FCC PART 95
EMI MEASUREMENT AND TEST REPORT

For

Hong Jin Crown America Inc

13929 Equitable Road, Cerritos, CA 90703

FCC ID: KA9HJC-X1

2004-11-04

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

Test Engineer:	Ming Jing /
Report Number:	R0410213
Test Date:	2004-10-23
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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 115mmL x 57mmW x 25mmH.

** The test data gathered are from production sample, serial number: G00002, 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 Standard 603, Telecommunications Industry Association Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

All radiated emissions measurement was performed at Bay Area Compliance Laboratory, Corp.

Test Facility

The Open Area Test site used by Bay Area Compliance Laboratory Corporation to collect radiated and conducted emission measurement data is located in the back parking lot of the building at 230 Commercial Street, Sunnyvale, California, USA.

Test site at Bay Area Compliance Laboratory Corporation 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 test methods and procedures set forth in ANSI C63.4-2001.

The Federal Communications Commission and Voluntary Control Council for Interference has the reports on file and is listed under FCC file 31040/SIT 1300F2 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, Bay Area Compliance Laboratory Corporation is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (NVLAP). The scope of the accreditation covers the FCC Method - 47 CFR Part 15 - Digital Devices, IEC/CISPR 22: 2002, and AS/NZS 3548: Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment test methods under NVLAP Lab Code 200167-0.

SYSTEM TEST CONFIGURATION

Justification

The EUT was tested according to ANSI C63.4-2001 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.

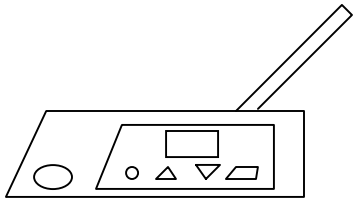
Schematics / Block Diagram

Please refer to Appendix D.

Equipment Modifications

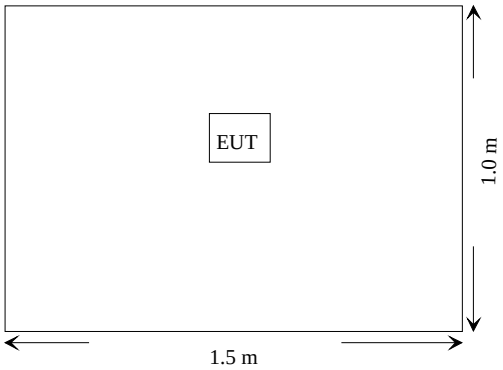
No modifications were made to the EUT.

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: G00002.

FCC Rules	Rules Description	Result
2.1053 and 15.109 (a)	RADIATED SPURIOUS EMISSION	Complied

§2.1053 and §15.109(a) - RADIATED SPURIOUS 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 halfwave dipole antenna.

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.

Spurious emissions in dB = 10 lg (TXpwr in Watts/0.001) – the absolute level

Spurious attenuation limit in dB = 43 + 10 Log_{10} (power out in Watts)

Test Equipment

Manufacturer	Description	Model	Serial Number	Cal. Date
Com-Power	Biconical Antennas	CDI B100/200/300	14012	2004-05-01
Com-Power	Bi-logcon Antenna	3110B	9603-2315	2004-10-11
Rohde & Schwarz	Generator	SMIQ03	1048004	2004-08-01

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

Environmental Conditions

Temperature:	10 ^{0} C
Relative Humidity:	48%
ATM Pressure:	1100 mbar

Test Result

-28.8 dB at 925.25 MHz, @ 3 Meters

EUT					Generator						Standard	
Indicated		Table	Test Antenna		Substitution			Antenna	Cable	Absolute	FCC	FCC
Frequency MHz	Ampl. dBuV/m	Angle Degree	Height Meter	Polar H/V	Frequency MHz	Level dBm	Polar H/V	Gain Corrected	Loss dB	Level dBm	Limit dBm	Margin dB
925.25	42.2	90	1.5	v	925.25	-41.5	v	0	0.3	-41.8	-13	-28.8
1387.88	32.8	0	1.5	v	1387.88	-50.3	v	3.6	0.5	-47.2	-13	-34.2
403.32	30.5	45	1.5	v	403.32	-47.6	v	0	0.1	-47.7	-13	-34.7
403.32	29.3	60	1.5	h	403.32	-48.5	h	0	0.1	-48.6	-13	-35.6
1387.88	30.1	310	1.8	h	1387.88	-52.6	h	3.6	0.5	-49.5	-13	-36.5
925.25	33.7	180	1.8	h	925.25	-49.8	h	0	0.3	-50.1	-13	-37.1

Note: No Preamplifier Used. The EUT was tested in three orthogonal planes. The EUT was tested with fresh battery.