

**ADDENDUM 01 TO TEST REPORT
OF A 2.4 GHz RLAN PCMCIA CARD,
BRAND NO WIRES NEEDED,
TYPES SWALLOW 1100 AND FALCON 1100,
IN CONFORMITY WITH
FCC PART 15 AND ANSI C63.4-1992**

FCC report layout endorsed by the FCC by Public
Notice of March 11, 1992.

Accredited by	: STERLAB accreditation number L029 D.A.R., TTI-P-G.127/96-00
Competent body	: Article 10-2 EMC Directive
Notified body	: Article 10-5 EMC Directive Low Voltage Directive Number 0122 TTE Directive
Designated laboratory	: TTE Directive
Notified test service	: Automotive Directive
FCC listed	: 31040/SIT
VCCI listed	: R 592 and C 507
Certification body	: Electrical Products Safety Regulation Hong Kong

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NMi Van Swinden Laboratorium B.V. (27228703)

NMi International B.V. (27239176)

MEASUREMENT/TECHNICAL REPORT

No Wires Needed B.V.

Models : Swallow 1100, Falcon 1100

FCC ID: OGD 10330209

September 20, 1999

This report concerns (check one):		Original grant	Class II change
Equipment type: Direct Sequence Spread Spectrum Transceiver			
Deferred grant requested per 47 CFR 0.457(d)(1)(ii)?		yes	no
If yes defer until: _____			
No Wires Needed, Jan Steen laan 5, 3723 BS Bilthoven, The Netherlands agrees to notify the Commission by _____ of the intended date of announcement of the product so that the grant can be issued on that date.			
Transition Rules Request per 15.37		yes	no
If no, assumed Part 15, Subpart B for unintentional radiators – the new 47 CFR (10-1-90 Edition) provision.			
Report prepared by:	Name	: Jan S. Sikkema B.Sc. E.E.	
	Company name	: NMI Certin B.V.	
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	City/Place/Postal cd.	: 9822 ZG NIEKERK	
	Country	: The Netherlands	

The data taken for this test and report herein was done in accordance with FCC Part 15 and measurement Procedures of ANSI C63.4-1992 and were relevant the procedures as specified in the sheets from the FCC attached to this test report. NMI Certin B.V. at Niekerk, The Netherlands, certifies that the data is accurate and contains a true representation of the emission-profile of the Equipment Under Test (EUT) on the date of the test noted in the test report. I have reviewed the test report and find it to be an accurate description of the test(s) performed and the EUT so tested.

Date: September 20, 1999

Signature:

P.A.J.M. Robben
Department EMC and Telecommunication

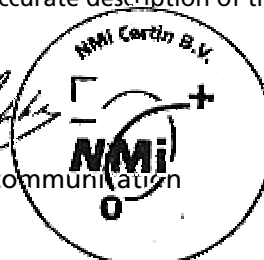


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1 Radiated emission data

The following data lists the significant emission frequencies (worst case), measured levels in accordance with FCC 15.209.

1.1 Radiated emissions above 1 GHz for Swallow 1100 with integral antenna

Vertical polarization			
Frequency	Measured Value Peak (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	35.5	54.0	-18.5

Table 1.1: Peak radiated emissions above 1GHz on channel 6 of Swallow 1100 (Vertical)

Vertical polarization			
Frequency	Measured Value Avg. (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	35.3	54.0	-18.7

Table 1.2: Average radiated emissions above 1GHz on channel 6 of Swallow 1100 (Vertical)

Notes:

Polarization refers to measuring antenna, negative margin means it is below the limit. All radiated harmonic emissions were found to be > 25dB below limits.

The radiated emission measurement has been carried out with AC supply voltage of 120 V.

Test personnel:

Tester signature :

Date: September 15, 1999

Typed/Printed name : Jan S. Sikkema

Horizontal polarization			
Frequency	Measured Value Peak (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	37.7	54.0	-16.3

Table 1.3: Peak radiated emissions above 1GHz on channel 6 of Swallow 1100 (Horizontal)

Horizontal polarization			
Frequency	Measured Value Avg. (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	37.4	54.0	-16.6

Table 1.4: Average radiated emissions above 1GHz on channel 6 of Swallow 1100 (Horizontal)

Notes:

Polarization refers to measuring antenna, negative margin means it is below the limit. All radiated harmonic emissions were found to be > 25dB below limits.

The radiated emission measurement has been carried out with AC supply voltage of 120 V.

Test personnel:

Tester signature :

Date: September 15, 1999

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1.2 Radiated emissions above 1GHz of Swallow 1100 with external antenna

Vertical polarization			
Frequency	Measured Value Peak (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	35.8	54.0	-18.3

Table 1.5: Peak radiated emissions above 1GHz on channel 6 of Swallow 1100 (Vertical)

Vertical polarization			
Frequency	Measured Value Avg. (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	35.5	54.0	-18.5

Table 1.6: Average radiated emissions above 1GHz on channel 6 of Swallow 1100 (Vertical)

Notes:

Polarization refers to measuring antenna, negative margin means it is below the limit. All radiated harmonic emissions were found to be > 25dB below limits.

The radiated emission measurement has been carried out with AC supply voltage of 120 V.

Test personnel:

Tester signature :

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Horizontal polarization			
Frequency	Measured Value Peak (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	36.6	54.0	-17.4

Table 1.7: Peak radiated emissions above 1GHz on channel 6 of Swallow 1100 (Horizontal)

Horizontal polarization			
Frequency	Measured Value Avg. (3m)	FCC limit	FCC margin
MHz	dbuV/m	dbuV/m	dB
2157.2	36.2	54.0	-17.8

Table 1.8: Average radiated emissions above 1GHz on channel 6 of Swallow 1100 (Horizontal)

Notes:

Polarization refers to measuring antenna, negative margin means it is below the limit. All radiated harmonic emissions were found to be > 25dB below limits.

The radiated emission measurement has been carried out with AC supply voltage of 120 V.

Test personnel:

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2 Peak power

The peak power measurement was performed in accordance with FCC 15.247 (b). The plot is made with the highest bandwidth being worst case. The maximum value is then marked and the peak value of this signal is measured using a wideband diode detector.

Channel	Peak Power (dBm)
1	7.1
6	8.8
11	11.7

Table 2.1: Peak Power

Test personnel:

Tester signature :

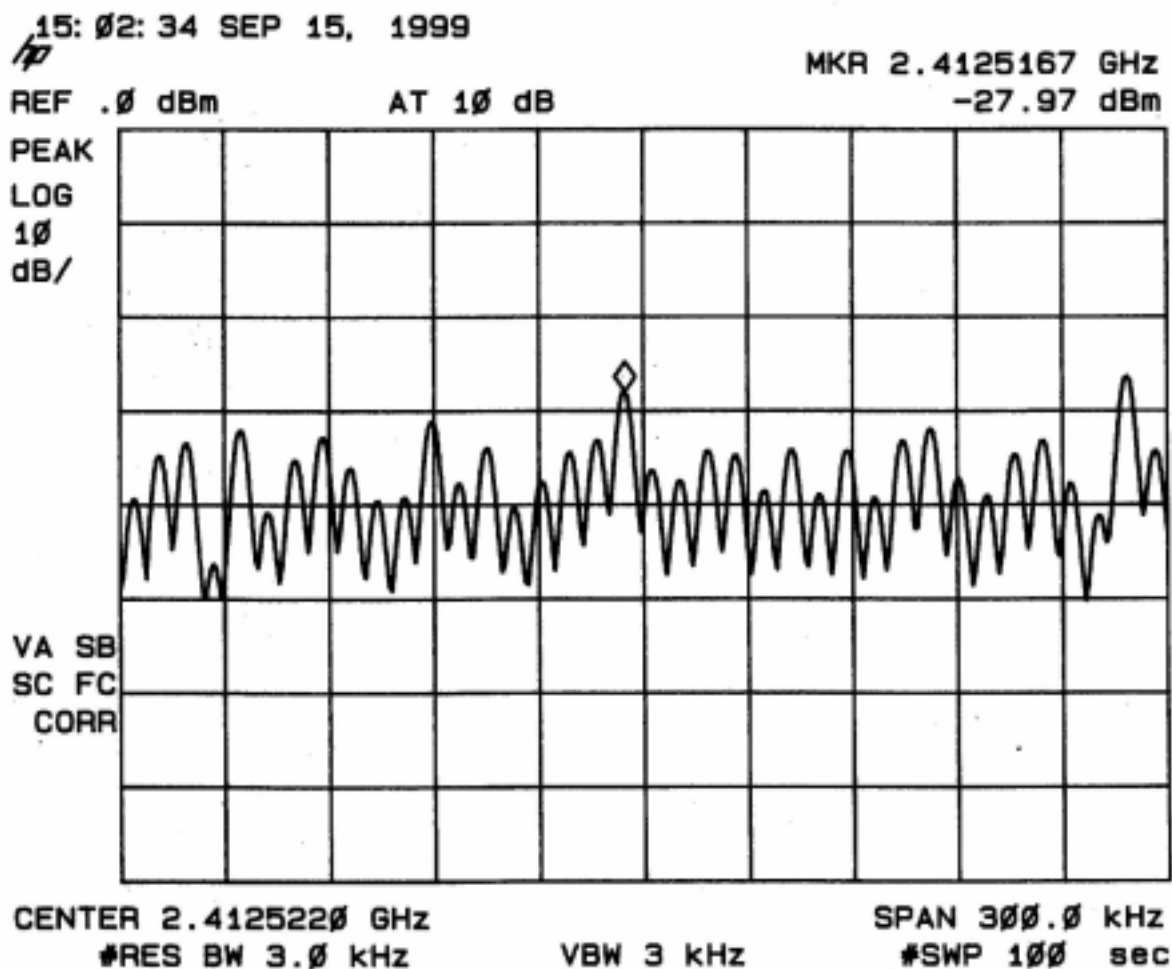
Date: September 15, 1999

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3 Peak power density

The peak power measurement was performed in accordance with FCC 15.247 (d)

3.1 Channel 1



Plot 3.1: Peak Power Spectral Density plot of channel 1

Modulation = 5.5 Mbps

The peak power spectral density on channel 1 : -27.97 dBm.

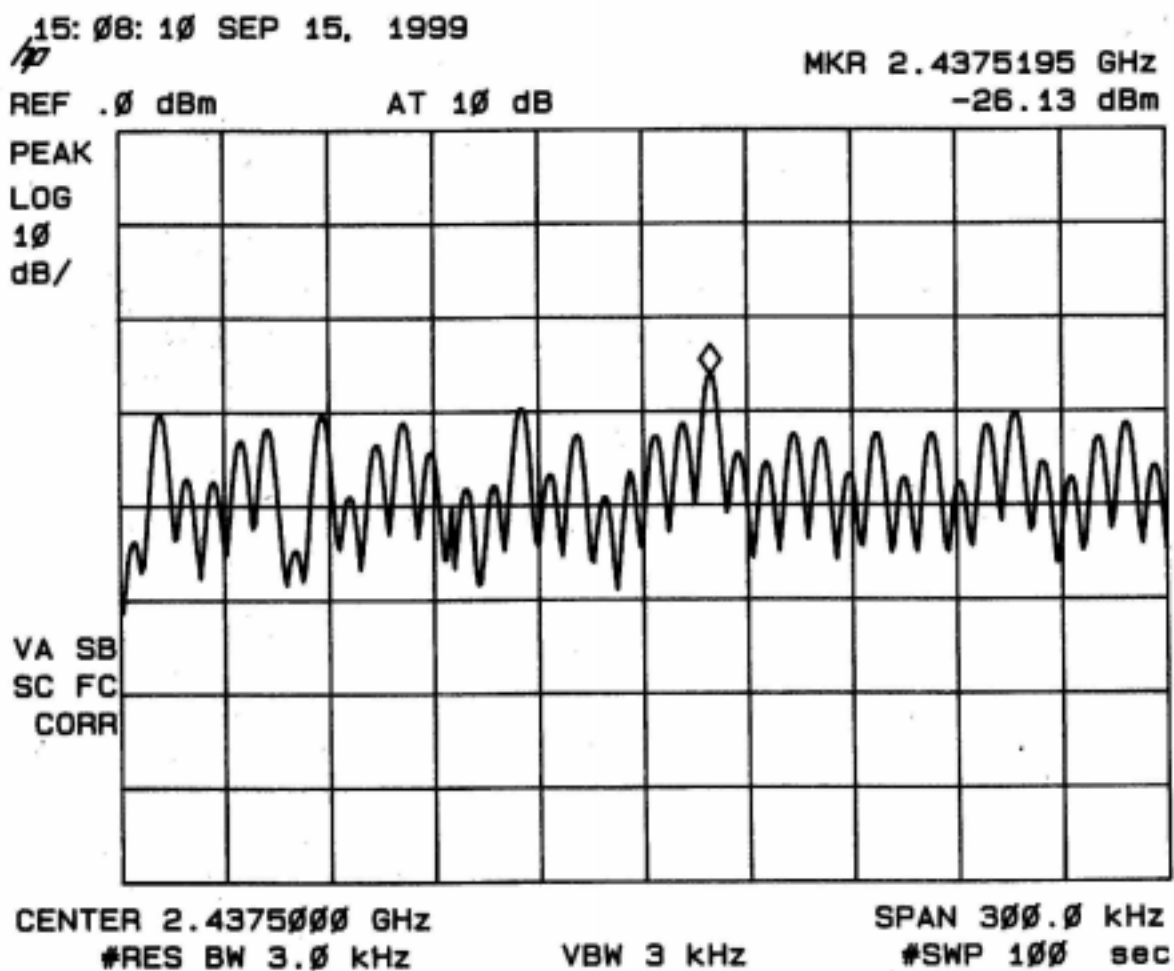
Test personnel:

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3.2 Channel 6



Plot 3.2: Peak Power Spectral Density plot of channel 6

Modulation = 5.5 Mbps

The peak power spectral density on channel 6 : -26.13 dBm.

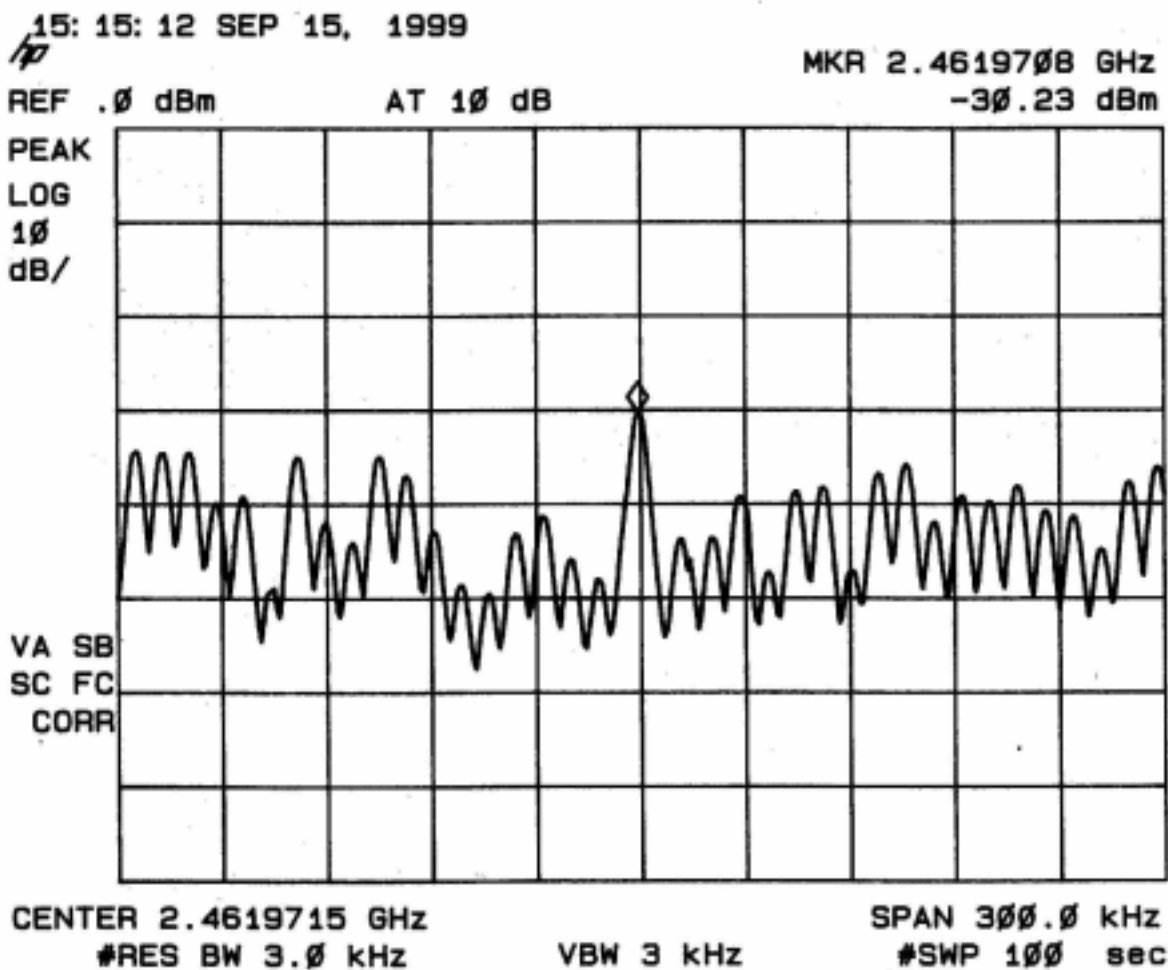
Test personnel:

Tester signature :

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3.3 Channel 11



Plot 3.3: Peak Power Spectral Density plot of channel 11

Modulation = 5.5 Mbps

The peak power spectral density on channel 11 : -30.23 dBm.

Test personnel:

Tester signature :

Date: September 15, 1999

Typed/Printed name : Jan S. Sikkema