

# TEST REPORT FROM RFI GLOBAL SERVICES LTD

Test of: WorldScout Corporation  
LT100

To: FCC Part 22: 2007 (Subpart H) and  
FCC Part 24: 2007 (Subpart E)

**Test Report Serial No:**  
RFI/RPTE1/RP72772JD05A

**This Test Report Is Issued Under The Authority  
Of Brian Watson, Operations Director:**



**Checked By: Steven Wong**



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**Test Dates: 29 October 2007**

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## **1. Client Information**

<b>Company Name:</b>	WorldScout Corporation
<b>Address:</b>	100 Leek Crescent Unit 10 Richmond Hill ONTARIO L4B 3E6 Canada
<b>Contact Name:</b>	Mr. N Lazovic

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## **2. Equipment Under Test (EUT)**

The following information (with the exception of the Date of Receipt) has been supplied by the client:

### **2.1. Description of EUT**

The equipment under test is a quad band GSM/GPRS GPS LT100 receiver supporting 3 downlink and 1 uplink.

### **2.2. Identification of Equipment Under Test (EUT)**

<b>Description:</b>	GSM/GPRS GPS Mobile Station
<b>Brand Name:</b>	Worldscout
<b>Model Name or Number:</b>	LT100
<b>Serial Number:</b>	7-0000627
<b>IMEI Number:</b>	35 268002691166
<b>Hardware Version Number:</b>	None Stated
<b>Software Version Number:</b>	None Stated
<b>FCC ID Number:</b>	VRNLT100
<b>Country of Manufacture:</b>	Canada
<b>Date of Receipt:</b>	29 October 2007

### **2.3. Modifications Incorporated in the EUT**

During the course of testing the EUT was not modified.

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## 2.4. Accessories

The following accessories were supplied with the EUT during testing:

<b>Description:</b>	Battery
<b>Brand Name:</b>	Worldscout
<b>Model Name or Number:</b>	LT100
<b>Serial Number:</b>	5-1-0001T01-01
<b>Cable Length and Type:</b>	Not Applicable
<b>Connected to Port</b>	Manufacturer Unique Contacts

<b>Description:</b>	Battery
<b>Brand Name:</b>	Worldscout
<b>Model Name or Number:</b>	LT100
<b>Serial Number:</b>	5-1-0001T01-01
<b>Country of Manufacture:</b>	Canada
<b>Connected to Port</b>	Manufacturer Unique Contacts

## 2.5. Support Equipment

The following support equipment was used to exercise the EUT during testing:

<b>Description:</b>	Communication Test Set
<b>Brand Name:</b>	Anritsu
<b>Model Name or Number:</b>	MT8820A
<b>Serial Number:</b>	6K00000647
<b>Cable Length and Type:</b>	1m Rosenberger Cable
<b>Connected to Port:</b>	RF Input & Output Port

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## **2.6.Additional Information Related to Testing**

<b>Equipment Category</b>	GSM/GPRS/GPS Quad Band
<b>Type of Unit</b>	Portable Receiver
<b>Intended Operating Environment:</b>	With in GSM/GPRS/GPS coverage
<b>Power Supply Requirement:</b>	4.2v DC / 950mAh

### **FCC Part 22**

<b>Transmit Frequency Range:</b>	824 MHz to 849 MHz		
<b>Transmit Channels Tested:</b>	Channel ID	Channel Number	Channel Frequency (MHz)
	Bottom	128	824.2
	Middle	189	836.4
	Top	251	848.8
<b>Maximum Power Output (ERP):</b>	33 dBm		

### **FCC Part 24**

<b>Transmit Frequency Range:</b>	1850 MHz to 1900 MHz		
<b>Transmit Channels Tested:</b>	Channel ID	Channel Number	Channel Frequency (MHz)
	Bottom	512	1850.2
	Middle	660	1879.8
	Top	810	1909.8
<b>Maximum Power Output (EIRP):</b>	30 dBm		

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### **3. Test Specification, Methods and Procedures**

<b>Reference:</b>	FCC Part 22: 2007 Subpart H (Cellular Radiotelephone Service)
<b>Title:</b>	Code of Federal Regulations, Part 22 (47CFR22) Personal Communication Services.

<b>Reference:</b>	FCC Part 24: 2007 Subpart E (Broadband PCS)
<b>Title:</b>	Code of Federal Regulations, Part 24 (47CFR24) Personal Communication Services.

#### **3.1. Methods and Procedures**

The methods and procedures used were as detailed in:

ANSI/TIA-603-B-2003  
Land Mobile Communications Equipment, Measurements and performance Standards

ANSI C63.2 (1987)  
Title: American National Standard for Instrumentation - Electromagnetic noise and field strength.

ANSI C63.4 (2003)  
Title: American National Standard Methods of Measurement of Electromagnetic Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

ANSI C63.5 (1988)  
Title: American National Standard for the Calibration of antennas used for Radiated Emission measurements in Electromagnetic Interference (EMI) control.

ANSI C63.7 (1988)  
Title: American National Standard Guide for Construction of Open Area Test Sites for performing Radiated Emission Measurements.

CISPR 16-1: (1999)  
Title: Specification For Radio Disturbance and Immunity Measuring Apparatus and Methods. Part 1: Radio Disturbance and Immunity Measuring Apparatus.

#### **3.2. Definition of Measurement Equipment**

The measurement equipment used complied with the requirements of the standards referenced in the methods & procedures Section above. Appendix 1 contains a list of the test equipment used.

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#### **4. Deviations from the Test Specification**

There were no deviations from the test specification.

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## **5. Operation of the EUT during Testing**

### **5.1. Operating Modes**

The EUT was tested in the following operating modes, unless otherwise stated.

GSM850 Call Allocated Mode

PCS1900 Call Allocated Mode

### **5.2. Configuration and Peripherals**

The EUT was tested in the following configuration unless otherwise stated:

Standalone.

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## **6. Summary of Test Results**

### **FCC Part 22**

<b>Range of Measurements</b>	<b>Specification Reference</b>	<b>Port Type</b>	<b>Compliance Status</b>
Transmitter Equivalent Radiated Power (ERP)	Section 22.913(a)	Antenna	Complied

### **FCC Part 24**

<b>Range of Measurements</b>	<b>Specification Reference</b>	<b>Port Type</b>	<b>Compliance Status</b>
Transmitter Equivalent Isotropic Radiated Power (EIRP)	Section 24.232	Antenna	Complied

### **6.1. Location of Tests**

All the measurements described in this report were performed at the premises of RFI Global Services Ltd, Ewhurst Park, Ramsdell, Basingstoke, Hampshire, RG26 5RQ

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## **7. Measurements, Examinations and Derived Results**

### **7.1. General Comments**

This Section contains test results only.

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to Section 8 for details of measurement uncertainties.

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**7.2. Test Results – FCC Part 22 (Subpart H)****7.2.1. Transmitter Equivalent Radiated Power (ERP)**

Tests were performed using the test methods detailed in ANSI TIA-603-C-2004 and FCC CFR Part 2.

**Results:**

Channel	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Note(s)
Bottom	824.2	21.3	38.4	17.1	-
Middle	836.4	23.4	38.4	15.0	-
Top	848.8	24.8	38.4	13.6	-

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**7.3. Test Results – FCC Part 24 (Subpart E)****7.3.1. Transmitter Equivalent Isotropic Radiated Power (EIRP)**

Tests were performed using the test methods detailed in ANSI TIA-603-C-2004 and FCC CFR Part 2.

**Results:**

Channel	Measured Frequency (MHz)	Maximum Transmitter EIRP (dBm)	Limit EIRP (dBm)	Margin (dB)	Note(s)
Bottom	1850.2	26.5	33.0	6.5	-
Middle	1879.8	26.9	33.0	6.1	-
Top	1909.8	24.2	33.0	8.8	-

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## **8. Measurement Uncertainty**

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor, such that a confidence level of approximately 95% is maintained. For the purposes of this document “approximately” is interpreted as meaning “effectively” or “for most practical purposes”.

<b>Measurement Type</b>	<b>Range</b>	<b>Confidence Level (%)</b>	<b>Calculated Uncertainty</b>
Equivalent Radiated Power (ERP)	Not applicable	95%	±1.78 dB
Equivalent Isotropic Radiated Power (EIRP)	Not applicable	95%	±2.54 dB

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the appropriate accreditation body is followed.

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### **Appendix 1. Test Equipment Used**

RFI No.	Instrument	Manufacturer	Type No.	Serial No.	Date Last Calibrated	Cal. Interval (Months)
A028	Horn Antenna	Eaton	91888-2	304	08 Jun 2006	36
A059	Log Periodic Antenna	EMCO	3146	8902-2378	17 Nov 2006	12
C1065	Cable	Rosenberger	UFA210-1-7872	0985	Calibrate before use	-
M1242	Spectrum Analyser	Rohde & Schwarz	FSEM30	845986_022	08 Sep 2006	15
S202	3m OATS	RFI	2	S202-15011990	17 Nov 2006	12

**NB** In accordance with UKAS requirements, all the measurement equipment is on a calibration schedule.