RF Exposure Evaluation Report

Product	:	TouchLock Bike BT
Trade mark	:	BIO-key
Model/Type reference	:	BL1309
Serial Number	:	N/A
Report Number	:	EED32J00175904
FCC ID	:	2AIKJ-BL1309
Date of Issue	:	Sep. 29, 2017
Test Standards	:	47 CFR Part 1.1307 47 CFR Part 1.1310 KDB447498D01v06
Test result	:	PASS

Prepared for:

BIO-key Hong Kong Limited
1806, 18/F, Tower Two, Lippo Centre, 89 Queensway Hong Kong

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

Tested By:	Tom chen (Test Project)	Compiled by:	Mill chen (Project Engineer)
Reviewed by:	Kevin yang (Reviewer)	Approved by:	Sheek Luo (Lab supervisor)
Date:	Sep. 29, 2017		Check No.: 1022565636

CENTRE TESTING INTERNATIONAL GROUP CO.,LTD. CTI Report Seal

2 Version

Version No.	Date	Description
00	Sep. 29, 2017	Original

3 Contents

4 General Information

4.1 Client Information

Applicant:	BIO-key Hong Kong Limited
Address of Applicant:	1806, 18/F, Tower Two, Lippo Centre, 89 Queensway, Hong Kong
Manufacturer:	TOP LEADER ELECTRONIC (SHEN ZHEN) CO., LTD.
Address of Manufacturer:	No.9 NanXin Road, NanLing Village Community, NanWan Street Office, LongGang District, ShenZhen, Guangdong, China
Factory:	TOP LEADER ELECTRONIC (SHEN ZHEN) CO., LTD.
Address of Factory:	No.9 NanXin Road, NanLing Village Community, NanWan Street Office, LongGang District, ShenZhen, Guangdong, China

4.2 General Description of EUT

Product Name:	TouchLock Bike BT
Model No.(EUT):	BL1309
Trade mark:	BIO-key
Power Supply:	DC 5V by USB port DC 3.7V by battery
EUT Supports Radios application:	BT 4.1 Signal mode

4.3 Product Specification subjective to this standard

Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK
Hardware Version:	5.0 (manufacturer declare)
Software Version:	29 (manufacturer declare)
Test Power Grade:	6
Test Software of EUT:	BLUENRG_GUI.exe
Antenna Type:	Integral
Antenna Gain:	0.49dBi
Test Voltage:	DC 3.7V
Sample Received Date:	Aug. 14, 2017
Sample tested Date:	Aug. 14, 2017 to Sep. 29, 2017
The tested sample and the sample information are provided by the client.	

4.4 Test Location

All tests were performed at:
Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101
Telephone: +86 (0) 755 3368 3668 Fax:+86 (0) 755 3368 3385
No tests were sub-contracted.

4.5 Test Facility

Test location

The test site a is located on *Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China.* Test site at Centre Testing International Group Co., Ltd has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 06, 2014. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

FCC Designation No.: CN1164

FCC-Registration No.: 886427

Centre Testing International Group Co., Ltd. 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 886427.

4.6 Deviation from Standards

None.

4.7 Abnormalities from Standard Conditions

None.

4.8 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

5.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

f(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation[17]

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

5.1.3 EUT RF Exposure

The Max Conducted Output Power is 2.444dBm in lowest channel(2.402GHz);

EIRP=2.444dBm+0.49dBi=2.0934dBm

2.934dBm logarithmic terms convert to numeric result is nearly 1.965 mW

According to the formula:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]

General RF Exposure = (1.965mW / 5 mm) x √2.402GHz = 0.61①

SAR requirement:

S= 3.0 ② ;

① < ②.

So the SAR report is not required.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32J00175903 for EUT external and internal photos.

*** End of Report ***