

FCC 47 CFR PART 15 SUBPART B CERTIFICATION TEST REPORT

PC VR Headset

MODEL No.: V8

Trade Mark: VIULUX

FCC ID: 2AGQ9-VIULUXV8

REPORT NO: ES180319008W

ISSUE DATE: April 26, 2018

Prepared for

Inlife-handnet Co., Ltd 53rd Floor, CES Tower, No.3099 Keyuan South Road, Yuehai Street, Nanshan District, Shenzhen City, Guangdong Province, P.R.C

Prepared by

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TABLE OF CONTENT

	Tes	st Report Description	Page
1.	SUN	MMARY OF TEST RESULT	5
2.	GEN	NERAL INFORMATION	6
2. 2. 2. 2.	2. 3.	DESCRIPTION OF DEVICE (EUT) DESCRIPTION OF TEST FACILITY DESCRIPTION OF SUPPORT DEVICE MEASUREMENT UNCERTAINTY	6 7
3.	MEA	ASURING DEVICE AND TEST EQUIPMENT	8
-	1. 2.	For Power Line Conducted Emission Measurement For Radiated Emission Measurement (3m Chamber)	
4.	CON	NDUCTED EMISSION MEASUREMENT	9
4. 4. 4. 4. 4. 4.	2. 3. 4. 5. 6. 7.	BLOCK DIAGRAM OF TEST SETUP MEASURING STANDARD POWER LINE CONDUCTED EMISSION LIMITS (CLASS B) EUT CONFIGURATION ON MEASUREMENT OPERATING CONDITION OF EUT TEST PROCEDURE MEASURING RESULTS	9 9 9 9 9 10 10
5.	RAD	DIATED EMISSION MEASUREMENT	
5. 5. 5. 5. 5. 5.	2. 3. 4. 5. 6.	BLOCK DIAGRAM OF TEST SETUP MEASURING STANDARD RADIATED EMISSION LIMITS (CLASS B) EUT CONFIGURATION ON MEASUREMENT OPERATING CONDITION OF EUT TEST PROCEDURE MEASURING RESULTS	
6.	PHC	DTOGRAPHS	18
6. 6.		PHOTOS OF CONDUCTED EMISSION MEASUREMENT PHOTOS OF RADIATION EMISSION MEASUREMENT	



TEST REPORT DESCRIPTION

Applicant	:	Inlife-handnet Co., Ltd 53rd Floor,CES Tower, No.3099 Keyuan South Road, Yuehai Street, Nanshan District, Shenzhen City, Guangdong Province, P.R.C
Manufacturer	:	Inlife-handnet Co., Ltd 53rd Floor,CES Tower, No.3099 Keyuan South Road, Yuehai Street, Nanshan District, Shenzhen City, Guangdong Province, P.R.C
Trademark	:	VIULUX
EUT	:	PC VR Headset
Model No.	:	V8
Power Supply	:	DC 5V from PC

Measurement Procedure Used:

FCC Rules and Regulations Part 15: 2017 Subpart B Class B & FCC / ANSI C63.4-2014 The device described above is tested by EMTEK (SHENZHEN) CO., LTD. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and EMTEK (SHENZHEN) CO., LTD. is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of EMTEK (SHENZHEN) CO., LTD.

Date of Test :	March 19, 2018 to April 25, 2018
Prepared by :	Dorrs Su. Doris Su/Editor
Reviewer :	Yaping Shen Supervisor
Approved & Authorized Signer :	Lisa Wang/Manager



Modified Information

Version Report No.		Revision Date	Summary	
Ver.1.0	ES180319008W	/	Original Report	



1. SUMMARY OF TEST RESULT

Description of Test Item	Standard & Limits	Results
Conducted Disturbance at Mains Terminals	FCC Part 15, Subpart B, Class B ANSI C63.4: 2014	Pass
Radiated Disturbance	FCC Part 15, Subpart B, Class B ANSI C63.4: 2014	Pass



2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT	:	PC VR Headset
Model Number	:	V8
Test Voltage	:	DC 5V from PC
Applicant	:	Inlife-handnet Co., Ltd
Address	:	53rd Floor, CES Tower, No.3099 Keyuan South Road, Yuehai Street, Nanshan District, Shenzhen City, Guangdong Province, P.R.C
Manufacturer	:	Inlife-handnet Co., Ltd
Address	:	53rd Floor, CES Tower, No.3099 Keyuan South Road, Yuehai Street, Nanshan District, Shenzhen City, Guangdong Province, P.R.C
Date of Received	:	March 19, 2018
Date of Test	:	March 19, 2018 to April 25, 2018

2.2. Description of Test Facility

Site Description EMC Lab.	: Accredited by CNAS, 2016.10.24 The certificate is valid until 2022.10.28 The Laboratory has been assessed and proved to be in compliance with CNAS-CL01:2006 (identical to ISO/IEC 17025:2005) The Certificate Registration Number is L2291.
	Accredited by TUV Rheinland Shenzhen 2016.5.19 The Laboratory has been assessed according to the requirements ISO/IEC 17025.
	Accredited by FCC, August 03, 2017 Designation Number: CN1204 Test Firm Registration Number: 882943
	Accredited by Industry Canada, November 24, 2015 The Certificate Registration Number is 4480A.
Name of Firm Site Location	 EMTEK (SHENZHEN) CO., LTD. Bldg 69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, China



2.3. Description of Support Device

PC :	Manufacturer: DELL M/N: D11M
LCD Monitor	S/N: CN-0CV772-0887-31L-5219 Manufacturer: LENOVO M/N: 9227-AE6
	S/N:4M0293084302824 CE, FCC
Keyboard :	Manufacturer: LENOVO M/N: KU-0225
	S/N:0585494 CE, FCC: DOC
Mouse :	Manufacturer: LENOVO M/N: MO28UOL S/N:44G7862 068 CE, FCC: DOC

2.4. Measurement Uncertainty

Test Item Conducted Emission Uncertainty	:	Uncertainty 2.96dB(9k~150kHz Conduction 1#) 2.74dB(150k-30MHz Conduction 1#)
Radiated Emission Uncertainty (3m Chamber)	:	3.78dB (30M~1GHz Polarize: H) 4.27dB (30M~1GHz Polarize: V)



3. MEASURING DEVICE AND TEST EQUIPMENT

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
	Test Receiver	Rohde & Schwarz	ESCI	26115-010-0027	May 20, 2017	1 Year
\checkmark	L.I.S.N.	Rohde & Schwarz	ENV216	101161	May 20, 2017	1 Year
V	50Ω Coaxial Switch	Anritsu	MP59B	6100175589	May 21, 2017	1 Year
\checkmark	Voltage Probe	Rohde & Schwarz	ESH2-Z3	100122	May 21, 2017	1 Year

3.1. For Power Line Conducted Emission Measurement

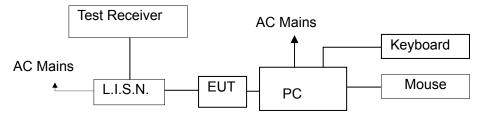
3.2. For Radiated Emission Measurement (3m Chamber)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
V	EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	May 21, 2017	1 Year
\checkmark	Pre-Amplifier	HP	8447F	2944A07999	May 20, 2017	1 Year
\checkmark	Bilog Antenna	Schwarzbeck	VULB9163	142	May 20, 2017	1 Year
\checkmark	Cable	Schwarzbeck	AK9513	ACRX1	May 21, 2017	1 Year
\checkmark	Cable	Rosenberger	N/A	FP2RX2	May 21, 2017	1 Year
\checkmark	Cable	Schwarzbeck	AK9513	CRPX1	May 21, 2017	1 Year
\checkmark	Cable	Schwarzbeck	AK9513	CRRX2	May 21, 2017	1 Year



4. CONDUCTED EMISSION MEASUREMENT

4.1. Block Diagram of Test Setup



(EUT: PC VR Headset)

4.2. Measuring Standard

FCC Part 15, Subpart B, Class BANSI C63.4: 2014

4.3. Power Line Conducted Emission Limits (Class B)

Frequency	Limit (dBµV)				
(MHz)	Quasi-peak Level	Average Level			
0.15 ~ 0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *			
0.50 ~ 5.00	56.0	46.0			
5.00 ~ 30.00	60.0	50.0			
NOTE1-The lower limit shall apply at the transition frequencies. NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.					

4.4. EUT Configuration on Measurement

The following equipments are installed on Conducted Emission Measurement to meet FCC requirements and operating in a manner which tends to maximize its emission characteristics in a normal application.

EUT : PC VR Headset Model Number : V8

4.5. Operating Condition of EUT

4.5.1.Setup the EUT as shown on Section 4.1.

4.5.2. Turn on the power of all equipments.

4.5.3.Let the EUT work in measuring mode (Connect to PC) and measure it.



4.6. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and connected to the AC mains through Line Impedance Stability Network (L.I.S.N). This provided a 500hm coupling impedance for the tested equipments. Both sides of AC line are investigated to find out the maximum conducted emission according to the FCC regulations during conducted emission measurement.

The bandwidth of the field strength meter (R&S Test Receiver ESCS30) is set at 9kHz in 150kHz~30MHz and 200Hz in 9kHz~150kHz.

The frequency range from 150kHz to 30MHz is investigated.

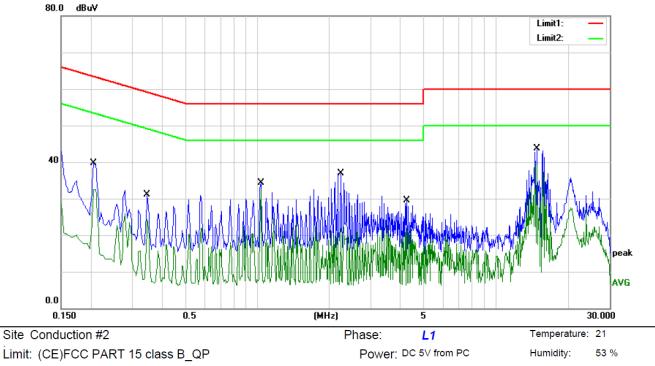
All the modes were tested and the data of the worst modes are attached the following pages.

4.7. Measuring Results

PASS.

Please refer to the following pages.





Mode:	Connect to PC
Note:	

No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1	0.2060	30.01	9.63	39.64	63.37	-23.73	QP	
2	0.2060	22.96	9.63	32.59	53.37	-20.78	AVG	
3	0.3460	21.46	9.67	31.13	59.06	-27.93	QP	
4	0.3460	14.57	9.67	24.24	49.06	-24.82	AVG	
5	1.0340	24.38	9.85	34.23	56.00	-21.77	QP	
6	1.0340	22.69	9.85	32.54	46.00	-13.46	AVG	
7	2.2420	27.09	9.86	36.95	56.00	-19.05	QP	
8	2.2420	12.44	9.86	22.30	46.00	-23.70	AVG	
9	4.2260	19.72	9.87	29.59	56.00	-26.41	QP	
10	4.2260	11.97	9.87	21.84	46.00	-24.16	AVG	
11	14.8580	33.10	10.60	43.70	60.00	-16.30	QP	
12 *	14.8580	29.05	10.60	39.65	50.00	-10.35	AVG	

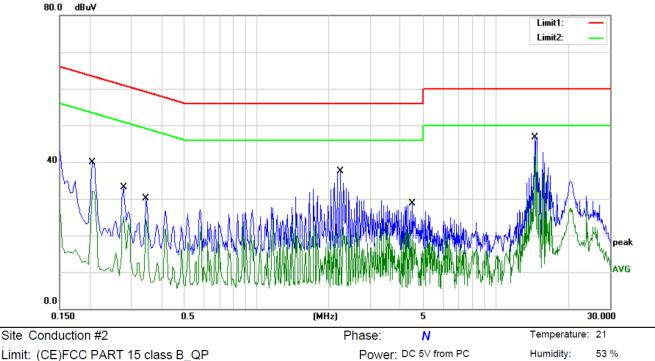
*:Maximum data x:Over lin

x:Over limit !:over margin

Comment: Factor build in receiver.

Operator: CH





Limit: (CE)FCC PART 15 class B_QP Mode: Connect to PC Note:

No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1	0.2060	30.35	9.63	39.98	63.37	-23.39	QP	
2	0.2060	22.52	9.63	32.15	53.37	-21.22	AVG	
3	0.2780	23.47	9.65	33.12	60.88	-27.76	QP	
4	0.2780	15.71	9.65	25.36	50.88	-25.52	AVG	
5	0.3460	20.37	9.67	30.04	59.06	-29.02	QP	
6	0.3460	14.59	9.67	24.26	49.06	-24.80	AVG	
7	2.2420	27.60	9.86	37.46	56.00	-18.54	QP	
8	2.2420	12.46	9.86	22.32	46.00	-23.68	AVG	
9	4.4820	18.85	9.87	28.72	56.00	-27.28	QP	
10	4.4820	11.74	9.87	21.61	46.00	-24.39	AVG	
11	14.5900	36.05	10.61	46.66	60.00	-13.34	QP	
12 *	14.5900	32.59	10.61	43.20	50.00	-6.80	AVG	

*:Maximum data

x:Over limit !:over margin

Comment: Factor build in receiver.

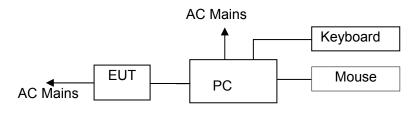
Operator: CH



5. RADIATED EMISSION MEASUREMENT

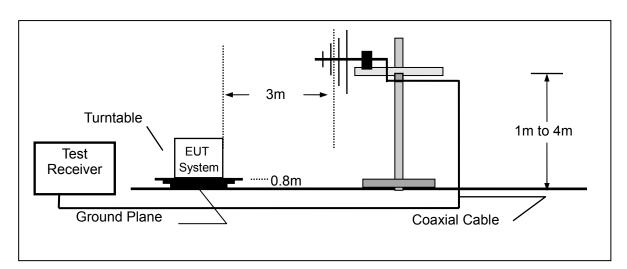
5.1. Block Diagram of Test Setup

5.1.1. Block diagram of EUT System



(EUT: PC VR Headset)

5.1.2.Block diagram of test setup (In chamber)



(EUT: PC VR Headset)

5.2. Measuring Standard

FCC Part 15, Subpart B, Class B ANSI C63.4: 2014

5.3. Radiated Emission Limits (Class B)

	Freque	ncy	Distance	it		
	MH	Z	(Meters)	μV/m @3m	μV/m @10m	dB(µV)/m@10M
30	~	88	10	100	30	29.5
88	~	216	10	150	45	33.0
216	~	960	10	200	60	35.5
960	~	1000	10	500	150	43.5

Frequency	Distance	Field Str	engths Limit	
(GHz)	(Meters)	Average (dBµV/m)	Peak (dBμV/m) 74	
1~6	3	54		

Remark: (1) Emission level (dB) μ V = 20 log Emission level μ V/m

(2) (Emission level μ V/m @3m) / (Emission level μ V/m @10m) = 10m / 3m

(3) The smaller limit shall apply at the cross point between two frequency bands.

(4) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

5.4. EUT Configuration on Measurement

The FCC Class B regulations test method must be used to find the maximum emission during radiated emission measurement.

EUT:PC VR HeadsetModel Number:V8

5.5. Operating Condition of EUT

5.5.1.Setup the EUT as shown on Section 5.1.

5.5.2. Turn on the power of all equipments.

5.5.3.Let the EUT work in measuring mode (Connect to PC) and measure it.

5.6. Test Procedure

The EUT is placed on a turn table which is 0.8 meter high above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Bilog antenna (calibrated by Dipole Antenna) is used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

The bandwidth of the Receiver (ESU26) is set at 120kHz.

All the modes were tested and the data of the worst modes are attached the following pages.



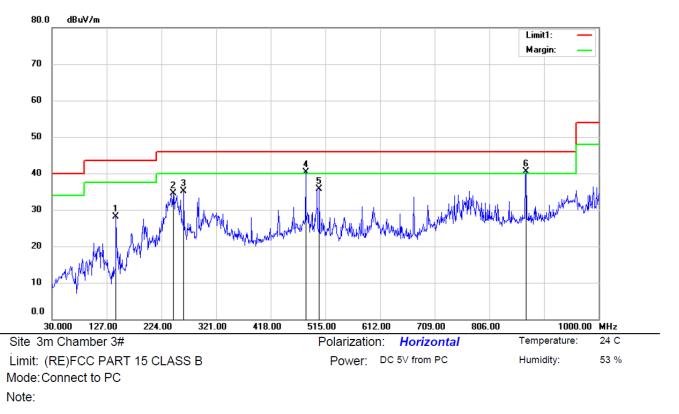
5.7. Measuring Results

PASS.

The frequency range from 30MHz to 6000MHz is investigated.

Please refer to the following pages.



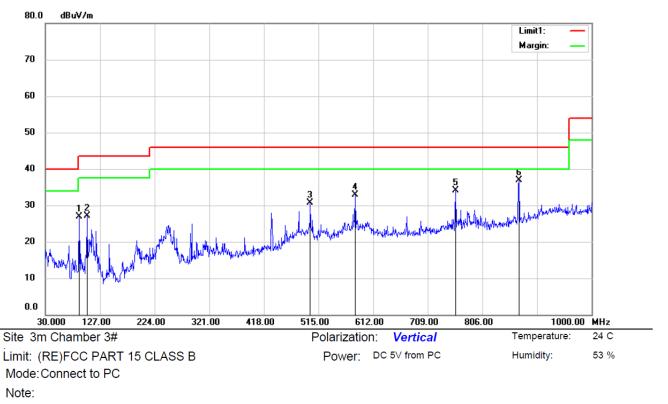


No.	Mł	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBu∨	dB	dBu∀/m	dBuV/m	dB	Detector	cm	degree	Comment
1		143.4900	47.46	-19.34	28.12	43.50	-15.38	QP			
2		245.3400	48.41	-13.96	34.45	46.00	-11.55	QP			
3		263.7700	48.47	-13.32	35.15	46.00	-10.85	QP			
4	İ	480.0800	48.36	-7.98	40.38	46.00	-5.62	QP			
5		504.3300	43.20	-7.53	35.67	46.00	-10.33	QP			
6	*	870.9900	41.22	-0.67	40.55	46.00	-5.45	QP			

*:Maximum data x:Over limit !:over margin

Operator:





No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		90.1400	44.69	-17.72	26.97	43.50	-16.53	QP			
2		103.7200	42.68	-15.64	27.04	43.50	-16.46	QP			
3		500.4500	38.32	-7.59	30.73	46.00	-15.27	QP			
4		579.9900	38.51	-5.60	32.91	46.00	-13.09	QP			
5		758.4700	36.63	-2.51	34.12	46.00	-11.88	QP			
6	*	870.9900	37.50	-0.67	36.83	46.00	-9.17	QP			

*:Maximum data x:Over limit !:over margin

Operator:



6. PHOTOGRAPHS



6.1. Photos of Conducted Emission Measurement







6.2. Photos of Radiation Emission Measurement

