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Report No.: SHEM151200467703
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1 Cover Page

FCC MPE REPORT

Application No.:	SHEM1512004677CR
Applicant:	Letv Sports Flying Pigeon Technology (Tianjin) Co., Ltd.
FCC ID:	2AGZB-GENE-UB1
Equipment Under Test (EUT): NOTE: The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	LETV BIKE STARLY
Model No.(EUT):	STARLY
Add Model No.:	SYVRAC
Standards:	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	December 15, 2015
Date of Test:	February 21, 2016, March 07, 2016
Date of Issue:	March 24, 2016
Test Result:	Pass*

* In the configuration tested, the EUT detailed in this report complied with the standards specified above.



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.

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.

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2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00	/	March 24, 2016	/	Original

Authorized for issue by:				
Engineer		Eddy Zong		Eddy Zong
		Print Name		
Clerk		Susie Liu		Susie Liu
		Print Name		
Reviewer		Parlam Zhan		Parlam Zhan
		Print Name		



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4 General Information

4.1 Client Information

Applicant:	Letv Sports Flying Pigeon Technology (Tianjin) Co., Ltd.
Address of Applicant:	8th Road & Jingba Linking-up Road, Jinghai Economic Development Zone, Tianjin
Manufacturer:	Not supplied by the client.
Address of Manufacturer:	Not supplied by the client.
Factory:	Not supplied by the client.
Address of Factory:	Not supplied by the client.

4.2 General Description of E.U.T.

Product Description:	Mobile product
Battery:	DC 3.8V 1850mAh by Li-on Rechargeable Battery Supply the EUT with fully charged battery during the testing.
Rated input:	DC 5V via adapter

4.3 Details of E.U.T.

Operation Frequency:	BT:2402MHz~2480MHz DTS: 2412MHz-2462MHz GSM850: TX:824.2MHz-848.8MHz; RX: 869.2MHz-893.8MHz GSM1900: TX: 1850.2MHz-1909.8MHz; RX: 1930.2MHz-1989 WCDMA Band 5: TX:826.4MHz-846.6MHz; RX: 871.4MHz-891.6MHz
Bluetooth Version:	2.1
Modulation Technique:	BT: FHSS(GFSK, $\pi/4$ DQPSK, 8DPSK) DTS: 802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n(HT20): OFDM(64QAM, 16QAM, QPSK, BPSK)
Data Rate:	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n20: 13/26/39/52/78/104/117/135Mbps
Number of Channel:	BT: 79 DTS: 11
Antenna Type	Integral Antenna
Antenna Gain	BT & WiFi:1.0 dBi GSM 850 & WCDMA Band 5: 1.22dBi GSM1900: 1.81dBi

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666

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4.5 Test Facility

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

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. 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. Date of expiry: 2017-07-14.

- **FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683, Expiry Date: 2017-09-16.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1. Expiry Date: 2017-06-18.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868, C-4336, T-2221, G-830 respectively. Date of Expiry: 2017-11-16.

5 Test Standards and Limits

According to §1.1310 Radiofrequency radiation exposure limits:

The limit for general population/uncontrolled exposures

Frequency	Power density(mW/cm ²)	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

6 Measurement and Calculation

6.1 Maximum transmit power

Test Mode		Output Power(dBm)			Output Power(mW)		
		Lowest	Middle	Highest	Lowest	Middle	Highest
BT	GFSK	-0.25	0.60	0.85	0.94	1.15	1.22
	$\pi/4$ DQPSK	1.70	2.58	2.89	1.48	1.81	1.95
	8DPSK	2.25	3.10	3.38	1.68	2.04	2.18
WiFi	802.11b	9.70	10.24	10.56	9.33	10.57	11.38
	802.11g	14.75	15.75	16.20	29.85	37.58	41.69
	802.11 n(HT20)	12.12	12.90	12.90	16.29	19.50	19.50

Band	Burst-Average Out Put Power(dBm)					Division Factors	Frame-Average Out Put Power					
							(dBm)			(mW)		
	Channel	128	190	251	128		190	251	128	190	251	
GSM850	GPRS/EGPRS (GMSK)	1 TXSlot	33.42	33.34	33.31	-9.19	24.23	24.15	24.12	264.85	260.02	258.23
		2 TXSlots	32.51	32.44	32.42	-6.18	26.33	26.26	26.24	429.54	422.67	420.73
		3 TXSlots	30.5	30.43	30.44	-4.42	26.08	26.01	26.02	405.51	399.02	399.94
		4 TXSlots	29.61	29.48	29.43	-3.17	26.44	26.31	26.26	440.55	427.56	422.67
	EGPRS (8PSK)	1 TXSlot	28.5	28.28	27.85	-9.19	19.31	19.09	18.66	85.31	81.10	73.45
		2 TXSlots	27.43	27.13	26.62	-6.18	21.25	20.95	20.44	133.35	124.45	110.66
		3 TXSlots	25.32	25.04	24.42	-4.42	20.90	20.62	20.00	123.03	115.35	100.00
		4 TXSlots	24.44	24.14	23.63	-3.17	21.27	20.97	20.46	133.97	125.03	111.17

Band	Burst-Average Out Put Power(dBm)					Division Factors	Frame-Average Out Put Power					
							(dBm)			(mW)		
	Channel	512	661	810	512		661	810	512	661	810	
GSM1900	GPRS/EGPRS (GMSK)	1 TXSlot	30.46	30.79	30.52	-9.19	21.27	21.60	21.33	133.97	144.54	135.83
		2 TXSlots	29.58	29.89	29.64	-6.18	23.4	23.71	23.46	218.78	234.96	221.82
		3 TXSlots	27.81	28.15	27.87	-4.42	23.39	23.73	23.45	218.27	236.05	221.31
		4 TXSlots	27.01	27.46	27.16	-3.17	23.84	24.29	23.99	242.10	268.53	250.61
	EGPRS (8PSK)	1 TXSlot	27.57	28.01	28.28	-9.19	18.38	18.82	19.09	68.87	76.21	81.10
		2 TXSlots	26.6	27.04	27.31	-6.18	20.42	20.86	21.13	110.15	121.90	129.72
		3 TXSlots	24.58	25.06	25.34	-4.42	20.16	20.64	20.92	103.75	115.88	123.59
		4 TXSlots	23.57	24.03	24.33	-3.17	20.4	20.86	21.16	109.65	121.90	130.62

Output Power(dBm)					Output Power(mW)		
Channel		4132	4182	4233	4132	4182	4233
WCDMA Band 5	HSDPA	23.21	23.09	23.03	209.41	203.70	200.91
	HSUPA	22.83	22.43	22.41	191.87	174.98	174.18

6.2 MPE Calculation

According to the formula $S = \frac{PG}{4R^2\pi}$, we can calculate S which is MPE.

Note:

- 1) P (Watts) = Power Input to antenna = $10^{\frac{dBm}{10}} / 1000$
- 2) G (Antenna gain in numeric) = $10^{(Antenna\ gain\ in\ dBi / 10)}$
- 3) R = distance to the center of radiation of antenna (in meter) = 20cm
- 4) MPE limit = 1mW/cm²

For BT:

The Max Conducted Peak Output Power is 2.18mW in Highest channel of 8DPSK;

The best case gain of the antenna is 1dBi. 1dB logarithmic terms convert to numeric result is nearly 1.259

$$\text{So, } S = \frac{PG}{4R^2\pi} = \frac{2.18 \times 1.259}{4 \times 400 \times 3.14} = 0.0005 \text{ mW/cm}^2 < 1.0$$

For DTS:

The Max Conducted Peak Output Power is 41.69mW in Highest channel of 802.11g;

The best case gain of the antenna is 1dBi. 1dB logarithmic terms convert to numeric result is nearly 1.259

$$\text{So, } S = \frac{PG}{4R^2\pi} = \frac{41.69 \times 1.259}{4 \times 400 \times 3.14} = 0.0104 \text{ mW/cm}^2 < 1.0$$

For 850MHz Band:

The Max Conducted Peak Output Power is 440.55 mW in Middle channel of GSM 850;

The best case gain of the antenna is 1.22dBi. 1dB logarithmic terms convert to numeric result is nearly 1.324.

$$\text{So, } S = \frac{PG}{4R^2\pi} = \frac{440.55 \times 1.324}{4 \times 400 \times 3.14} = 0.12 \text{ mW/cm}^2 < 0.57$$

For 1900MHz Band:

The Max Conducted Peak Output Power is 250.61 mW in Lowest channel of GSM1900;

The best case gain of the antenna is 1.81dBi. 1dB logarithmic terms convert to numeric result is nearly 1.517.

$$\text{So, } S = \frac{PG}{4R^2\pi} = \frac{250.61 \times 1.517}{4 \times 400 \times 3.14} = 0.08 \text{ mW/cm}^2 < 1.0$$

So the device is exclusion from SAR test.

7 EUT Constructional Details

Refer to the < STARLY _External Photos > & < STARLY _Internal Photos>.

--End of the Report--