

Marstech Limited

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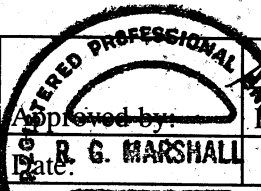
Engineering &
Administrative



Testing For FCC
Submissions/Certifications

Approved Test Facility



TEST REPORT		
REPORT DATE:	24 September 2001	REPORT NO: 21378D
CONTENTS:	See Table of Contents	
SUBMITTOR:	ATLINKS USA, Inc. 101 West 103 rd Street Indianapolis, IN 46290-1102 USA	
SUBJECT:	Model No:	27925XXX-A [modification filing - to cover component changes and different antennae]
	FCC ID:	G9H2-7925
TEST SPECIFICATION	CFR 47 FCC Part 15 Class "II" Permissive Change NOTE: Tests Conducted Are "Type" Tests.	
DATE SAMPLE RECEIVED:	17 September 2001	DATE TESTED: 21 September 2001
RESULTS:	Equipment tested complies with referenced specification.	
ALTERATIONS	None	
Tested by:		
	Edward Chang	Robert G. Marshall, P. Eng. Sept 25/01
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TECHNICAL REPORT - FCC 2.1033(b)

Applicant

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

FCC Identifier

G9H2-7925

Manufacturer

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

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EXHIBIT D

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

"Report of Measurements"

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TEST REPORT CONTAINING:

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Exhibit D(3)

Product Description
Test Equipment List
Test Procedure
Field Strength of Emissions
Test Setup Photos
Measurement Facility (3 meter site)

PRODUCT DESCRIPTION

The revised Model 27925XXX-A is a two-line 2.4GHz cordless telephone that operates in the 2403.60 to 2477.00 MHz frequency band. The antenna used for the base and the handset is permanently attached to the EUT. Its actual frequency range is:

Base: 2403.60 to 2405.58

Handset: 2475.03 to 2477.00

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.

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 Double Ridged 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 UUT was 24°F with a humidity of 60%.

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

Requirements:

<u>Field Strength of Fundamental</u>	<u>Field Strength of Harmonics</u>		<u>15.209</u>
2.400-2.4835 GHz 94 dB μ V/M	54 dB μ V/m@ 3m	30-88 MHz	40 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

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Test Data:

HANDSET UNIT (Headset)

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>							
2475.03	60	Horn V	33.50	93.50	94	-0.50	PK 1000
4950.06	---						
7425.09	---						
9900.12	---						
12375.15	---						
<u>Channel 40</u>							
2477.00	60	Horn V	33.51	93.51	94	-0.49	PK 1000
4954.00	---						
7431.00	---						
9908.00	---						

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>							
2403.60	47.00	Horn V	33.40	80.40	94	-13.60	PK 1000
4807.20	7.76	Horn V	37.91	45.67	54	-8.33	PK 1000
7210.80	---						
9614.40	---						
12018.00	---						
<u>Channel 40</u>							
2405.58	47.00	Horn V	33.40	80.40	94	-13.60	PK 1000
4811.16	7.76	Horn V	37.91	45.67	54	-8.33	PK 1000
7216.74	4.76	Horn V	43.27	48.03	54	-5.97	PK 1000
9622.32	---						
12027.90	---						