

Application for FCC Certification
On behalf of

AFCO INC.

Product Name: Bluetooth remote control

Model No.: 16-SABTS

FCC ID: QWI16-SABTS

(MPE Calculation)

Prepared For : AFCO INC.
P.O.BOX 177 Memphis TN 38101, USA

Prepared By : Audix Technology (Shanghai) Co., Ltd.
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Report No. : ACI-F12180
Date of Test : Oct. 31, 2012
Date of Report : Nov. 06, 2012

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TEST REPORT FOR FCC CERTIFICATE

Applicant : AFCO INC.
 Manufacturer : Hangzhou Newsources Electronics Co., Ltd.

EUT Description : Bluetooth remote control
 (A) Model No. : 16-SABTS
 (B) Power Supply : DC 12V
 (C) Test Voltage : DC 12V

Test Procedure Used:

FCC OET Bulletin 65 August 1997

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC OET Bulletin 65.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report also shows that the EUT (M/N: 16-SABTS), which was tested on Oct. 31, 2012 is technically compliance with the FCC limits.


This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Oct. 31, 2012 Date of Report : Nov. 06, 2012

Producer : *Kathy Wang*
 KATHY WANG / Assistant

Review : *Dio Yang*
 DIO YANG / Assistant Manager

 For and on behalf of
 Audix Technology (Shanghai) Co., Ltd.

Signatory : *Sunny Chan for*
 Authorized Signature EMC BYRON KWO / Assistant General Manager

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test

Description : Bluetooth remote control

Type of EUT Production Pre-product Pro-type

Model Number : 16-SABTS

Radio Tech : Bluetooth

Freq. Band : 2402 MHz ~ 2480 MHz
Total 79 Channels

Tested Freq. : 2402 MHz (Channel 00)
2441 MHz (Channel 39)
2480 MHz (Channel 78)

Antenna Gain : 0 dBi

Applicant : AFCO INC.
P.O. BOX 177 Memphis TN 38101, USA

Manufacturer : Hangzhou Newsources Electronics Co., Ltd.
No. 7 Houyang Rd, Anxi Industrial Zone,
Liangzhu, Hangzhou, China

1.2 Description of Test Facility

Site Description (Semi-Anechoic Chamber) : Sept. 17, 1998 file on
Apr 29, 2009 Renewed
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046, USA

Name of Firm : Audix Technology (Shanghai) Co., Ltd.

Site Location : 3 F 34 Bldg 680 Guiping Rd.,
Caohejing Hi-Tech Park,
Shanghai 200233, China

FCC registration Number : 91789

Accredited by NVLAP, Lab Code : 200371-0

1.3 Measurement Uncertainty

Output Power Expanded Uncertainty : U = 0.30 dB

2 SUMMARY OF STANDARDS AND RESULTS

2.1 Applicable Standard

FCC OET Bulletin 65:1997

2.2 Specification Limits

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 Time 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 ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/150	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

*Plane-wave equivalent power density

NOTE: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

The limit value 1.0mW/cm² is available for this EUT.

2.3 MPE Calculation Method

$$S = PG/(4 \pi R^2)$$

$$R = [PG/(4 \pi S)]^{0.5}$$

where: S = power density (in appropriate units, e.g. mW/ cm²)

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

(the measured power value see Report: F12179 Section 5.6)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

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

2.4 Calculated Result

2.4.1 Radio Frequency Radiation Exposure Evaluation – Non-EDR

Frequency (MHz)	Output Power to Antenna (mW)	Antenna Gain		Power Density (mW/cm ²)	Limit (mW/cm ²)
		(dBi)	(Numeric)		
2402	1.02	0.00	1.00	0.000203	1.0
2441	2.19	0.00	1.00	0.000436	1.0
2480	1.87	0.00	1.00	0.000372	1.0

Separation distance R= 20cm.

Frequency (MHz)	Output Power to Antenna (mW)	Antenna Gain		Limit (mW/cm ²)	Distance (cm)
		(dBi)	(Numeric)		
2402	1.02	0.00	1.00	1.0	0.28
2441	2.19	0.00	1.00	1.0	0.42
2480	1.87	0.00	1.00	1.0	0.39

The antenna used for this transmitter must be installed to provide a separation distance of at least 0.42cm from all persons.

2.4.2 Radio Frequency Radiation Exposure Evaluation – EDR

Frequency (MHz)	Output Power to Antenna (mW)	Antenna Gain		Power Density (mW/cm ²)	Limit (mW/cm ²)
		(dBi)	(Numeric)		
2402	1.31	0.00	1.00	0.000261	1.0
2441	2.56	0.00	1.00	0.000509	1.0
2480	2.46	0.00	1.00	0.000489	1.0

Separation distance R= 20cm.

Frequency (MHz)	Output Power to Antenna (mW)	Antenna Gain		Limit (mW/cm ²)	Distance (cm)
		(dBi)	(Numeric)		
2402	1.31	0.00	1.00	1.0	0.32
2441	2.56	0.00	1.00	1.0	0.45
2480	2.46	0.00	1.00	1.0	0.44

The antenna used for this transmitter must be installed to provide a separation distance of at least 0.45cm from all persons.