

CENTRE OF TESTING SERVICE INTERNATIONAL

OPERATE ACCORDING TO ISO/IEC 17025

FCC&IC TEST REPORT

TEST REPORT NUMBER : CNB3100122-00270&00271-E



CENTRE OF TESTING SERVICE CO., LTD. Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China.

FCC ID: PH3DJ-X11T IC ID:3070C-DJX11K

CENTRE OF TESTING SERVICE





TEST REPORT For FCC & IC ID

47 CFR PART 15:2009, 47 CFR PART 2:2009 RSS-215 Issue 2, ANSI C63.4-2009

Compiled by:	Supervised by: Approved by:		
Result	Positive		
	 5.4~6.0 VDC external supply or internal battery 4.5VDC (AA battery) or internal battery 3.7VDC (lithium-ion battery). 		
Model/Type reference	DJ-X11T (US Version), DJ-X11K (Canadian Version)		
Manufacturer	Alinco Inc. Electronic Div.		
Trade Mark	ALINCO		
Test item description	Model DJ-X11T portable VHF AM and FM receiver operating in the 0.05~1299.99995MHz frequency band, hereafter referred to as the EUT. Included are the following accessories: 115V wall charger EDC-140 and EDC 139. Li-ion batteries EBP-74. USB cable ERW-8.		
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-	CENTRE OF TESTING SERVICE CO., LTD		
Test Report Form No.	RSS-215 Issue 2, ANSI C63.4-2003		
-	47 CFR PART 15:2009, 47 CFR PART 2:2006		
Test specification	Japan.		
Address	Yodoyabashi Daibiru Building,4-4-9,Koraibashi, Chuo-ku, Osaka 541-0043,		
Applicant's name	Alinco Inc. Electronic Div.		
	Other standard testing method \Box		
	Partial application of Harmonised standards \Box		
Testing location/ procedure	Guangzhou, China.		
•	Building F, Dachuang industrial park, No.379, Zhongshan Dadao,		
	. CETRE OF TESTING SERVICE CO., LTD		
Date of issue	CNB3100122-00270&00271-E 02 March 2010		

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FCC ID&IC -- TEST REPORT

Test Report No. : CNB3100122-00270&00271-E

02 March 2010 Date of issue

Type / Model	DJ-X11T (US Version), DJ-X11K (Canadian Version)	
EUT	Wide Band Communication Receiver	
Applicant	Alinco Inc. Electronic Div.	
Address	Yodoyabashi Daibiru Building, 4-4-9,Koraibashi, Chuo-ku, Osaka 541-0043, Japan.	
Telephone	+81-6-7636-2363	
Fax	+81-6-6208-3803	
Contact	Katsumi Nakata	
Manufacturer	Alinco Inc. Electronic Div.	
Address	Yodoyabashi Daibiru Building, 4-4-9,Koraibashi, Chuo-ku, Osaka 541-0043, Japan.	
Telephone	+81-6-7636-2363	
Fax	+81-6-6208-3803	
Contact	Katsumi Nakata	
Test report holder	Alinco Inc. Electronic Div.	
Address	Yodoyabashi Daibiru Building, 4-4-9,Koraibashi, Chuo-ku, Osaka 541-0043, Japan.	
Telephone	+81-6-7636-2363	
Fax	+81-6-6208-3803	
Contact	Katsumi Nakata	

Positive Test Result according to the standards on page 3:

The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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FCC ID: PH3DJ-X11T IC ID:3070C-DJX11K

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See Reverse For Terms And Conditions of Service

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1 TEST STANDARDS

The tests were performed according to following standards:

- 47 CFR PART 15 :2009 Radio Frequency Devices
- 47 CFR PART 2 :2009 Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
- ANSI C63.4-2009 Standard Format Measurement/Technical Report Personal Computer and Peripherals
- RSS-215 Issue 2 Analogue Scanner Receivers

2 SUMMARY

2.1 GENERAL REMARKS

Date of receipt of test sample	25 January 2010
Testing commenced on	26 January 2010
Testing concluded on	01 March 2010

2.2 FINAL ASSESSMENT

The FCC and ICrequirements pertaining to the technical standards and tested operation modes are

- fulfilled.
- □ **not** fulfilled.

The equipment under test

- - fulfils the FCC & IC requirements cited on page 3.
- □ **does not** fulfil the FCC & IC requirements cited on page 3.

2.3 General Information

The following application for certification of an analog scanning receiver is prepared on behalf of Alinco Incorporated; Electronics Division, in accordance with FCC Rules and Regulations Parts 2 and 15 and Industry Canada RSS-215. The Equipment Under Test (EUT) is Model DJ-X11T/DJ-X11K, FCC ID: PH3DJ-X11T, IC: 3070C-DJX11K respectively. The DJ-X11T is the US version and does not receive in the Cellular Radiotelephone Service frequency bands. The DJ-X11K is the Canadian version. The test results reported in this document relate only to the item that was tested.

All measurements contained in this application were conducted in accordance with ANSI C63.4 Methods of Measurement of Radio Noise Emissions, 2009. The instrumentation utilized for the measurements conforms to the ANSI C63.4 standard for EMI and Field Strength Instrumentation. Some accessories are used to increase sensitivity and prevent overloading of the measuring instrument. Calibration checks are performed regularly on the instruments, and all accessories including the high pass filter, preamplifier and cables.

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2.3.1 Modifications

No modifications were made during testing.

2.3.2 Related Submittal(s)/Grant(s)

This is an original certification application.

2.3.3 Test Methodology

Radiated testing was performed according to the procedures in ANSI C63.4 2009. Radiated testing was performed at an antenna-to-EUT distance of 3 meters.

2.4 System Test Configuration

2.4.1 Justification

To complete the test configuration required by the FCC, the receiver was connected to an external antenna, which receives a signal from a signal generator output. With the antenna installed, the receiver indicator was used to determine optimal reception. The EUT's intermediate frequencies (IF), local oscillators (LO), crystal oscillators and harmonics of each were investigated. Conducted emissions were measured from the AC port of the charger. All modes were investigated and tested, including standby mode and scanning mode. The final radiated data was taken with the EUT locked to a set frequency.

2.4.2 Exercising the EUT

The DJ-X11T/DJ-X11K is a receiver designed to function at the following frequency range: 0.050~1299.99995 MHz. In order to activate the receiver circuitry, a signal was transmitted from a signal generator. This allowed the EUT to function in its typical state throughout the course of all testing.

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3 EQUIPMENT UNDER TEST

3.1 Power supply system utilised

Power supply voltage

■ 5.4~6.0 VDC external supply or internal battery 4.5VDC (AA battery) or internal battery 3.7VDC (lithium-ion battery).
 □ Other (Specified blank below)

3.2 Short description of the Equipment under Test (EUT)

÷

Number of tested samples: **1** Serial number: Prototype

3.3 EUT operation frequency range

Frequency Range (MHz)	Output Power (W)	Frequency Tolerance	Emission Designator
0.05~1299.99995	N/A	N/A	N/A

3.4 EUT operation mode

The equipment under test was operated during the measurement under the following conditions:

- □ Standby
- Test program (customer specific)

Operation mode 1: Select the band to operate, referring for the range of the receivable frequencies for each band.

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4 TEST ENVIRONMENT

4.1 Address of the test laboratory

Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

4.2 Test facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L3394

CENTRE OF TESTING SERVICE CO., LTD has been assessed and proved to be in compliance with CNAS-CL01: 2006 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

IC-Registration No.: 8374

The 3m Alternate Test Site of CENTRE OF TESTING SERVICE CO., LTD has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 8374 on June 24, 2009 .

FCC-Registration No.: 971995

CENTRE OF TESTING SERVICE CO., LTD, EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration No.971995, July 21, 2009.

4.3 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

15~35 °C
25~75 %
86~106 kPa

4.4 Definitions of symbols used in this test report

- - The black square indicates that the listed condition, standard or equipment is applicable for this report.
- The empty square indicates that the listed condition, standard or equipment is **not** applicable for this report.

4.5 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the CTS quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

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4.6 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Conduction disturbance	150kHz~30MHz	±1.22dB	(1)
Power disturbance	30MHz~300MHz	±1.38dB	(1)
Radiation emission (3m)	30MHz~300MHz	±3.14dB	(1)
	300MHz~1000MHz	±3.18dB	(1)

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5 Summary of standards and results

5.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION				
Description of Test Item	Standard	Results		
Conducted Disturbance Emission Test	PCC PART 15 §15.107(b) ANSI C63.4-2009	PASSED		
Radiated Emission Test	PCC PART 15 §15.109(a) ANSI C63.4-2009	PASSED		
38 dB Rejection Test	PCC PART 15 §15.121(b) ANSI C63.4-2009	PASSED		
N/A is an abbreviation for Not Applicable.				

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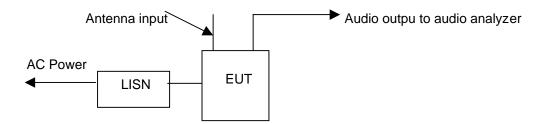
6 Power line conducted Emission Test

6.1 Test Equipment used

Condu	Conducted Disturbance				
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESHS10	842884/012	2009/12
2	Artificial Mains	ROHDE & SCHWARZ	ESH3-Z5	832479/025	2009/12
3	Signal generator	ROHDE & SCHWARZ	SML03	102986	2009/12
4	Pulse Limiter	ROHDE & SCHWARZ	ESHSZ2	100301	2009/12
5	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2009/12
6	Signal generator	ROHDE & SCHWARZ	SML03	102986	2009/12

6.2 Block Diagram of Test Setup

6.2.1 Block Diagram of connection between EUT and simulators



(EUT: Wide Band Communication Receiver)

6.3 Power Line Conducted Emission Test Limits §15.107(b)

	Maximum RF Line Voltage	
Frequency	Quasi-Peak Level	Average Level
	dB(μV)	dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

6.4 Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application

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6.5 Operating Condition of EUT

6.5.1.Setup the EUT and simulator as shown as Section 6.2.

6.5.2. Turn on the power of all equipment.

6.5.3.Let the EUT work in test mode (RX) and measurement it.

6.6 Test Procedure

The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N.#1). This provides a 50 ohm coupling impedance for the EUT. Please refer the block diagram of the test setup and photographs. let EUT working in test mode, then test it. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC Part 15 107(b) on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS 10) is set at 10kHz.

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

The test result are reported on Section 6.7.

6.7 Power Line Conducted Emission Test Results PASSED

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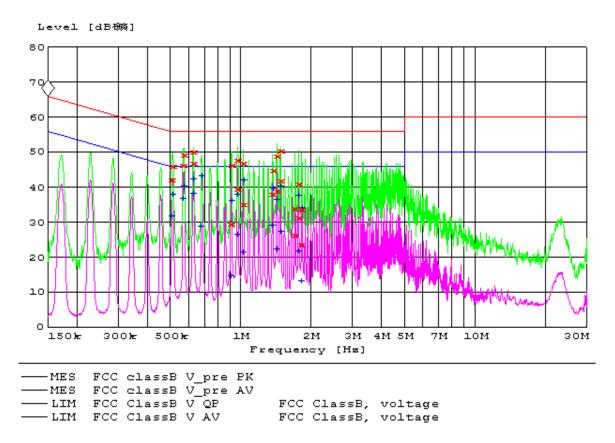
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Test point Va Operation mode 1 Remarks:		Result:	 passed not passed 		
EUT	Wide Band Communication Receiver				
Firm Name	Alinco Inc. Electronic Div.				
Power Supply	5.4~6.0 VDC external supply or internal battery 4.5VDC (AA battery) or internal battery 3.7VDC (lithium-ion battery).				
Test condition	Test condition Ambient Temperature: 20°C , Humidity:56%				
Operator	Raymond				
MODEL NO.	DJ-X11T (US Version) DJ-X11K (Canad	ian Version)			

Marker: 150 kHz 66 dB&



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MEASUREMENT RESULT: "FCC Class B V-2_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
0.510905	42.30	10.1	56	13.8	Va	GND
0.512949	46.00	10.1	56	10.0	Va	GND
0.569047	46.50	10.1	56	9.5	Va	GND
0.571323	49.30	10.1	56	6.7	Va	GND
0.626265	46.90	10.1	56	9.1	Va	GND
0.628770	50.10	10.1	56	5.9	Va	GND
0.907807	29.60	10.1	56	26.4	Va	GND
0.915084	46.50	10.1	56	9.5	Va	GND
0.967685	39.40	10.1	56	16.6	Va	GND
0.971556	47.80	10.1	56	8.2	Va	GND
1.023307	35.20	10.1	56	20.9	Va	GND
1.027400	46.90	10.1	56	9.1	Va	GND
1.369511	38.00	10.1	56	18.0	Va	GND
1.374989	44.90	10.1	56	11.1	Va	GND
1.425294	38.90	10.1	56	17.1	Va	GND
1.430995	48.90	10.1	56	7.1	Va	GND
1.483336	42.00	10.1	56	14.0	Va	GND
1.489269	50.50	10.1	56	5.5	Va	GND
1.705776	26.30	10.1	56	29.7	Va	GND
1.712599	34.00	10.1	56	22.0	Va	GND
1.768171	31.40	10.1	56	24.6	Va	GND
1.775244	41.00	10.1	56	15.0	Va	GND
1.818284	23.70	10.1	56	32.3	Va	GND
1.825557	33.60	10.1	56	22.4	Va	GND

MEASUREMENT RESULT: "EN 55022 V-2 fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
0.510905	31.80	10.1	46	14.2	Va	GND
0.515001	38.20	10.1	46	7.8	Va	GND

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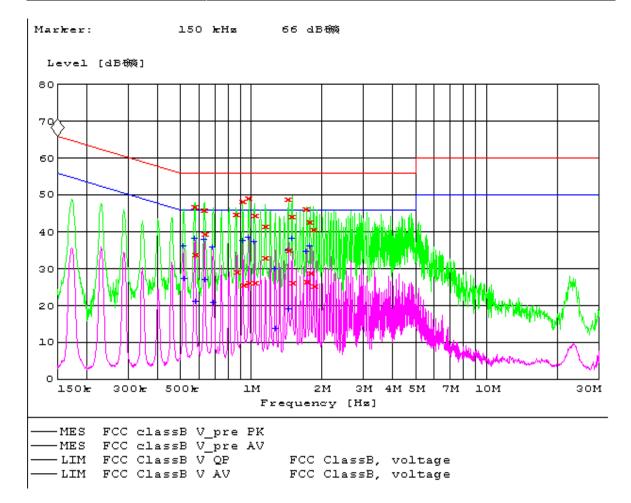
FCC ID: PH3DJ-X11T IC ID:3070C-DJX11K

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Test point:	Vb	Result:	- passed
Operation mode 1			- not passed
Remarks:			

EUT	Wide Band Communication Receiver
Firm Name	Alinco Inc. Electronic Div.
Power Supply	5.4~6.0 VDC external supply or internal battery 4.5VDC (AA battery) or internal battery 3.7VDC (lithium-ion battery).
Test condition	Ambient Temperature: 20°C, Humidity:56%
Operator	Raymond
MODEL NO.	DJ-X11T (US Version) DJ-X11K (Canadian Version)



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MEASUREMENT RESULT: "FCC Class B V-2_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
0.573605	46.80	10.1	56	9.2	Vb	GND
0.578203	34.00	10.1	56	22.0	Vb	GND
0.631285	46.00	10.1	56	10.0	Vb	GND
0.633810	39.70	10.1	56	16.3	Vb	GND
0.858460	44.90	10.1	56	11.1	Vb	GND
0.865342	29.20	10.1	56	26.8	Vb	GND
0.915080	48.30	10.1	56	7.7	Vb	GND
0.926105	25.70	10.1	56	30.3	Vb	GND
0.971550	49.20	10.1	56	6.8	Vb	GND
0.983255	26.30	10.1	56	29.7	Vb	GND
1.031510	44.50	10.1	56	11.5	Vb	GND
1.039778	26.40	10.1	56	29.6	Vb	GND
1.144329	41.60	10.1	56	14.5	Vb	GND
1.148906	33.00	10.1	56	23.0	Vb	GND
1.430991	49.10	10.1	56	6.9	Vb	GND
1.436715	35.20	10.1	56	20.8	Vb	GND
1.489273	44.40	10.1	56	11.6	Vb	GND
1.501211	26.20	10.1	56	29.8	Vb	GND
1.712600	46.20	10.1	56	9.8	Vb	GND
1.726328	26.60	10.1	56	29.4	Vb	GND
1.775243	42.70	10.1	56	13.3	Vb	GND
1.782344	28.90	10.1	56	27.1	Vb	GND
1.832852	40.80	10.1	56	15.2	Vb	GND
1.847544	25.40	10.1	56	30.6	Vb	GND

MEASUREMENT RESULT: " FCC Class B V-2 fin AV"

Frequency	Level	Transd	Limit	Margin	Line	ΡE
MHz	dBµV	dB	dBµV	dB		
0.514992	36.20	10.1	46	9.8	Vb	GND
0.519120	27.40	10.1	46	18.6	Vb	GND

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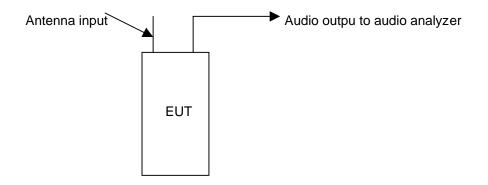
7 Radiated disturbance (electric field)

7.1 Test Equipment used

Radia	Radiated disturbance (electric field)								
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.				
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100868	2009/12				
2	Biconical Antenna	ROHDE & SCHWARZ	HK116	100221	2009/12				
3	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2009/12				
4	Log per Antenna	ROHDE & SCHWARZ	HL050	100186	2009/12				
5	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2009/12				
6	Signal generator	ROHDE & SCHWARZ	SML03	102986	2009/12				

7.2 Block Diagram of Test Setup

7.2.1 Block Diagram of connection between EUT and simulators



(EUT: Wide Band Communication Receiver)

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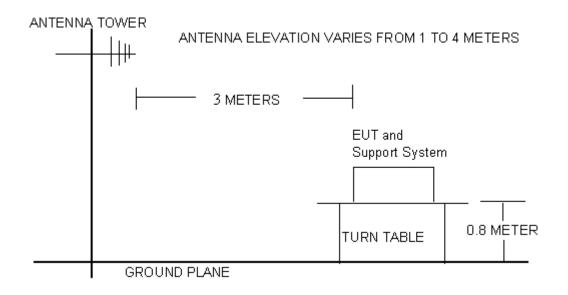
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7.2.2 Anechoic Chamber Setup Diagram



7.3 Radiated Emission Limit Standard §15.109(a) & RSS-215 Section 7

FREQUENCY	DISTANCE	FIELD STRENGTHS LIMIT		
MHz	Meters	μV/m	dB(µV)/m	
30 ~ 88	3	100	40.0	
88 ~ 216	3	150	43.5	
216 ~ 960	3	200	46.0	
960 ~ 1000	3	500	54.0	
Above 1000	3	Other:74.0 dB(µV)/m (Peak)		
	3	54.0 dB(μV)/m (Average)		

Remark: (1) Emission level $dB\mu V = 20 \log Emission level \mu V/m$

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

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

7.4 EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

7.5 Operating Condition of EUT

7.5.1.Setup the EUT and simulator as shown as Section 7.2.

7.5.2.Turn on the power of all equipment.

7.5.3.Let the EUT work in test mode (RX) and measurement it.

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7.6 Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above 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 between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009 on radiated emission Test.

The frequency range from 30MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 120kHz RBW below 1GHz and a Peak and Average detector with 1MHz RBW above 1GHz,

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 300kHz VBW below 1GHz and a Peak detector with 1MHz VBW above 1GHz, A average detector with 10Hz VBW above 1GHz

The test modes (RX Mode) is tested in Anechoic Chamber and all the results are reported on section 7.7

7.7 Radiated Emission Test Results

PASSED

The frequency range from 30MHz to 230MHz and 230MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

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FCC ID: PH3DJ-X11T IC ID:3070C-DJX11K

CENTRE OF TESTING SERVICE





Test point: Operation mode 1 Remarks:	Horizontal/ Vertical	Result:	 passed not passed 				
EUT	Wide Band Communi	Wide Band Communication Receiver					
Firm Name	Alinco Inc. Electronic	Alinco Inc. Electronic Div.					
Power Supply		5.4~6.0 VDC external supply or internal battery 4.5VDC (AA battery) or internal battery 3.7VDC (lithium-ion battery).					
Test condition	Ambient Temperature	Ambient Temperature: 20°C , Humidity:56%					
Operator	Raymond						
MODEL NO.	DJ-X11T (US Versior	n) DJ-X11K (Canadian V	ersion)				

Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
132.640	QP	V	0	1.0	41.0	-16.9	24.1	43.5	-19.4
233.334	QP	Н	180	1.2	57.7	-16.1	41.6	46.0	-4.4
233.678	QP	V	0	1.0	51.0	-16.4	34.6	46.0	-11.4
287.560	QP	V	0	1.0	34.3	-13.6	20.7	46.0	-25.3
343.271	QP	Н	180	1.0	44.8	-11.4	33.4	46.0	-12.6
343.679	QP	V	0	1.5	44.4	-11.3	33.1	46.0	-12.9
687.715	QP	Н	180	2.0	33.7	-4.6	29.1	46.0	-16.9
687.767	QP	V	0	1.0	25.8	-4.5	21.3	46.0	-24.7
699.729	QP	Н	0	1.8	38.7	-4.8	33.9	46.0	-12.1
699.729	QP	V	180	1.5	38.6	-4.5	34.1	46.0	-11.9
1167.350	AV	Н	0	1.0	29.5	2.8	32.3	54.0	-21.7

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FCC Rules and Regulations Part 15§15.121(b)-38dB 8 **Rejection Test**

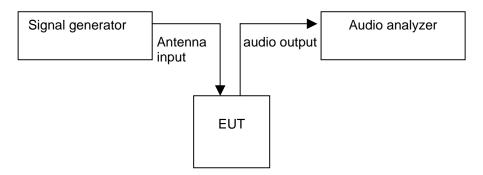
8.1 Test Equipment used

Radia	Radiated disturbance (electric field)								
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.				
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100868	2009/12				
2	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2009/12				
3	Signal generator	ROHDE & SCHWARZ	SML03	102986	2009/12				

8.2 Test Procedure

A signal generator was connected to the receiver under test, and the output of the receiver was connected to an audio analyzer.

An FM signal was applied to the receiver antenna input with a 1 kHz tone modulated at 8 kHz deviation, and adjusted with the audio analyzer to produce a 12 dB SINAD. This was done across the receiver bands to determine a reference level. The reference level used was that with the highest sensitivity in all of the bands. The output of the signal generator was then adjusted to a level 40 dB above the reference level established and set to a low, medium, and high frequency in both the mobile and base cellular bands: the mobile band being 824.04 MHz - 848.97 MHz, and the base band being 869.04 MHz - 893. 97 MHz. The squelch of the receiver was then set to a minimum threshold level, and scanning begun from the lowest to the highest channel. Whenever the receiver stopped and "un-squelched", that frequency was noted as a response. After all the frequencies of responses were noted, the signal generator was set to measure the sensitivity at each of these response frequencies. This measurement was the reference sensitivity for the particular received frequency measured. The audio analyzer measurement was used to measure the 12 dB SINAD, which is the spurious value. The difference between the reference sensitivity and the spurious value is the rejection ratio and must be at least 38 dB.



(EUT: Wide Band Communication Receiver)

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Frequencies used on the signal generator were 824.04, 836.50, and 848.97 MHz for the mobile band, and 869.04, 881.50, and 893.97 MHz for the base band.

The DJ-X11T/DJ-X11K unit reference level used was –63.7dBm from the signal generator. The DJX11T/DJ-X11K unit was scanned on all specified operating frequency ranges (per manufacturer's specifications.). Signals that were noted as responses were checked with the signal generator off. If they were still present, they were determined to be ambient signals and removed from the response list.

8.2 Test Results

8.2.1 38 dB Rejection Test Data for Base Band (869.040-893.970 MHz) Table 8-1: 38 dB Rejection {Frequency Injected: 869.040 MHz} (Cellular Band)

Frequency Injected: 869.040 MHz		Temperature: 25°C; Humidity: 56%		
Frequency Detected (MHz)	Level 12 dB SINAD at 869.040 MHz	Level 12 dB at Frequency Detected	Rejection	Margin
No Frequencies Detected	N/A	N/A	N/A	N/A

Table 8-2: 38 dB Rejection {Frequency Injected: 881.500 MHz} (Cellular Band)

Frequency Injected: 881.500 MHz		Temperature: 25°C; Humidity: 56%		
Frequency Detected (MHz)	Level 12 dB SINAD at 881.500 MHz	Level 12 dB at Frequency Detected	Rejection	Margin
No Frequencies Detected	N/A	N/A	N/A	N/A

Table 8-3: 38 dB Rejection {Frequency Injected: 893.970 MHz} (Cellular Band)

Frequency Injected: 893.970 MHz		Temperature: 25°C; Humidity: 56%		
Frequency Detected (MHz)	Level 12 dB SINAD at 893.970 MHz	Level 12 dB at Frequency Detected	Rejection	Margin
No Frequencies Detected	N/A	N/A	N/A	N/A

8.2.2 38dB Rejection Test Data for Mobile Band (824.040-848.970 MHz)

Table 8-4: 38 dB Rejection {Frequency Injected: 824.040 MHz} (Mobile Band)

Frequency Injected: 824.040 MHz		Temperature: 25°C; Humidity: 56%		
Frequency Detected (MHz)	Level 12 dB SINAD at 824.040 MHz	Level 12 dB at Frequency Detected	Rejection	Margin
No Frequencies Detected	N/A	N/A	N/A	N/A

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Table 8-5: 38 dB Rejection {Frequency Injected: 836.500 MHz} (Mobile Band)

Frequency Injected: 836.505 MHz		Temperature: 25°C; Humidity: 56%		
Frequency Detected (MHz)	Level 12 dB SINAD at 836.500 MHz	Level 12 dB at Frequency Detected	Rejection	Margin
No Frequencies Detected	N/A	N/A	N/A	N/A

Table 8-6: 38 dB Rejection {Frequency Injected: 848.970 MHz} (Mobile Band)

Frequency Injected: 848.970 MHz		Temperature: 25°C; Humidity: 56%		
Frequency Detected (MHz)	Level 12 dB SINAD at 848.970 MHz	Level 12 dB at Frequency Detected	Rejection	Margin
No Frequencies Detected	N/A	N/A	N/A	N/A

Deviation to test specifications 9

[NONE]

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