

F C C - TEST REPORT

REPORT NO.: 44552

FCC – Test Report

Date: 2006-04-29

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**FCC listed testlab
acc. to Section 2.948 of the FCC - Rules
in compliance with the requirements of
ANSI C63.4 - 2003**

Product : USB 4-Ports Hub Mini Ionizer

Product Class : Class B Computing Device Peripheral

Brand Name : -

Model : 9845

Importer : CHOWS INDUSTRIAL (CHINA) LIMITED

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LABORATORY - REPORT

APPLICANT: CHOWS INDUSTRIAL (CHINA) LIMITED
ADDRESS: Flat B, 9/F., Seapower Industrial Centre
177 Hoi Bun Road
Kwun Tong, Kowloon
Hong Kong

DATE OF SAMPLE RECEIVED: 2006-02-17

DATE OF TESTING: 2006-02-27 to 2006-02-28 and 2006-04-28

DESCRIPTION OF SAMPLE:

Product: USB 4-Ports Hub Mini Ionizer
Product class: Class B Computing Device Peripheral
Model no.: 9845
Rating: DC via USB from host computer

INVESTIGATIONS REQUESTED: Measurements to the relevant clauses of F.C.C. Rules and Regulations Part 15 Subpart B – 'Unintentional Radiators'

RESULTS: See the attached test sheets

CONCLUSIONS: From the measurement data obtained, the tested sample was considered to have COMPLIED with the requirements for the relevant clauses of Federal Communications Commission Rules as specified above.



Authorized Signature

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Test Location

International Electrical Certification Centre Ltd.
Unit 602-605, 31 Lok Yip Road, On Lok Tsuen, Fanling, N.T., Hong Kong

Summary of Test Results

Radiated Emission:

Test result: O.K.
Test data: See attached data sheet

Conducted Emission:

Test result: O.K.
Test data: See attached data sheet

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TEST EQUIPMENT LIST

Equipment	Manufacturer	Model	Serial No.	Remark
Test Receiver	Rohde & Schwarz	ESH 3	892580/006	9KHz – 30MHz
Artificial Mains Network (LISN)	Schwarzbeck	NSLK 8127	8127312	2 x 10A, 50Ω, 50μH 9KHz-30MHz
Artificial Mains Network (LISN)	Schwarzbeck	NSLK 8127	8127309	2 x 10A, 50Ω, 50μH 9KHz-30MHz
Test Receiver	Rohde & Schwarz	ESVP	860688/022	20MHz – 1,300 MHz
Antenna	Schaffner	CBL6111C	2791	30MHz – 1000MHz
Antenna	Schwarzbeck	BBA 9106 / UHALP 9107	--	30MHz – 1000MHz
Antenna Mast System	Schwarzbeck	AM9104	--	Max. 4 meters height
Turntable with Controller	Drehtisch	DT312	--	φ120 cm

TEST SUPPORT UNITS

The sample was tested with PC system :

Equipment	Manufacturer	Model	Serial No.
NoteBook	DELL	PP10S	H8893 A02 FCC ID : E2K24BNHM
Keyboard	DELL	SK-8115	CN-0J4635-71616-61F-1S63
Mouse	DELL	M056UOA	E1G00ATA
Printer	HEWLETT PACKARD	1010	CNFG866674

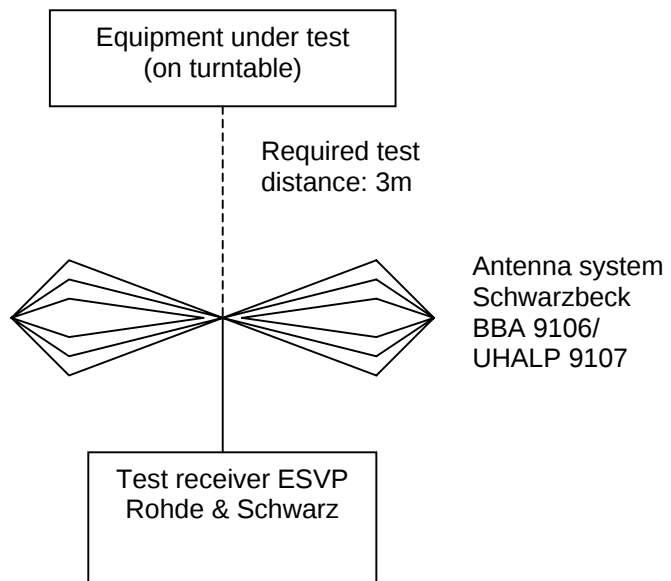
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Radiated Emission Test Configuration



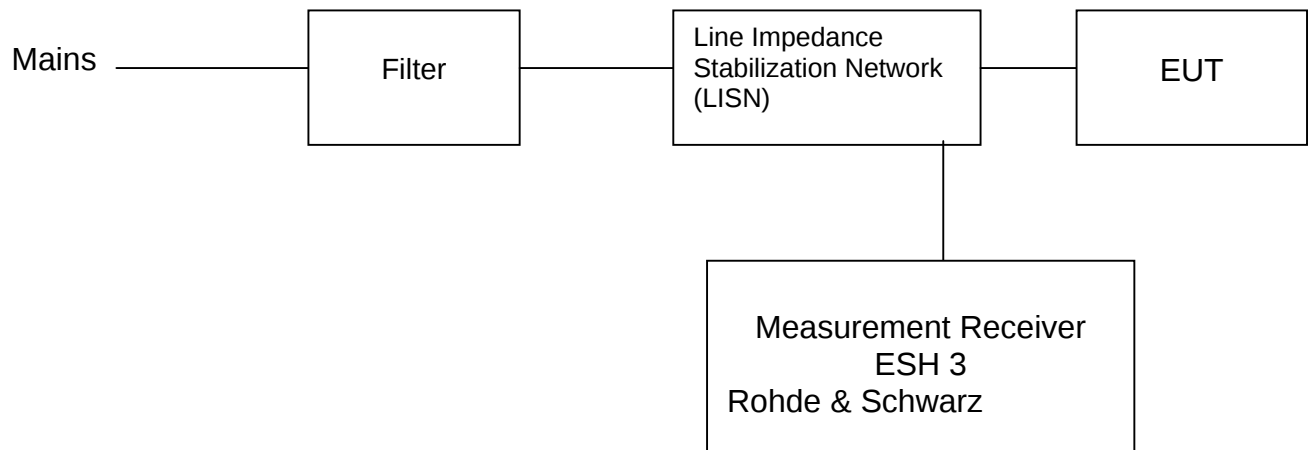
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Conducted Emission Test Configuration



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Test Results

Radiated Emission :

Test Requirement: FCC Part 15 Subpart B Section 15.109
Test Method: ANSI C63.4 : 2003
Frequency Range: 30MHz – 1000MHz
Measurement Distance: 3 m
Class: Class B
Detector: Quasi-Peak

Conducted Emission :

Test Requirement: FCC Part 15 Subpart B Section 15.107
Test Method: ANSI C63.4 : 2003
Frequency Range: 150kHz – 30MHz
Class: Class B
Detector: Quasi-Peak and Average

Sample Operation and Measurement :

Radiated Emission :

The sample was tested under normal operation for various modes with supply from the USB port of a computer system. An initial pre-scan was performed in the Open Area Test Site to find out the worst operation mode for maximum emission level. Final measurement was then performed and the measurement data were shown on page 10.

Refer to page 11 for notes for radiated emission measurement.

Conducted Emission :

The sample was tested under normal operation with supply from the USB port of a computer system. The host computer was connected to the LISN for conducted emission measurement. The measurement data were shown on page 12 – 13.

Refer to page 14 for notes for conducted emission measurement.

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Radiated Emission
According: FCC Part 15 Subpart B (15.109)

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IECC Ref:	44552	
Model:	9845	Test Equipment
Applicant:	CHOWS INDUSTRIAL (CHINA) LIMITED	Receiver: Rohde & Schwarz ESVP
		Antenna: Schaffner CBL6111C
Ser. No.:	--	
Set under test:	USB 4-Ports Hub Mini Ionizer	
Connected sets:	-	
Operating mode:	Operated with host computer system + Ionizer ON	

Frequency (MHz)	Horz. Reading dB(μV)	Vert. Reading dB(μV)	Corr. Factor (dB)	Horiz. Test Result dB(μV/m)	Vert. Test Result dB(μV/m)	Limit dB(μV/m)
30	< 16	< 16	18.0	< 34.0	< 34.0	40.0
48	< 16	< 16	8.9	< 24.9	< 24.9	40.0
51	< 16	< 16	7.8	< 23.8	< 23.8	40.0
54	< 16	< 16	6.8	< 22.8	< 22.8	40.0
153	< 16	< 16	11.0	< 27.0	< 27.0	43.5
156	< 16	< 16	10.9	< 26.9	< 26.9	43.5
159	< 16	< 16	10.7	< 26.7	< 26.7	43.5
168	< 16	< 16	10.0	< 26.0	< 26.0	43.5
180	< 16	< 16	9.1	< 25.1	< 25.1	43.5
200	< 16	< 16	9.1	< 25.1	< 25.1	43.5
240	< 16	< 16	11.9	< 27.9	< 27.9	46.0
300	< 16	< 16	13.6	< 29.6	< 29.6	46.0
500	< 16	< 16	17.8	< 33.8	< 33.8	46.0
1000	< 16	< 16	24.9	< 40.9	< 40.9	54.0

The measurements indicate that the test unit meets the FCC requirements.

Notes for Radiated Emission Measurement

1. Measurement facility:

Measurement facility located at Fanling (Hong Kong), placed on file with the FCC Pursuant to Section 2.948 of the FCC Rules (FCC Registration No. : 97774).

2. Distance between the EUT and measuring antenna:

3 meters.

3. Measuring instrumentations:

Rohde & Schwarz ESVP Test Receiver (20 - 1300 MHz) with a CISPR weighting QP detector, 6 dB bandwidth set at 120 KHz.

4. Measuring antenna:

Broad-band antenna for the frequency range 30 - 1000 MHz, connected with 10 meters coaxial cable. Cable loss of the coaxial cable included in the Antenna Factor for measurement data. The antenna is capable of measuring both horizontal and vertical polarizations. The antenna was raised from 1 to 4 meters to find out the maximum emission level from the EUT.

5. Frequency range scanned:

The frequency range 30 - 1000 MHz has been scanned. Readings of the highest emissions relating to the limit were reported as above.

6. Arrangement of EUT:

During the test, the sample was placed on a turn table and operated under various modes at rated supply voltage. The table is 0.8 meter above ground and can rotate 360 degrees to determine the position of the maximum emission level.

7. Measuring Procedure:

In **accordance** with the relevant sections of the American National Standards Institute (ANSI) C63.4-2003 'Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9KHz to 40GHz'.

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Acc: Conducted Emission
FCC Part 15 Subpart B (15.107)

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IECC Ref: 44552
Model: 9845
Applicant: CHOWS INDUSTRIAL (CHINA) LIMITED
Ser.Nr.: --
Set under test: USB 4-Ports Hub Mini Ionizer
Connected sets: -
Operating mode: Operated with host computer system + Ionizer On
Remark: Line measurement

Test Equipment
Receiver: Rohde & Schwarz ESH 3
Schwarzbeck NNLA 8119

Frequency (MHz)	Test Result (Quasi-Peak) dB(μV)	Test Result (Average) dB(μV)	Limit (Quasi-Peak) dB(μV)	Limit (Average) dB(μV)
0.15	58	41	66	56
0.16	58.5	45	65	55
0.19	44	< 25	64	54
0.26	40	< 25	61	51
0.39	32	< 25	58	48
0.58	< 25	< 25	56	46
0.74	< 25	< 25	56	46
1	< 25	< 25	56	46
2.3	< 25	< 25	56	46
3.8	26	< 25	56	46
5.6	< 25	< 25	60	50
7.8	< 25	< 25	60	50
10.9	< 25	< 25	60	50
23.8	< 25	< 25	60	50
30	29	< 25	60	50

The measurements indicate that the test unit meets the FCC requirements.

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Acc: Conducted Emission
FCC Part 15 Subpart B (15.107)

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IECC Ref: 44552
Model: 9845
Applicant: CHOWS INDUSTRIAL (CHINA) LIMITED
Ser.Nr.: --
Set under test: USB 4-Ports Hub Mini Ionizer
Connected sets: -
Operating mode: Operated with host computer system + Ionizer On
Remark: Neutral measurement

Test Equipment
Receiver: Rohde & Schwarz ESH 3
Schwarzbeck NNLA 8119

Frequency (MHz)	Test Result (Quasi-Peak) dB(μV)	Test Result (Average) dB(μV)	Limit (Quasi-Peak) dB(μV)	Limit (Average) dB(μV)
0.15	58	41	66	56
0.16	58.5	45	65	55
0.19	49	28.5	64	54
0.26	43	28	61	51
0.39	29	< 25	58	48
0.58	25	< 25	56	46
0.74	25	< 25	56	46
1	< 25	< 25	56	46
2.3	< 25	< 25	56	46
3.8	25	< 25	56	46
5.6	< 25	< 25	60	50
7.8	< 25	< 25	60	50
10.9	< 25	< 25	60	50
23.8	< 25	< 25	60	50
30	30	< 25	60	50

The measurements indicate that the test unit meets the FCC requirements.

Notes for Voltage Measurement

1. LISN (Line Impedance Stabilization Network) used:

LISN in accordance with CISPR 16-1.

2. Measuring instrumentations:

Rohde & Schwarz ESH3 Test Receiver (9 KHz - 30 MHz) with a CISPR weighting QP detector, 6 dB bandwidth set at 10 KHz.

3. Frequency range scanned:

The frequency range 150 KHz - 30 MHz has been scanned. Readings of the highest emissions relating to the limit were reported as above.

4. Setup of EUT:

Connection of equipment and operation conditions are the same as those in the Radiation measurement.

5. Measuring Procedure:

In accordance with the relevant sections of the American National Standards Institute (ANSI) C63.4-2003 'Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9KHz to 40GHz'

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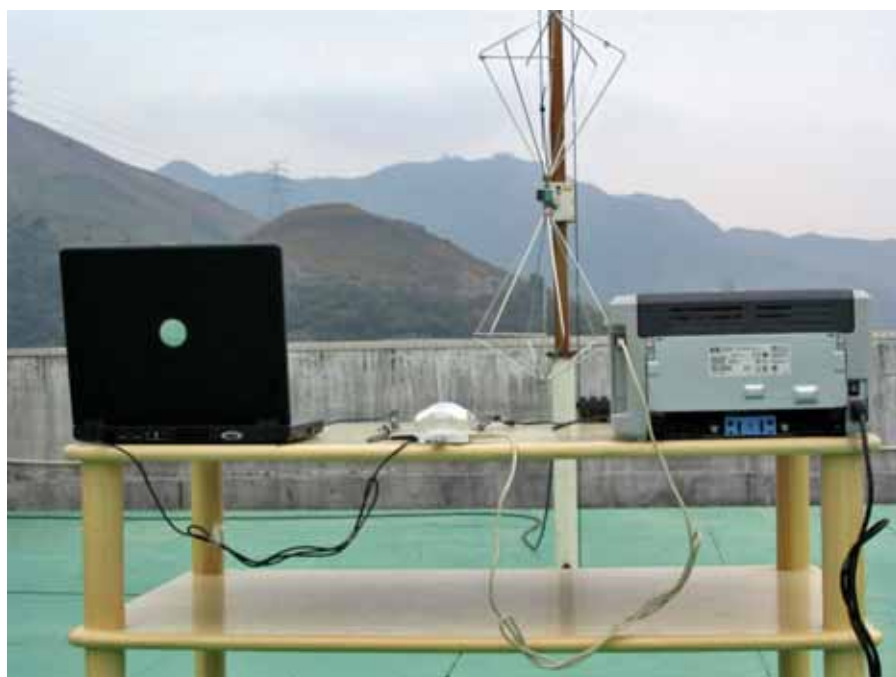
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Photographs

Radiated Emission Test setup



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Conducted Emission Test Setup



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Sample Construction Details



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Sample Construction Details



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Sample Construction Details

