RF EXPOSURE EVALUATION REPORT

Issued to

Life Alert Emergency Response, Inc.

For

Cellular Base Station

Model Name	:	Life Alert HELP PERS (914)
Trade Name	:	Life Alert HELP PERS (914)
Brand Name	:	Life Alert HELP PERS
FCC ID	:	2ABZ7-914
Standard	:	47CFR 2.1091 KDB 447498 D01 General RF Exposure Guidance v05r02
Test date	:	2014-4-28
Issue date	:	2014-5-12

by

Shenzhen Morlab Communications Technology Co., Ltd.
FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District,
ShenZhen, GuangDong Province P. R. China 518101

Tested by	Zou Jian	***Approved by***	Zeng Dexin	***Reviewed by***	Peng Huarui
	Zou Jian (Test Engineer)		Zeng Dexin (Chief Engineer)		(SAR Manager)
Date	2014.5.12	***Date***	2014.5.12	***Date***	2014.5.12

DIRECTORY

Change History		
Issue	Date	Reason for change
1.0	May 12, 2014	First edition

1. TESTING LABORATORY

1.1. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China 518101
FCC Registration Number:	695796

1.2. Accreditation Certificate

Accredited Testing Laboratory: No. CNAS L3572

2. TECHNICAL INFORMATION

Note: the following data is based on the information by the applicant.

2.1. Identification of Applicant

Company Name:	Life Alert Emergency Response, Inc.
Address:	16027 Ventura Blvd. Suite 400, Encino, CA 91436 USA

2.2. Identification of Manufacturer

Company Name:	Life Alert Emergency Response, Inc.
Address:	16027 Ventura Blvd. Suite 400 Encino, CA 91436 USA

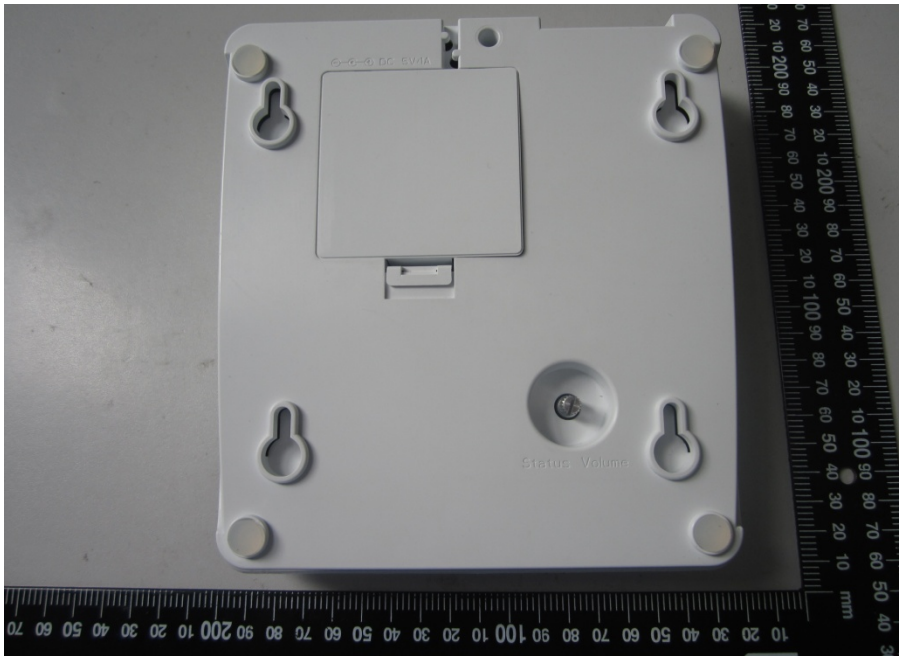
2.3. Equipment Under Test (EUT)

Model Name:	Life Alert HELP PERS (914)
Trade Name:	Life Alert HELP PERS (914)
Brand Name:	Life Alert HELP PERS
Hardware Version:	V. 914
Software Version:	914: V1.00
Frequency Bands:	GSM 850: 824-849MHz; GSM 1900: 1850-1910MHz; WCDMA 850: 824-849MHz; WCDMA 1900: 1850-1910MHz;
Modulation Mode:	GSM: GSMK; WCDMA: QPSK;
Antenna type:	Fixed Internal Antenna
Development Stage:	Identical prototype

2.3.1. Photographs of the EUT

1. EUT front view

2. EUT rear view



2.3.2. Identification of all used EUT

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

EUT Identity	Hardware Version	Software Version
1#	V. 914	914: V1.00

2.4. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	**47 CFR§2.1091**	Radiofrequency Radiation Exposure Evaluation: mobile devices
2	**KDB 447498 D01v05r02**	General RF Exposure Guidance

3. DEVICE CATEGORY AND RF EXPOSURE LIMIT

Per user manual, this device is a cellular base station. Based on 47CFR 2.1091, this device belongs to mobile device category with General Population/Uncontrolled exposure.

Mobile Devices:

47CFR 2.1091(b)

For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. In this context, the term “fixed location” means that the device is physically secured at one location and is not able to be easily moved to another location. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 centimeter separation requirement.

GENERAL POPULATION / UNCONTROLLED EXPOSURE

The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity. Warning labels placed on low-power consumer devices such as cellular telephones are not considered sufficient to allow the device to be considered under the occupational/controlled category, and the general population/uncontrolled exposure limits apply to these devices.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*($180/f^2$)	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

4. MEASUREMENT OF CONDUCTED PEAK OUTPUT POWER.

1. GSM Mode

Band	Channel	Frequency (MHz)	Output Power(dBm)
GSM 850	128	824.2	32.72
	190	836.6	33.16
	251	848.8	33.54
PCS 1900	512	1850.2	30.55
	661	1880.0	29.96
	810	1909.8	29.02

2. WCDMA mode conducted output power

Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4132	4175	4233	9262	9400	9538
	subtest	dBm			dBm		
5.2(WCDMA)	non	26.54	26.52	26.93	25.43	25.69	25.17
Note:	The Conducted RF Output Power test of WCDMA was tested by power meter.						

5. RF EXPOSURE EVALUATION

Standalone transmission MPE evaluation

Bands	Antenna Gain (dBi)	Conducted Average Power (dBm)	Time-averaging EIRP(mW)	Power density (mW/cm^2)	Limit for MPE (mW/cm^2)
GSM850	0.92	33.54	349.1	0.069	0.566
GSM1900	0.88	30.55	173.8	0.035	1.0
WCDMA850	0.92	26.93	609.5	0.121	0.566
WCDMA1900	1.07	25.69	474.2	0.094	1.0

Note:

1. Timeslot consignations

Band	GSM850	GSM1900	WCDMA850	WCDMA1900
Duty Cycle	1:8	1:8	1:1	1:1
Correct Factor	-9.03dB	-9.03dB	0dB	0dB

Time-averaging Power

Band	Channel	Frequency (MHz)	Output Power(dBm)
GSM 850	128	824.2	23.69
	190	836.6	24.13
	251	848.8	24.51
PCS 1900	512	1850.2	21.52
	661	1880.0	20.93
	810	1909.8	19.99
WCDMA 850	4132	826.4	26.54
	4175	835.0	26.52
	4233	846.6	26.93
WCDMA 1900	9262	1852.4	25.43
	9400	1880.0	25.69
	9538	1907.6	25.17

2. MPE calculation method

Power Density = $EIRP/4\pi R^2$

Where: EIRP = P·G

P = Peak out power

G = Antenna gain

R = Separation distance (20cm)

Simultaneous transmission MPE evaluation

There is only one transmitter incorporated in this cellular base station, so simultaneous transmission is not required.