Marstech Limited

11 Kelfield Street, Etobicoke, Ontario, Canada, M9W 5A1
Telephone (416) 246-1116, Fax (416) 246-1020

Authorized by: Professional Engineers Ontario

Engineering & Administrative

CERTIFICATED UL AGENCY

Testing For FCC Submissions/Verifications

Industry Canada Industrie Canada

Approved Test Facility

Qualified SP Facility

TEST REPORT

REPORT DATE:	08 December 2003		REPORT NO: 23372D
CONTENTS:	See Table of Contents		
SUBMITTOR:	ATLINKS USA, Inc. 101 West 103rd Street Indianapolis, IN 46290-1102 USA		
SUBJECT:	Model No:	**26976XXX-A**	
	FCC ID:	G9H2-6976A	
TEST SPECIFICATION	FCC 47 CFR Part 15 NOTE: Tests Conducted Are "Type" Tests.		
DATE SAMPLE RECEIVED:	27 October 2003 and 24 November 2003	DATE TESTED:	04 & 12 November 2003 01 & 02 December 2003
RESULTS:	Equipment tested complies with referenced specification **with the following modifications on the handset unit**. Also, the Model 26976XXX-A meets the new rules (150kHz to 30MHz) FCC Power Line Conducted Limits.		
ALTERATIONS	**1. C21, 1500p capacitor was deleted.** **2. C31, 33N capacitor was changed to 15N.**		
Tested by:	Ed. Chang	Approved by:	Robert G. Marshall, P. Eng.
	Edward Chang	Date:	Dec 22/03

TECHNICAL REPORT - FCC 2.1033(b)

Applicant

ATLINKS USA, Inc.
101 West 103rd Street
Indianapolis, IN
46290-1102 USA

FCC Identifier

G9H2-6976A

Manufacturer

Integrated Display Technology Telecommunications
(Shenzhen) Co., Ltd.
Block 21, Chentian Industrial Village, Xixian Town
Bao An District, Shenzhen City, CHINA

TABLE OF CONTENTS

EXHIBIT D

[FCC Ref. 2.1033(b)(6)]

"Report of Measurements"

TABLE OF CONTENTS

TEST REPORT CONTAINING:

PRODUCT DESCRIPTION

The Model 26976XXX-A is a single-line 900MHz cordless telephone with caller ID, speakerphone, answering machine and AM/FM radio/handset charge cradle that operates from 902 MHz to 928 MHz. The antenna used for the base and the handset is permanently attached to the EUT. Its actual frequency range is:

Base - ANT1 (Spacemaker):	902.80 MHz to 904.75 MHz
Base - ANT0 (Handset):	902.80 MHz to 904.75 MHz
Handset:	925.30 MHz to 927.25 MHz
Spacemaker:	925.30 MHz to 927.25 MHz

Refer to Exhibit D(6) for complete frequency list.

15.107 (a) POWER LINE CONDUCTED INTERFERENCE

Requirements:

Frequency of Emission (MHZ)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

Test Procedure:

ANSI STANDARD C63.4-1992. using a 50uH LISN. Both lines were observed with the EUT transmitting. The bandwidth of the spectrum analyzer was 9KHz QP with an appropriate sweep speed. The ambient temperature of the EUT was 24°C with a humidity of 60%.

The spectrum was scanned from 0.15 to 30MHz.

Test Data:

The highest emission read for LINE was 52.29 dBμV@ 0.15 MHz.
The highest emission read for NEUTRAL was 52.51 dBμV@ 0.15 MHz.

The graphs on Appendix 1 to 6 represent the emissions taken for this device.

Test Results:

Both lines were observed. The measurements indicate that the unit DOES appear to meet the FCC requirements for this class of equipment.

15.249 (a), (b) and (c) FIELD STRENGTH OF EMISSIONS

Requirements:

Fundamental Frequency		Field Strength of Harmonics	15.209	
902-928 MHz	94dBμV	54 dBμV/m@ 3m	30-88 MHz	40 dBμV/m@ 3m
			88-216 MHz	43.5
			216-960 MHz	46
			Above 960 MHz	54

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in 15.209, whichever is the lesser attenuation.

Emissions that fall in the restricted bands (15.205) must be less than 54dBμV/m

Procedure

The test procedure used was ANSI STANDARD C63.4-1992 and DA-00-705 using an appropriate spectrum analyzer, as listed in the Test Equipment List. The bandwidth (RBW) of the spectrum analyzer was 100KHz/120KHz up to 1GHz with an appropriate sweep speed. The RBW above 1.0GHz was = 1.0MHz. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the EUT was 24°C with a humidity of 60%.

Test Data:

Refer to Exhibit D(3)-3 and -6

FIELD STRENGTH OF EMISSIONS

BASE UNIT - ANT1 (Spacemaker)

Emission Frequency MHz	Meter Reading @3m dBµV	Antenna	Cable and ACF dB	Field Strength dBµV/M	FCC Limit dBµV/M	Margin dB	Detector & BW KHz
Channel 1							
902.80	**55.00**	**RT4 V**	**33.30**	**88.30**	**94**	**-5.70**	**PK 100**
1805.60	13.00	Horn V	33.18	46.18	54	-7.82	PK 1000
2708.40	9.00	Horn V	33.92	42.92	54	-11.08	PK 1000
3611.20	8.00	Horn V	35.38	43.38	54	-10.62	PK 1000
Channel 40							
904.75	**52.80**	**RT4 V**	**33.30**	**86.10**	**94**	**-7.90**	**PK 100**
1809.50	15.00	Horn V	33.18	48.18	54	-5.82	PK 1000
2714.25	11.00	Horn V	33.92	44.92	54	-9.08	PK 1000
3619.00	8.00	Horn V	35.38	43.38	54	-10.62	PK 1000

FIELD STRENGTH OF EMISSIONS

BASE UNIT - ANT0 (Handset)

Emission Frequency MHz	Meter Reading @3m dBµV	Antenna	Cable and ACF dB	Field Strength dBµV/M	FCC Limit dBµV/M	Margin dB	Detector & BW KHz
Channel 1							
902.80	**57.50**	**RT4 V**	**33.30**	**90.80**	**94**	**-3.20**	**PK 100**
1805.60	19.00	Horn V	33.18	52.18	54	-1.82	PK 1000
2708.40	13.00	Horn H	33.92	46.92	54	-7.08	PK 1000
3611.20	9.00	Horn V	35.38	44.38	54	-9.62	PK 1000
Channel 40							
904.75	**56.30**	**RT4 V**	**33.30**	**89.60**	**94**	**-4.40**	**PK 100**
1809.50	19.00	Horn V	33.18	52.18	54	-1.82	PK 1000
2714.25	14.00	Horn H	33.92	47.92	54	-6.08	PK 1000
3619.00	9.00	Horn V	35.38	44.38	54	-9.62	PK 1000

FIELD STRENGTH OF EMISSIONS

HANDSET UNIT

Emission Frequency MHz	Meter Reading @3m dBμV	Antenna	Cable and ACF dB	Field Strength dBμV/M	FCC Limit dBμV/M	Margin dB	Detector & BW KHz
Channel 1							
925.30	**55.00**	**RT4 V**	**33.40**	**88.40**	**94**	**-5.60**	**PK 100**
1850.60	7.00	Horn V	33.06	40.06	54	-13.94	PK 1000
2775.90	12.00	Horn V	34.08	46.08	54	-7.92	PK 1000
3701.20	—						
Channel 40							
927.25	**57.00**	**RT4 V**	**33.40**	**90.40**	**94**	**-3.60**	**PK 100**
1854.50	7.00	Horn V	33.06	40.06	54	-13.94	PK 1000
2781.75	11.00	Horn V	34.08	45.08	54	-8.92	PK 1000

FIELD STRENGTH OF EMISSIONS

SPACEMAKER

Emission Frequency MHz	Meter Reading @3m dBµV	Antenna	Cable and ACF dB	Field Strength dBµV/M	FCC Limit dBµV/M	Margin dB	Detector & BW KHz
Channel 1							
925.30	**52.00**	**RT4 V**	**33.40**	**85.40**	**94**	**-8.60**	**PK 100**
1850.60	9.00	Horn V	33.06	42.06	54	-11.94	PK 1000
2775.90	11.00	Horn V	34.08	45.08	54	-8.92	PK 1000
3701.20	—						
Channel 40							
927.25	**52.50**	**RT4 V**	**33.40**	**85.90**	**94**	**-8.10**	**PK 100**
1854.50	9.00	Horn V	33.06	42.06	54	-11.94	PK 1000
2781.75	9.00	Horn V	34.08	43.08	54	-10.92	PK 1000
3709.00	—						

15.249 (d) BAND EDGES

Requirements:

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Measurement:

The base was attenuated by 50 dB. The handset was attenuated by 50 dB.

Test Data:

The Bandedge was measured at the Low end of the band for the base (ANT0/ANT1), and the High end of the band for the handset/spacemaker. See Plots [Appendix 7 and 8].

2.202 BANDWIDTH

Measurement:

The measurements were made with the spectrum analyzer's resolution bandwidth (RBW) = 30KHz [Base (ANT0/ANT1) and Handset/Spacemaker] and the video bandwidth (VBW) = NONE and the span set as shown on plot.

Test Data:

Base (ANT0/ANT1):

Channel 1: **0.094 MHz** [Refer to Appendix 9]
Channel 40: **0.095 MHz** [Refer to Appendix 10]

Handset/Spacemaker:

Channel 1: **0.117 MHz** [Refer to Appendix 11]
Channel 40: **0.112 MHz** [Refer to Appendix 12]

BANDWIDTH = **0.095 MHz** [Base (ANT0/ANT1)]
0.117 MHz [Handset/Spacemaker]