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# FCC PART 15.209 TEST REPORT UNLICENSED INTENTIONAL RADIATOR

| Applicant            | WILD PLANET ENTERTAINMENT, INC. |  |  |  |
|----------------------|---------------------------------|--|--|--|
| Address              | 225 BUSH STREET SUITE 1300      |  |  |  |
|                      | SAN FRANCISCO CA. 94104 USA     |  |  |  |
| FCC ID               | N3EVIDEOATV70241R               |  |  |  |
| Model Number         | VIDEOATV70241R                  |  |  |  |
| Product Description  | REMOTE CONTROL TOY              |  |  |  |
| Date Sample Received | 3/11/2008                       |  |  |  |
| Date Tested          | 3/14/2008                       |  |  |  |
| Tested By            | Richard Block                   |  |  |  |
| Approved By          | Mario de Aranzeta               |  |  |  |
| Report Number        | 471BUT8TestReport.doc           |  |  |  |
| Test Results         |                                 |  |  |  |

THE ATTACHED REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF TIMCO ENGINEERING, INC.





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### **GENERAL REMARKS**

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## **Summary**

The device under test does:

fulfill the general approval requirements as identified in this test report not fulfill the general approval requirements as identified in this test report

### **Attestations**

This equipment has been tested in accordance with the standards identified in this test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report.

All instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 17025 requirements.

Testing Certificate # 0955-01

I attest that the necessary measurements were made, under my supervision, at:

Timco Engineering Inc. 849 NW State Road 45 Newberry, Fl 32669



## **Authorized Signatory Name:**

Mario de Aranzeta C.E.T. Compliance Engineer/ Lab. Supervisor

**Date:** 3/14/2008

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## **GENERAL INFORMATION**

# **DUT Specification**

| The test results relate only to the items tested. |  |   |          |       |  |
|---|--|---|----------|-------|--|
| Applicable Standard                               | Part 15.209  |   |          |       |  |
| DUT Description                                   | REMOTE CONTROL TOY   | 7 |          |       |  |
| FCC ID  | N3EVIDEOATV70241R  |   |          |       |  |
| Operating Frequency                               | TX: 49.405 MHz   |   | RX: 49.8 | 6 MHz |  |
| DUT Power Source                                  | ☐ 110-120Vac/50- 60Hz  |   |          |       |  |
|   | ☐ DC Power   |   |          |       |  |
|   | ☐ Battery Operated Exclusively   |   |          |       |  |
| Test Item   | ☐ Prototype ☐ Pre-Production ☐ Production                                      |   |          |       |  |
| Type of Equipment                                 | ☐ Fixed ☐ Mobile ☐ Portable  |   |          |       |  |
| Test Facility                                     | Timco Engineering Inc. located at 849 NW State Road 45 Newberry, FL 32669 USA. |   |          |       |  |
| Test Conditions                                   | Temperature: 26°C  |   |          |       |  |
| 1000 00114110110                                  | Relative humidity: 50%   |   |          |       |  |
| Test Exercise                                     | The DUT was placed in continuous transmit mode of operation.                   |   |          |       |  |
| Modifications                                     | None   |   |          |       |  |

# **Test Supporting Equipment**

| Supporting Device | Manufacturer | Model / FCC ID | Serial Number |
|-------------------|--------------|----------------|---------------|
| N/A               |              |                |               |

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# EMC EQUIPMENT LIST

| Device       | Manufacturer | Model    | Serial     | Cal/Char | Due Date |
|--------------|--------------|----------|------------|----------|----------|
|              |              |          | Number     | Date     |          |
| 3/10-Meter   | TEI          | N/A      | N/A        | Listed   | 3/19/10  |
| OATS         |              |          |            | 3/20/07  |          |
| 3-Meter      | TEI          | N/A      | N/A        | Listed   | 1/10/09  |
| OATS         |              |          |            | 1/11/06  |          |
| 3-Meter      | Panashield   | N/A      | N/A        | Listed   | 5/10/10  |
| Semi-        |              |          |            | 5/11/07  |          |
| Anechoic     |              |          |            |          |          |
| Chamber      |              |          |            |          |          |
| Antenna:     | Eaton        | 94455-1  | 1057       | CAL      | 1/15/10  |
| Biconnical   |              |          |            | 1/15/08  |          |
| Antenna:     | Eaton        | 94455-1  | 1096       | CAL      | 10/11/08 |
| Biconnical   |              |          |            | 10/11/06 |          |
| Antenna:     | Electro-     | BIA-25   | 1171       | CAL      | 7/18/09  |
| Biconnical   | Metrics      |          |            | 7/18/07  |          |
| Analyzer     | HP           | 85650A   | 2811A01279 | CAL      | 5/17/09  |
| Blue Tower   |              |          |            | 5/17/07  |          |
| Quasi-Peak   |              |          |            |          |          |
| Adapter      |              |          |            |          |          |
| Analyzer     | HP           | 85685A   | 2926A00983 | CAL      | 5/17/09  |
| Blue Tower   |              |          |            | 5/17/07  |          |
| RF           |              |          |            |          |          |
| Preselector  |              |          |            |          |          |
| Analyzer     | HP           | 8568B    | 2928A04729 | CAL      | 5/17/09  |
| Blue Tower   |              |          | 2848A18049 | 5/17/07  |          |
| Spectrum     |              |          |            |          |          |
| Analyzer     |              |          |            |          |          |
| LISN         | Electro-     | ANS-25/2 | 2604       | CAL      | 10/5/08  |
|              | Metrics      | -        |            | 10/5/06  |          |
| LISN         | Electro-     | EM-7820  | 2682       | CAL      | 7/23/09  |
|              | Metrics      |          |            | 7/23/07  |          |
| Antenna:     | Eaton        | 96005    | 1243       | CAL      | 12/13/09 |
| Log-Periodic |              |          |            | 12/13/07 |          |

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#### TEST PROCEDURES

**Radiation Interference:** ANSI C63.4-2003 using a spectrum analyzer, a preselector, a quasipeak adapter, and an appropriate antenna. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100 kHz with an appropriate sweep speed and the video bandwidth was 300 kHz up to 1 GHz and 1 MHz with a video BW of 3 MHz above 1 GHz. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. The spectrum was searched to at least the tenth (10) harmonic of the fundamental.

**Formula Of Conversion Factors:** The field strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer plus the coax loss. The antenna correction factors are stated in terms of dB. The gain of the preselector was accounted for in the spectrum analyzer meter reading.

Example:

Freq (MHz) Meter Reading + ACF + CL = FS

33 20 dBuV + 10.36 dB + 0.5 = 30.86 dBuV/m @ 3m

**Power Line Conducted Interference:** The procedure used was ANSI C63.4-2003 using a 50uH LISN. Both lines were observed. The bandwidth of the spectrum analyzer was 10kHz with an appropriate sweep speed. The spectrum was scanned from 0.15 to 30 MHz.

**Occupied Bandwidth**: A small sample of the transmitter output was fed into the spectrum analyzer and the attached plot was printed. The vertical scale is set to -10 dBm per division.

**ANSI C63.4-2003 10.1 Measurement Procedures:** The DUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The DUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

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## RADIATION INTERFERENCE

**Rules Part No.:** 15.209

Requirements:

| Frequency          | Limits                         |  |  |
|--------------------|--------------------------------|--|--|
| Pa                 | rt 15.209                      |  |  |
| Fundamental        | 2400/F (kHz) uV/m@ 300 meters  |  |  |
| 9 to 490 kHz       | 2400/F (kHz) μV/m @ 300 meters |  |  |
| 490 to 1705 kHz    | 24000/F (kHz) μV/m @ 30 meters |  |  |
| 1705 kHz to 30 MHz | 29.54 dBµV/m @ 30 meters       |  |  |
| 30 – 88            | 40.0 dBμV/m @ 3 meters         |  |  |
| 80 – 216           | 43.5 dBµV/m @ 3 meters         |  |  |
| 216 – 960          | 46.0 dBµV/m @ 3 meters         |  |  |
| Above 960          | 54.0 dBµV/m @ 3 meters         |  |  |

## **Test Data:**

| Tuned     | Emission  | Meter   | Ant.     | Coax | Correction | Field    | Margin |
|-----------|-----------|---------|----------|------|------------|----------|--------|
| Frequency | Frequency | Reading | Polarity | Loss | Factor     | Strength | dB     |
| MHz       | MHz       | dBuV    |          | dB   | dB/m       | dBuV/m   |        |
| 49.4      | 49.41     | 22.1    | H        | 0.50 | 10.89      | 33.49    | 6.51   |
| 49.4      | 49.41     | 28.0    | v        | 0.97 | 10.72      | 39.69    | 0.31   |
| 49.4      | 98.81     | 0.9     | H        | 0.65 | 10.85      | 12.40    | 31.10  |
| 49.4      | 98.81     | 2.5     | v        | 0.65 | 11.41      | 14.56    | 28.94  |
| 49.4      | 148.22    | 0.7     | v        | 0.70 | 14.05      | 15.45    | 28.05  |
| 49.4      | 148.22    | 1.5     | H        | 0.70 | 13.76      | 15.96    | 27.54  |
| 49.4      | 197.62    | 1.6     | H        | 0.89 | 17.10      | 19.59    | 23.91  |
| 49.4      | 197.62    | 1.7     | v        | 0.89 | 17.19      | 19.78    | 23.72  |
| 49.4      | 247.00    | 0.9     | H        | 0.99 | 12.35      | 14.24    | 31.78  |
| 49.4      | 247.00    | 2.2     | v        | 0.99 | 12.32      | 15.51    | 30.51  |
| 49.4      | 293.40    | 1.2     | v        | 1.09 | 14.07      | 16.36    | 29.66  |
| 49.4      | 296.40    | 1.6     | H        | 1.09 | 14.26      | 16.95    | 29.07  |
| 49.4      | 345.80    | 2.0     | v        | 1.15 | 14.60      | 17.75    | 28.27  |
| 49.4      | 345.80    | 2.7     | H        | 1.15 | 14.92      | 18.77    | 27.25  |
| 49.4      | 395.20    | 2.2     | H        | 1.20 | 15.96      | 19.36    | 26.66  |
| 49.4      | 395.20    | 3.8     | v        | 1.20 | 15.65      | 20.65    | 25.37  |
| 49.4      | 444.60    | 3.1     | H        | 1.24 | 16.85      | 21.19    | 24.83  |
| 49.4      | 444.60    | 3.5     | v        | 1.24 | 16.44      | 21.18    | 24.84  |
| 49.4      | 494.05    | 2.3     | v        | 1.29 | 17.78      | 21.37    | 24.65  |
| 49.4      | 494.05    | 3.1     | H        | 1.29 | 17.66      | 22.05    | 23.97  |

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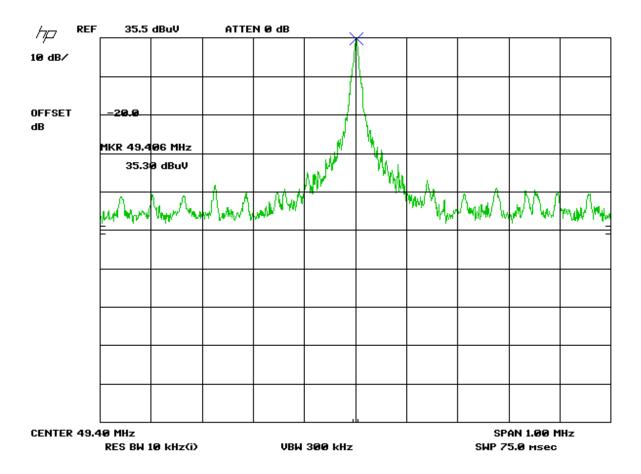


### OCCUPIED BANDWIDTH

**Rules Part No.:** 15.209

**Requirements**: The field strength of any emissions appearing between the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 26 dB below the level of the un-modulated carrier or to the general limits of 15.209, whichever permits the higher emission levels.

### **Test Data:**



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## POWER LINE CONDUCTED INTERFERENCE

**Rules Part No.:** 15.207

Requirements:

| Frequency<br>(MHz) | Quasi Peak Limits<br>(dBuv) | Average Limits<br>(dBuV) |
|--------------------|-----------------------------|--------------------------|
| 0.15 – 0.5         | 66 – 56                     | 56 – 46                  |
| 0.5 – 5.0          | 56                          | 46                       |
| 5.0 – 30           | 60                          | 50                       |

**Test Data:** N/A Battery or vehicle powered DUT.

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# RADIATED TEST SET UP PHOTO



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