

## FCC COMPLIANCE TEST REPORT

ON

**X-10 (USA), Inc.**  
**310MHz Superregenerative Receiver**  
**Model: VT30A**  
**FCC ID: B4SVT30A**

Customer Name:	X-10 (USA), Inc.
Customer P.O.:	Verbal
Test Method:	ANSI C63.4:1992
Test Specification:	FCC Rules & Regulations Part 15
Date of Report:	January 11, 1999
RETLIF Test Report No.:	R-7684-1
Test Engineer:	T.J. Schneider
Report Written By:	R. Stremel
Supervisor:	R.J. Reitz

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REPORT No. R-7684-1

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## EXHIBIT 1

### Installation and Operating Instructions

Para. 2.1033(b)(3)

## EXHIBIT 2

### Technical Description

Para. 2.1033(b)(4)

Technical Report 2.1033(b)(4)

Equipment Manufacturer

X-10 Electronics Shenzhen Co. Ltd.  
X-10 Building  
Labour Industrial District  
Shenzhen, Xixiang, Bao An  
Guang Dong, China, 518102

FCC Identifier

B4SVT30A

Operating Instructions

See Exhibit 1

Trade Name

X-10 PowerHouse

Model Number

VT30A

Additional Model Numbers and Trade Names

Not Applicable

## EXHIBIT 3

### Block Diagram and Schematic

Para. 2.1033(b)(5)

## EXHIBIT 4

### Report of Measurements

Para. 2.1033(b)(6)

X-10 USA, Inc. 91 Ruckman Road Closter, NJ 07624	<b>MANUFACTURER</b>  X-10 Electronics Shenzhen Co. Ltd. X-10 Building Labour Industrial District Shenzhen, Xixiang, Bao An Guang Dong, China, 518102
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TEST SPECIFICATION: Part 15, Subpart B Certification

TEST PROCEDURE: ANSI C63.4:1992

### TEST SAMPLE DESCRIPTION

BRANDNAME: X-10 PowerHouse                      MODEL: VT30A

TYPE: 310MHz Superregenerative Receiver

POWER REQUIREMENTS: 12 VDC

FREQUENCY RANGE: 310MHz

### TESTS PERFORMED

Para. 15.107(a), Conducted Emissions, Receiver Locked

Para. 15.109(a), Radiated Emissions, Receiver Locked

I HEREBY CERTIFY THAT: The measurements shown here were in accordance with the procedure indicated and that the energy emitted by this equipment was found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements and vouch for the qualifications of all persons taking them.

I FURTHER CERTIFY THAT: On the basis of the measurements made, the device tested is capable of operation in compliance with the requirements of Part 15 of the FCC Rules under normal use and maintenance.

SIGN	PRINT	TITLE
	Thomas J. Schneider	EMC Test Engineer



## Test Procedures Used

The test procedures used for all testing follow the guidelines specified in the applicable FCC specification and general industry practices. Although test procedures may sometimes have to be modified to address the needs of specific test samples, the following forms the basis for all testing programs:

**Conducted Emissions** - All testing was performed with the test sample placed 80cm above a 2.5 x 3M ground plane and 1 meter from any other grounded surface. The power cord of the test sample was connected to the Line Impedance Stabilization Networks, which in turn, had their cases mounted to the ground plane. With the equipment connected as stated, an EMI meter or spectrum analyzer was connected to the LISN and the conducted emissions were measured over the frequency range of 450KHz to 30MHz, in turn on each of the input power leads. Care was taken during testing to relocate all system components and cabling in an effort to maximize the emissions from the EUT.

**Radiated Emissions** - Radiated emissions testing was performed on an FCC listed 3 meter open field test site over the frequency range of 30MHz to 2000MHz. Prior to open field testing, pre-scan testing was performed inside of a shielded enclosure in order to obtain a spectrum signature of the unit and to use the data obtained as a guideline for open field testing. When the test sample is taken to the open field tests site, it is placed on a one meter high wooden turntable. A spectrum analyzer or EMI meter is then connected to either the biconical or log periodic antenna, depending on frequency range being scanned. The antenna is mounted on a remote controlled four meter antenna mast. The frequency range was then scanned and each measurement taken was maximized by performing the following: (1) Raising and lowering the measurement antenna. (2) Rotating the measurement antenna to both the horizontal and vertical polarizations. (3) Tuning the measurement antenna to the frequency of measurement. (4) Rotating the test sample, and (5) Relocating all interconnecting and input power cables. In the event that testing was extended above or below the frequency range of 30MHz to 1000MHz, loop antennas were used for all measurements below 30MHz and horn antennas were used for all measurements above 1000MHz.

REPORT OF MEASUREMENTS

RADIATED EMISSIONS

PARA. 15.109(a)

## TEST PERFORMED

Radiated Emissions

FCC Part 15/B/B

## MODEL NUMBER

X-10 PowerHouse

VT30A

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## E.U.T. CONFIGURATION JUSTIFICATION

The test sample, with cables connected, was arranged on the test stand. This configuration was rotated and all power cables were relocated in order to maximize the emissions from the E.U.T. The test antenna was raised, lowered and both vertically and horizontally polarized to further maximize the emissions (polarization is dependent on the frequency of test, see attached data sheets). The highest emissions were observed with the rear side of the EUT facing the test antenna. E.U.T. power cables were hanging vertically from the test stand. The E.U.T. was configured as shown above.

## MODE OF OPERATION

Radiated emissions from the E.U.T. were measured while the sample was continuously receiving a 310MHz signal.

REPORT OF MEASUREMENTS

CONDUCTED EMISSIONS

PARA. 15.107(a)

## TEST PERFORMED

Conducted Emissions

FCC Part 15/B/B

## MODEL NUMBER

X-10 PowerHouse

VT30A

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## E.U.T. CONFIGURATION JUSTIFICATION

The test sample, with cables connected, was placed 80cm above a 2.5 x 3M ground plane. (Floor standing units are placed directly on the ground plane.) The line cord of the E.U.T. was connected to the line impedance stabilization network. All measuring instrumentation and components not part of the E.U.T. were isolated from the E.U.T. E.U.T. power cables were hanging vertically from the test stand. The E.U.T. was configured as shown above.

## MODE OF OPERATION

Conducted emissions from the E.U.T. were measured while the sample was continuously receiving a 310MHz signal.

## EXHIBIT 5

### Equipment Photographs and Label

Para. 2.1033(b)(7)