Test Report:	3W07525
Applicant:	Mark IV Industries 6020 Ambler Drive Mississauga, Ontario L4W 2P1
Equipment Under Test: **(EUT)**	Mark IV IVHS Division 915.0MHz Handheld Reader
In Accordance With:	**FCC Part 15, Subpart C, 15.249**
Tested By:	Nemko Canada Inc. 303 River Road, R.R. 5 Ottawa, Ontario K1V 1H2
Authorized By:	 Kevin Carr, EMC Specialist
Date:	8 October 2003
Total Number of Pages:	13

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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 FCC Part 15.249. All tests were conducted using measurement procedure ANSI C63.4-1992. Radiated Emissions were 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: 8 October 2003
Glen Westwell, Wireless Technologist

Summary Of Test Data

Name Of Test	Para. No.	Result
Conducted Emissions	15.207	N/A
Radiated Emissions	15.249	Complies

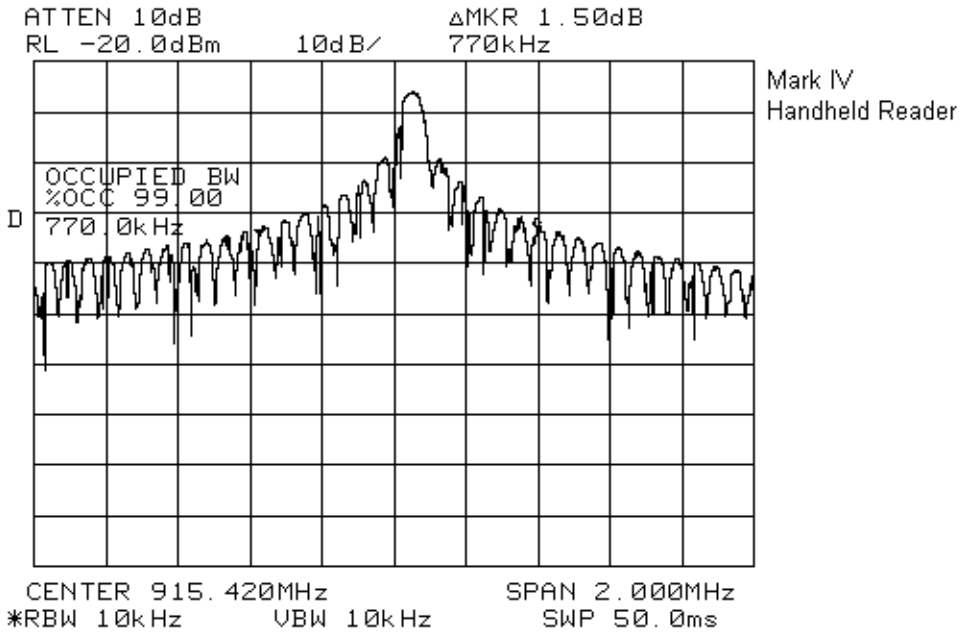
Note: This device is DC powered.

Test Conditions:

Indoor	Temperature:	21°C
	Humidity:	38%
Outdoor	Temperature:	15°C
	Humidity:	44%

Section 2. General Equipment Specification

Manufacturer:	Mark IV Industries
Model No.:	915MHz Handheld Reader
Serial No.:	2665 371 101A
Date Received In Laboratory:	25 Sept. 2003
Nemko Identification No.:	#1
Frequency Range:	915.75MHz (fixed)
Number of Channels:	1
Modulation:	AM, On-Off Keying


ATTEN 10dB
RL -20.0dBm
10dB/
ΔMKR 1.50dB
770kHz
Mark IV
Handheld Reader
OCCUPIED BW
%OCC 99.00
D
770.0kHz
CENTER 915.420MHz
SPAN 2.000MHz
*RBW 10kHz
VBW 10kHz
SWP 50.0ms

Section 3. Radiated Emissions

Para. No.: 15.249

Test Performed By: Glen Westwell	**Date of Test: 7 Oct 2003**

Minimum Standard:

Fundamental (MHz)	Field Strength (mV/m)	Field Strength (dBµV)	Harmonic (mV/m)	Harmonic (dBµV)
902-928	50	94	0.5	54

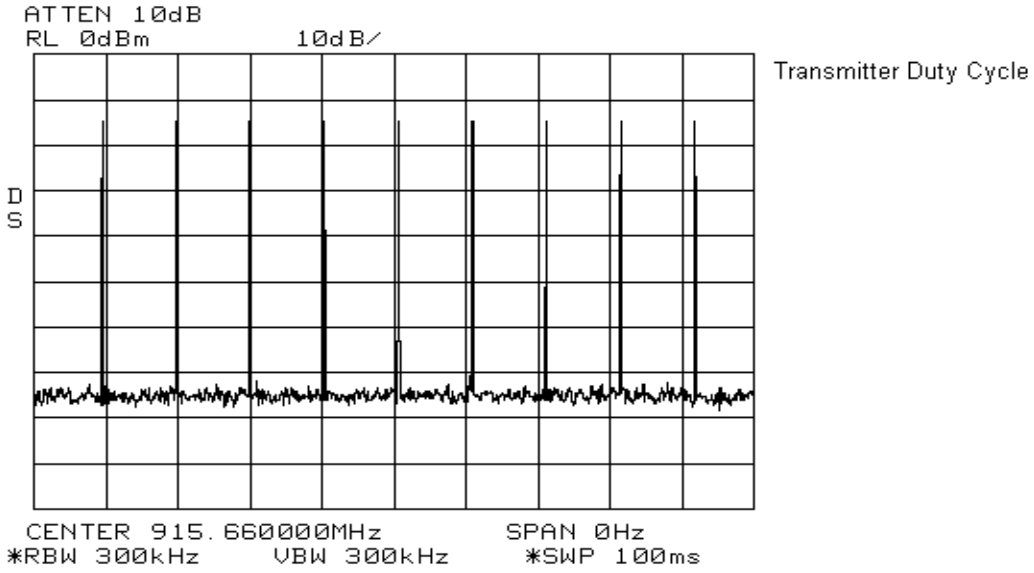
Test Results:

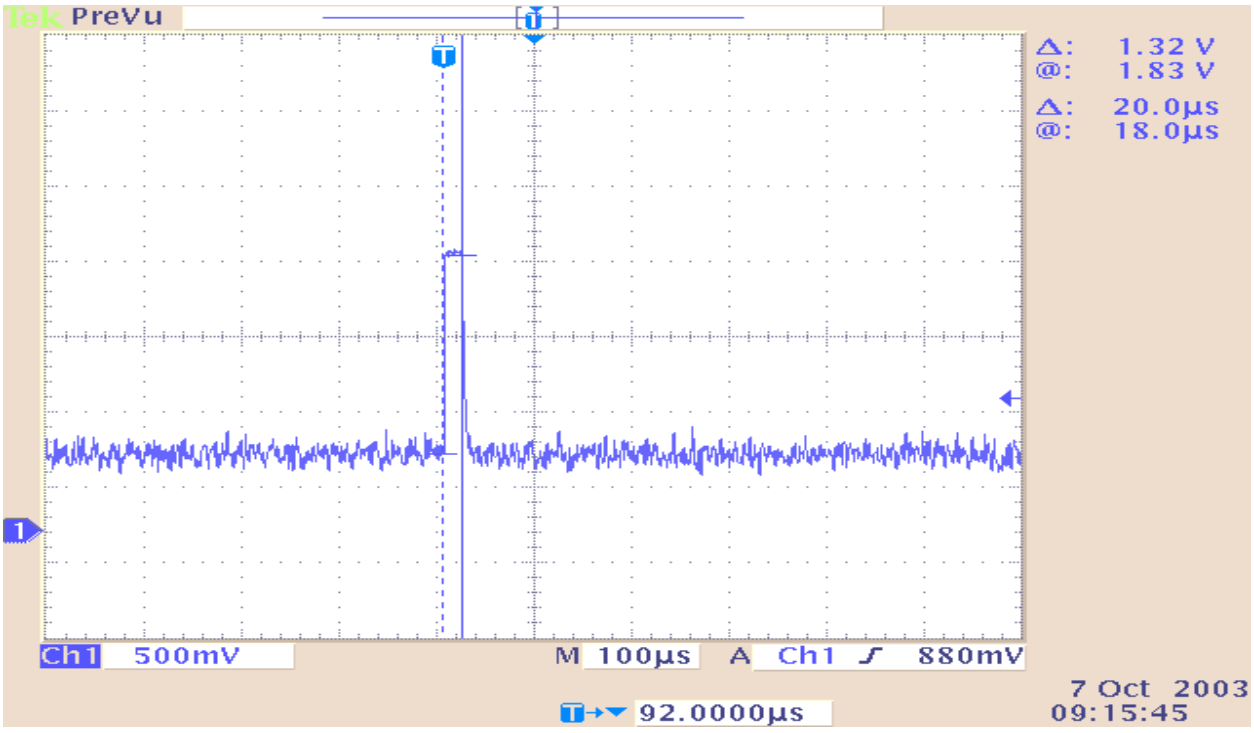
Measurement Data: See attached tabulated data.

Duty Cycle Correction: -20dB.

•This devices was searched on 3 orthogonal axis, from 30MHz to the 10th harmonic.
•This device was searched with fresh batteries installed.
•All emissions within 20dB of the limit were reported.

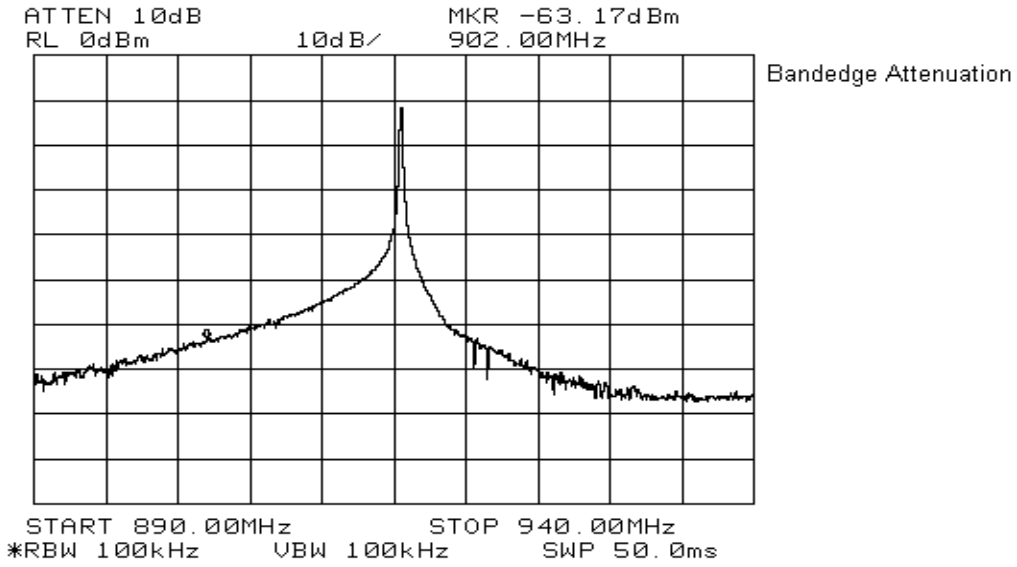
Transmitter Duty Cycle



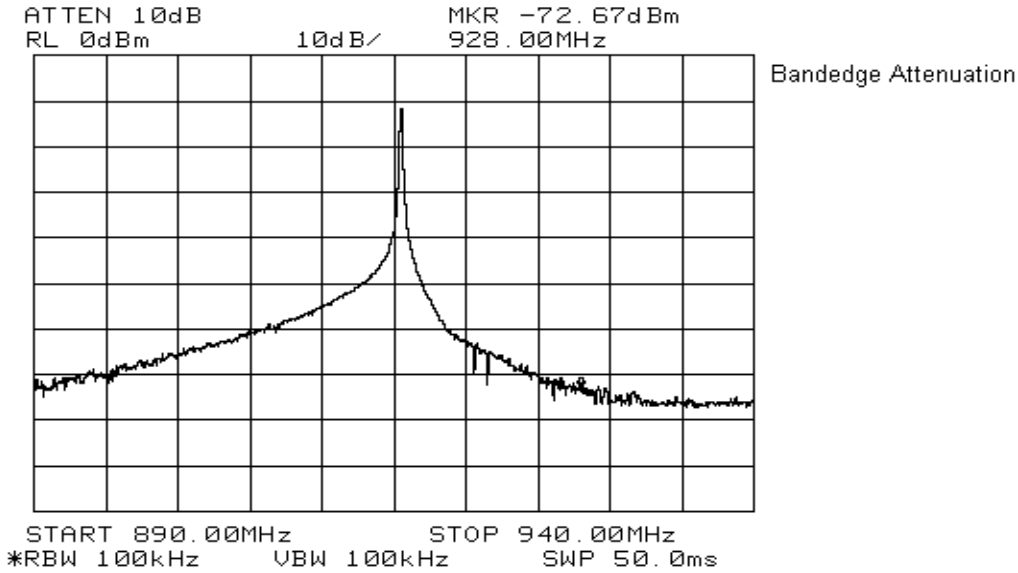


Duty Cycle Corection Factor = 10log(9x20uS/100mS) = -27.5dB, therefore –20dB.

Lower Band Edge



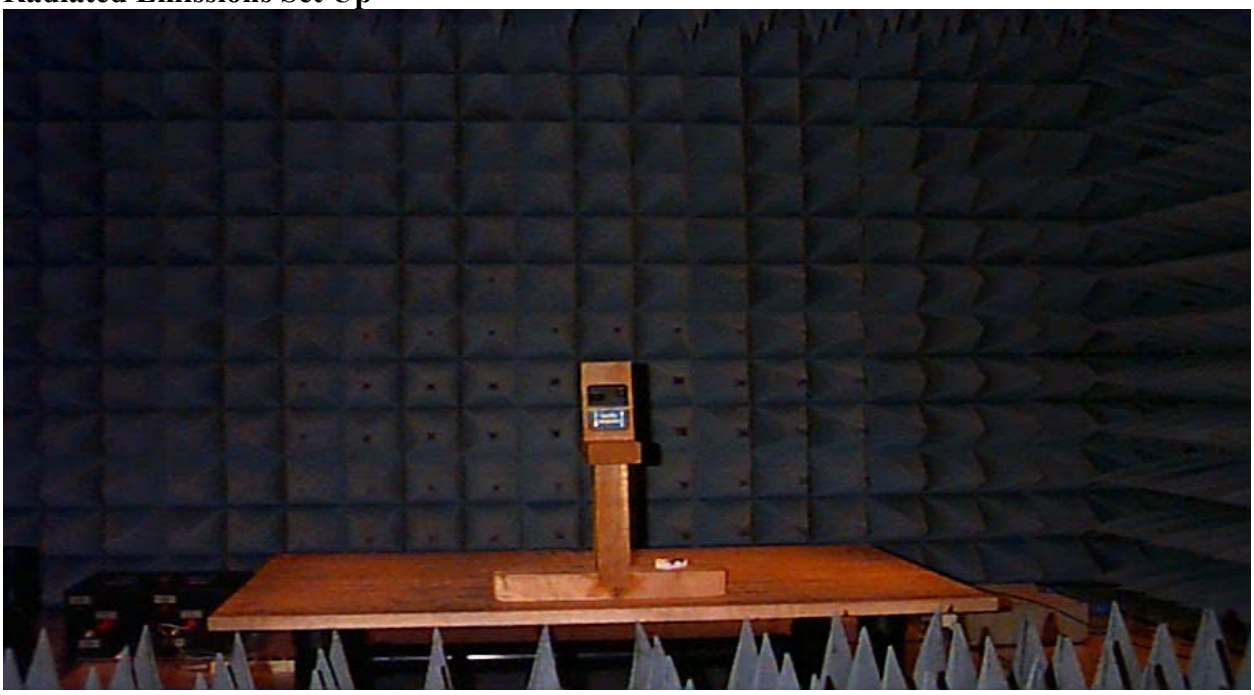
Upper Band Edge



Test Distance (meters) : 3		**Range: A**		**Receiver: Spectrum Analyzer 8564E**		**RBW(kHz): 100/1000**		**Detector: Peak**	
Freq. (MHz)	**Ant. ***	**Pol. (V/ H)**	**RCVD Signal (dBµV)**	**Ant. Factor (dB)**	**Amp. Gain (dB)**	**Duty Cycle Correction (dB)**	**Field Strength (dBµV/m)**	**Limit (dBµV/m)**	**Margin (dB)**
915.75	LP1	V	69.2	27.0		-20.0	76.2	94.0	17.8
915.75	LP1	H	74.3	27.7		-20.0	82.0	94.0	12.0
1831.5000	Horn2	V	78.5	32.4	46.6	-20.0	44.3	54.0	9.7
1831.5000	Horn2	H	77.2	32.8	46.6	-20.0	43.4	54.0	10.6
2747.2500	Horn2	V	93.0	35.8	56.6	-20.0	52.2	54.0	1.8
2747.2500	Horn2	H	93.8	35.6	56.6	-20.0	52.8	54.0	1.2
3663.0000	Horn2	V	82.3	39.7	54.9	-20.0	47.0	54.0	7.0
3663.0000	Horn2	H	73.8	39.7	54.9	-20.0	38.6	54.0	15.4
4578.7500	Horn2	V	71.3	41.8	53.3	-20.0	39.8	54.0	14.2
4578.7500	Horn2	H	75.0	42.0	53.3	-20.0	43.7	54.0	10.3
5494.5000	Horn2	V	70.7	43.1	51.2	-20.0	42.7	54.0	11.3
5494.5000	Horn2	H	72.3	43.3	51.2	-20.0	44.5	54.0	9.5

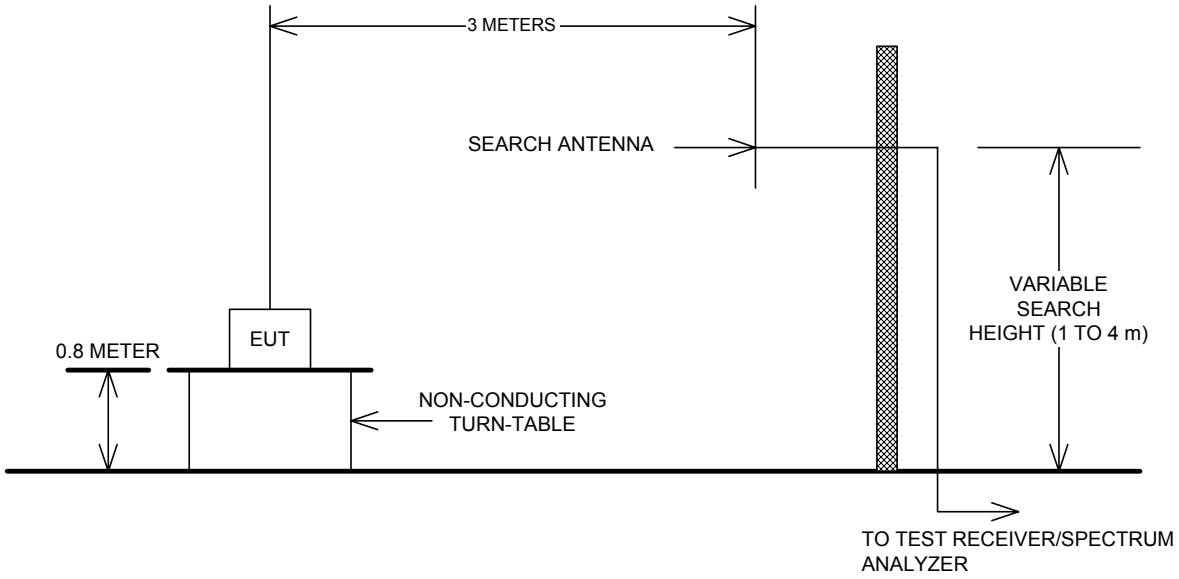
Notes:
L/P = Log-Periodic

Radiated Emissions Set Up



Section 4. Block Diagrams

Test Site For Radiated Emissions



The spectrum was search up to the 10^{th} harmonic of the fundamental frequency of operation.

Section 5. Test Equipment List

CAL CYCLE	EQUIPMENT	MANUFACTURER	MODEL	SERIAL	LAST CAL.	NEXT CAL.
1 Year	Spectrum Analyzer	Hewlett Packard	8564E	FA001367	13 May 03	13 May 04
1 Year	Oscilloscope	Tektronix	TDS 3012	FA001560	14 Aug 03	14 Aug 04
1 Year	Receiver	Rohde & Schwarz	ESVS-30	FA001437	July. 24/03	July. 24/04
1 Year	Log Periodic Antenna #1	EMCO	LPA-25	FA000477	Sept. 02/03	Sept. 02/04
1 Year	Horn Antenna	EMCO #2	3115	FA000825	09 Dec 02	09 Dec 03
1 Year	RF AMP	JCA	4-8 GHz	FA001497	18 June 03	18 June 04
1 Year	RF AMP	JCA	2-4 GHz	FA001496	18 June 03	18 June 04
1 Year	RF AMP	JCA	1-2 GHz	FA001498	18 June 03	18 June 04
1 Year	Spectrum Analyzer	Hewlett-Packard	8566B	FA001309	June. 05/03	June. 05/04
1 Year	Spectrum Analyzer Display	Hewlett-Packard	85662A	FA001309	June. 05/03	June. 05/04
NCR	Bilog	Schaffner	CBL6112B	FA001504	NCR	NCR