



Nemko

Test Report: 3W07125.1

Applicant: DATAMARS SA
Via ai Prati
Bedano-Lugano Switzerland
6930

**Equipment Under Test:
(EUT)** MiniMax II

FCC ID: NDXMINIMAXII

In Accordance With: FCC Part 15, Subpart C, 15.209

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

Authorized By:

Glen Westwell, Wireless Technologist

Date: 28 July 2003

Total Number of Pages: 10

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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, 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 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".



Test Performed By: _____
Jason Nixon, Telecom Specialist

Date: 28 July 2003

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:MiniMax II

Summary Of Test Data

Name Of Test	Para. No.	Result
Powerline Conducted Emissions	15.207	N/A 9V Battery
Radiated Emissions	15.209	Complies

Test Conditions:**Indoor**

Temperature:21°C

Humidity:47%

Outdoor

Temperature:25°C

Humidity:52%

EQUIPMENT:MiniMax II

Section 2. General Equipment Specification

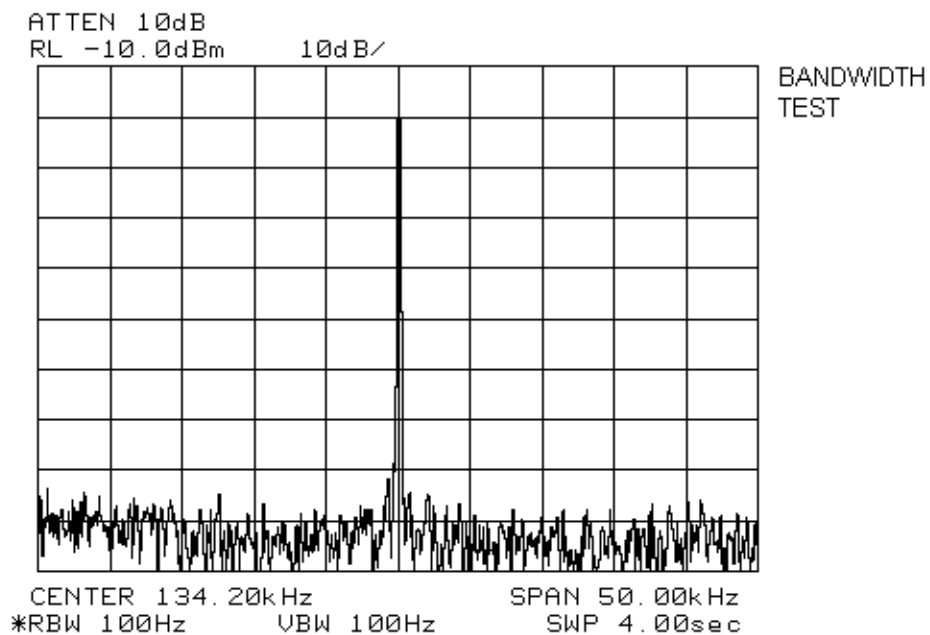
Model No.: MiniMax II

Date Received In Laboratory: July 10, 2003

Nemko Identification No.: 1

Transmit Frequency 134.2 kHz

Emission Designator N0N (no modulation)



Section 3. Radiated Emissions

Para. No.: 15.209

Test Performed By: Jason Nixon	Date of Test: July 24, 2003
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Minimum Standard:

Fundamental (MHz)	Field Strength ($\mu\text{V/m}$)	Field Strength (dB μV)
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. The worst case emissions is -19.5 dBuV/m @ 300m. This is 44.5 dB below specification limit.

Measurement Data:

Measured using active loop antenna and test receiver.

The equipment was tested on 3 orthogonal axis.

Worst case data has been presented.

Frequency of Emission (kHz)	Received Signal (dBuV@3m)	Distance Correction Factor (dB)	Field Strength (dBuV/m@300m)	Limit (dBuV/m@300m)	Margin (dB)
134.2	96.3	-115.8	-19.5	25.0	44.5
268.4	35.0	-80.0	-45.0	19.0	64.0
402.6	49.0	-80.0	-31.0	15.5	46.5

Measured:Test Receiver 10 kHz RBW, Peak Detector

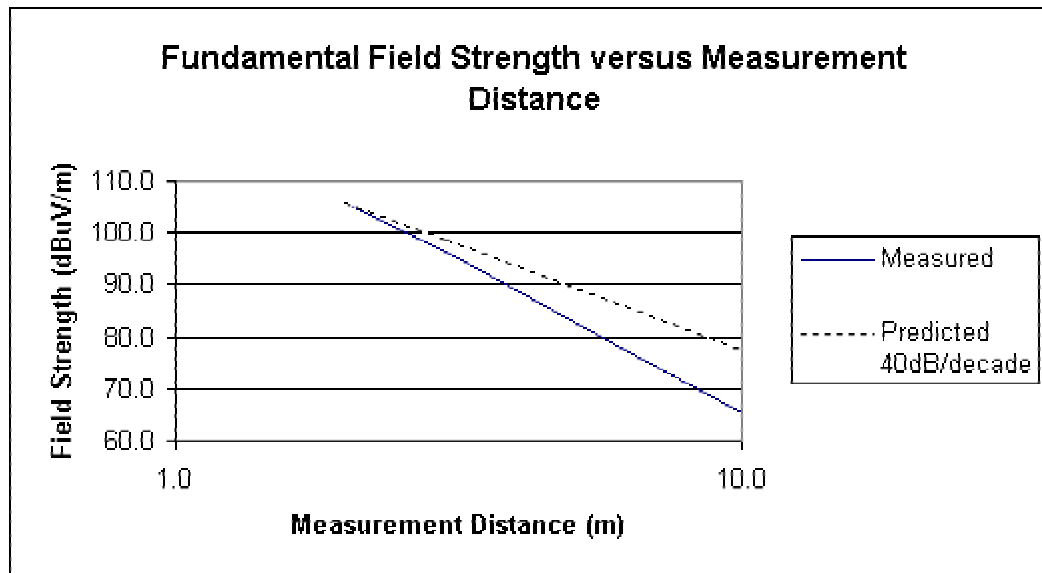
134.2 kHz reading extrapolated to 300 m using measured extrapolation factor

of 57.9 dB per decade, see attached

268.4 and 402.6 kHz readings extrapolated using 40 dB per decade

EQUIPMENT:MiniMax II

Measurement Distance (m)	Measured Field Strength (dBuV/m)	Predicted Field Strength (dBuV/m)
2.0	105.7	105.7
3.0	96.3	98.7
10.0	65.2	77.7



Measured Extrapolation Factor = 57.9dB/decade

This is $\frac{(105.7 - 65.2)}{\log(10/2)} = 57.9 \text{ dB / decade}$

EQUIPMENT:MiniMax II

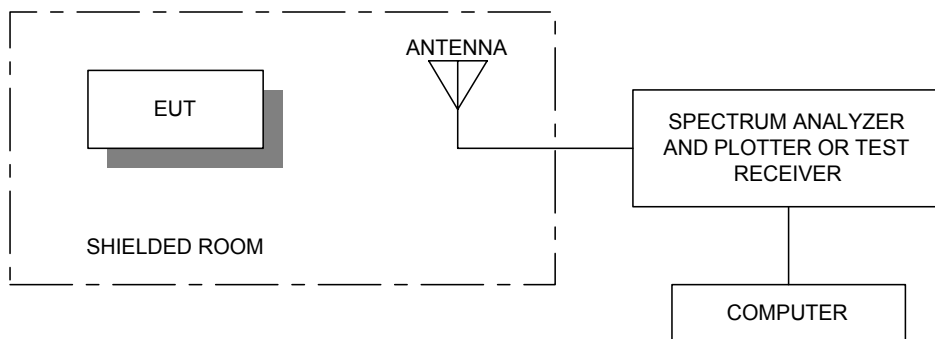


Section 5. Block Diagrams

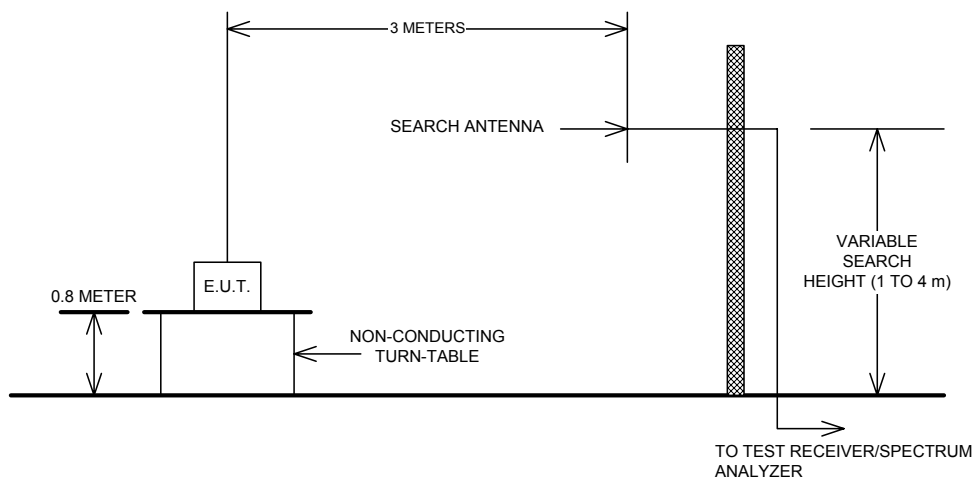
Conducted Emissions



Radiated Prescan



Test Site For Radiated Emissions



EQUIPMENT:MiniMax II

Section 6. Test Equipment List

R&S ESH3 Test Receiver	FA000872	Oct 2003, Oct 2004
R&S HFH-Z2 Loop Antenna	FA000631	May 2003, May 2004