



Test Report:

2W04658

Applicant:

Nemko

Desa International Inc.
P.O. Box 90004, 2901 Industrial Ave.
Bowling Green, KY
42102
USA

**Equipment Under Test:
(EUT)** 6030 RF Tx Motion Sensor

FCC ID: BJ4-60WRC30TX

In Accordance With: FCC Part 15, Subpart C, 15.231

Tested By: Nemko Canada Inc.
3325 River Road, R.R. 5
Ottawa, Ontario K1V 1H2

Authorized By:

G. Westwell, Wireless Technologist

Date: February 14, 2002

Total Number of Pages: 18

Authorized Copy: Soft Copy

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Section 1. Summary of Test Results**General****All measurements are traceable to national standards.**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15, Subpart C. All tests were conducted using measurement procedure ANSI C63.4-1992. Radiated emissions are made on an open area test site. A description of the test facility is on file with the FCC.

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.

See "Summary of Test Data".

**TESTED BY:**

Russell Grant, Wireless Group Manager

DATE: February 14, 2002

Nemko Canada Inc., a testing laboratory, is accredited by the Standards Council of Canada. The tests included in this report are within the scope of this accreditation. The results apply only to the samples tested.

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This report applies only to the items tested.

*EQUIPMENT: 6030 RF Tx Motion Sensor**FCC ID: BJ4-60WRC30TX***Summary Of Test Data**

Name of Test	Para. Number	Results
Transmission Requirements	15.231(a)	Complies
Radiated Emissions	15.231(b)	Complies
Occupied Bandwidth	15.231(c)	Complies
Frequency Tolerance	15.231(d)	N/A
Periodic Alternate Field Strength Requirements	15.231(e)	N/A
Powerline Conducted Emissions	15.207	N/A

Test Conditions:**Indoor** Temperature: 21 °C
 Humidity: 7 %**Outdoor** Temperature: 20 °C
 Humidity: 5 %

Section 2. Equipment Under Test**General Equipment Information****Manufacturer:** Desa International Inc.**Model No.:** 6030**Serial No.:** None**Date Received In Laboratory:** February 7, 2002**Nemko Identification No.:** Item #1**Tx:** 315 MHz Fixed**Emission Designator:** 117KL1D**Type of Modulation:** Pulse Modulated**Duty Cycle:** 6.2 dB

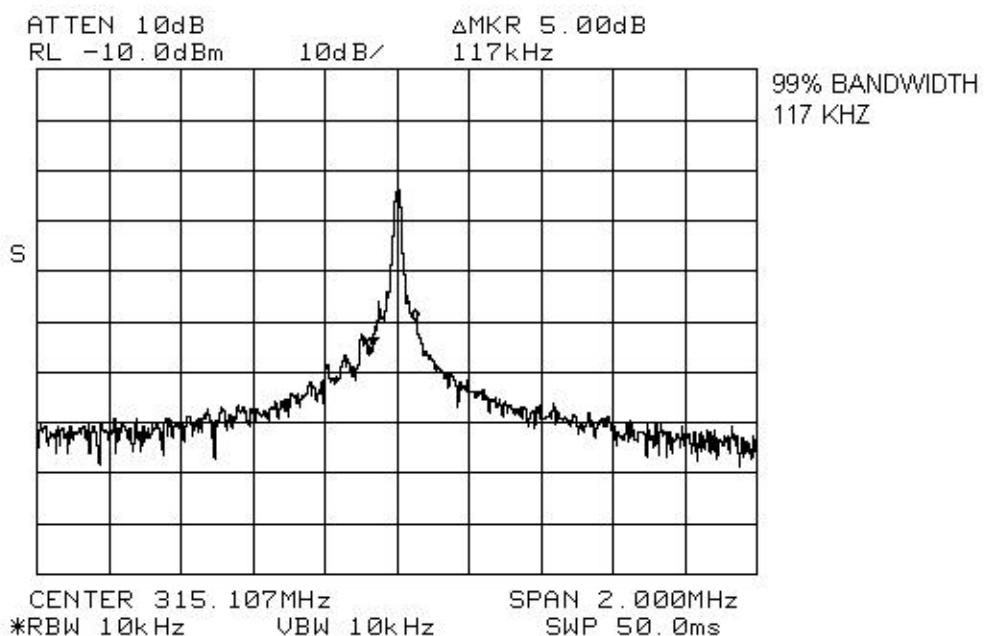
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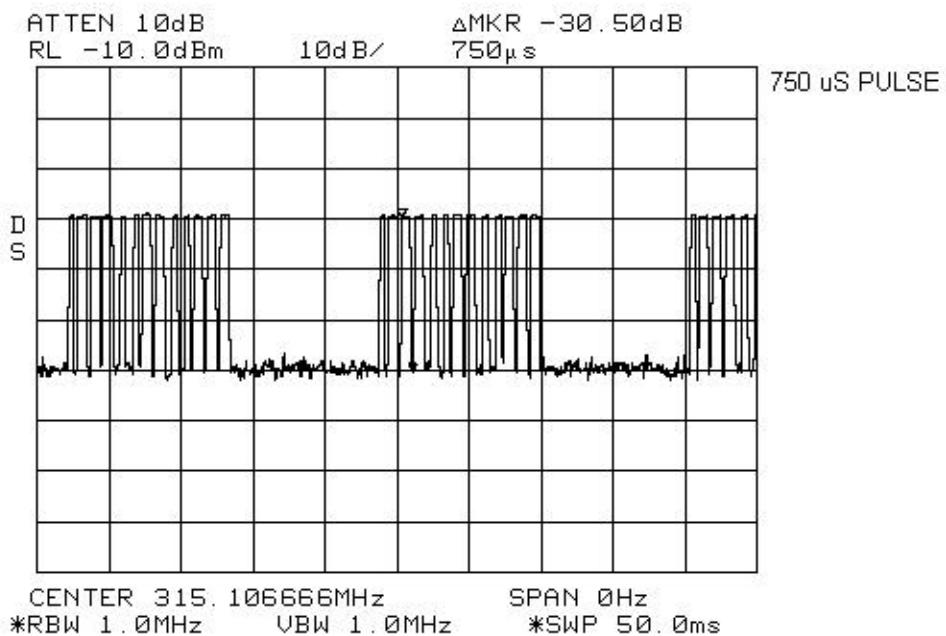
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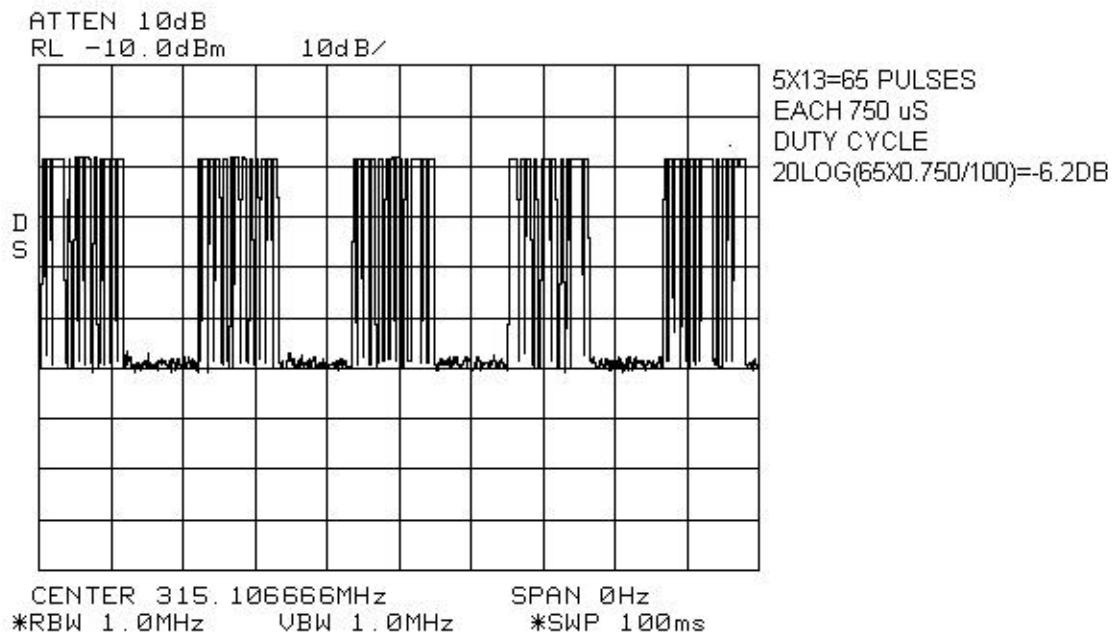
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*EQUIPMENT: 6030 RF Tx Motion Sensor**FCC ID: BJ4-60WRC30TX*

Section 3. Transmission Requirements**Para. No.: 15.231(a)**

Test Performed By: Russell Grant	Date of Test: February 13, 2002
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Minimum Standard: 15.231(a) Continuous transmissions such as voice, video or data transmissions are not permitted.

15.231(a)(1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds after being released.

15.231(a)(2) A transmitter activated automatically shall cease transmission within 5 seconds of activation.

15.231(a)(3) Periodic transmissions at regular pre-determined intervals are not permitted. However polling or supervisory transmissions to determine system integrity of transmitters used in security or safety applications are allowed if the periodic rate of transmission does not exceed one transmission of not more than one second duration per hour for each transmitter.

15.231(a)(4) Intentional radiators which are employed for radio control purposes during emergencies involving fire, security, and safety of life, when activated to signal an alarm, may operate during the pendency of the alarm.

Test Results: Complies.

Test Data: Compliance was determined by verification of technical specifications and a functional test on the equipment.

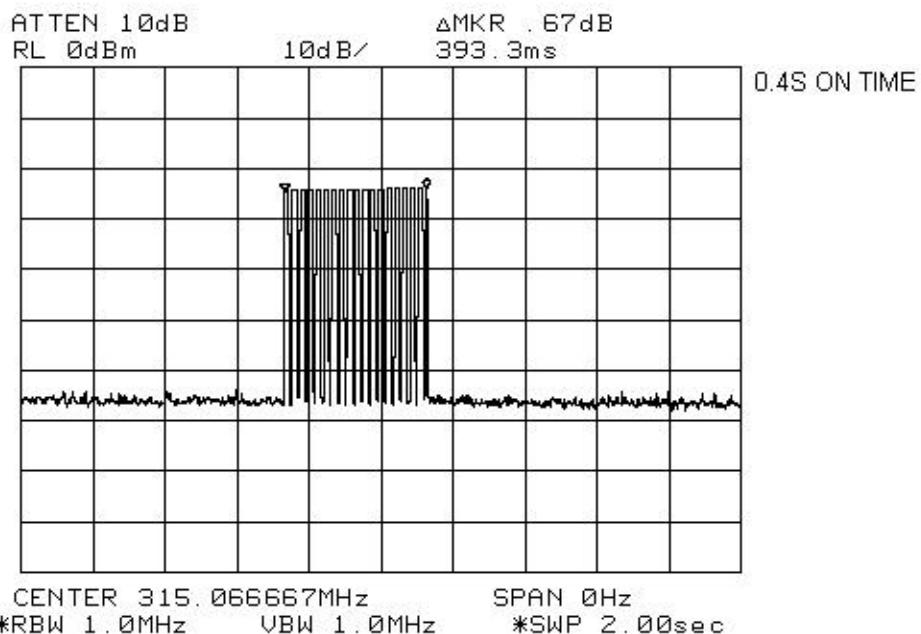
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Rationale for Compliance with Transmission Requirements

15.231(a)(1) : Complies

15.231(a)(2) : N/A

15.231(a)(3) : 0.4 Seconds

15.231(a)(4) : N/A

*EQUIPMENT: 6030 RF Tx Motion Sensor**FCC ID: BJ4-60WRC30TX***Section 4. Radiated Emissions****Para. No.: 15.231(b)**

Test Performed By: Russell Grant	Date of Test: February 13, 2002
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Minimum Standard:

Fundamental Frequency (MHz)	Field Strength of Fundamental (μV/m @ 3m)	Field Strength of Spurious Emissions (μV/m @ 3m)
40.66 - 40.70	2,250	225
70-130	1, 250	125
130-174	1,250 to 3,750*	125 to 375
174-260 (note 1)	3,750	375
260-470 (note 1)	3,750 to 12,500*	375 to 1,250
Above 470	12,500	1,250

Restricted Band Limits		
Frequency (MHz)	Field Strength (μV/m @ 3m)	Field Strength (dBμV/m @ 3m)
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above 960	500	54.0

Test Results: Complies**Test Data:** As per attached tabulated data.

*EQUIPMENT: 6030 RF Tx Motion Sensor**FCC ID: BJ4-60WRC30TX***Test Data - Radiated Emissions**

Test Distance (meters) : 3		Range: A Tower		Receiver: ESVP		RBW(kHz): 120/1000		Detector: Peak	
Freq. (MHz)	Ant. *	Pol. (V/H)	RCVD Signal (dB μ V/m)	Ant. Factor (dB)**	Amp. Gain (dB)***	Dist. Corr. (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
315.0	L/P1	V	59.7	18.0		-6.2	71.5	75.6	4.1
315.0	L/P1	H	62.4	18.0		-6.2	74.2	75.6	1.4
630.0	L/P1	V	27.4	23.1		-6.2	44.3	55.6	11.3
630.0	L/P1	H	27.0	23.1		-6.2	43.9	55.6	11.7
945.0	L/P1	V	28.0	29.0		-6.2	50.8	55.6	4.8
945.0	L/P1	H	22.5	29.0		-6.2	45.3	55.6	10.3
1260.0	Hrn 2	V	21.8	28.5		-6.2	44.1	55.6	11.5
1260.0	Hrn 2	H	21.5	28.5		-6.2	43.8	54.0	10.2
1575.0	Hrn 2	V	77.1	30.1	-48.0	-6.2	53.0	54.0	1.0
1575.0	Hrn 2	H	72.7	30.1	-48.0	-6.2	48.6	54.0	5.4
1890.0	Hrn 2	V	71.5	32.6	-48.7	-6.2	49.2	55.6	6.4
1890.0	Hrn 2	H	70.3	32.6	-48.7	-6.2	48.0	55.6	7.6
2205.0	Hrn 2	V	69.8	34.0	-58.7	-6.2	38.9	54.0	15.1
2205.0	Hrn 2	H	66.5	34.0	-58.7	-6.2	35.6	54.0	18.4

Notes:

B/C = Biconical, B/L = Biconilog, L/P = Log-Periodic, H = Horn, D/P = Dipole

* Re-measured using dipole antenna.

** Includes cable loss when amplifier is not used.

*** Includes cable loss.

() Denotes failing emission level.

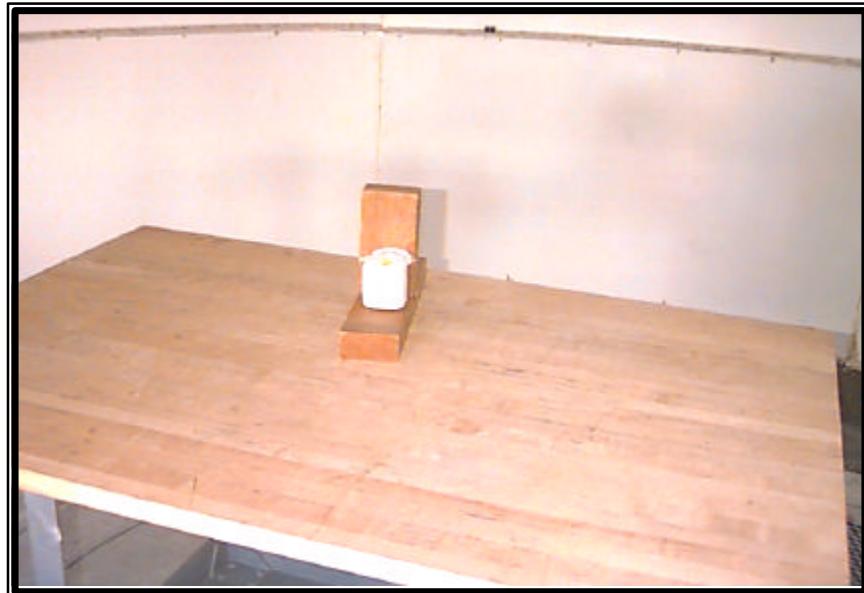
N.D. = Not Detected

EQUIPMENT: 6030 RF Tx Motion Sensor

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Radiated Photographs

Front View:



Section 5. Occupied Bandwidth**Para. No.: 15.231(c)**

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Minimum Standard: 15.231(c) The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

Test Results: Complies

Test Data: See attached graph.

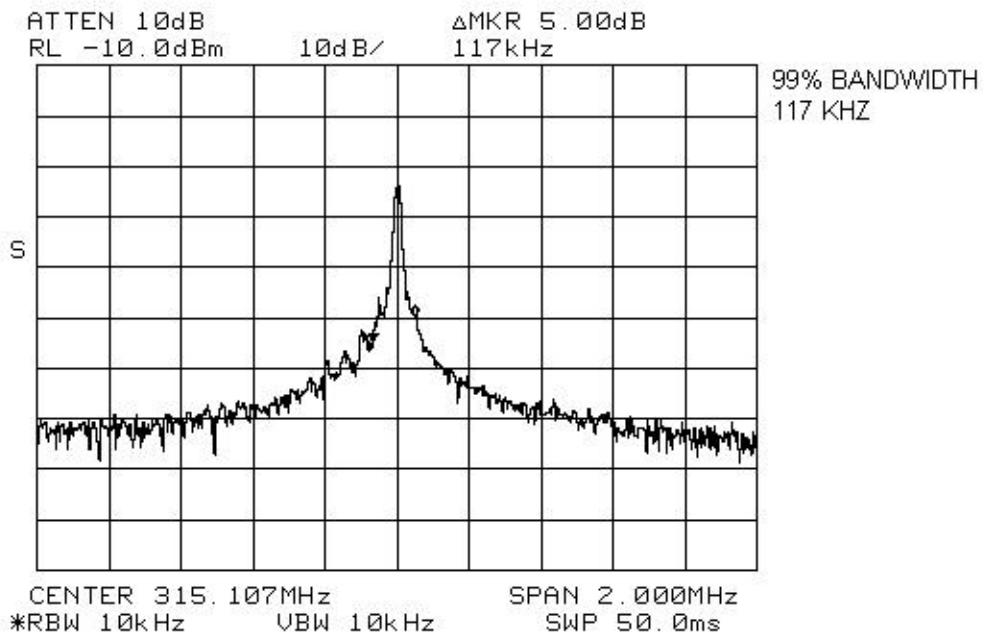
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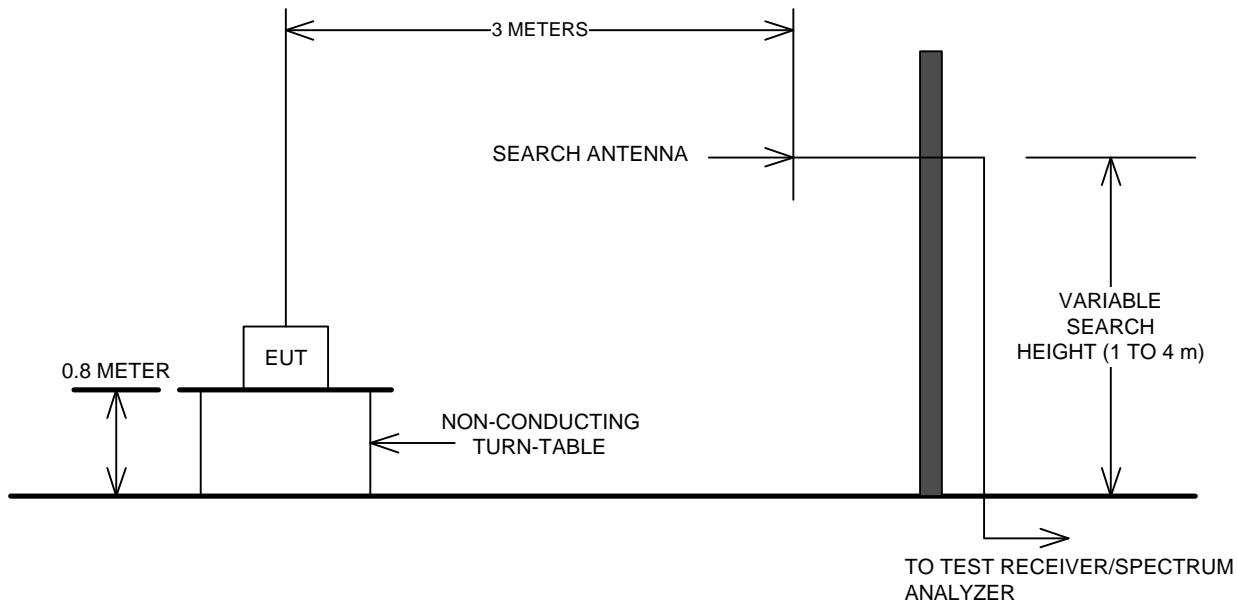
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Section 6. Block Diagrams**Outdoor Test Site For Radiated Emissions**

The spectrum was searched up to the 10th harmonic of the fundamental frequency of operation.

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CAL CYCLE	EQUIPMENT	MANUFACTURER	MODEL	SERIAL	LAST CAL.	NEXT CAL.
1 Year	Spectrum Analyzer	Hewlett Packard	8565E	FA000981	June 08/01	June 08/02
1 Year	Receiver	Rohde & Schwarz	ESVP	892661/014	Apr. 3/01	Apr. 3/02
1 Year	Horn Antenna	EMCO #2	3115	4336	Dec. 1/01	Dec. 1/02
1 Year	Log Periodic Antenna 1	EMCO	LPA-25	1141	Aug. 28/01	Aug. 28/02

NA: Not Applicable

NCR: No Cal Required

COU: CAL On Use