

RF Exposure Evaluation Report

APPLICANT : Locus Solutions, LLC
EQUIPMENT : GO Tracker 1.4
BRAND NAME : Emerson
MODEL NAME : GO Tracker 1.4
MARKETING NAME : GO Tracker 1.4
FCC ID : AMH101010
STANDARD : 47 CFR Part 2.1091
FCC KDB 447498 D01

We, Sporton International (Shenzhen) Inc., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091, and pass the limit. Without written approval of Sporton International (Shenzhen) Inc., the test report shall not be reproduced except in full.



Approved by: Mark Qu / Manager



Sporton International (Shenzhen) Inc.

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**Revision History**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA862610	Rev. 01	Initial issue of report	Aug. 27, 2018

**1. Administration Data****1.1. Testing Laboratory**

Testing Laboratory	
Test Site	Sporton International (Shenzhen) Inc.
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan Shenzhen City Guangdong Province 518055 China TEL: +86-755-8637-9589 FAX: +86-755-8637-9595

Applicant	
Company Name	Locus Solutions, LLC
Address	7121 Fairway DR. Suite #400, Plam Beach Gardens, FL 33418, United States

Manufacturer	
Company Name	Zhenshen Zhenhua Communication Equipment Co. Ltd
Address	Zhenhua Industrial Park, No.44, Tiezai Rd., Xixiang Town, BaoAn, Shenzhen, Guang Dong, China

**2. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	GO Tracker 1.4
Brand Name	Emerson
Model Name	GO Tracker 1.4
Marketing Name	GO Tracker 1.4
FCC ID	AMH101010
IMEI Code	352544074664609
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz
Mode	GPRS
HW Version	TK108-61-SECURE-V11A
SW Version	M6100-V2.0.6
EUT Stage	Identical Prototype
Remark:	
1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.	
2. The device supports GPRS Class 12.	

**3. Maximum RF average output power among production units****<GSM>**

Mode	Burst Average Power (dBm)	
	GSM 850	GSM 1900
GPRS 1 Tx slot	33.50	30.50
GPRS 2 Tx slots	32.50	29.50
GPRS 3 Tx slots	31.50	28.50
GPRS 4 Tx slots	30.50	27.50

4. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(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

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



5. Radio Frequency Radiation Exposure Evaluation

5.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
GPRS850 (1 Tx slot)	824.2	-1.50	33.50	32.00	199.53	0.040	0.549
GPRS850 (2 Tx slots)	824.2	-1.50	32.50	31.00	316.23	0.063	0.549
GPRS850 (3 Tx slots)	824.2	-1.50	31.50	30.00	374.97	0.075	0.549
GPRS850 (4 Tx slots)	824.2	-1.50	30.50	29.00	398.11	0.079	0.549
GPRS1900 (1 Tx slot)	1850.2	-1.00	30.50	29.50	112.20	0.022	1.000
GPRS1900 (2 Tx slots)	1850.2	-1.00	29.50	28.50	177.83	0.035	1.000
GPRS1900 (3 Tx slots)	1850.2	-1.00	28.50	27.50	210.86	0.042	1.000
GPRS1900 (4 Tx slots)	1850.2	-1.00	27.50	26.50	223.87	0.045	1.000

Note: For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.