

Marstech Limited

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

Authorized by:

Professional Engineer
Ontario



Engineering &
Administrative



Testing For FCC

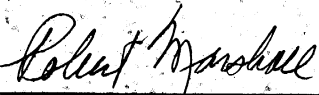
Submissions/Verifications



Approved Test Facility



TEST REPORT

REPORT DATE:	05 March 2002	REPORT NO:	22043D
CONTENTS:	See Table of Contents		
SUBMITTOR:	ATLINKS USA, Inc. 101 West 103 rd Street Indianapolis, IN 46290-1102 USA		
SUBJECT:	Model No: 26928XXX-A [Alternate Construction - to cover alternate antenna on both handset and base]		
	FCC ID: G9H2-6928A		
TEST SPECIFICATION	FCC 47 CFR Part 15, Class "II" Permissive Change NOTE: Tests Conducted Are "Type" Tests.		
DATE SAMPLE RECEIVED:	11 February 2002	DATE TESTED:	14 & 20 February 2002
RESULTS:	Equipment tested complies with referenced specification.		
ALTERATIONS	None		
		Approved by:	
Tested by:	Edward Chang	Date:	Mar 11/02
THIS REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF MARSTECH LIMITED. This report was prepared by Marstech Limited for the account of the "Submitter". The material in it reflects Marstech's judgement in light of the information available to it at the time of preparation. Any use which a Third Party makes of this report, or any reliance on decisions to be made based on it, are the responsibility of such Third Parties. Marstech accepts no responsibility for damages, if any, suffered by any Third Party as a result of decisions made or actions based on this report.			

TECHNICAL REPORT - FCC 2.1033(b)

Applicant

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

FCC Identifier

G9H2-6928A

Manufacturer

Huiyang CCT Telecommunications Products Co. Ltd.
CCT Technology Park, San He Economic Experimental Zone
Huiyang City, Guangdong Province
P. R. of China

TABLE OF CONTENTS

<u>Exhibit</u>	<u>Description</u>	<u>FCC Ref.</u>	<u>Page</u>
D	Report of Measurements	2.1033(b)(6)	Exhibit D
E	Photographs Equipment - Internal Photos	2.1033(b)(7)	Exhibit E Exhibit E(2)-1 to -2

EXHIBIT D

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

"Report of Measurements"

TABLE OF CONTENTS

TEST REPORT CONTAINING:

Exhibit D(1)-2	Product Description
Exhibit D(1)-3 to -4	Test Equipment List
Exhibit D(1)-5	Test Procedure
Exhibit D(1)-6 to -8	Field Strength of Emissions
Exhibit D(2)-1 to -2	Test Set Up Photo
Exhibit D(3)	Measurement Facility (3 meter site)

PRODUCT DESCRIPTION

The revised Model 26928XXX-A is a single-line 900MHz cordless telephone that operates from 902.10 to 927.86 MHz. The antenna used for the base and the handset is permanently attached to the EUT. Its actual frequency range is:

Base: 902.102 to 904.051 MHz

Handset: 925.903 to 927.86 MHz

TEST FACILITY AND EQUIPMENT LIST

FACILITIES

- Radiated ANSI C63.4 (FCC OET/55) open field 3 metre test range. This test range is protected from the cold and moisture by a non-conductive enclosure.
- Conducted 2.5m Anechoic Chamber

EQUIPMENT

Anritsu 2601A Spectrum Analyzer
Advantest R3261A Spectrum Analyzer
Hewlett-Packard RF generator # 8640 B with an 002 doubler
A.H. Systems biconical antenna; 20 MHz to 330 MHz
A.H. Systems log periodic antenna; 300 MHz to 1.8 GHz
Eaton dipole antennas; T1, T2, T3 25 MHz to 1.0 GHz
Roberts dipole antennas; T1, T2, T3 & T4 25 MHz to 1.0 GHz
Compliance Design P950 Preamp (16 dB) ... 25 MHz to 1.0 GHz

NOTE:

The Anritsu 2601A Spectrum Analyzer and the Advantest R3261A Spectrum Analyzer are calibrated annually, and that calibration is directly traceable to the National Research Council of Canada. (NRC) This equipment is only used by qualified technicians and only for the purpose of EMI measurements. The three metre test range has been carefully evaluated to the ANSI document C63.4 and will be remeasured for reflections and losses every three years.

ADDITIONAL TEST EQUIPMENT LIST

1. Spectrum Analyzer: HP 8591EM, S/N 3639A00995, Calibrated April 2001
2. Spectrum Analyzer: ANRITSU 2601A, S/N MT64544, Calibrated May 2001
3. Spectrum Analyzer: IFR AN940, S/N 635001039, Calibrated March 2001
4. Preamp: HP 8449B, S/N 3008A00378, Calibrated August 2001
5. Horn Antenna: Q-PAR 6878/24, S/N 1721, 1.5-18GHz
6. Line Impedance Stabilization Network.: Marstech, Cal. July 2001

TEST PROCEDURE

GENERAL:

Shielded interface cables were used in all cases except for cables connecting to the telephone line and the power cords. A test program was run which simulated a normal transmission.

POWER OUTPUT:

The radiated output power was measured with the spectrum analyzer and Horn Antenna.

RADIATION INTERFERENCE:

The test procedure used was ANSI STANDARD C63.4-1992 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 VBW above 1.0GHz was = 1.0GHz. 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%.

15.249 (a) and 15.249 (b)
FIELD STRENGTH OF EMISSIONSPage 1 of 3**Requirements:**

Field Strength of Fundamental	Field Strength of Harmonics	15.209
		30-88 MHz 40 dB μ V/M@ 3m
902 to 928 MHz 94dB μ V	54 dB μ V/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 54dB μ V/M.

FIELD STRENGTH OF EMISSIONS**Test Data:****HANDSET**

Emission Frequency MHz	Meter Reading @3m dB μ V	Antenna	Cable and ACF dB	Field Strength dB μ V/M	FCC Limit dB μ V/M	Margin dB	Detector & BW KHz
<u>Channel 1</u>							
925.903	54.40	RT4 V	33.44	87.44	94	-6.56	PK 100

<u>Channel 40</u>							
927.860	54.00	RT4 V	33.47	87.47	94	-6.53	PK 100

FIELD STRENGTH OF EMISSIONS

Test Data:

BASE UNIT

Emission Frequency MHz	Meter Reading @3m dB μ V	Antenna	Cable and ACF dB	Field Strength dB μ V/M	FCC Limit dB μ V/M	Margin dB	Detector & BW KHz
<u>Channel 1</u>							
902.102	54.00	RT4 V	33.21	87.21	94	-6.79	PK 100
451.200	10.00	LP H	19.20	29.20	46	-16.80	PK 100

<u>Channel 40</u>							
904.051	53.00	RT4 V	33.23	86.23	94	-7.77	PK 100
