



**CENTRE OF TESTING SERVICE  
INTERNATIONAL**

**OPERATE ACCORDING TO ISO/IEC 17025**

# **FCC/IC TEST REPORT**

**TEST REPORT NUMBER : CNB3110714-02880-E**



**CENTRE OF TESTING SERVICE CO., LTD.**

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



<b>TEST REPORT For FCC ID</b>	
<b>47 CFR PART 15:2010, 47 CFR PART 2:2009 ANSI C63.4-2009, RSS-215 Issue 2</b>	
<b>Report Reference No.</b> .....	CNB3110714-02880 & 02881-E
<b>Date of issue</b> .....	22 Jul 2011
<b>Testing Laboratory Name</b> ..... <b>CETRE OF TESTING SERVICE CO., LTD</b>	
<b>Address</b> .....	Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China.
<b>Testing location/ procedure</b> .....	Full application of Harmonised standards <input checked="" type="checkbox"/> Partial application of Harmonised standards <input type="checkbox"/> Other standard testing method <input type="checkbox"/>
<b>Applicant's name</b> .....	
Alinco Inc. Electronic Div.	
<b>Address</b> .....	Yodoyabashi Daibiru Building,4-4-9,Koraibashi, Chuo-ku, Osaka 541-0043, Japan
<b>Test specification</b> .....	
Standard ..... <b>47 CFR PART 15:2010, 47 CFR PART 2:2009 ANSI C63.4-2009, RSS-215 Issue 2</b>	
<b>Test Report Form No.</b> .....	
CTSEMC-1.0	
<b>TRF Originator</b> .....	CENTRE OF TESTING SERVICE CO., LTD
<b>Master TRF</b> .....	Dated 2009-01
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<b>Test item description</b> .....	
VHF UHF FM Transceiver	
<b>Trade Mark</b> .....	ALINCO
<b>Manufacturer</b> .....	Alinco Inc. Electronic Div.
<b>Model/Type reference</b> .....	DJ-V57T
<b>Ratings</b> .....	DC 12V By Battery or DC 12V By Adapter
<b>Result</b> .....	<b>Positive</b>

**Compiled by:**

Violet Lee / File administrators

**Supervised by:**

Tom Xiao / Technique principal

**Approved by:**

Vincent Yao / Manager



## FCC ID&IC -- TEST REPORT

<b>Test Report No. :</b> CNB3110714-02880 & 02881-E	<u>22 Jul 2011</u> Date of issue
---	-------------------------------------

Type / Model.....	DJ-V57T
EUT.....	VHF UHF FM Transceiver
<b>Applicant</b> .....	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
<b>Manufacturer</b> .....	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
<b>Test report holder</b> .....	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 Result** according to the standards on page 3: **Positive**

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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## 1. TEST STANDARDS

The tests were performed according to following standards:

- 47 CFR PART 15 :2010 Radio Frequency Devices
- 47 CFR PART 2 :2009 Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
- RSS-215 Issue 2 Analogue Scanner Receivers
- ANSI C63.4-2009 Standard Format Measurement/Technical Report Personal Computer and Peripherals

## 2. SUMMARY

### 2.1 GENERAL REMARKS

Date of receipt of test sample	19 Jul 2011
Testing commenced on	19 Jul 2011
Testing concluded on	22 Jul 2011

### 2.2 FINAL ASSESSMENT

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

- - fulfilled.
- **not** fulfilled.

The equipment under test

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



### 3. TEST ENVIRONMENT

#### 3.1 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

#### 3.2 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.: 8374A**

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. 8374A on June 6, 2011 .

##### **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.

#### 3.3 Environmental conditions

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

Temperature:	15~35 °C
Humidity:	25~75 %
Atmospheric pressure:	86~106 kPa

#### 3.4 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.

#### 3.5 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.

### 3.6 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.

## 4. Summary of standards and results

### 4.1 Description of Standards and Results

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

Standards Referenced for this Report	
<b>Part 2: 2009</b>	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
<b>Part 15.121: 2010</b>	Radio Frequency Devices; Scanning Receivers and Frequency Converters Used with Scanning Receivers
<b>ANSI C63.4-2009</b>	Standard Format Measurement/Technical Report Personal Computer and Peripherals
<b>RSS-215 Issue 2</b>	Analogue Scanner Receivers

Frequency Range (MHz)	Output Power (W)	Frequency Tolerance	Emission Designator
144.000~147.995	N/A	N/A	N/A
420.000~449.995	N/A	N/A	N/A
136.000~173.995	N/A	N/A	N/A
400.000~511.995	N/A	N/A	N/A

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## 5. GENERAL INFORMATION

The following application for FCC 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 . The Equipment Under Test (EUT) is Model DJ-V57T, FCC ID: PH3DJ-V57T. 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.

### 5.1 MODIFICATIONS

No modifications were made during testing.

### 5.2 RELATED SUBMITTAL(S)/GRANT(S)

This is an original certification submission.

### 5.3 TEST METHODOLOGY

Radiated testing was performed according to the procedures in ANSI C63.4 2003. Radiated testing was performed at an antenna-to-EUT distance of 3 meters.

## 6. CONFORMANCE STATEMENT

Standards Referenced for this Report	
<b>Part 2: 2004</b>	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
<b>Part 15.121: 2004</b>	Radio Frequency Devices; Scanning Receivers and Frequency Converters Used with Scanning Receivers
<b>ANSI C63.4-2003</b>	Standard Format Measurement/Technical Report Personal Computer and Peripherals
<b>RSS-215 Issue 2</b>	Analogue Scanner Receivers

Frequency Range (MHz)	Output Power (W)	Frequency Tolerance	Emission Designator
144.000~147.995	N/A	N/A	N/A
420.000~449.995	N/A	N/A	N/A
136.000-173.995	N/A	N/A	N/A
400.000-511.995	N/A	N/A	N/A

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## 7. SYSTEM TEST CONFIGURATION

### 7.1 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.

### 7.2 EXERCISING THE EUT

The DJ-V57T is a receiver designed to function at the following frequency range: 144.00~147.995 MHz, 420.00~449.995 MHz. The following frequencies were tested: 144.050MHz, 146.050MHz, 147.050MHz, 430.050MHz, 440.050MHz and 449.995MHz. Each receiver frequency was measured independently. 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.

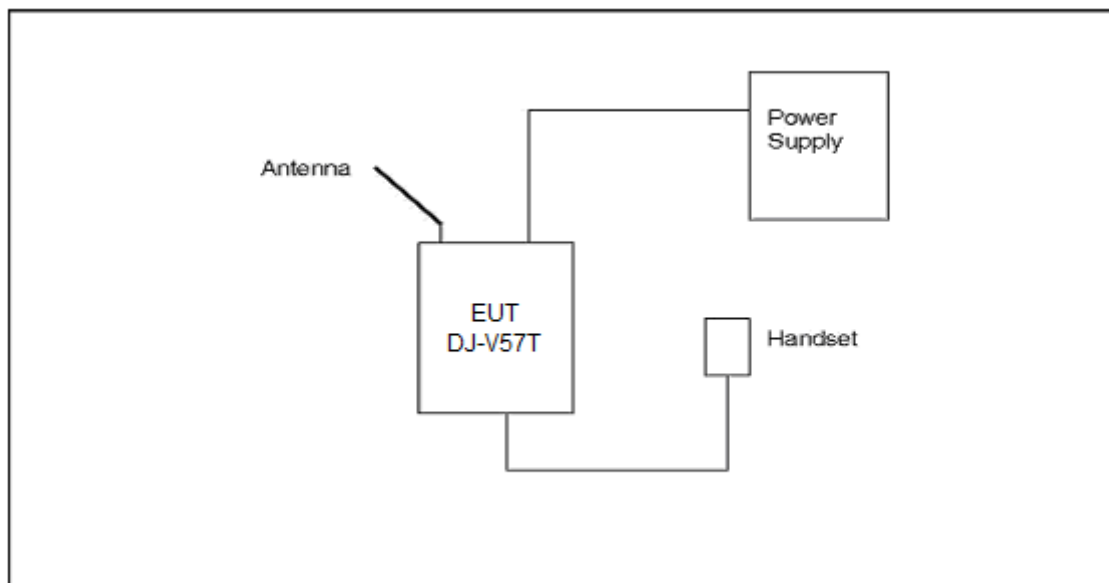
### 7.3 TEST SYSTEM DETAILS

The FCC Identifiers for all equipment, plus descriptions of all cables used in the tested system are:

TABLE 1: EQUIPMENT UNDER TEST (EUT)

Part	Manufacturer	Model	Serial Number	FCC ID	Cable Description
VHF UHF FM Transceiver	Alinco	DJ-V57T	M000401	PH3DJ-V57T	N/A

## 7.4 CONFIGURATION OF TESTED SYSTEM



## 8 Power line conducted Emission Test

### 8.1 Test Equipment used

Conducted Disturbance					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESHS10	842884/012	2010/12
2	Artificial Mains	ROHDE & SCHWARZ	ESH3-Z5	832479/025	2010/12
3	Signal generator	ROHDE & SCHWARZ	SML03	102986	2010/12
4	Pulse Limiter	ROHDE & SCHWARZ	ESHSZ2	100301	2010/12
5	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12
6	Signal generator	ROHDE & SCHWARZ	SML03	102986	2010/12

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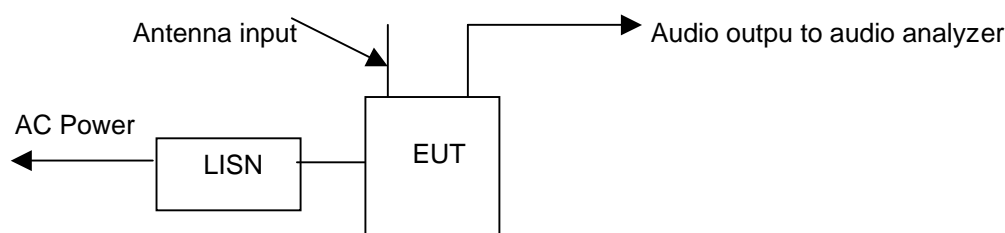
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## 8.2 Block Diagram of Test Setup

### 8.2.1 Block Diagram of connection between EUT and simulators



(EUT: VHF UHF FM Transceiver)

## 8.3 Power Line Conducted Emission Test Limits §15.107(b)

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level 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.

## 8.4 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

## 8.5 Operating Condition of EUT

- 8.5.1. Setup the EUT and simulator as shown as Section 8.2.
- 8.5.2. Turn on the power of all equipment.
- 8.5.3. Let the EUT work in test mode (RX) and measurement it.

## 8.6 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.

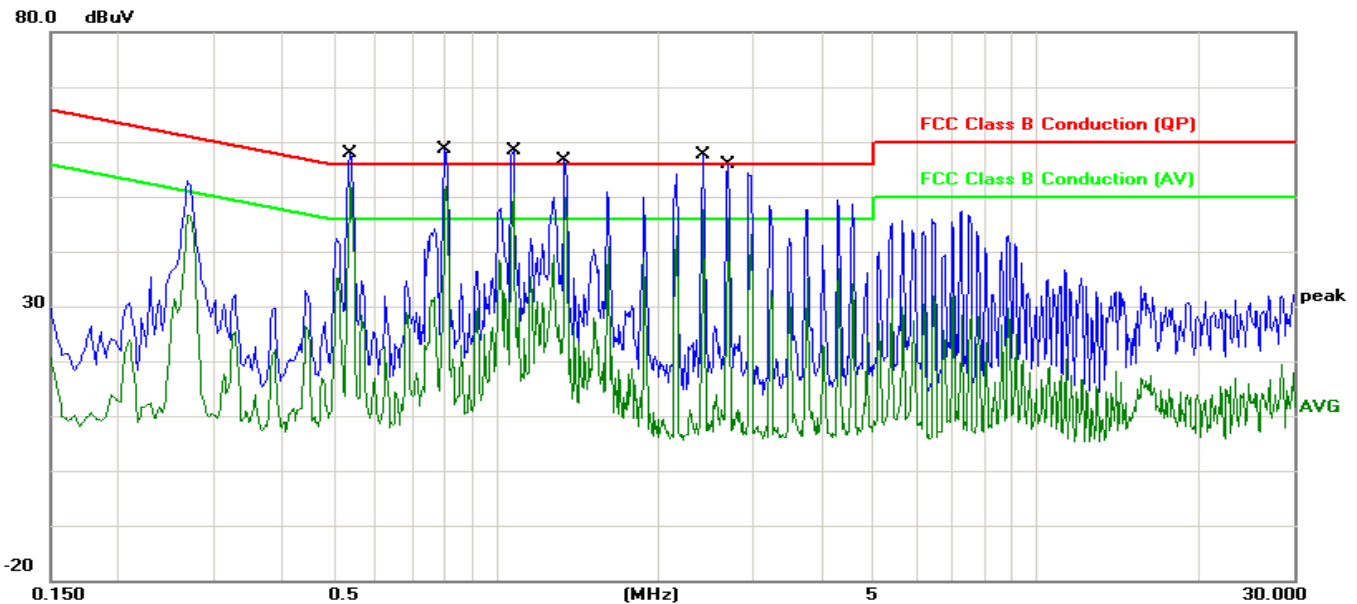
The test result are reported on Section 8.7.

### 8.7 Power Line Conducted Emission Test Results

**PASSED**

Channel:	Charger Mode	Result:	<input checked="" type="checkbox"/> - passed
Test point:	L1		<input type="checkbox"/> - not passed
Frequency range:	0.15MHz~30MHz		

EUT	VHF UHF FM Transceiver
Firm Name	Alinco Inc. Electronic Div.
Operating Condition	AC 120 for Adapter
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test Date:	19 Jun~22 Jul 2011
Operator	<b>Peter</b>
MODEL NO	DJ-V57T



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.5380	10.03	40.32	50.35	56.00	-5.65	QP
2	0.5380	10.03	27.12	37.15	46.00	-8.85	AVG
3	0.8060	10.11	29.76	39.87	56.00	-16.13	QP
4	0.8060	10.11	20.29	30.40	46.00	-15.60	AVG
5	1.0780	10.12	31.98	42.10	56.00	-13.90	QP
6	1.0780	10.12	15.26	25.38	46.00	-20.62	AVG
7	1.3420	10.10	22.09	32.19	56.00	-23.81	QP
8	1.3420	10.10	15.27	25.37	46.00	-20.63	AVG
9	2.4300	10.06	8.58	18.64	56.00	-37.36	QP
10	2.4300	10.06	-3.54	6.52	46.00	-39.48	AVG
11	2.6980	10.04	4.16	14.20	56.00	-41.80	QP
12	2.6980	10.04	-2.80	7.24	46.00	-38.76	AVG

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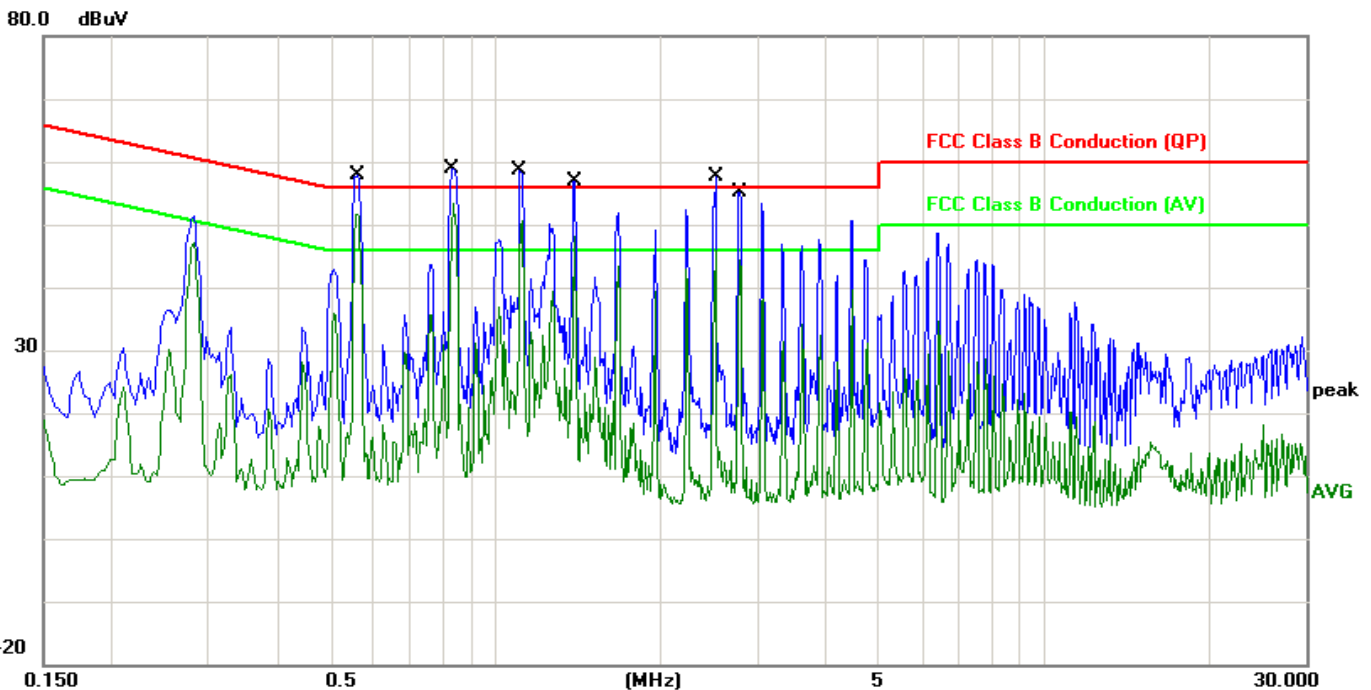
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Channel:	Charger Mode	Result:	<input checked="" type="checkbox"/> - passed
Test point:	L2		<input type="checkbox"/> - not passed
Frequency range:	0.15MHz~30MHz		

EUT	VHF UHF FM Transceiver
Firm Name	Alinco Inc. Electronic Div.
Operating Condition	AC 120 for Adapter
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test Date:	19 Jun~22 Jul 2011
Operator	Peter
MODEL NO	DJ-V57T



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.5620	10.04	39.43	49.47	56.00	-6.53	QP
2	0.5620	10.04	24.27	34.31	46.00	-11.69	AVG
3	0.8340	10.11	26.00	36.11	56.00	-19.89	QP
4	0.8340	10.11	19.68	29.79	46.00	-16.21	AVG
5	1.1100	10.12	27.41	37.53	56.00	-18.47	QP
6	1.1100	10.12	18.18	28.30	46.00	-17.70	AVG
7	1.3980	10.10	22.34	32.44	56.00	-23.56	QP
8	1.3980	10.10	16.30	26.40	46.00	-19.60	AVG
9	2.5140	10.05	8.01	18.06	56.00	-37.94	QP
10	2.5140	10.05	-2.39	7.66	46.00	-38.34	AVG
11	2.7900	10.04	9.29	19.33	56.00	-36.67	QP
12	2.7900	10.04	-0.37	9.67	46.00	-36.33	AVG

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## 9. RADIATED EMISSIONS

### 9.1 MEASUREMENT PROCEDURES

Before final measurements of radiated emissions were made on the open-field three/ten meter range, the EUT was scanned indoors at one meter and three meter distances, in order to determine its emissions spectrum signature. The physical arrangement of the test system and associated cabling was varied in order to determine the effect on the EUT's emissions in amplitude, direction, and frequency. This process was repeated during final radiated emissions measurements on the open-field range, at each frequency, in order to ensure that maximum emission amplitudes were attained.

Final radiated emissions measurements were made on the three meter, open-field test site. The EUT was placed on a nonconductive turntable approximately 0.8 meters above the ground plane. The spectrum was examined from 30 MHz to 1000 MHz using a spectrum analyzer, a quasi-peak adapter, and R&S log periodic and biconical antenna. In order to gain sensitivity, a preamplifier was connected in series between the antenna and the input of the spectrum analyzer.

At each frequency, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters in order to determine the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarizations. The spectrum analyzer's 6 dB bandwidth was set to 120 kHz, and the analyzer was operated in the CISPR quasi-peak detection mode. No video filter less than 10 times the resolution bandwidth was used. The second harmonic of the highest LO was tested. The highest emission amplitudes relative to the appropriate limit were measured and recorded in this report.

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

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

### 9.2 RADIATED EMISSION DATA

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Test point: Frequency range:	Horizontal 30MHz~26.5GHz	Result:	<input checked="" type="checkbox"/> - passed <input type="checkbox"/> - not passed
---------------------------------	-----------------------------	---------	---

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	51.2424	5.30	29.44	34.74	40.00	-5.26	QP
2	64.4689	5.35	28.76	34.11	40.00	-5.89	QP
3	143.8276	6.38	28.20	34.58	43.50	-8.92	QP
4	159.4589	6.63	29.32	35.95	43.50	-7.55	QP
5	185.9118	7.42	28.64	36.06	43.50	-7.44	QP
6	169.0781	7.33	29.97	37.30	43.50	-6.20	QP
7	433.6873	8.25	33.06	41.31	46.00	-4.69	QP
8	476.8937	8.37	33.55	41.92	46.00	-4.08	QP
9	532.4448	8.72	32.71	41.43	46.00	-4.57	QP
10	969.1382	10.50	38.53	49.03	54.00	-4.97	QP
11	901.2424	10.50	31.18	41.68	46.00	-4.32	QP
12	935.1903	10.50	31.87	42.37	46.00	-3.63	QP
13	3965.932	21.16	36.05	47.21	54.00	-6.79	AV
14	3196.393	20.52	34.95	45.47	54.00	-8.53	AV
15	2587.174	18.58	34.23	42.81	54.00	-11.19	AV
16	2194.389	16.96	31.80	48.76	74.00	-25.24	Peak
17	4350.701	21.95	32.76	44.71	54.00	-9.29	AV
18	4446.894	22.16	34.64	46.80	54.00	-7.20	AV

Notes: All readings are quasi-peak, unless stated otherwise.  
A low, middle, and high channel was checked for every frequency band.

Test by: Peter

Date: Jul 20 2011

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Test point:	Vertical	Result:	<input checked="" type="checkbox"/> - passed
Frequency range:	30MHz~26.5GHz		<input type="checkbox"/> - not passed

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	47.6352	5.35	31.35	36.70	40.00	-3.30	QP
2	42.4248	5.55	30.16	35.71	40.00	-4.29	QP
3	114.1683	6.06	28.92	34.98	43.50	-8.52	QP
4	168.6773	7.30	30.30	37.60	43.50	-5.90	QP
5	183.1062	7.43	29.31	36.74	43.50	-6.76	QP
6	209.9599	7.30	29.80	37.10	43.50	-6.40	QP
7	501.5831	8.60	31.07	39.67	46.00	-6.33	QP
8	552.5050	8.93	29.22	38.15	46.00	-7.85	QP
9	611.1422	9.50	30.10	39.60	46.00	-6.40	QP
10	836.4328	10.20	30.72	40.92	46.00	-5.08	QP
11	935.1903	10.50	31.89	42.39	46.00	-3.61	QP
12	780.8817	10.19	29.46	39.65	46.00	-6.35	QP
13	2843.687	19.69	22.64	42.33	59.00	-16.67	AVG
14	2170.341	16.86	32.62	49.48	59.00	-9.52	AVG
15	3757.515	20.99	20.95	41.94	59.00	-17.06	AVG
16	3332.665	20.64	29.84	50.48	74.00	-23.52	peak
17	4607.214	22.50	21.15	43.65	59.00	-15.35	AVG
18	4238.477	21.71	21.27	42.98	59.00	-16.02	AVG

Notes: All readings are quasi-peak, unless stated otherwise.  
A low, middle, and high channel was checked for every frequency band.

Test by: Peter

Date: Jul 22 2011

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**TABLE 3:MAINS EQUIPMENT USED FOR TESTING**

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100868	2010/12
2	Biconical Antenna	ROHDE & SCHWARZ	HK116	100221	2010/12
3	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2010/12
4	Waveguide horn	EMCO	3115	9607-4876	2010/12
5	EMI Test Software	ROHDE & SCHWARZ	ESK1	N/A	2010/12
6	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12
7	SIGNAL GENERATOR	ROHDE & SCHWARZ	SML03	102986	2010/12

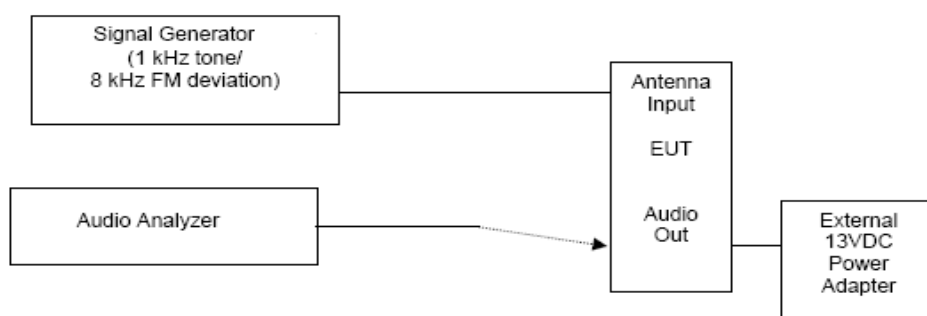
\*The preamplifier's gain is included in the site correction factor.

## 10. 38 DB REJECTION TEST

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 38dB.



Frequencies used on the signal generator were 824.04, 836.50, and 848.97 MHz for the mobile band, and

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869.04, 881.50, and 893.97 MHz for the base band.

The DJ-V57T unit reference level used was -60 dBm from the signal generator. The DJ-V57T 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.

No signals were detected for the 38 dB rejection test requirements.

### 10.1 38 DB REJECTION TEST DATA FOR BASE BAND (869.040-893.970 MHz)

TABLE 4: 38 DB REJECTION {FREQUENCY INJECTED: 869.040 MHZ} (CELLULAR BAND)

Frequency Injected: 869.040 MHz		Temperature: 24° 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 5: 38 DB REJECTION {FREQUENCY INJECTED: 881.500 MHZ} (CELLULAR BAND)

Frequency Injected: 881.500 MHz		Temperature: 24° 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 6: 38 DB REJECTION {FREQUENCY INJECTED: 893.970 MHZ} (CELLULAR BAND)

Frequency Injected: 893.970 MHz		Temperature: 24° 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	

TABLE 7: MAINS EQUIPMENT USED FOR TESTING

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100868	2010/12
2	Biconical Antenna	ROHDE & SCHWARZ	HK116	100221	2010/12
3	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2010/12
4	Log per Antenna	ROHDE & SCHWARZ	HL050	100186	2010/12
5	EMI Test Software	ROHDE & SCHWARZ	ESK1	N/A	2010/12
6	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12
7	SIGNAL GENERATOR	ROHDE & SCHWARZ	SML03	102986	2010/12

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**10.2 38DB REJECTION TEST DATA FOR MOBILE BAND (824.040-848.970 MHz)**

TABLE 8: 38 DB REJECTION {FREQUENCY INJECTED: 824.040 MHZ} (MOBILE BAND)

Frequency Injected: 824.040 MHz		Temperature: 24° 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

TABLE 9: 38 DB REJECTION {FREQUENCY INJECTED: 836.500 MHZ} (MOBILE BAND)

Frequency Injected: 836.505 MHz		Temperature: 24° 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 10: 38 DB REJECTION {FREQUENCY INJECTED: 848.970 MHZ} (MOBILE BAND)

Frequency Injected: 848.970 MHz		Temperature: 24° 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

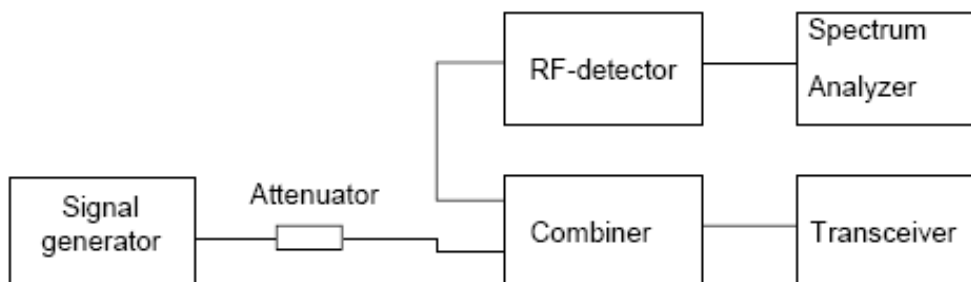
Test by: Peter

Date: Jul 22 2011

## 11. ANTENNA CONDUCTED POWER

### 11.1 METHOD OF MEASUREMENT

A Signal generator a power meter are each combined via appropriate attenuators into the equipment antenna Connector, The following test set-up shall be used.



For equipment with intergal antenna the connector to the equipment is made either to a temporary 50 ohm Connector, the spectrum analyzer is operated in zero span mode and the resolution bandwidth shall be approximately 3 times the channel bandwidth.

### 11.2 ANTENNA CONDUCTED POWER DATA

Frequency Detected (MHz)	Result (dBm)	Limit (dBm)	Margin
55.69	-70.71	-57	13.71
98.21	-70.47	-57	13.47
115.77	-72.19	-57	15.19
279.17	-73.37	-57	16.37
368.22	-71.55	-57	14.55
533.13	-72.39	-57	15.39
738.67	-73.27	-57	16.27

TABLE 7: MAINS EQUIPMENT USED FOR TESTING

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12
2	SIGNAL GENERATOR	ROHDE & SCHWARZ	SML03	102986	2010/12

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## 12. CONCLUSION

The data in this measurement report shows that the Alinco Incorporated Model DJ-V57T, FCC ID: PH3DJ-V57T complies with all applicable requirements of Parts 2 and 15.121 of the FCC Rules and IC:3070C-DJV57T complies with all applicable requirements of Industry Canada RSS-215, Issue 2.

## 13. Deviation to test specifications

[ NONE ]

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