




# RF EXPOSURE REPORT



Report No.: 15020559-FCC-H1

Supersede Report No.: N/A

Applicant	Interactive Technologies, Inc.		
Product Name	8 Button Remote		
Main Model	2.4IQ58		
Test Standard	FCC 2.1093		
Test Date	June 24 to June 29, 2015		
Issue Date	June 29, 2015		
Test Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail		
Equipment complied with the specification		<input checked="" type="checkbox"/>	
Equipment did not comply with the specification		<input type="checkbox"/>	
			
William Long Test Engineer	Herve Idoko Checked By		
This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only			

Issued by:

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## Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

### Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC, RF/Wireless, SAR, Telecom
Canada	EMC, RF/Wireless, SAR, Telecom
Taiwan	EMC, RF, Telecom, SAR, Safety
Hong Kong	RF/Wireless, SAR, Telecom
Australia	EMC, RF, Telecom, SAR, Safety
Korea	EMI, EMS, RF, SAR, Telecom, Safety
Japan	EMI, RF/Wireless, SAR, Telecom
Singapore	EMC, RF, SAR, Telecom
Europe	EMC, RF, SAR, Telecom, Safety

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## 1 Report Revision History

Report No.	Report Version	Description	Issue Date
15020559-FCC-H1	NONE	Original	June 29, 2015

## 2 Customer information

Applicant Name	Interactive Technologies, Inc.
Applicant Add	15655 S. Mahaffie Street, Olathe KS 66062
Manufacturer	Beijing Jia An Electronics Technology Co.,Ltd.
Manufacturer Add	No.19 GuCheng West Street, Shi Jing Shan District, Beijing 100043, CHINA

## 3 Test site information

Lab performing tests	SIEMIC (Nanjing-China) Laboratories
Lab Address	2-1 Longcang Avenue Yuhua Economic and Technology Development Park, Nanjing, China
FCC Test Site No.	986914
IC Test Site No.	4842B-1
Test Software	Labview of SIEMIC version 1.0

## 4 Equipment under Test (EUT) Information

Description of EUT:	8 Button Remote
Main Model:	2.4IQ58
Serial Model:	N/A
Date EUT received:	June 15, 20145
Test Date(s):	June 24 to June 29, 2015
Antenna Gain:	1 dBi
Type of Modulation:	O-QPSK
RF Operating Frequency (ies):	2405-2480 MHz(TX/RX)
Number of Channels:	16CH
Port:	N/A
Input Power:	DC 3V
Trade Name :	N/A
FCC ID:	ULP-24IQ58

## 5 FCC §2.1093 - RF Exposure

### Standard Requirement:

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances*  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{GHz}}}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR,<sup>16</sup> where

- $f_{\text{GHz}}$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum *test separation distance* is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

### Test Result:

Type	Test mode	CH	Freq (MHz)	Conducted Power (dBm)	Tune Up Power (dBm)
Output power	2.4G	Low	2405	-17.165	-18.0±1
		Mid	2440	-17.421	
		High	2480	-18.358	

One antenna is available for the EUT.

### 2.4G Mode:

The maximum output power(turn-up power) in low channel of 2.4G is -17.0 dBm=0.02 mW

The calculation results=  $0.02/5 \cdot \sqrt{2.405} = 0.006 < 3$

The maximum output power(turn-up power) in middle channel of 2.4G is -17.0 dBm=0.02mW

The calculation results=  $0.02/5 \cdot \sqrt{2.440} = 0.006 < 3$

The maximum output power(turn-up power) in high channel of 2.4G is -17.0 dBm=0.02 mW

The calculation results= $0.02/5 \cdot \sqrt{2.480} = 0.006 < 3$

Test Result: Pass