Test Report:	3W06960
Applicant:	Diffraction Ltd. 106-100 Craig Henry Dr. Ottawa, K2G 5W3
Equipment Under Test: (EUT)	Max Dome
In Accordance With:	**FCC Part 15, Subpart C, 15.231**
Tested By:	Nemko Canada Inc. 303 River Road, R.R. 5 Ottawa, Ontario K1V 1H2
Authorized By:	Glen Westwell, Wireless Technologist
Date:	29 August 2003
Total Number of Pages:	15

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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: _____ DATE: 28 August 2003
Kevin Carr, EMC/EMI/Wireless Specialist

Summary Of Test Data

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

Test Conditions:

Indoor Temperature: 24 °C
Humidity: 43 %

Outdoor Temperature: 24 °C
Humidity: 68 %

Section 2. Equipment Under Test

General Equipment Information

Manufacturer:	Diffraction Ltd.
Model No.:	MD-1
Serial No.:	1001, 1002
Date Received In Laboratory:	25 Aug 03
Nemko Identification No.:	1 & 2
OCCUPIED BANDWIDTH (99% BW):	44.0kHz
TYPE OF MODULATION:	FSK
EMISSION DESIGNATOR (TRC-43):	44K0P0D
FREQUENCY RANGE (or fixed frequency):	433.93 and 434.33 MHz

Section 3. Transmission Requirements

Para. No.: 15.231(a)

Test Performed By: Kevin Carr	**Date of Test: 25 Aug. 03**

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.

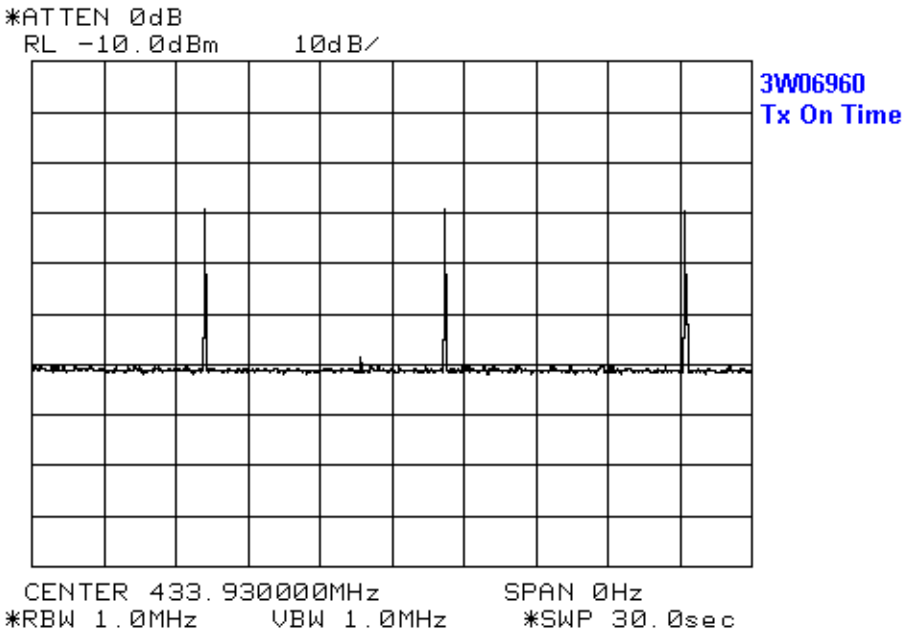
Rationale for Compliance with Transmission Requirements

15.231(a)(1) : The EUT does not Transmit continuously, See Plot

15.231(a)(2) : The Transmit on time is less then 5 seconds, See Plot

15.231(a)(3) : The EUT Polls the Receiver every 10 seconds, See Plot and Radiated Emissions, section 4

15.231(a)(4) : The EUT is not intended for control purposes during emergencies involving fire, security, and safety of life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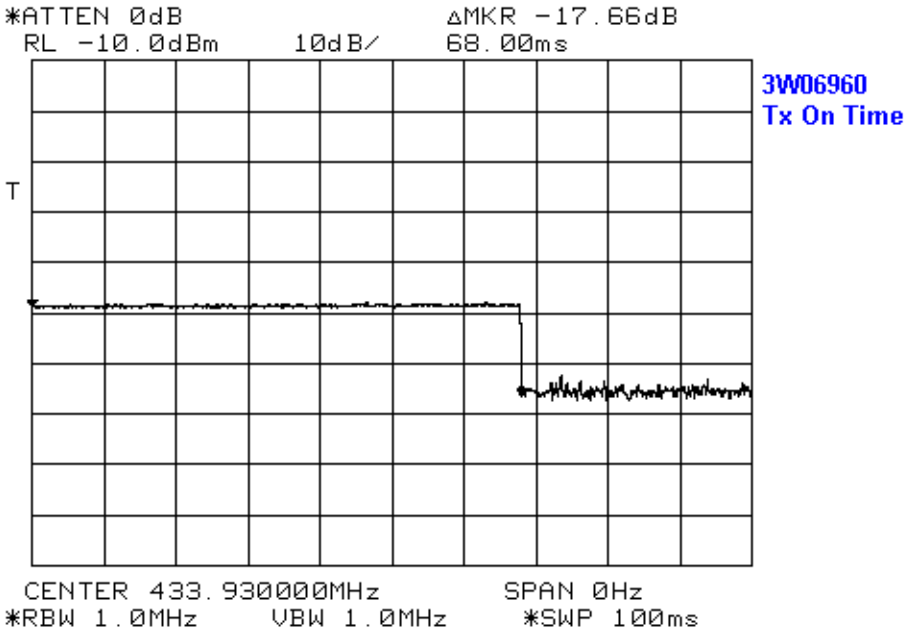
RL -10.0dBm
10dB/
3W06960
Tx On Time
CENTER 433.930000MHz
SPAN 0Hz
*RBW 1.0MHz
VBW 1.0MHz
*SWP 30.0sec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RL -10.0dBm
10dB/
68.00ms
3W06960
Tx On Time
T
CENTER 433.930000MHz
SPAN 0Hz
*RBW 1.0MHz
VBW 1.0MHz
*SWP 100ms

Section 4. Occupied Bandwidth

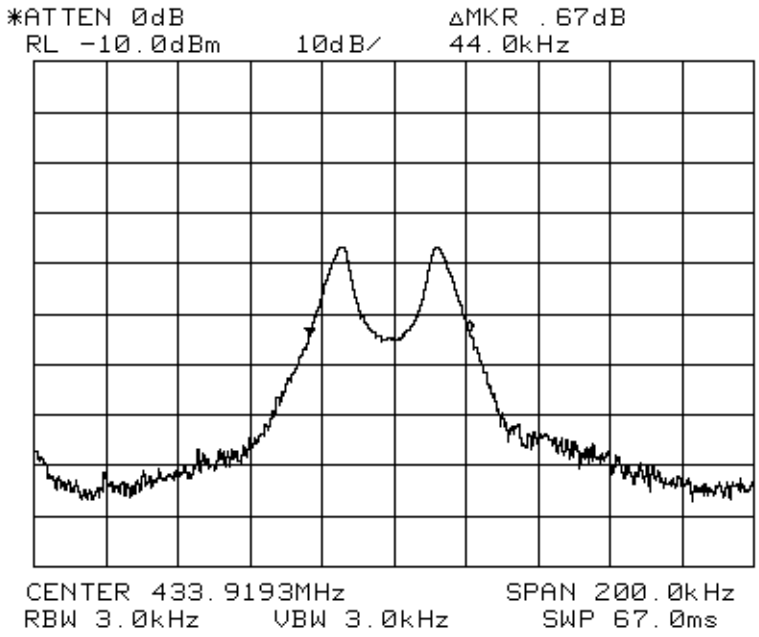
Para. No.: 15.231(c)

Test Performed By: Kevin Carr	**Date of Test: 25 Aug. 03**

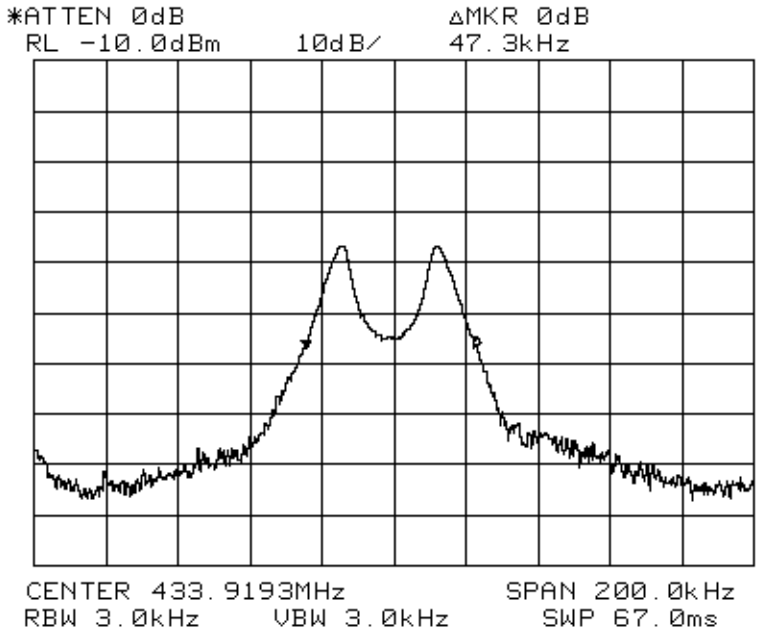
Minimum Standard: 15.231(c) The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points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

Test Results: Complies

Test Data: See attached graph.



3W06960
99% Occupied BW



3W06960
20 dB Occupied BW

Section 5. Periodic Alternate Field Strength Requirements

Para. No.: 15.231(e)

Test Performed By: Kevin Carr	**Date of Test: 25 Aug. 03**

Minimum Standard: 15.231(e) Intentional radiators may operate at a periodic rate exceeding that specified in paragraph (a) of this section and may be employed for any type of operation, including operation prohibited in paragraph (a) of this section, provided the intentional radiator complies with the provisions of paragraphs (b) through (d) of this section, except the field strength table in paragraph (b) of this section is replaced by the following.

Fundamental Frequency (MHz)	Field Strength of Fundamental (μV/m @ 3m)	Field Strength of Spurious Emissions (μV/m @ 3m)
40.66 - 40.70	1,000	100
70 - 130	500	50
130 - 174	500 to 1,500	50 to 150
174 - 260	1,500	150
260-470	1,500 to 5,000	150 to 500
Above 470	5,000	500

In addition, devices operated under the provisions of this paragraph shall be provided with a means for automatically limiting operation so that the duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.

Test Results: Complies

Test Data: As per attached tabulated data.

Radiated Disturbance Test Data:

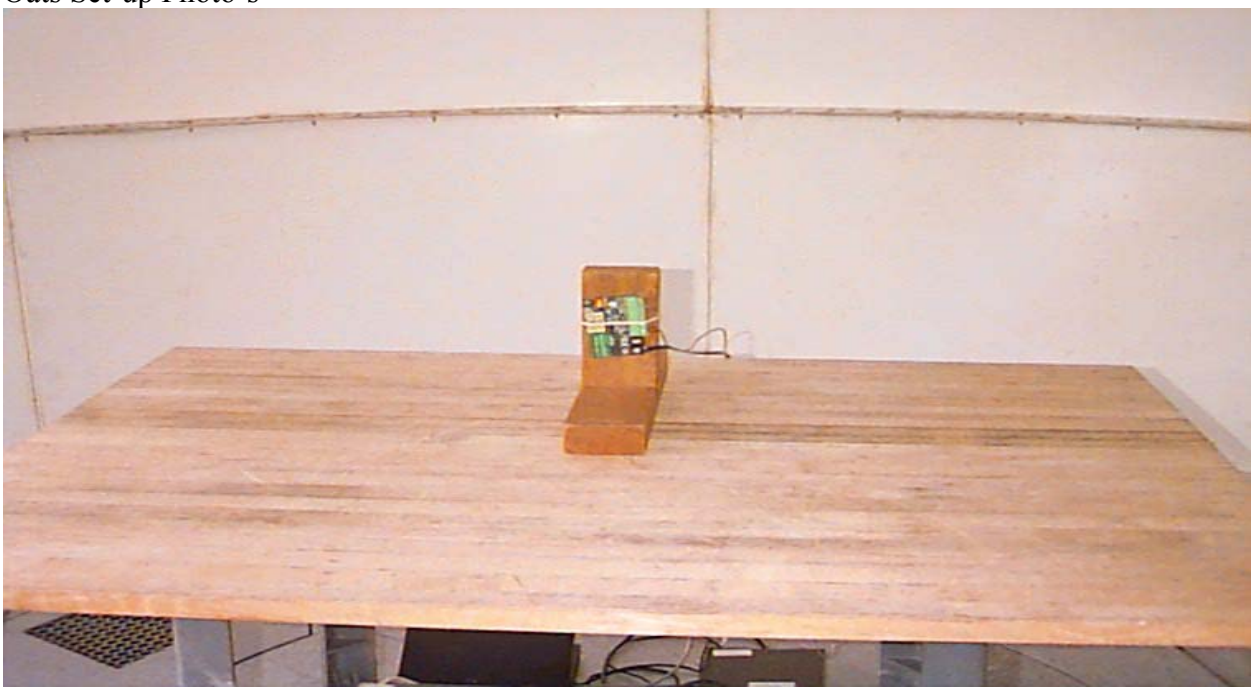
Test Date: 25 Aug. 2003	
Engineer's Name: Kevin Carr	
Temperature (C°): 16	Humidity %:88
Tested as per (Table Top/Floor Standing): Table Top	
Test Distance (meters): 3	Range: 1
Emissions within 20 dB of the limit have been recorded. Pre-scan data can be found at the back of this section	

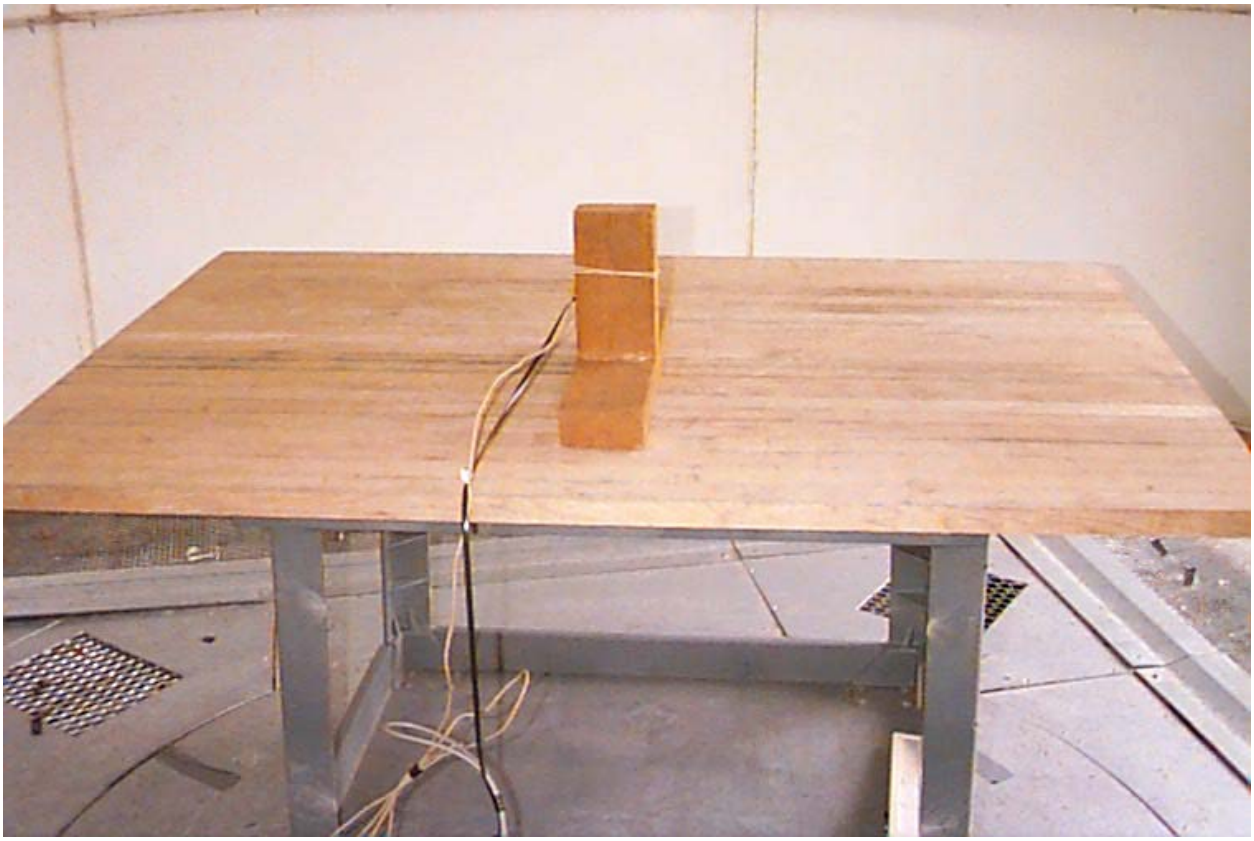
Freq. (MHz)	Ant.	Pol. V/H	RCVD Signal (dBµV)	Ant. Factor (dB)	Amp. Gain (dB)	Cable Loss (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Amp.
433.9100	LP2	V	48.1	16.9	N/A	2.7	67.7	73.9	6.2	Q-Peak	None
433.9100	LP2	H	46.6	17.4	N/A	2.7	66.7	73.9	7.2	Q-Peak	None
867.8400	LP2	V	9.0	22.5	N/A	3.9	35.4	54.0	18.6	Q-Peak	None
867.8400	LP2	H	9.5	23.7	N/A	3.9	37.1	54.0	16.9	Q-Peak	None
1301.7000	Horn2	V	48.0	26.6	46.5	3.3	31.4	54.0	22.6	Peak	1-2GHz
1301.7000	Horn2	H	47.7	26.6	46.5	3.3	31.1	54.0	22.9	Peak	1-2GHz
1735.6000	Horn2	V	54.3	28.4	46.6	3.9	39.9	54.0	14.1	Peak	1-2GHz
1735.6000	Horn2	H	51.0	28.8	46.6	3.9	37.1	54.0	16.9	Peak	1-2GHz
2169.7000	Horn2	V	62.3	28.9	55.3	4.7	40.5	54.0	13.5	Peak	2-4GHz
2169.7000	Horn2	H	62.0	28.9	55.3	4.7	40.3	54.0	13.7	Peak	2-4GHz
2603.6000	Horn2	V	62.8	30.0	56.5	8.0	44.3	54.0	9.7	Peak	2-4GHz
2603.6000	Horn2	H	61.3	29.9	56.5	8.0	42.7	54.0	11.3	Peak	2-4GHz
3037.4000	Horn2	V	62.3	31.0	56.1	6.1	43.3	54.0	10.7	Peak	2-4GHz
3037.4000	Horn2	H	61.8	31.0	56.1	6.1	42.7	54.0	11.3	Peak	2-4GHz
3471.3000	Horn2	V	61.5	31.1	55.1	7.2	44.7	54.0	9.3	Peak	2-4GHz
3471.3000	Horn2	H	62.2	31.1	55.1	7.2	45.4	54.0	8.6	Peak	2-4GHz
3905.2000	Horn2	V	58.4	32.8	54.6	7.6	44.2	54.0	9.8	Peak	2-4GHz
3905.2000	Horn2	H	59.2	32.9	54.6	7.6	45.1	54.0	8.9	Peak	2-4GHz
4339.1000	Horn2	V	56.3	32.6	52.5	8.3	44.7	54.0	9.3	Peak	4-8GHz
4339.1000	Horn2	H	55.4	33.0	52.5	8.3	44.2	54.0	9.8	Peak	4-8GHz

Note 1: Antenna Legend: BC = Biconical, BL = Bilog, LP = Log-Periodic, Horn = Horn, ED = EMCO Dipole
Note 2: Detector Legend: Q-Peak = 120 kHz RBW, Average = 1.0 MHz RBW

Notes:	

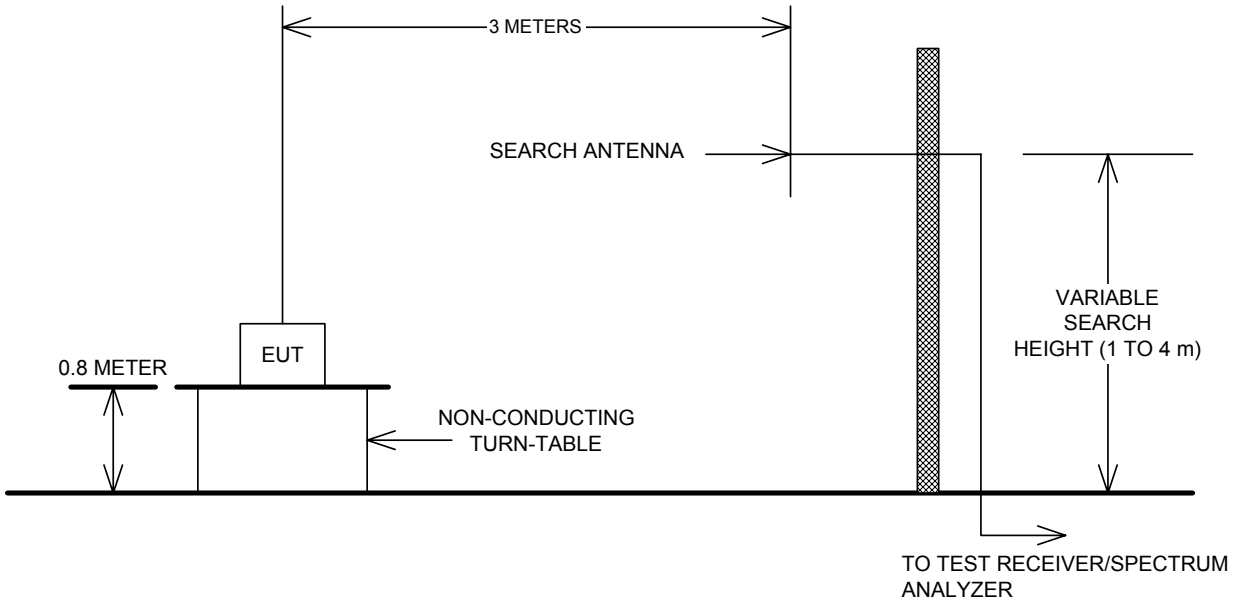
Oats Set-up Photo's





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.

Section 7. Test Equipment List

CAL Cycle	Equipment	Manufacturer	Model No.	Asset/Serial No.	Last Cal.	Next Cal.
1 Year	Receiver	Rohde & Schwarz	ESVS-30	FA001437	July. 24/03	July. 24/04
1 Year	Spectrum Analyzer	Hewlett-Packard	8564E	FA001367	May. 13/03	May. 13/04
1 Year	Biconical (1) Antenna	EMCO	3109	FA000805	April. 15/03	April. 15/04
1 Year	Horn Antenna #2	EMCO	3115	FA000825	Dec. 09/02	Dec. 09/03
1 Year	Log Periodic Antenna #2	EMCO	3148	FA001355	May. 09/03	May. 09/04
1 Year	1.0 – 2.0 GHz Amplifier	JCA	12-400	FA001498	June. 18/03	June. 18/04
1 Year	2.0 – 4.0 GHz Amplifier	JCA	24-600	FA001496	June. 18/03	June. 18/04

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use, OUT = Out For CAL/Repair