SGS-CSTC Standards Technical Services Co., Ltd.

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China 518057

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FCC REPORT

Application No. :	SZEMO100704858IT
Applicant:	Shenzhen Luckystar Digital Technology, Co., LTD
Product Name:	GPS
FCC ID:	YOEGPS828-898-892
Standards:	FCC CFR Title 47 Part 15 Subpart B: 2008
Date of Receipt:	2010-07-30
Date of Test:	2010-08-02 to 2010-08-27
Date of Issue:	2010-12-21
Test Result :	**PASS ***

*In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Jack Zhang
Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.
If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

2 Contents

3 Test Summary

Test Item	Section in CFR 47	Result
Radiated Emission (30MHz to 6GHz)	ANSI C63.4:2003	Passed
Conducted Emission (150KHz to 30MHz)	ANSI C63.4:2003	Passed*

Remark: Passed: The EUT complies with the essential requirements in the standard.

Failed: The EUT does not comply with the essential requirements in the standard.

** The EUT passed the Conducted Emission(PC mode, AC adapter+ Play Video mode) after retest.*

Remark:

Item No.: GPS828, GPS898, GPS892

Only the Item no.GPS828 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above items. Only theappearance of structure and color is different.

4 General Information

4.1 Client Information

Applicant:	Shenzhen Luckystar Digital Technology, Co., LTD
Address of Applicant:	21ST FL., Fuchun Orient BLDG.,7006# Shennan AV., Shenzhen, China
Manufacturer/Factory:	Shenzhen Chaoming Inoustrial Co., LTD
Address of Manufacturer/ Factory:	4F Block 1, Yujingtai Inoustrial Park, HuaRong Road Shuiwei Village, Dalang,Longhua Town, Shenzhen, P.R.China

4.2 General Description of E.U.T.

Product Name:	GPS
Trade mark:	JBL
Item No.:	GPS828, GPS898, GPS892♣
♣	Please refer to section 3 of this report which indicates which item was actually tested and which were electrically identical.
AC Adapter:	Type: A02S050150U Input: 100-240V 50/60Hz 0.3A Output: DC 5.0V 1.5A Power Code; < 3m Battery：3.7V(Recharge battery)
USB Cable:	Two ferrite cores permanently attached

4.3 E.U.T Operation Environment and test mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1008 mbar
Test mode:	
Read and write Int. Memory:	Keep the EUT communicate With PC and exchange data by EUT Int. Memory.
Read and Write SD card:	Keep the EUT communicate With PC and exchange data by EUT SD card.
AC charge+ Play Video:	Keep the EUT work at play Video connect earphone, AC adapter charge to EUT.

4.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations

- **CNAS (No. CNAS L2929)**
  CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.
- **VCCI**
  The 3m Semi-anechoic chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197 and C-2383 respectively.
  Date of Registration: September 29, 2008. Valid until September 28, 2011.
- **FCC – Registration No.: 556682**
  SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 556682, June 27, 2008.
- **Industry Canada (IC)**
  The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1.

4.5 Test Location

All tests were performed at:
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch E&E Lab
No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China 518057
Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594
No tests were sub-contracted.

4.6 Other Information Requested by the Customer

None.

5 Equipments Used during Test

RE in Chamber						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (yyyy-mm-dd)**	**Cal.Due date (yyyy-mm-dd)**
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2010-06-17	2011-06-17
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	2009-11-05	2010-11-05
3	EMI Test software	AUDIX	E3	SEL0050	N/A	N/A
4	Coaxial cable	SGS	N/A	SEL0028	2008-06-18	2011-06-18
5	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0015	2009-11-05	2010-11-05
6	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0006	2009-11-10	2010-11-10
7	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	2009-11-10	2010-11-10
8	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2010-06-02	2011-06-02
9	Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEL0168	2009-12-18	2010-12-18
10	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	SEL0080	2010-06-04	2011-06-04
11	Band filter	Amindeon	82346	SEL0094	2010-06-02	2011-06-02

Conducted Emission						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal.Date (yyyy-mm-dd)**	**Cal.Due date (yyyy-mm-dd)**
1	Shielding Room	ZhongYu Electron	GB-88	SEL0042	N/A	N/A
2	LISN	ETS-LINDGREN	3816/2	SEL0021	2010-06-02	2011-06-02
3	8 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T8-02	EMC0120	2010-01-25	2011-01-25
4	4 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T4-02	EMC0121	2010-01-25	2011-01-25
5	2 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T2-02	EMC0122	2010-01-25	2011-01-25
6	EMI Test Receiver	Rohde & Schwarz	ESCI	SEL0022	2010-06-02	2011-06-02
7	Coaxial Cable	SGS	N/A	SEL0024	2008-06-18	2011-06-18

6 Test results and Measurement Data

6.1 Conducted Emissions

Test Requirement:	FCC Part15 B
Test Method:	ANSI C63.4: 2003
Test Frequency Range:	150KHz to 30MHz
Class / Severity:	Class B
Detector:	Peak for pre-scan (9kHz Resolution Bandwidth)
	Quasi-Peak if maximised peak within 6dB of Quasi-Peak limit
Test mode:	Read and write Int. Memory mode, Read and Write SD card mode, AC charge+ Play Video mode. Pre-scan was performed on the EUT on above modes, and then found the worse case mode is Read and Write SD card mode Only the worse case data was displayed.
Test Instruments:	Refer to section 4.7 for details
Test results:	Passed

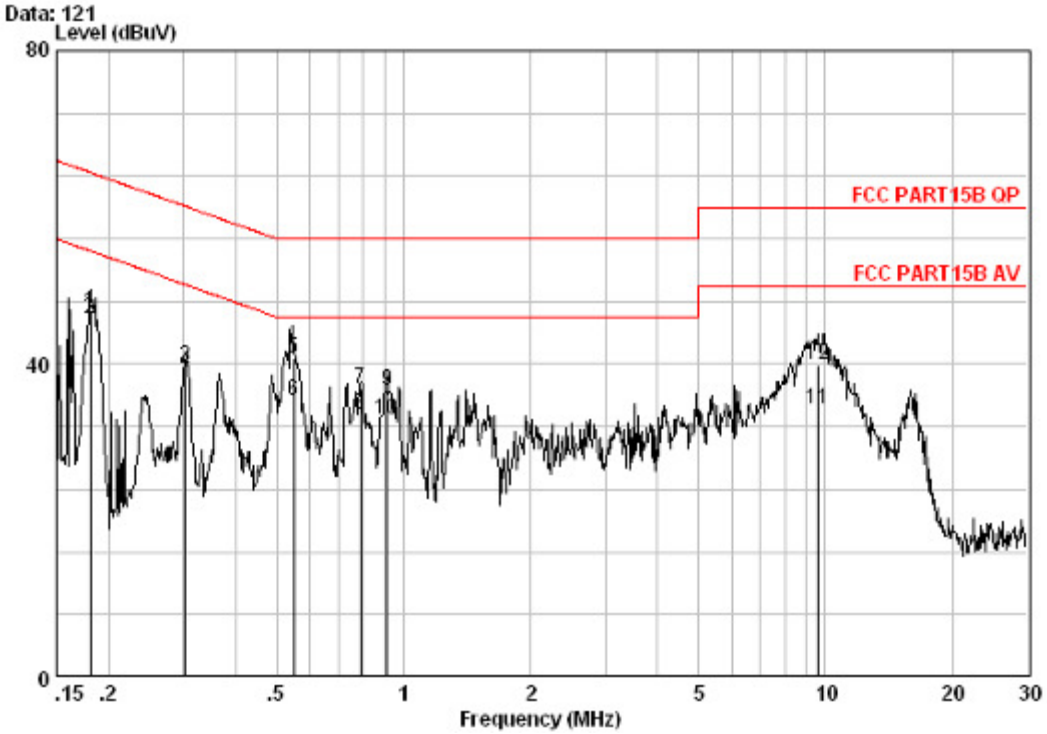
Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Read and Write SD card mode:

Live Line:



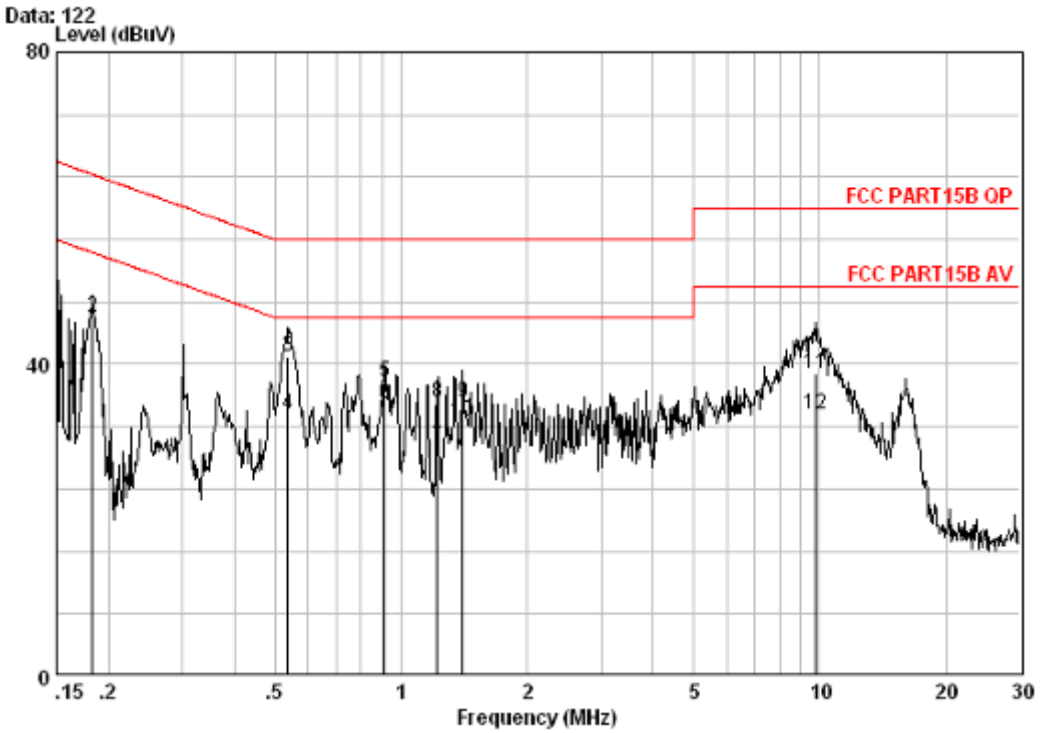
	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.18000	0.14	-0.05	46.50	46.59	64.49	-17.89	QP
2 @	0.18000	0.14	-0.05	45.70	45.79	54.49	-8.69	Average
3	0.30300	0.16	-0.04	39.60	39.72	60.16	-20.44	QP
4	0.30300	0.16	-0.04	38.90	39.02	50.16	-11.14	Average
5	0.54800	0.16	-0.04	40.60	40.72	56.00	-15.28	QP
6	0.54800	0.16	-0.04	35.10	35.22	46.00	-10.78	Average
7	0.79100	0.18	-0.05	36.70	36.83	56.00	-19.17	QP
8	0.79100	0.18	-0.05	33.40	33.53	46.00	-12.47	Average
9	0.91100	0.19	-0.05	36.40	36.54	56.00	-19.46	QP
10	0.91100	0.19	-0.05	32.70	32.84	46.00	-13.16	Average
11	9.550	0.27	-0.27	34.30	34.29	50.00	-15.71	Average
12	9.550	0.27	-0.27	39.80	39.79	60.00	-20.21	QP

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

Neutral Line:



		Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
		MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1		0.18300	0.14	-0.04	46.20	46.30	64.35	-18.05	QP
2	@	0.18300	0.14	-0.04	45.90	46.00	54.35	-8.35	Average
3		0.53600	0.16	-0.04	40.90	41.02	56.00	-14.98	QP
4		0.53600	0.16	-0.04	33.50	33.62	46.00	-12.38	Average
5		0.91300	0.19	-0.04	37.60	37.75	56.00	-18.25	QP
6		0.91300	0.19	-0.04	34.70	34.85	46.00	-11.15	Average
7		1.220	0.20	-0.05	29.30	29.45	46.00	-16.55	Average
8		1.220	0.20	-0.05	34.90	35.05	56.00	-20.95	QP
9		1.400	0.20	-0.05	34.90	35.05	56.00	-20.95	QP
10		1.400	0.20	-0.05	32.60	32.75	46.00	-13.25	Average
11		9.750	0.27	-0.32	38.90	38.85	60.00	-21.15	QP
12		9.750	0.27	-0.32	33.60	33.55	50.00	-16.45	Average

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

6.2 Radiated Emission

Test Requirement:	FCC Part15 B
Test Method:	ANSI C63.4: 2003
Test Frequency Range:	30MHz to 25000MHz
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)
Limit:	40.0 dBμV/m between 30MHz & 88MHz
	43.5 dBμV/m between 88MHz & 216MHz
	46.0 dBμV/m between 216MHz & 960MHz
	54.0 dBμV/m between 960MHz & 1000MHz
Detector:	Peak for pre-scan (120kHz resolution bandwidth)
	Quasi-Peak if maximised peak within 6dB of limit
Test mode:	Read and write Int. Memory mode, Read and Write SD card mode, AC charge+ Play Video mode. Pre-scan was performed on the EUT on above modes, and then found the worse case mode is Read and Write SD card mode Only the worse case data was displayed.
Test Instruments:	Refer to section 4.7 for details
Test results:	Passed

Note:
The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

Read and Write SD card mode

Below 1G

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarity
55.220	0.80	7.56	27.28	45.42	26.50	40.00	-13.50	Vertical
118.270	1.25	8.02	27.08	50.07	32.26	43.50	-11.24	Vertical
179.380	1.37	9.87	26.78	42.94	27.40	43.50	-16.10	Vertical
238.550	1.62	11.93	26.57	43.17	30.15	46.00	-15.85	Vertical
478.140	2.52	17.80	27.60	41.54	34.26	46.00	-11.74	Vertical
657.590	2.82	20.84	27.47	39.61	35.80	46.00	-10.20	Vertical
118.270	1.25	8.02	27.08	55.40	37.59	43.50	-5.91	Horizontal
179.380	1.37	9.87	26.78	44.58	29.04	43.50	-14.46	Horizontal
308.390	1.93	14.20	26.46	39.91	29.58	46.00	-16.42	Horizontal
478.140	2.52	17.80	27.60	36.36	29.08	46.00	-16.92	Horizontal
657.590	2.82	20.84	27.47	39.27	35.46	46.00	-10.54	Horizontal
749.740	3.06	21.70	27.35	38.91	36.32	46.00	-9.68	Horizontal

Above 1G

Peak :

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarity
1610.000	5.12	27.47	38.92	54.02	47.69	74.00	-26.31	Vertical
2495.000	5.99	30.35	39.34	50.71	47.71	74.00	-26.29	Vertical
3170.000	7.17	32.13	39.57	52.02	51.75	74.00	-22.25	Vertical
4090.000	8.09	33.23	40.24	52.08	53.16	74.00	-20.84	Vertical
4455.000	8.92	33.77	40.30	50.33	52.72	74.00	-21.28	Vertical
5230.000	11.74	34.81	41.19	52.52	57.88	74.00	-16.12	Vertical
1090.000	3.89	25.61	39.38	59.98	50.10	74.00	-23.90	Horizontal
2130.000	5.66	29.03	39.40	54.04	49.33	74.00	-24.67	Horizontal
3030.000	7.00	31.95	39.32	49.89	49.52	74.00	-24.48	Horizontal
4155.000	8.37	33.34	40.63	51.98	53.06	74.00	-20.94	Horizontal
5090.000	10.68	34.62	41.20	52.16	56.26	74.00	-17.74	Horizontal
5575.000	12.60	35.26	41.93	51.34	57.27	74.00	-16.73	Horizontal

Average

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarity
1610.000	5.12	27.47	38.92	38.22	31.89	54.00	-22.11	Vertical
2495.000	5.99	30.35	39.34	39.52	36.52	54.00	-17.48	Vertical
3170.000	7.17	32.13	39.57	38.55	38.28	54.00	-15.72	Vertical
4090.000	8.09	33.23	40.24	37.01	38.09	54.00	-15.91	Vertical
4455.000	8.92	33.77	40.30	36.26	38.65	54.00	-15.35	Vertical
5230.000	11.74	34.81	41.19	35.49	40.85	54.00	-13.15	Vertical
1090.000	3.89	25.61	39.38	39.56	29.68	54.00	-24.32	Horizontal
2130.000	5.66	29.03	39.40	40.53	35.82	54.00	-18.18	Horizontal
3030.000	7.00	31.95	39.32	38.54	38.17	54.00	-15.83	Horizontal
4155.000	8.37	33.34	40.63	37.84	38.92	54.00	-15.08	Horizontal
5090.000	10.68	34.62	41.20	36.45	40.55	54.00	-13.45	Horizontal
5575.000	12.60	35.26	41.93	35.98	41.91	54.00	-12.09	Horizontal