

# ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

Test Report No. : W17NR-D074

AGR No. : A17NA-015

Applicant : Sennheiser Electronic Corp

Address : 1 Enterprise Drive Old Lyme Connecticut 06371 United States

Manufacturer : Sennheiser Communications A/S

Address : Industriparken 27, DK-2750 Ballerup, Denmark

Type of Equipment : In-ear headset

FCC ID. : DMOSCBT8

Model Name : SCBT8

Multiple Model Name : N/A

Serial number : N/A

Total page of Report : 7 pages (including this page)

Date of Incoming : November 06, 2017

Date of issue : November 23, 2017

## SUMMARY

The equipment complies with the regulation; *FCC PART 15 SUBPART C Section 15.247*


This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by:

  
Jae-Ho Lee / Chief Engineer  
ONETECH Corp.

Approved by:

  
Keun-Young, Choi / Vice President  
ONETECH Corp.

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**Revision History**

Issued Report No.	Issued Date	Revisions	Effect Section
W17NR-D074	November 23, 2017	Initial Issue	All

## 1. VERIFICATION OF COMPLIANCE

Applicant : Sennheiser Electronic Corp  
Address : 1 Enterprise Drive Old Lyme Connecticut 06371 United States  
Contact Person : Michael Lieske  
Telephone No. : 860-434-9190  
FCC ID : DMOSCBT8  
Model Name : SCBT8  
Serial Number : N/A  
Date : November 23, 2017

EQUIPMENT CLASS	DSS – PART 15 SPREAD SPECTRUM TRANSMITTER
E.U.T. DESCRIPTION	In-ear headset
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

## 2. GENERAL INFORMATION

### 2.1 Product Description

The Sennheiser Electronic Corp, Model SCBT8 (referred to as the EUT in this report) is a In-ear headset. Product specification information described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	In-ear headset	
OPERATING FREQUENCY	2 402 MHz ~ 2 480 MHz	
RF OUTPUT POWER	1 Mbps	7.57 dBm
	2 Mbps	6.27 dBm
	3 Mbps	6.41 dBm
NUMBER OF CHANNEL	79 Channels	
MODULATION TYPE	GFSK for 1 Mbps, $\pi/4$ -DQPSK for 2 Mbps, 8-DPSK for 3 Mbps	
ANTENNA TYPE	PCB Flex Antenna	
ANTENNA GAIN	1.7 dBi	
LIST OF EACH OSC. OR CRYSTAL. FREQ.(FREQ. $\geq$ 1 MHz)	26 MHz	
RATED SUPPLY VOLTAGE	DC 3.7 V	

### 2.2 Alternative type(s)/model(s); also covered by this test report.

-. None

## 3. EUT MODIFICATIONS

-. None

## 4. MAXIMUM PERMISSIBLE EXPOSURE

### 4.1 EUT Description

Kind of EUT	In-ear headset	
Operating Frequency Band	<input type="checkbox"/> Wireless Microphone: 494.000 MHz ~ 501.000 MHz and 498.200 MHz ~ 505.200 MHz <input type="checkbox"/> WLAN: 2 412 MHz ~ 2 462 MHz <input type="checkbox"/> WLAN: 5 180 MHz ~ 5 240 MHz <input type="checkbox"/> WLAN: 5 745 MHz ~ 5 825 MHz <input checked="" type="checkbox"/> Bluetooth: 2 402 MHz ~ 2 480 MHz <input type="checkbox"/> Bluetooth BLE: 2 402 MHz ~ 2 480 MHz	
MAX. RF OUTPUT POWER	1 Mbps	7.57 dBm
	2 Mbps	6.27 dBm
	3 Mbps	6.41 dBm
Antenna Gain	1.7 dBi	
Exposure Evaluation Applied	<input type="checkbox"/> MPE <input type="checkbox"/> SAR <input checked="" type="checkbox"/> N/A	

#### 4.2 Calculated MPE Safe Distance

According to the procedure, KDB 447498 D01, the standalone SAR test exclusion threshold is

$$[(\text{Max. Power of channel, including tune-up tolerance, mW})/(\text{Mim. test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] < 3$$

$$= (2.39/5) \times \sqrt{2.441} = 0.75$$

Conclusion: The SAR test exclusion threshold is less than 3, so the device meets the RF Exposure Requirement and excluded SAR Test.

	Frequency (MHz)	Target Power W/tolerance (dBm)	Max tune up power (dBm)	Max tune up power (mW)	Separation distance (mm)	RF exposure
1 Mbps	2 441	8.00 ± 0.5	8.50	7.08	5	2.21
2 Mbps	2 441	6.50 ± 0.5	7.00	5.01	5	1.57
3 Mbps	2 441	6.50 ± 0.5	7.00	5.01	5	1.57