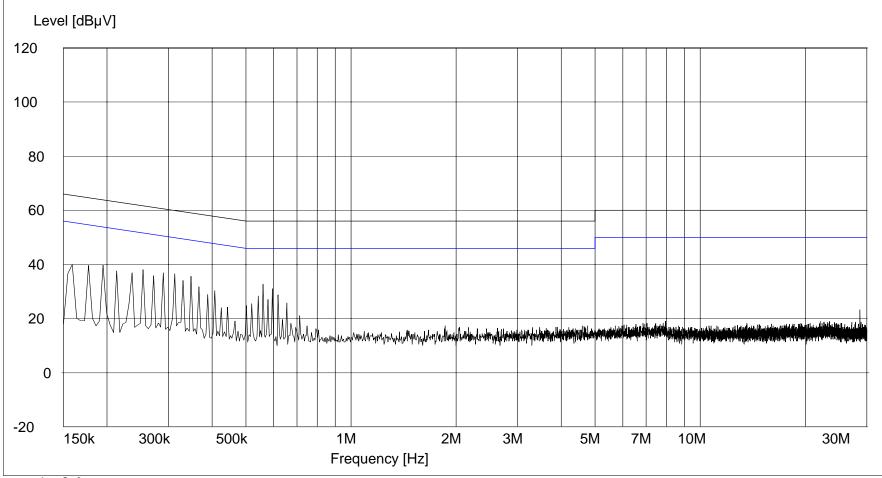
Model Number: VT44A ; Serial No.: N/A

Test Specification: FCC Part 15 Subpart B, 15.207(a)

Mode of Operation: Continuously transmitting a 2.450 GHz FM signal, Channel C.

Lead Tested: Hot input to AC adapter. Technician / Date: R. S / November 14, 2006.

Detector / Note: Peak / Peak passed average limit.



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FCC Part 15 Subpart C, Conducted Emissions, 150 kHz to 30 MHz.

Customer: X-10 (USA), Inc.

Test Sample: 2.4 GHz Wireless Audio / Video Sender with an integrated 310MHz superregenerative receiver.

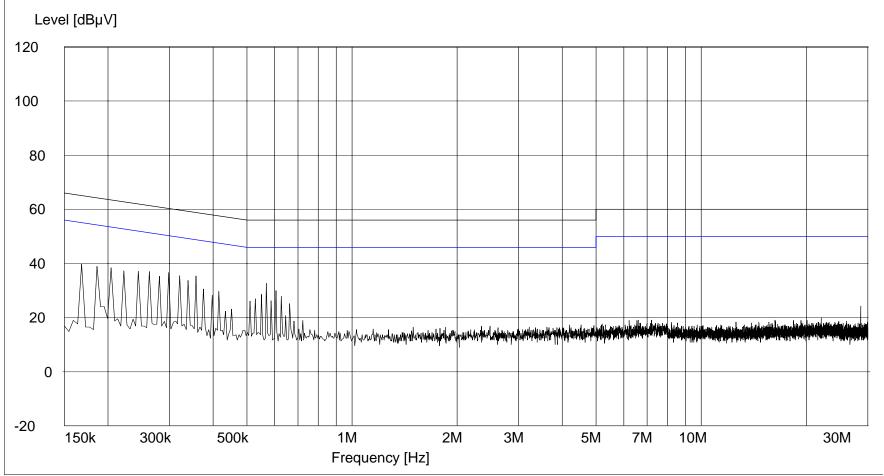
Model Number: VT44A ; Serial No.: N/A

Test Specification: FCC Part 15 Subpart B, 15.207(a)

Mode of Operation: Continuously transmitting a 2.450 GHz FM signal, Channel C.

Lead Tested: Neutral input to AC adapter. Technician / Date: R. S / November 14, 2006.

Detector / Note: Peak / Peak passed average limit.



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FCC Part 15 Subpart C, Conducted Emissions, 150 kHz to 30 MHz.

Customer: X-10 (USA), Inc.

Test Sample: 2.4 GHz Wireless Audio / Video Sender with an integrated 310MHz superregenerative receiver.

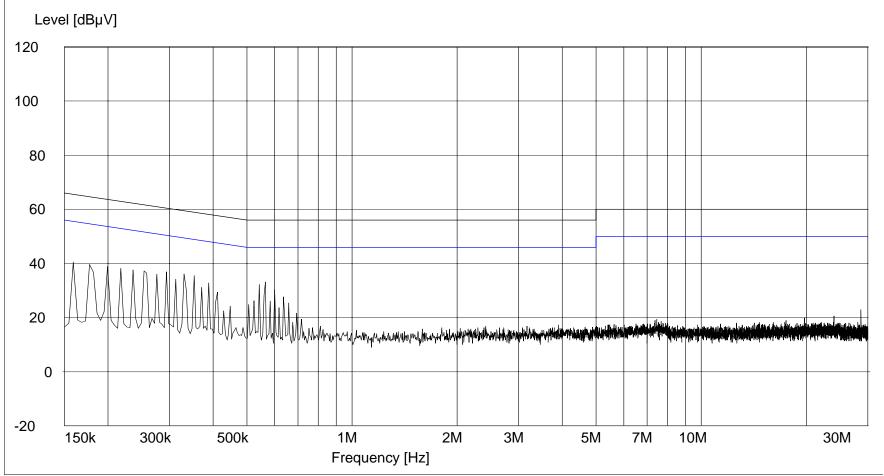
Model Number: VT44A ; Serial No.: N/A

Test Specification: FCC Part 15 Subpart B, 15.207(a)

Mode of Operation: Continuously transmitting a 2.468 GHz FM signal, Channel D.

Lead Tested: Hot input to AC adapter. Technician / Date: R. S / November 14, 2006.

Detector / Note: Peak / Peak passed average limit.



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FCC Part 15 Subpart C, Conducted Emissions, 150 kHz to 30 MHz.

Customer: X-10 (USA), Inc.

Test Sample: 2.4 GHz Wireless Audio / Video Sender with an integrated 310MHz superregenerative receiver.

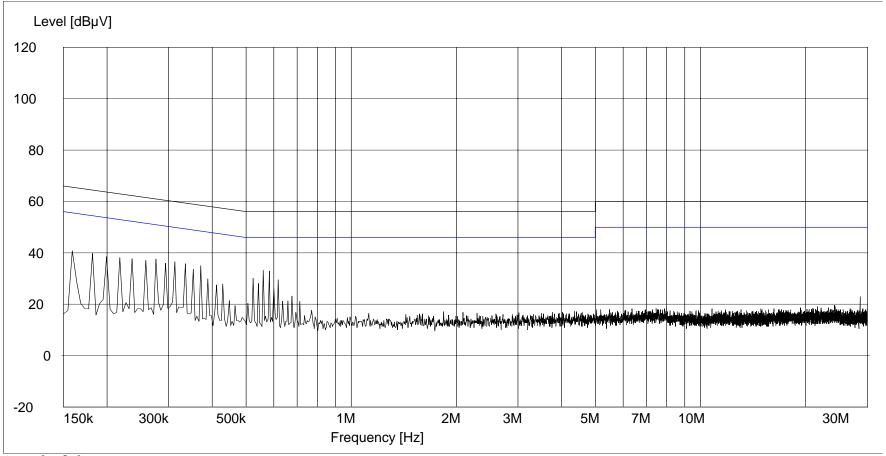
Model Number: VT44A ; Serial No.: N/A

Test Specification: FCC Part 15 Subpart B, 15.207(a)

Mode of Operation: Continuously transmitting a 2.450 GHz FM signal, Channel D.

Lead Tested: Neutral input to AC adapter. Technician / Date: R. S / November 14, 2006.

Detector / Note: Peak / Peak passed average limit.



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Radiated Emissions, Fundamental and Harmonics Test Data

Test Method	·	FCC Par	t 15 Subpart C.R	adiated Emissio	ns Fundament	tal & Harmonic Em	nissions Paragran	h 15 249
Customer:	••	X-10 (US		dalated Efficiency	mo, r driddirion		R-11708-1	11 10.2 10
Test Sample	\•	,	*	Video Sender w	ith an Intogrator	d 310 MHz Superi		vor
Model No.:	.	VT44A	Wireless Addio /	video Serider w	illi ali illegiale		egenerative recei 34SVT44A	vei.
Operating M	ladaı		u alv tranamittina	o 2 444 CHz FN	A signal shann	l l	043 V I 44A	
<u> </u>	ioue.		ously transmitting	a 2.414 GHZ FI	vi signai, chann		Javanska i 10. 200	<u> </u>
Technician:	T (D)	R. Soodo				•	November 18, 200	
Notes:			eters ^^=Reading ess otherwise spe		ter, correction t	factors includes te	st distance correc	tion.
Test Freq.		enna Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Average Limit
GHz	(V/H)/l	Meters	X/Y/Z	dBuV	dB	dBuV/m	uV/m	uV/m
2.414	V /	1.0	Х	91.3	-1.5	89.8	30903.0	50000.0
1		1.0	Y	87.2	-1.5	85.7	19275.2	1
	1	1.0	Z	92.1	-1.5	90.6	33884.4	i
İ	•	1.0	X	91.6	-1.5	90.1	31989.0	<u> </u>
		1.0	Y	93.2	-1.5	91.7	38459.2	l i
2.414	•	1.0	Z	92.7	-1.5	91.2	36307.8	50000.0
4.828	V /	2.0	Х	49.0	4.0	53.0	446.7	500.0
	V /	2.0	Υ	48.5	4.0	52.5	421.7	
	V /	2.0	Z	47.2	4.0	51.2	363.1	
	H/	1.0	X	45.6	4.0	49.6	302.0	
	H/	1.0	Y	44.1	4.0	48.1	254.1	
4.828	H/	1.0	Z	48.1	4.0	52.1	402.7	500.0
7.242		1.0	X	31.9	7.7	39.6	*95.5	500.0
	•	1.0	Y	31.9	7.7	39.6	*95.5	
	•	1.0	Z	31.9	7.7	39.6	*95.5	
		1.0	X	31.9	7.7	39.6	*95.5	
	1	1.0	Y	31.9	7.7	39.6	*95.5	
7.242	H /	1.0	Z	31.9	7.7	39.6	*95.5	500.0
9.656	V /	1.0	Х	31.9	12.3	44.2	*162.2	500.0
	V /	1.0	Υ	31.9	12.3	44.2	*162.2	
	V /	1.0	Z	31.9	12.3	44.2	*162.2	
	H/	1.0	X	31.9	12.3	44.2	*162.2	
	H/	1.0	Y	31.9	12.3	44.2	*162.2	
9.656	H/	1.0	Z	31.9	12.3	44.2	*162.2	500.0
12.070	V /	1.0	X	31.4	14.2	45.6	*190.5	500.0
	V /	1.0	Y	31.4	14.2	45.6	*190.5	
	V /	1.0	Z	31.4	14.2	45.6	*190.5	1
	H/	1.0	X	31.4	14.2	45.6	*190.5	
	H/	1.0	Y	31.4	14.2	45.6	*190.5	
12.070	H/	1.0	Z	31.4	14.2	45.6	*190.5	500.0
	The freq	uency rang	ge was scanned f	rom 30 MHz to	25 GHz. All em	issions not record	ed were more	
						ot exceed the spe	cified limits.	
	*=Noise	Floor Mea	surements (Minin	num system ser	nsitivity), RBW=	:100 kHz		

Test Method	ethod: FCC Part 15 Subpart C Radiated Emissions, Fundamental & Harmonic Emissions Paragraph 15.249										
Customer:		X-10 (US		adiated Efficiency	no, i didament	İ	R-11708-1	1 10.2 10			
Test Sample		`	•	/idoo Sondor w	ith an Intogrator	d 310 MHz Superr		vor			
	; <u>.</u>		Wireless Addio /	video Serider w	illi ali illegialet			vei.			
Model No.:	a da .	VT44A		- 0.444.011- 1	- Nacional about	<u> </u>	34SVT44A				
Operating M	oae:		Continuously transmitting a 2.414 GHz FM signal, channel A								
Technician:		R. Sood				•	lovember 18, 200				
Notes:			eters **=Reading ess otherwise spe		ter, correction f	actors includes tes	st distance correc	tion.			
Test Freq.		enna Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Average Limit			
GHz	(V/H)/	Meters	X/Y/Z	dBuV	dB	dBuV/m	uV/m	uV/m			
14.484		1.0	Х	31.1	16.4	47.5	*237.1	500.0			
	V /	1.0	Y	31.1	16.4	47.5	*237.1				
İ	V /	1.0	Z	31.1	16.4	47.5	*237.1	i			
i		1.0	Х	31.1	16.4	47.5	*237.1	i			
		1.0	Y	31.1	16.4	47.5	*237.1	i			
14.484	1	1.0	Z	31.1	16.4	47.5	*237.1	500.0			
16.898	V / 1.0		Х	31.0	17.0	48.0	*251.2	500.0			
	V / 1.0 V / 1.0		Y	31.0	17.0	48.0	*251.2				
İ	V /	1.0	Z	31.0	17.0	48.0	*251.2	i			
İ	H/	1.0	Х	31.0	17.0	48.0	*251.2	i			
İ	H/	1.0	Y	31.0	17.0	48.0	*251.2	i			
16.898			Z	31.0	17.0	48.0	*251.2	500.0			
19.312	V /	1.0	X	30.8	22.9	53.7	**484.2	500.0			
	V /	1.0	Υ	30.8	22.9	53.7	**484.2				
	V /	1.0	Z	30.8	22.9	53.7	**484.2				
	Η/	1.0	X	30.8	22.9	53.7	**484.2				
	H/	1.0	Υ	30.8	22.9	53.7	**484.2				
19.312	H /	1.0	Z	30.8	22.9	53.7	**484.2	500.0			
21.726	V /	1.0	X	30.0	23.2	53.2	**457.1	500.0			
	V /	1.0	Y	30.8	23.2	53.2	**457.1				
	V /	1.0	Z	30.0	23.2	53.2	**457.1				
	H/	1.0	X	30.0	23.2	53.2	**457.1				
	H /	1.0	Y	30.0	23.2	53.2	**457.1				
21.726	H /	1.0	Z	30.0	23.2	53.2	**457.1	500.0			
24.140	V /	1.0	X	29.3	23.4	52.7	**431.5	500.0			
	V /	1.0	Y	29.3	23.4	52.7	**431.5				
	V /	1.0	Z	29.3	23.4	52.7	**431.5				
	H/	1.0	X	29.3	23.4	52.7	**431.5				
	H/	1.0	Y	29.3	23.4	52.7	**431.5				
24.140	H/	1.0	Z	29.3	23.4	52.7	**431.5	500.0			
	The freq	uency ran	ge was scanned f	rom 30 MHz to	25 GHz. All emi	issions not recorde	ed were more				
						ot exceed the spec	cified limits.				
	*=Noise	Floor Mea	surements (Minin	num system ser	sitivity), RBW=	100 kHz					
-		Noise Floor Measurements (Minimum system sensitivity), RBW=100 kHz									

Test Method: FCC Part 15 Subpart C Radiated Emissions, Fundamental & Harmonic Emissions Para									
Customer:		X-10 (US	SA), Inc.			Job No.	R-11708-1		
Test Sample	:	2.4GHz	Wireless Audio /	Video Sender v	vith an Integrat	ed 310 MHz Su	perregenerative rec	eiver.	
Model No.:		VT44A				FCC ID:	B4SVT44A		
Operating Mo	ode:	Continuo	usly transmitting	a 2.450 GHz F	M signal, chan	nel C			
Technician:		R. Sood	-		<i>,</i>	Date:	November 18, 200	06.	
Notes:	Test Dista	nce: 3 Me	eters **=Reading	s taken @ 1 me	ter. correction f	actors includes	test distance correc		
			ess otherwise spe					-	
Test Freq.	Ante Pol./H		EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Average Limit	
GHz	(V/H)/N	/leters	X/Y/Z	dBuV	dB	dBuV/m	uV/m	uV/m	
2.450	V / *	1.0	X	87.6	-1.5	86.1	20183.7	50000.0	
1	V / -		Y	84.3	-1.5	82.8	13803.8	I	
l	V / -		Z	87.5	-1.5	86.0	19952.6		
l	H / -		X	88.1	-1.5	86.6	21379.6		
	H/		Y	90.3	-1.5	88.8	27542.3		
2.450	H/		Z	90.6	-1.5	89.1	28510.2	50000.0	
	-								
4.900	V / 2	2.0	Х	47.9	4.0	51.9	393.6	500.0	
	V / 2		Y	45.6	4.0	49.6	302.0		
i	V / 2	2.0	Z	44.6	4.0	48.6	269.2	i	
İ	H / '	1.0	Х	45.9	4.0	49.9	312.6	i	
	H/	1.0	Υ	45.9	4.0	49.9	312.6		
4.900	H / '	1.0	Z	46.2	4.0	50.2	323.6	500.0	
7.350	V / ′	1.0	X	31.9	7.7	39.6	*95.5	500.0	
	V / ′	1.0	Y	31.9	7.7	39.6	*95.5		
	V / ′	1.0	Z	31.9	7.7	39.6	*95.5		
	H / ′	1.0	X	31.9	7.7	39.6	*95.5		
	H/	1.0	Y	31.9	7.7	39.6	*95.5		
7.350	H / ′	1.0	Z	31.9	7.7	39.6	*95.5	500.0	
9.800	V / ·	1.0	X	31.9	12.3	44.2	*162.2	500.0	
	V / ′	1.0	Y	31.9	12.3	44.2	*162.2		
i	V / ′	1.0	Z	31.9	12.3	44.2	*162.2	i	
i	H / ·		Х	31.9	12.3	44.2	*162.2	i	
i	H / '		Υ	31.9	12.3	44.2	*162.2	i	
9.800	H/	1.0	Z	31.9	12.3	44.2	*162.2	500.0	
12.250	V / ′	1 0	X	31.4	14.2	45.6	*190.5	500.0	
1	V / -		Y	31.4	14.2	45.6	*190.5	1	
1	V / ·		Z	31.4	14.2	45.6	*190.5		
1	H / -		X	31.4	14.2	45.6	*190.5		
	H/		Y	31.4	14.2	45.6	*190.5		
12.250	H/		Z	31.4	14.2	45.6	*190.5	500.0	
			ge was scanned f						
			he specified limit.						
			surements (Minin						
			1	•	• / ·				

Test Method	:	FCC Part 15 Subpart C Radiated Emissions, Fundamental & Harmonic Emissions Paragraph 15.249								
Customer:		X-10 (US	SA), Inc.			Job No.	R-11708-1			
Test Sample):	2.4GHz	Wireless Audio /	Video Sender v	with an Integrate	d 310 MHz Supe	rregenerative rece	eiver.		
Model No.:		VT44A				FCC ID:	B4SVT44A			
Operating M	ode:	Continuo	ously transmitting	a 2.450 GHz F	M signal, chann	el C				
Technician:		R. Soodo			3, .		November 18, 200	16.		
Notes:	Test Dista			s taken @ 1 me	ter, correction fa		st distance correc			
			ess otherwise spe		101, 00110011011110	1	1			
Test Freq.	Ante Pol./F	enna Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Average Limit		
GHz	(V/H)/I	Meters	X/Y/Z	dBuV	dB	dBuV/m	uV/m	uV/m		
14.700	V /	1.0	X	31.1	16.4	47.5	*237.1	500.0		
	V /	1.0	Y	31.1	16.4	47.5	*237.1			
	V /	1.0	Z	31.1	16.4	47.5	*237.1			
	H/	1.0	X	31.1	16.4	47.5	*237.1			
	1	1.0	Y	31.1	16.4	47.5	*237.1			
14.700	H/	1.0	Z	31.1	16.4	47.5	*237.1	500.0		
17.150	\/ /	1.0	X	31.0	17.0	48.0	*251.2	500.0		
17.130		1.0	Y	31.0	17.0	48.0	*251.2	300.0		
		1.0	Z	31.0	17.0	48.0	*251.2			
	1	1.0	X	31.0	17.0	48.0	*251.2			
	1	1.0	Y	31.0	17.0	48.0	*251.2			
17.150		1.0	Z	31.0	17.0	48.0	*251.2	500.0		
19.600	V /	1.0	X	30.8	22.9	53.7	**484.2	500.0		
I		1.0	Y	30.8	22.9	53.7	**484.2	1		
i	1	1.0	Z	30.8	22.9	53.7	**484.2	i		
i	1	1.0	Х	30.8	22.9	53.7	**484.2	i		
i	1	1.0	Υ	30.8	22.9	53.7	**484.2	i		
19.600	H/	1.0	Z	30.8	22.9	53.7	**484.2	500.0		
22.050	V /	1.0	X	30.0	23.2	53.2	**457.1	500.0		
		1.0	Υ	30.8	23.2	53.2	**457.1			
İ		1.0	Z	30.0	23.2	53.2	**457.1			
	1	1.0	Х	30.0	23.2	53.2	**457.1			
	H/	1.0	Y	30.0	23.2	53.2	**457.1			
22.050	H/	1.0	Z	30.0	23.2	53.2	**457.1	500.0		
24.500	V /	1.0	X	29.3	23.4	52.7	**431.5	500.0		
		1.0	Υ	29.3	23.4	52.7	**431.5			
		1.0	Z	29.3	23.4	52.7	**431.5			
	H/	1.0	Х	29.3	23.4	52.7	**431.5	i		
<u> </u>		1.0	Y	29.3	23.4	52.7	**431.5			
24.500		1.0	Z	29.3	23.4	52.7	**431.5	500.0		
	The frequ	uency ranç	ge was scanned f	rom 30 MHz to	25 GHz. All emis	sions not record	ed were more			
			he specified limit.				cified limits.			
	*=Noise	Floor Mea	surements (Minin	num system ser	sitivity), RBW=1	00 kHz				

Test Method	l:	FCC Par	FCC Part 15 Subpart C Radiated Emissions, Fundamental & Harmonic Emissions Para.15.249								
Customer:		X-10 (US			·	Job No.	R-11708-1				
Test Sample):	,	*	Video Sender v	with an Integrat		erregenerative rec	eiver.			
Model No.:	-	VT44A				FCC ID:	B4SVT44A				
Operating M	lode:		ously transmitting	a 2.468 GHz F							
Technician:		R. Soodo		<u> </u>	in orginal, orial	Date:	November 18, 200	06.			
Notes:	Test Dista			s taken @ 1 me	ter correction f		est distance correct				
110100.			ess otherwise spe		ntor, correction i		oot diotarioo oorroc	don.			
Test Freq.		enna Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Average Limit	Э		
GHz	(V/H)/l	Meters	X/Y/Z	dBuV	dB	dBuV/m	uV/m	uV/m			
2.468	V /	1.0	X	88.1	-1.5	86.6	21379.6	50000.0	<u> </u>		
		1.0	Y	84.8	-1.5	83.3	14621.8				
i		1.0	Z	85.9	-1.5	84.4	16595.9	i			
		1.0	X	88.8	-1.5	87.3	23173.9	i i			
		1.0	Y	91.7	-1.5	90.2	32359.4	l i			
2.468	H/	1.0	Z	89.7	-1.5	88.2	25704.0	50000.0)		
4.936		2.0	X	46.1	4.0	50.1	319.9	500.0			
		2.0	Y	47.7	4.0	51.7	384.6				
		2.0	Z	44.5	4.0	48.5	266.1				
		1.0	X	46.6	4.0	50.6	338.8				
		1.0	Y	45.7	4.0	49.7	305.5				
4.936	H /	1.0	Z	46.3	4.0	50.3	327.3	500.0			
7.404	V /	1.0	Х	31.9	7.7	39.6	*95.5	500.0			
I		1.0	Y	31.9	7.7	39.6	*95.5	1			
		1.0	Z	31.9	7.7	39.6	*95.5	i			
i		1.0	Х	31.9	7.7	39.6	*95.5	i			
i	H/	1.0	Y	31.9	7.7	39.6	*95.5	i			
7.404	H/	1.0	Z	31.9	7.7	39.6	*95.5	500.0			
9.872	V /	1.0	X	31.9	12.3	44.2	*162.2	500.0			
		1.0	Y	31.9	12.3	44.2	*162.2				
		1.0	Z	31.9	12.3	44.2	*162.2				
		1.0	X	31.9	12.3	44.2	*162.2	 			
		1.0	Y	31.9	12.3	44.2	*162.2				
9.872	H /	1.0	Z	31.9	12.3	44.2	*162.2	500.0			
12.340	V /	1.0	Х	31.4	14.2	45.6	*190.5	500.0			
	1	1.0	Y	31.4	14.2	45.6	*190.5				
	V /	1.0	Z	31.4	14.2	45.6	*190.5	i i			
		1.0	Х	31.4	14.2	45.6	*190.5	İ			
	H/	1.0	Y	31.4	14.2	45.6	*190.5				
12.340	H/	1.0	Z	31.4	14.2	45.6	*190.5	500.0			
	The freq	uency rang	ge was scanned f	rom 30 MHz to	25 GHz. All em	issions not recor	ded were more				
	than 20 d	dB below th	he specified limit.	Emissions from	n the EUT do n	ot exceed the sp	ecified limits.				
	*=Noise	Floor Mea	surements (Minin	num system ser	nsitivity), RBW=	100 kHz					

Test Method	: FCC Pa	art 15 Subpart C R	adiated Emission	ons, Fundamenta	al & Harmonic Em	nissions Para.15.2	49		
Customer:		X-10 (USA), Inc. Job No. R-11708-1							
Test Sample	,	2.4GHz Wireless Audio / Video Sender with an Integrated 310 MHz Superregenerative receiver.							
Model No.:		VT44A							
Operating M	ode: Continu	ously transmitting	a 2.468 GHz I	FM signal, chann	l e e	-			
Technician:	R. Soo					November 18, 200	6.		
Notes:	Test Distance: 3 M		s taken @ 1 me	eter correction fa	•				
1101001	Detector: Peak, U	-		7.01, 0011001101110		or diotalioo con co			
	Antenna	EUT	Meter	Correction	Corrected	Converted	Average		
Test Freq.	Pol./Height	Orientation	Reading	Factor	Reading	Reading	Limit		
GHz	(V/H)/Meters	X/Y/Z	dBuV	dB	dBuV/m	uV/m	uV/m		
14.808	V / 1.0	X	31.1	16.4	47.5	*237.1	500.0		
1	V / 1.0	Υ	31.1	16.4	47.5	*237.1	1		
	V / 1.0	Z	31.1	16.4	47.5	*237.1	i		
i	H / 1.0	Х	31.1	16.4	47.5	*237.1	i		
	H / 1.0	Y	31.1	16.4	47.5	*237.1	i		
14.808	H / 1.0	Z	31.1	16.4	47.5	*237.1	500.0		
17.276	V / 1.0	Х	31.0	17.0	48.0	*251.2	500.0		
	V / 1.0	Υ	31.0	17.0	48.0	*251.2			
	V / 1.0	Z	31.0	17.0	48.0	*251.2			
	H / 1.0	X	31.0	17.0	48.0	*251.2			
	H / 1.0	Y	31.0	17.0	48.0	*251.2	1		
17.276	H / 1.0	Z	31.0	17.0	48.0	*251.2	500.0		
19.744	V / 1.0	X	30.8	22.9	53.7	**484.2	500.0		
19.744	V / 1.0	Y	30.8	22.9	53.7	**484.2	300.0		
	V / 1.0	Z	30.8	22.9	53.7	**484.2			
	H / 1.0	X	30.8	22.9	53.7	**484.2	i		
	H / 1.0	Y	30.8	22.9	53.7	**484.2	i		
19.744	H / 1.0	Z	30.8	22.9	53.7	**484.2	500.0		
22.212	V / 1.0	X	30.0	23.2	53.2	**457.1	500.0		
	V / 1.0	Y	30.8	23.2	53.2	**457.1			
	V / 1.0	Z	30.0	23.2	53.2	**457.1	1		
	H / 1.0	X	30.0	23.2	53.2	**457.1 **457.1	<u> </u>		
00.015	H / 1.0	Y	30.0	23.2	53.2	**457.1	500.0		
22.212	H / 1.0	Z	30.0	23.2	53.2	4 07.1	500.0		
24.680	V / 1.0	X	29.3	23.4	52.7	**431.5	500.0		
l	V / 1.0	Y	29.3	23.4	52.7	**431.5	I		
	V / 1.0	Z	29.3	23.4	52.7	**431.5	i		
	H / 1.0	Х	29.3	23.4	52.7	**431.5	i		
	H / 1.0	Y	29.3	23.4	52.7	**431.5	i		
24.680	H / 1.0	Z	29.3	23.4	52.7	**431.5	500.0		
-	The frequency ra	nge was scanned f	rom 30 MHz to	25 GHz. All emis	ssions not recorde	ed were more			
		the specified limit.				cified limits.			
	*=Noise Floor Me	asurements (Minin	num system ser	nsitivity), RBW=1	00 kHz				

Radiated Emissions, Spurious Case Test Data

Test Method	l:	FCC Pa	rt 15 Subpart C	, Spurious Ca	se Radiated Er	missions, I	Paragraph 1	5.209	θ(a).		
Customer:		X-10 (U	X-10 (USA), Inc. Job No. R-11708-1								
Test Sample):		2.4GHz Wireless Audio / Video Sender with an Integrated 310 MHz Superregenerative receiver.								
Model No.:		VT44A FCC ID: B4SVT44A									
Operating M	lode:	Continuously transmitting a 2.414 GHz FM signal, channel A									
Technician:		R. Soodoo Date: November 18, 2								, 2006.	
Notes:	Test D	Distance: 3 Meters Temp: 11°C Humidity: 15%									
	Detect	or: Quas	i-Peak from 30	MHz to 1 GHz	z, Peak above	1 GHz					
Frequency		enna sition	EUT Orientation	Meter Readings	Correction Factor		ected ading		Converted Reading	Lim	ıit
MHz	(V/H) /	Meters	Degrees	dBuV	dB	dB	μV/m		μV /m	μV	/m
30										100)
										1 1	
										1 i	
										1 1	
88		100									
88										150	<u>) </u>
İ										j	
										1	
										1 1	
216										150	
216										200	<u>) </u>
310.0	H /	1.0	180.0	21.0	16.7	3	7.7		76.7	ļ	
										1 1	
960										200	0
960										500	
										 	
										<u> </u>	
25000										500)
	The fre	auona:	ango was sees	and from 20 M	1Uz to 25 CUz					1	
		requency range was scanned from 30 MHz to 25 GHz. emissions observed from the EUT do not exceed the specified limits.									
			ecorded were m								

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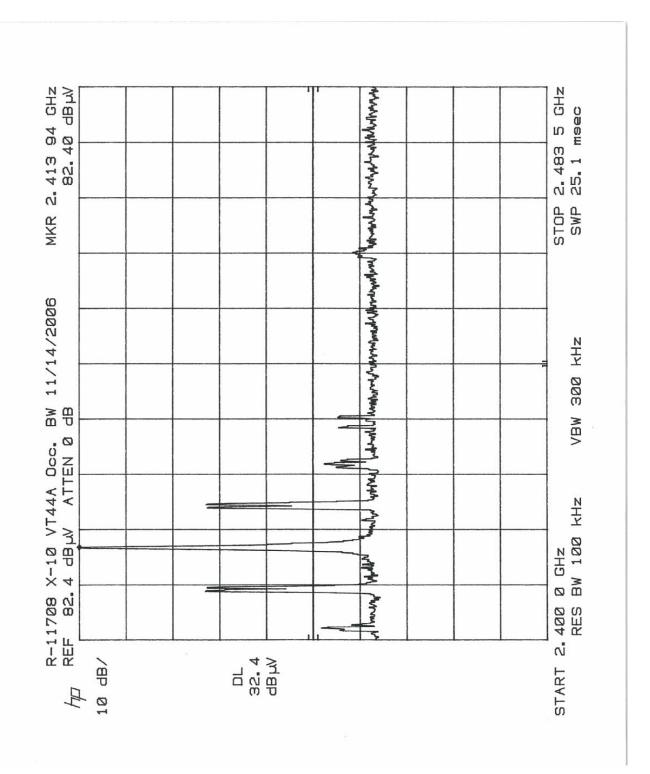
Test Method:		FCC Pa	rt 15 Subpart C	, Spurious Ca	se Radiated Er	nissions, I	Paragraph 15.20	9(a).	
Customer:		X-10 (USA), Inc. Job No. R-11708-1							
Test Sample:	ample: 2.4GHz Wireless Audio / Video Sender with an Integrated 310 MHz Superregenerative receive								/er.
Model No.: VT44A FCC ID: B4SVT44A									
Operating Mo	ode:	Continu	ously transmittin	ng a 2.450 GI	Hz FM signal,	channel C		•	
						Date:	November 18	3, 2006.	
Notes:	Test D	istance: 3 Meters Temp: 11°C Humidity: 15%							
	Detect	or: Quas	i-Peak from 30 l	MHz to 1 GHz	z, Peak above 1	l GHz			
Frequency		enna sition	EUT Orientation	Meter Readings	Correction Factor		Corrected Converted Reading Reading		Limit
MHz	(V/H) /	Meters	Degrees	dΒμV	dB	dB	μV/m	μV /m	μV /m
20									100
30									100
<u> </u>									
88						100			
88									150
21.0									150
216 216									150 200
040.0	11	14.0	400.0	04.0	40.7	0.	7.7	70.7	
310.0	H /	1.0	180.0	21.0	16.7	3	7.7	76.7	
960									200
960									500
									į į
25000									500
20000									300
			ange was scanr				'		
			bserved from the						
	⊏IIIISSI	0115 1101 [6	ecorded were m	ore man 2001	o unuer the Spe	cinea iiinii			

Page 2 of 3

Test Method	:	FCC Pa	rt 15 Subpart C	, Spurious Ca	se Radiated Er	nissions, I	Paragraph 15.20	9(a).	
Customer:		X-10 (USA), Inc. Job No. R-11708-1							
Test Sample								/er.	
Model No.: VT44A FCC ID: B4SVT44A									
Operating M	ode:	Continu	ously transmittir	ng a 2.468 GI	Hz FM signal,	channel D		•	
Technician: R. Soodoo Date: Noven							November 18	November 18, 2006.	
Notes:	Test D	Distance: 3 Meters Temp: 11°C Humidity: 15%					•		
	Detect	or: Quas	i-Peak from 30	MHz to 1 GHz	z, Peak above	-		•	
Frequency	-	enna sition	EUT Orientation	Meter Readings	Correction Factor		Corrected Converted Reading Reading		Limit
MHz	(V/H) /	Meters	Degrees	dΒμV	dB	dB	μV/m	μV /m	μV /m
00									400
30 I									100
88	88						100		
88									150
<u> </u>									1 !
									İ
216 216									150 200
									200
									İ
310.0	H	1.0	180.0	21.0	16.7	3	7.7	76.7	
960									200
960									500
i									<u> i</u>
25000	1								500
	The fre	equency r	ange was scanr	ned from 30 M	ı 1Hz to 25 GHz.				
	The er	nissions o	bserved from th	ne EUT do no	t exceed the sp				
	Emiss	ons not re	ecorded were m	ore than 20d	3 under the spe	cified limi	t.		

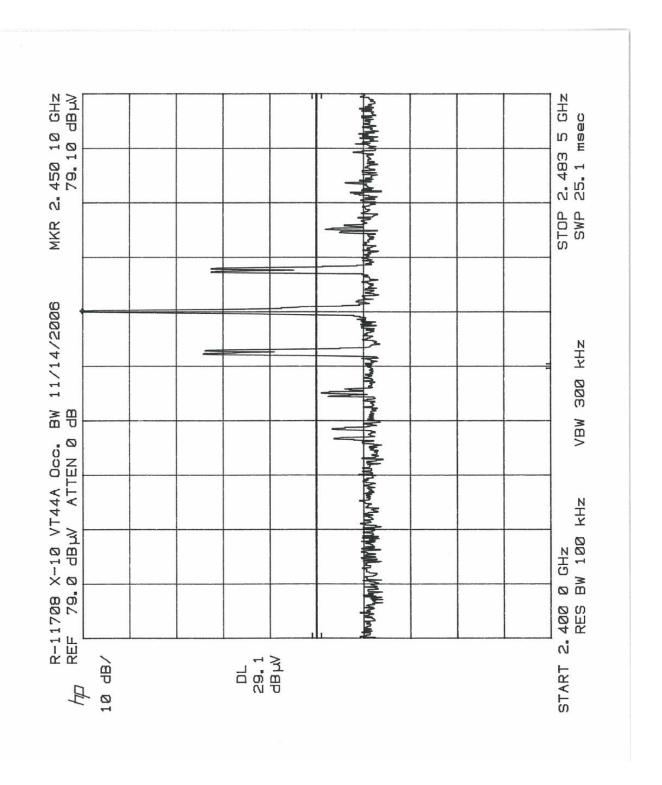
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Occupied Bandwidth Test Data



Test Method: FCC Part 15, Subpart C, 15.249 (c), Occupied Bandwidth. **Notes**: Channel A 2.414 GHz. Emissions of center frequency attenuated by 50 dBc at the band edges

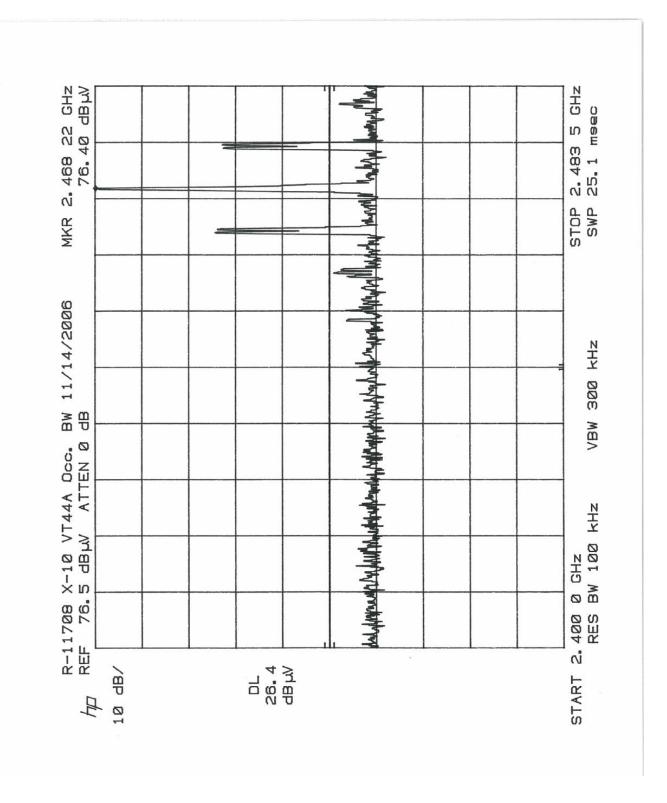
Customer	X-10 (USA), Inc.					
Test Sample	2.4 GHZ \	Nireless Audio/ Video S	Sender			
Model Number VT44A						
Date: 11-14-2006		Tech: R. Soodoo	Sheet 1 of 3			



Test Method: FCC Part 15, Subpart C, 15.249 (c), Occupied Bandwidth.

Notes: Channel C 2.450 GHz. Emissions of center frequency attenuated by 50 dBc at the band edges

Customer	X-10 (USA), Inc.					
Test Sample	2.4 GHZ Wireless Audio / Video Sender					
Part Number	VT44	VT44A				
Date: 11-14-2006		Tech: R. Soodoo	Sheet 2 of 3			



Test Method: FCC Part 15, Subpart C, 15.249 (c), Occupied Bandwidth. **Notes**: Channel D 2.468 GHz. Emissions of center frequency attenuated by 50 dBc at the band edges

Customer	X-10 (USA), Inc.					
Test Sample	2.4 GHZ Wireless Audio / Video Sender					
Part Number	VT44A					
Date: 11-14-2006		Tech: R. Soodoo	Sheet 3 of 3			