Standards Council of Canada
Accredited Laboratory
Scope of Accreditation 75

Conseil canadien des normes
Laboratoire accrédité
Portée d'accréditation 75

TM

Test Report:	2W04610
Applicant:	Casi-Rusco 791 Park of Commerce Blvd., Suite 100 Boca Raton, FL 33487 USA
Equipment Under Test: (EUT)	940, 941 Proximity Reader
In Accordance With:	**FCC Part 15, Subpart C, 15.209**
Tested By:	Nemko Canada Inc. 3325 River Road, R.R. 5 Ottawa, Ontario K1V 1H2
Authorized By:	 G. Westwell, Wireless Technologist
Date:	January 15, 2002
Total Number of Pages:	12
Authorized Copy:	Soft Copy

Table Of Contents

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, Subpart C for low power devices. 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 in 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: January 15, 2002

Russell Grant, Wireless Group Manager

Summary Of Test Data

Name Of Test	Para. No.	Result
Powerline Conducted Emissions	15.207	N/A
Radiated Emissions	15.209	Complies

Footnotes For N/A's: 12 VDC external power supply.

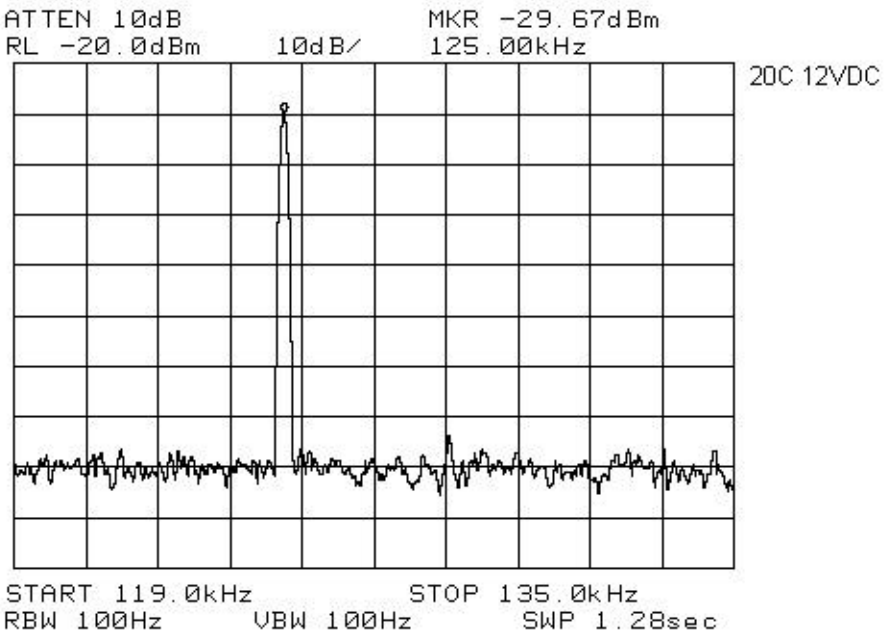
Test Conditions:

Indoor Temperature: 25 °C
Humidity: 51 %

Outdoor Temperature: 25 °C
Humidity: 51 %

Section 2. General Equipment Specification

Manufacturer:	Casi Rusco
Model No.:	940
Serial No.:	H33605 22/01
Date Received In Laboratory:	July 17, 2001
Nemko Identification No.:	Item #1
Tx:	125 kHz
Emission Designator:	NON


ATTEN 10dB
MKR -29.67dBm
RL -20.0dBm
10dB/
125.00kHz
20C 12VDC
START 119.0kHz
STOP 135.0kHz
RBW 100Hz
VBW 100Hz
SWP 1.28sec

Section 3. Radiated Emissions

Para. No.: 15.209

Test Performed By: Russell Grant	**Date of Test:** August 17, 2001

Minimum Standard:

Fundamental (MHz)	**Field Strength (μV/m)**	**Field Strength (dBμV)**
0.009 - 0.490	2400/F(kHz) @ 300m	—
0.490 - 1.705	24000/F(kHz) @ 30m	—
1.705 - 30	30 @ 30m	—
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above 960	500	54.0

Test Results: Complies.

Measurement Data: See attached table.

Test Data - Radiated Emissions

Frequency of Emission (MHz)	Received Signal (dBuV/m@2m)	Received Signal (dBuV/m@4m)	Extrapolated Signal (dBuV/m)	Limit (dBuV/m)	Margin (dB)
0.125	113.7	95.2	-20.0	25.7	45.7
0.250	56.9	38.9	-73.2	19.6	92.9
0.375	63.1	44.3	-72.8	16.1	88.9
0.500	45.2	26.7	-27.1	33.6	60.7
0.625	54.5	37.1	-13.5	31.7	45.2
0.750	33.7		-122.6	30.1	152.7
0.875	53.4	36.3	-13.4	28.8	42.2
1.000	38.0		-118.3	27.6	145.9
1.125	51.0	21.2	-65.4	26.6	92.0
1.375	47.5	29.2	-24.0	24.8	48.8
1.500	30.0		-126.3	24.1	150.4
1.625	47.0	29.0	-23.3	23.4	46.7
1.750	28.4		-127.9	29.5	157.4
1.875	45.4	27.5	-24.5	29.5	54.1
2.000	30.2		-126.1	29.5	155.6
2.125	44.6	27.3	-23.0	29.5	52.5
2.250	29.0		-127.3	29.5	156.8
2.375	43.1	26.2	-22.9	29.5	52.5
2.500	28.5	12.4	-34.4	29.5	63.9
2.625	41.4	24.2	-25.8	29.5	55.3
2.750	29.0	13.0	-33.5	29.5	63.1
2.875	40.6	23.3	-27.0	29.5	56.5
3.000	27.5	11.0	-37.0	29.5	66.5
3.125	39.4	21.2	-31.7	29.5	61.2
3.250	27.6	11.6	-34.9	29.5	64.5
3.375	38.6	21.3	-29.0	29.5	58.5
3.625	37.5	20.3	-29.7	29.5	59.2
3.750	27.0	11.2	-34.7	29.5	64.3
3.875	35.8	18.9	-30.2	29.5	59.8
4.000	25.7	10.1	-35.2	29.5	64.8
4.125	33.7	16.5	-33.5	29.5	63.0

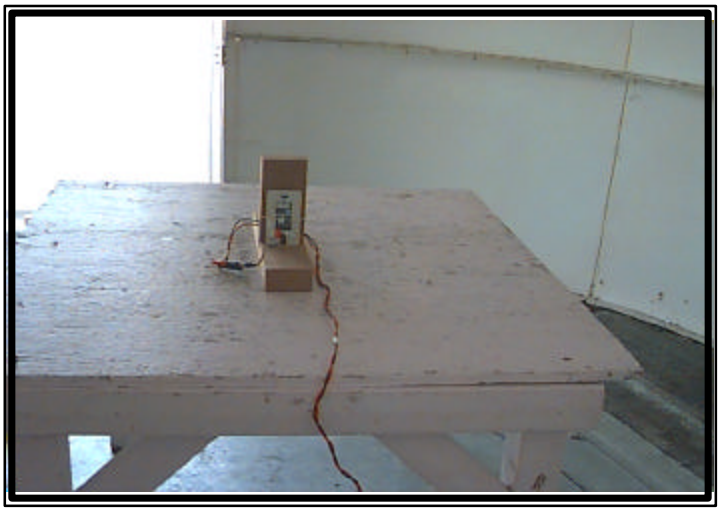
Note: Emissions measured at 2 m only extrapolated using 40 dB/decade.
Measured Active Loop Antenna, Test Receiver, 10 kHz RBW, Peak Detector

Test Data - Radiated Emissions

Test Distance (meters) : 3		Range: A Tower		Receiver: ESVP		RBW(kHz): 120		Detector: Q-Peak	
Freq. (MHz)	Ant. *	Pol. (V/H)	RCVD Signal (dBµV/m)	Ant. Factor (dB)**	Amp. Gain (dB)***	Dist. Corr. (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
218.0	B/C1	V	16.3	16.7			33.0	46.0	13.0
218.0	B/C1	H	21.3	16.7			38.0	46.0	8.0
220.0	B/C1	V	18.5	16.8			35.3	46.0	10.7
220.0	B/C1	H	19.0	16.8			35.8	46.0	10.2
224.0	B/C1	V	19.0	16.9			35.9	46.0	10.1
224.0	B/C1	H	21.5	16.9			38.4	46.0	7.6
60.0	B/C1	V	21.5	10.1			31.6	40.0	8.4
60.0	B/C1	H	11.0	10.1			21.1	40.0	18.9
88.0	B/C1	V	19.0	8.8			27.8	40.0	12.2
88.0	B/C1	H	12.0	8.8			20.8	40.0	19.2
176.0	B/C1	V	18.7	13.8			32.5	43.5	11.0
176.0	B/C1	H	21.3	13.8			35.1	43.5	8.4
178.0	B/C1	V	19.1	13.9			33.0	43.5	10.5
178.0	B/C1	H	22.0	13.9			35.9	43.5	7.6
182.0	B/C1	V	19.3	14.1			33.4	43.5	10.1
182.0	B/C1	H	23.6	14.1			37.7	43.5	5.8
184.0	B/C1	V	19.0	14.2			33.2	43.5	10.3
184.0	B/C1	H	22.8	14.2			37.0	43.5	6.5
188.0	B/C1	V	20.0	14.5			34.5	43.5	9.0
188.0	B/C1	H	24.0	14.5			38.5	43.5	5.0

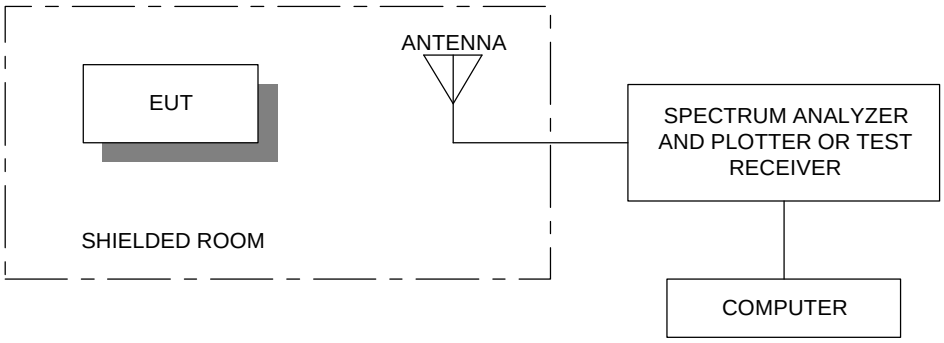
Notes:
B/C = Biconical, B/L = Biconilog, L/P = Log-Periodic, H = Horn, D/P = Dipole
* Re-measured using dipole antenna.
** Includes cable loss when amplifier is not used.
*** Includes cable loss.
( ) Denotes failing emission level.
N.D. = Not Detected

Radiated Emissions- Photographs

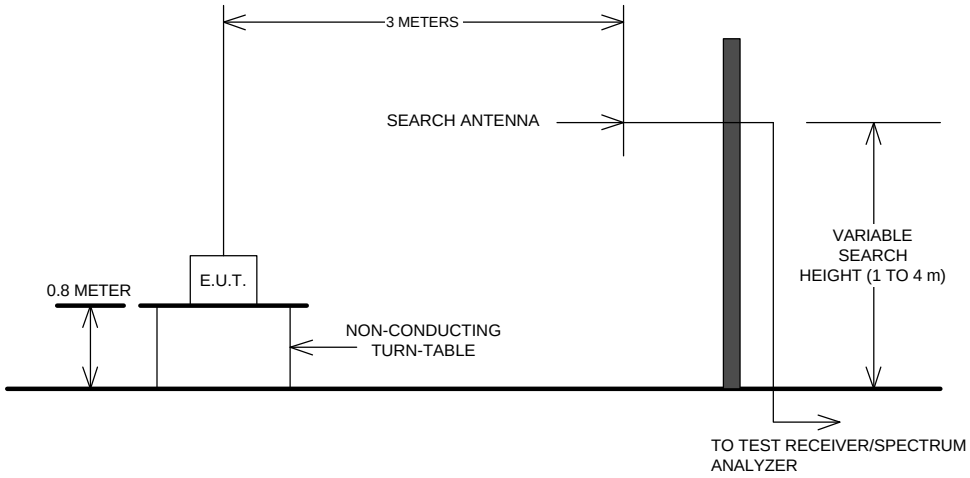


Section 4. Block Diagrams

Radiated Prescan



Test Site For Radiated Emissions



Section 5. Test Equipment List

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	ESH3	892473/002	Jan. 3/01	Jan. 3/02
1 Year	Receiver	Rohde & Schwarz	ESVP	892661/014	Apr. 3/01	Apr. 3/02
1 Year	Log Periodic Antenna 1	EMCO	LPA-25	1141	Aug. 28/01	Aug. 28/02
1 Year	Biconical (1) Antenna	EMCO	3109	9204-2708	Aug. 22/01	Aug. 22/02
1 Year	Active Loop Antenna	Rohde & Schwarz	HFH2-Z2	FA000631	March 20/01	March 20/02

NA: Not Applicable
NCR: No Cal Required
COU: CAL On Use