FCC PART 95
EMI MEASUREMENT AND TEST REPORT

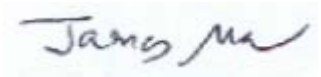
For

Hong Jin Crown America Inc

13929 Equitable Road, Cerritos, CA 90703

FCC ID: KA9HJC-X1

This Report Concerns:	**Equipment Type:**
☒ Permissive II Change	GMRS Radio

Test Engineer:	James Ma / 
Report Number:	R0601195
Test Date:	2006-02-22
Reviewed By:	Snell Leong / 
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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *Hong Jin Crown America Inc's product*, FCC ID: *KA9HJC-X1* or the "EUT" as referred to in this report is a GMRS radio which is measured approximately 127mmL x 63.5mmW x 46mmH.

** The test data gathered are from production sample, serial number: X1-200601-001, provided by the manufacturer.*

Objective

This report is prepared on behalf of *Hong Jin Crown America Inc* in accordance with Part 95 Subpart A, Subpart B and Subpart E of the Federal Communication Commissions rules.

Hong Jin Crown is filling for a permissive change for FCC ID: KA9HJC-X1, due to certain component changes. The original application was granted on 2001-03-15.

Related Grant/Submission

This application was originally granted on 2001-03-15. Please refer to test report by Hyak Laboratories, Inc. for the details of the original application.

Test Methodology

Measurements contained in this report were also conducted with TIA/EIA 603C, Telecommunications Industry Association Land Mobile AM Communications Equipment Measurement and Performance Standards.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory, Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by BACL to collect radiated and conducted emission measurement data is located in the chamber of the building at 1274 Anvilwood Ave., Sunnyvale, California 94089, USA.

Test site at BACL has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports has been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997 and Article 8 of the VCCI regulations on December 25, 1997. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission and Voluntary Control Council for Interference has the reports on file and is listed under FCC registration number: 90464 and VCCI Registration No.: C-1298 and R-1234. The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, BACL is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200367-0). The current scope of accreditations can be found at http://ts.nist.gov/ts/htdocs/210/214/scopes/2001670.htm

SYSTEM TEST CONFIGURATION

Justification

The EUT was tested according to ANSI C63.4-2005 and TIA-603-C to represent the worst-case results during the final qualification test.

EUT Test Configuration

The EUT was powered and fully operated by pushing PTT (Push To Talk) button and then change the channel to Low, Middle, and High by using up and down buttons.

Special Accessories

As shown in following test block diagram setup, interface cable used for compliance testing is shielded as normally supplied by customer and its respective support equipment manufacturers.

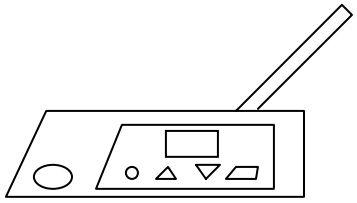
Schematics / Block Diagram

Please refer to Appendix D.

Equipment Modifications

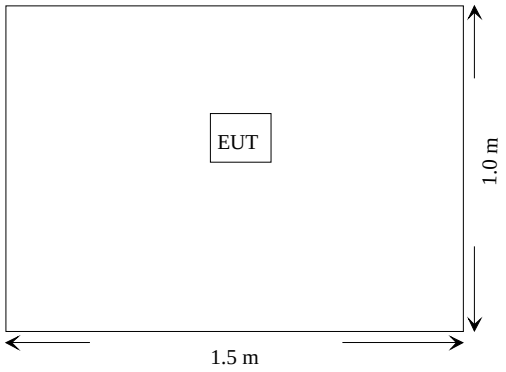
No modifications were made to the EUT.

Configuration of Test System



Test Setup Block Diagram

For tabletop systems, the EUT shall be centered laterally on the tabletop and its rear shall be flushed with the rear of the table. If the EUT is a stand-alone unit, it shall be placed in the center of the tabletop.



REQUIREMENTS OF PROVISIONS

Results reported relate only to the product tested, serial number: X1-200601-001.

FCC Rules	Rules Description	Requirement	Result
§2.1053 §95.635(b)(1) §95.635(b)(3) §95.635(b)(7)	Spurious Radiation	Worst Case < -13dBm	Complied

§2.1053, §95.635(b)(1), §95.635(b)(3), §95.635(b)(7) - RADIATED EMISSION

Standard Applicable

According to FCC §2.1053, measurements shall be made to detect spurious emission that may be radiated directly from the cabinet, control circuits, power leads, or intermediated circuit elements under normal condition of installation and operation. Information submitted shall include the relative radiated power of spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from a half wave dipole antenna.

According to FCC §95.635(b)(1), at least 25 dB (decibels) on any frequency removed from the center of the authorized bandwidth by more than 50% up to and including 100% of the authorized bandwidth.

According to FCC §95.635(b)(3), at least 35 dB on any frequency removed from the center of the authorized bandwidth by more than 100% up to and including 250% of the authorized bandwidth.

According to FCC §95.635(b)(7), at least $43 + 10 \log_{10} (T)$ dB on any frequency removed from the center of the authorized bandwidth by more than 250%.

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Test Equipment

Manufacturer	Description	Model	Serial Number	Cal. Date
Sounl	30Mhz ~ 3 GHz Antenna	JB3	A020106-2/ S006628	02/14/2006
A. H. Systems	Antenna, Horn, DRG	SAS-200/571	261	04/20/2005
HP	Amplifier, Pre	8447D	2944A10187	2005-8-25
R&S	Receiver, EMI Test	ESCI 1166.5950K03	100044	2005-09-29
Com-Power	Antenna, Dipole	AD-100	2219	2005-09-26
R&S	Generator, Signal	SMIQ03	DE23746	2005-07-03
Wisewave	Antenna, Horn, Std	ARH-2823-02	10555-02	2005-12-13

*** Statement of Traceability: BACL Corp.** certifies that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Environmental Conditions

Temperature:	18 ^{0} C
Relative Humidity:	58%
ATM Pressure:	1022 mbar

The testing was performed by James Ma on 2006-02-17.

Test Result At 3 meter

Worst Case readings:

-1.00 dB at 925 MHz in the Horizontal polarization

Run # 1: Primary scan. 30 - 4000MHz. At 3 meter

Indicated		Table	Test Antenna		Substituted		Antenna	Cable	Absolute		Limit	Margin
Frequency	Ampl.	Angle	Height	Polar	Frequency	Level	Gain	Loss	Level			
MHz	dBuV/m	Degree	Meter	H/V	MHz	dBm	Correction	dB	dBm	nW	dBm	dB
925.00	58.4	140	1.5	H	925	-12.8	0	1.2	-14.00	39810.72	-13	-1.00
925.00	56.0	70	2.5	V	925	-13.2	0	1.2	-14.40	36307.81	-13	-1.40
1387.73	50.1	140	2.5	H	1387.73	-21.5	8.33	2.5	-15.67	27101.92	-13	-2.67
1387.73	49.6	60	2.0	V	1387.73	-24.8	8.33	2.5	-18.97	12676.52	-13	-5.97
1850.29	30.0	60	1.5	V	1850.29	-32.7	8.32	2.4	-26.78	2098.94	-13	-13.78
1850.29	29.4	140	2.5	H	1850.29	-34.1	8.32	2.4	-28.18	1520.55	-13	-15.18
375.14	39.5	180	2.0	H	375.14	-29.7	0	0.5	-30.20	954.99	-13	-17.20
375.14	38.2	150	1.0	V	375.14	-42.6	0	0.5	-43.10	48.98	-13	-30.10

Note: The EUT was tested in three orthogonal planes. The EUT was tested with fresh battery.