

# FCC RF EXPOSURE EVALUATION REPORT

**Product Name:** WIRELESS INTERCOM SYSTEM  
**Trade Mark:** TekeyTBox  
**Model No.:** TK-708  
**Report Number:** 171028001RFC-2  
**Test Standards:** FCC 47 CFR Part 1 Subpart I  
**FCC ID:** 2AN74-TK708  
**Test Result:** PASS  
**Date of Issue:** November 25, 2017


Prepared for:

**Guangxi Qinzhou Hua Jun Trading Co., Ltd.**  
**No. 40, West Lane, ShaWei, Qinzhou City, Guangxi Province, China**

Prepared by:

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November 25, 2017



**Version**

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# 1. GENERAL INFORMATION

## 1.1 CLIENT INFORMATION

<b>Applicant:</b>	Guangxi Qinzhou Hua Jun Trading Co., Ltd.
<b>Address of Applicant:</b>	No. 40, West Lane, ShaWei, Qinzhou City, Guangxi Province, China
<b>Manufacturer:</b>	Guangxi Qinzhou Hua Jun Trading Co., Ltd.
<b>Address of Manufacturer:</b>	No. 40, West Lane, ShaWei, Qinzhou City, Guangxi Province, China

## 1.2 EUT INFORMATION

<b>Product Name:</b>	WIRELESS INTERCOM SYSTEM
<b>Model No.:</b>	TK-708
<b>Add. Model No.:</b>	N/A
<b>Trade Mark:</b>	TekeyTBox
<b>DUT Stage:</b>	Identical Prototype
<b>EUT Supports Function:</b>	FRS: 462.5875 MHz to 462.7250 MHz & 467.5625 MHz to 467.6125 MHz

## 1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

<b>Frequency Range:</b>	FRS:	462.5875 MHz to 462.7250 MHz 467.5625 MHz to 467.6125 MHz
<b>Rated Output Power:</b>	FRS:	0.5W(27dBm)
<b>Modulation Type:</b>	FRS:	FM
<b>Emission Type:</b>	FRS:	F3E
<b>Channel Separation:</b>	FRS:	12.5 KHz
<b>Maximum Transmitter Power (ERP):</b>	FRS:	14.4dBm
<b>Number of Channels:</b>	10	
<b>Antenna Type:</b>	External Antenna	

## 1.4 OTHER INFORMATION

Operation Frequency Each of Channel					
FRS		FRS		FRS	
Channel	Frequency	Channel	Frequency	Channel	Frequency
1	462.7250 MHz	5	462.6625 MHz	8	467.5625 MHz
2	462.5875 MHz	6	462.6875 MHz	9	467.5875 MHz
3	462.6125 MHz	7	462.7125 MHz	0	467.6125 MHz
4	462.6375 MHz	--	--	--	--

## 1.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product, according to the specifications of the manufacturers. It must comply with the requirements of the following standards:

### FCC 47 CFR Part 1 Subpart I

All test items have been performed and recorded as per the above standards

## 1.6 TEST LOCATION

### **Shenzhen UnionTrust Quality and Technology Co., Ltd.**

Address: 16/F, Block A, Building 6, Baoneng Science and Technology Park, Qingxiang Road No.1, Longhua New District, Shenzhen, China

Tel: +86-755-28230888

Fax: +86-755-28230886

E-mail: info@uttlab.com

[Http://www.uttlab.com](http://www.uttlab.com)

All tests were performed at:

**Shenzhen UnionTrust Quality and Technology Co., Ltd.**

Address: 16/F, Block A, Building 6, Baoneng Science and Technology Park, Qingxiang Road No.1, Longhua New District, Shenzhen, China 518109

Telephone: +86 (0) 755 2823 0888

Fax: +86 (0) 755 2823 0886

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## 1.7 TEST FACILITY

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

**CNAS-Lab Code: L9069**

The measuring equipment utilized to perform the tests documented in this report has been calibrated once a year or in accordance with the manufacturer's recommendations, and is traceable under the ISO/IEC/EN 17025 to international or national standards. Equipment has been calibrated by accredited calibration laboratories.

**IC-Registration No.: 21600-1**

The 3m Semi-anechoic chamber of Shenzhen UnionTrust Quality and Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 21600-1.

**A2LA-Lab Certificate No.: 4312.01**

Shenzhen UnionTrust Quality and Technology Co., Ltd. has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

**FCC Accredited Lab.**

Designation Number: CN1194

Test Firm Registration Number: 259480

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## 1.8 DEVIATION FROM STANDARDS

None.

## 1.9 ABNORMALITIES FROM STANDARD CONDITIONS

None.

## 1.10 OTHER INFORMATION REQUESTED BY THE CUSTOMER

None.

## 2. EQUIPMENT LIST

Please refer to the RF test report.

### 3. MPE EVALUATION

#### 3.1 REFERENCE DOCUMENTS FOR EVALUATION

No.	Identity	Document Title
1	FCC 47 CFR Part 1 Subpart I	PROCEDURES IMPLEMENTING THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969
2	KDB 447498 D01 General RF Exposure Guidance v06	RF EXPOSURE PROCEDURES AND EQUIPMENT AUTHORIZATION POLICIES FOR MOBILE AND PORTABLE DEVICES

#### 3.2 MPE COMPLIANCE REQUIREMENT

##### 3.2.1 Limits

According to §1.1307(b)(1), system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

##### Limits for Occupational / Controlled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Times   E   <sup>2</sup> ,   H   <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	F/300	6
1500-100000	/	/	5	6

##### Limits for General Population / Uncontrolled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Times   E   <sup>2</sup> ,   H   <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-100000	/	/	1	30

**Note:** f = frequency in MHz; \* = Plane-wave equivalents power density.

##### 3.2.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

#### 3.3 MPE CALCULATION METHOD

$$S = PG/4\pi R^2 = EIRP/4\pi R^2$$

S = power density (in appropriate units, e.g., mw/cm<sup>2</sup>)

P = power input to the antenna (in appropriate units, e.g., mw)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor is normally numeric gain.

R = distance to the center of radiation of the antenna (in appropriate units, e.g., cm)

### 3.4 MPE CALCULATION RESULTS

**Note:** For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

#### 3.4.1 For FRS

For FRS function, operating at 462.5875 MHz to 462.7250 MHz and 467.5625 MHz to 467.6125 MHz for FM

##### 3.4.2.1 Antenna Type:

Chain 0: External Antenna

##### 3.4.2.2 Results for FRS

Operating Frequency	Declared maximum ERP	Max. positive tolerance according manufacturer	Calculated maximum ERP	Declared maximum ERP	MPE Limit	MPE Value
(MHz)	(dBm)	(dB)	(dBm)	(mW)	(mw/cm2)	
462.5875 MHz to 462.7250 MHz	26	± 1	27	501.19	0.3084 (F/1500)	0.0997
467.5625 MHz to 467.6125 MHz	26	± 1	27	501.19	0.3117 (F/1500)	0.0997

## APPENDIX 1 PHOTOS OF TEST SETUP

N/A

## APPENDIX 2 PHOTOS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photos.

\*\*\* End of Report \*\*\*

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