

FCC RF EXPOSURE EVALUATION REPORT

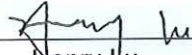
Product Name: WIRELESS INTERCOM SYSTEM
Model No.: TD-888
Report Number: 180628001RFC-2
Test Standards: FCC 47 CFR Part 1 Subpart I
FCC ID: 2AQQS-888
Test Result: PASS
Date of Issue: July 30, 2018

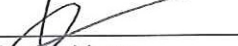
Prepared for:


Shenzhen Todakj Co., Ltd.
No. 40 Huan Dong Road, Tie Gang Industrial District, Baoan,
Shenzhen


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July 30, 2018

UnionTrust

* Certified *

Version

Version No.	Date	Description
V1.0	July 30, 2018	Original

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1. GENERAL INFORMATION

1.1 CLIENT INFORMATION

Applicant:	Shenzhen Todakj Co., Ltd.
Address of Applicant:	No. 40 Huan Dong Road, Tie Gang Industrial District, Baoan, Shenzhen
Manufacturer:	Shenzhen Todakj Co., Ltd.
Address of Manufacturer:	No. 40 Huan Dong Road, Tie Gang Industrial District, Baoan, Shenzhen

1.2 EUT INFORMATION

Product Name:	WIRELESS INTERCOM SYSTEM
Model No.:	TD-888
Add. Model No.:	WL-888 LD-888
Trade Mark:	The trade mark of WL-888 is  The trade mark of LD-888 is 
DUT Stage:	Identical Prototype
EUT Supports Function:	FRS: 462.5625 MHz to 462.7125 MHz 467.5625 MHz to 467.7125 MHz 462.5500 MHz to 462.7250 MHz
Note: The test data is gathered from a production sample, provided by the manufacturer. The marks of others models listed in the report is different from main-test model LD-888, but the circuit and the electronic construction do not change, declared by the manufacturer.	

1.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Frequency Range:	FRS:	462.5625 MHz to 462.7125 MHz 467.5625 MHz to 467.7125 MHz 462.5500 MHz to 462.7250 MHz
Rated Output Power:	FRS:	0.5W(27dBm)
Modulation Type:	FRS:	FM
Channel Separation:	FRS:	12.5 KHz
Modulation Type:	FRS:	F3E
Maximum Transmitter Power (ERP):	FRS:	22.82dbm
Number of Channels:	22	
Antenna Type:	Integral Antenna	

1.4 OTHER INFORMATION

Operation Frequency Each of Channel					
FRS					
Channel	Frequency	Channel	Frequency	Channel	Frequency
1	462.5625 MHz	8	467.5625 MHz	15	462.5500 MHz
2	462.5875 MHz	9	467.5875 MHz	16	462.5750 MHz
3	462.6125 MHz	10	467.6125 MHz	17	462.6000 MHz
4	462.6375 MHz	11	467.6375 MHz	18	462.6250 MHz
5	462.6625 MHz	12	467.6625 MHz	19	462.6500 MHz
6	462.6875 MHz	13	467.6875 MHz	20	462.6750 MHz

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7	462.7125 MHz	14	467.7125 MHz	21	462.7000 MHz
				22	462.7250 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

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

1.7 TEST FACILITY

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

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 ²)	Averaging Times E ² , H ² 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 ²)	Averaging Times E ² , H ² 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/cm²)

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 462.5625 MHz to 462.7125 MHz, 467.5625 MHz to 467.7125 MHz and 462.5500 MHz to 462.7250 MHz for FM

3.4.2.1 Antenna Type:

Chain 0: Integral 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)	
462.5625 MHz to 462.7125 MHz	26	± 1	27	501.19	0.3085 (F/1500)	0.0997
467.5625 MHz to 467.7125 MHz	26	± 1	27	501.19	0.3118 (F/1500)	0.0997
462.5500 MHz to 462.7250 MHz	26	± 1	27	501.19	0.3085 (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 ***

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of UnionTrust, this report can't be reproduced except in full.
