

| <u>APPLICANT</u>                                                     | <u>MANUFACTURER</u>                                                                                                                         |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| X-10 USA, Inc.<br>19823, 58 <sup>th</sup> Place S.<br>Kent, WA 98032 | X-10 Electronics Shenzhen Co. Ltd.<br>X-10 Building<br>Labour Industrial District<br>Shenzhen, Xixiang, Bao An<br>Guang Dong, China, 518102 |

TEST SPECIFICATION: FCC Rules and Regulations Part 15, Subpart C

TEST PROCEDURE: ANSI C63.4:2000

#### TEST SAMPLE DESCRIPTION

BRANDNAME: X-10

MODEL: VT40A FCC ID: B4SVT40A

TYPE: 2.4 GHz FM Transmitter

FREQUENCY RANGE: 2400 to 2483.5 MHz

POWER REQUIREMENTS: 9 VDC, 200 mA derived from an AC Adapter, model D9200

#### TESTS PERFORMED

- 15.249(a) Radiated Emissions, Fundamental and Harmonics
- 15.294(c) Occupied Bandwidth
- 15.249(c)/15.209 Radiated Emissions, Spurious Case
- 15.207(a) Conducted Emissions

## REPORT OF MEASUREMENTS

Applicant: X-10 (USA), Inc.  
Device: 2.4 GHz Transmitter  
FCC ID: B4SVT40A  
Power Requirements: 9 VDC, 200 mA derived from an AC Adapter, model D9200  
Applicable Rule Section: Part 15, Subpart C, Section 15.249

## TEST RESULTS

- 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 450kHz to 30MHz did not exceed 250 microvolts.
- 15.249(a): The unit operates in the 2.4 to 2.4835 GHz band at 4 frequencies as follows:  
1) 2.410 GHz 2) 2.435 GHz  
3) 2.455 GHz 4) 2.472 GHz  
Field strength readings were taken at 3 frequencies (low, middle and high) because the device operates over a range greater than 10 MHz.  
The field strength of the fundamental did not exceed 50 milliV/M AVERAGE. The field strength of the harmonics did not exceed 500 microV/M AVERAGE.
- 15.249(b): Field strength readings were taken at three meters unless otherwise noted.
- 15.249(c): Emissions radiated outside band edges were greater than 50 dB below the specified the level of the fundamental or met the general radiated emission requirements of 15.209(a), whichever provided the lesser attenuation.
- 15.249(d): The peak field strength of any emission did not exceed the maximum permitted average field strength by more than 20dB under any condition of modulation.

## EXHIBIT 4

Radiated Emissions, Fundamental & Harmonics, Spurious Case

Para. 15.249(a)

EXHIBIT 4

Spurious Emissions

Para. 15.249(c)

EXHIBIT 4

Occupied Bandwidth

Para. 15.249(c)

EXHIBIT 4

Conducted Emissions

Para. 15.207(a)

## EQUIPMENT LIST

### FCC15.249 Compliance Testing

| EN   | Type                    | Manufacturer      | Description          | Model No.       | Cal Date   | Due Date   |
|------|-------------------------|-------------------|----------------------|-----------------|------------|------------|
| 066  | High Gain Horn Antenna  | Microlab/FXR      | 8.2 GHz - 12.4 GHz   | X638A           | 09/25/2002 | 09/25/2003 |
| 067  | Open Area Test Site     | Retlif            | 3 Meter              | RNY             | 09/20/2000 | 09/20/2003 |
| 078  | LISN                    | Solar Electronics | 10 kHz - 30 MHz      | 8028-50-TS24BNC | 05/16/2002 | 05/16/2003 |
| 128  | Double Ridged Guide     | Electro-Mechanics | 1 GHz - 18 GHz       | 3105            | 06/07/2002 | 06/07/2003 |
| 129F | High Gain Horn Antenna  | Microlab/FXR      | 18 GHz - 26.5 GHz    | K638A           | 09/11/2002 | 09/11/2003 |
| 129G | High Gain Horn Antenna  | Microlab/FXR      | 26.5 GHz - 40 GHz    | U638A           | 09/11/2002 | 09/11/2003 |
| 133  | Broadband Pre-Amplifier | Electro-Metrics   | 10 kHz - 1 GHz, 26dB | BPA-1000        | 06/11/2002 | 06/11/2003 |
| 141  | Spectrum Analyzer       | Hewlett Packard   | 100 Hz - 40 GHz      | 8566B           | 07/17/2002 | 01/17/2003 |
| 141A | Graphics Plotter        | Hewlett Packard   | N/A                  | 7470A           | 03/05/2002 | 03/05/2003 |
| 141B | Quasi-Peak Adaptor      | Hewlett Packard   | 100 Hz - 1 GHz       | 85650A          | 07/16/2002 | 01/16/2003 |
| 202  | Transient Limiter       | Hewlett Packard   | .009 MHz - 200 MHz   | 11947A          | 07/22/2002 | 07/22/2003 |
| 206B | 6.0 dB Attenuator       | Texscan           | 0 - 1.0 GHz          | FP-50 - 6 dB    | 06/11/2002 | 06/11/2003 |
| 420  | Amplifier               | Hewlett Packard   | 2.0 GHz - 18 GHz     | 11975A          | 09/09/2002 | 09/09/2003 |
| 421  | Harmonic Mixer          | Hewlett Packard   | 18 GHz - 26.5 GHz    | 11970K          | 09/29/2000 | 09/29/2003 |
| 512  | Graphics Plotter        | Hewlett Packard   | N/A                  | 7470A           | 11/21/2001 | 11/21/2002 |
| 513  | LISN                    | Solar Electronics | 10 kHz - 30 MHz      | 8028-50-TS24BNC | 05/16/2002 | 05/16/2003 |
| 543  | Preamplifier            | Hewlett Packard   | 1.0 GHz - 26.5 GHz   | 8449B           | 07/11/2002 | 07/11/2003 |
| 544  | EMC Analyzer            | Hewlett Packard   | 9.0 kHz - 1.8 GHz    | 8591EM          | 12/19/2001 | 12/19/2002 |
| 617  | Interference Analyzer   | Electro-Metrics   | 10 kHz - 1 GHz       | EMC-30          | 08/23/2002 | 08/23/2003 |
| 767  | Biconilog               | EMCO              | 26 - 2000 MHz        | 3142B           | 09/03/2002 | 09/03/2003 |

## Test Setup Photographs

