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FCC PART 90
AND IC RSS-119, RSS-GEN
TEST REPORT

APPLICANT	RELM WIRELESS CORP. - BK RADIO
	7100 TECHNOLOGY DRIVE WEST MELBOURNE FLORIDA 32904 USA
FCC ID	K95KNGM800
IC CERTIFICATION	2116A-KNGM800
MODEL NUMBER	KNG-M800
PRODUCT DESCRIPTION	MOBILE TRANSCEIVER
DATE SAMPLE RECEIVED	3/15/2012
DATE TESTED	4/4/2012
TESTED BY	Nam Nguyen
APPROVED BY	Mario R. de Aranzeta
TIMCO REPORT NO.	661AUT12TestReport.doc
TEST RESULTS	☒ PASS ☐ FAIL

ACCREDITED
Certificate # 0955-01

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GENERAL REMARKS

The attached report shall not be reproduced except in full without the written permission of Timco Engineering Inc.

The test results relate only to the items tested.

Summary

The device under test does:
☒ fulfill the general approval requirements as identified in this test report
☐ not fulfill the general approval requirements as identified in this test report

Attestations

This equipment has been tested in accordance with the standards identified in this test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report.

All instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 17025: 2005 requirements.

Testing Certificate # 0955-01

I attest that the necessary measurements were made, under my supervision, at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, Fl 32669

Authorized Signatory Name:

Mario de Aranzeta C.E.T.
Compliance Engineer/ Lab. Supervisor

Date: June 22, 2012

GENERAL INFORMATION
DUT Specification

DUT Description	MOBILE TRANSCEIVER
FCC ID	K95KNGM800
IC Certification	2116A-KNGM800
Model Number	KNG-M800
Serial Number	N/A
DUT Power Source	☐ 110–120Vac/50– 60Hz
	☐ DC Power 12V
	☒ Battery Operated Exclusively
Test Item	☐ Prototype
	☒ Pre-Production
	☐ Production
Type of Equipment	☐ Fixed
	☒ Mobile
	☐ Portable
Test Conditions	The temperature was 26°C Relative humidity of 50%.
Modification to the DUT	None
Test Exercise	The DUT was placed in continuous transmit mode.
Applicable Standards	ANSI/TIA 603-C:2004, FCC CFR 47 Part 90, IC RSS-119, RSS-GEN
Test Facility	Timco Engineering Inc. at 849 NW State Road 45 Newberry, FL 32669 USA.

TEST PROCEDURES

Power Line Conducted Interference: The procedure used was ANSI/TIA 603-C:2004 using a 50uH LISN. Both lines were observed with the DUT transmitting. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

Bandwidth 20 dB: The measurements were made with the spectrum analyzer's resolution bandwidth (RBW) = 1 MHz and the video bandwidth (VBW) = 3 MHz and the span set as shown on plot.

Power Output: The RF power output was measured at the antenna feed point using a peak power meter.

Antenna Conducted Emissions: The RBW = 100 kHz, VBW = 300 kHz and the span set to 10.0 MHz and the spectrum was scanned from 30 MHz to the 10th harmonic of the fundamental. Above 1 GHz the resolution bandwidth was 1 MHz and the VBW = 3 MHz
and the span to 50 MHz.

Radiation Interference: The test procedure used was ANSI/TIA 603-C:2004 using an Agilent spectrum receiver with pre-selector. The bandwidth (RBW) of the spectrum receiver was 100 kHz up to 1 GHz and 1 MHz above 1 GHz with an appropriate sweep speed. The VBW above 1 GHz was 3 MHz. The analyzer was calibrated in dB above a micro volt at the output of the antenna.

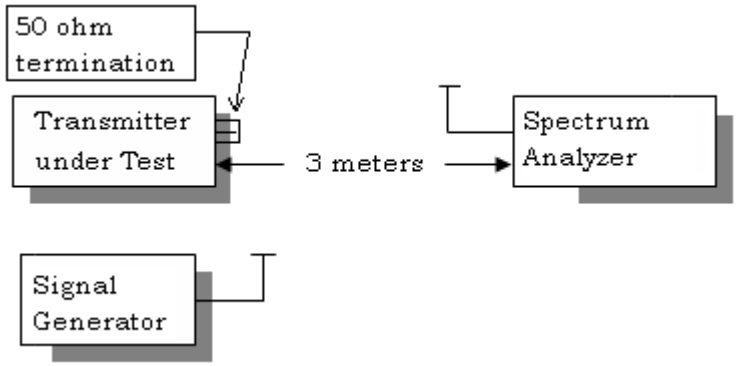
FIELD STRENGTH OF SPURIOUS EMISSIONS

Rule Parts. No.: FCC Part 2.1053, RSS-GEN 4.9

Requirements: 12.5 kHz Channel Spacing = 66 dBc (for 40 Watts)
12.5 kHz Channel Spacing = 60 dBc (for 10 Watts)

METHOD OF MEASUREMENT: The tabulated data shows the results of the radiated field strength emissions test. The spectrum was scanned from 30 MHz to at least the tenth harmonic of the fundamental. This test was conducted per ANSI/TIA 603-C: 2004 using the substitution method. Measurements were made at the test site of TIMCO ENGINEERING, INC. located at 849 NW State Road 45, Newberry, FL 32669.

Test Setup Diagram:



Test Data:

High Power

Emission Frequency MHz	Ant. Polarity	dB Below Carrier (dBc)
774.00	0	0
1548.00	V	83.6
2322.00	V	91.8
3096.00	V	82.9
3870.00	V	90.4
4644.00	V	98.9
5418.00	V	98.1
6192.00	V	95.0
6966.00	V	94.6
7740.00	V	97.0

Low Power

Emission Frequency MHz	Ant. Polarity	dB Below Carrier (dBc)
774.00	0	0
1548.00	V	77.8
2322.00	V	88.2
3096.00	V	85.8
3870.00	V	86.2
4644.00	V	94.8
5418.00	V	91.2
6192.00	V	82.7
6966.00	V	89.1
7740.00	V	90.5

High Power

Emission Frequency MHz	Ant. Polarity	dB Below Carrier (dBc)
793.00	0	0
1586.00	V	81.6
2379.00	V	92.7
3172.00	V	78.6
3965.00	V	89.6
4758.00	V	98.5
5551.00	V	95.1
6344.00	V	89.2
7137.00	V	96.3
7930.00	V	95.0

Low Power

Emission Frequency MHz	Ant. Polarity	dB Below Carrier (dBc)
793.00	0	0
1586.00	V	76.4
2379.00	V	83.1
3172.00	V	85.7
3965.00	V	87.1
4758.00	V	92.4
5551.00	V	90.5
6344.00	V	83.5
7137.00	V	86.8
7930.00	V	91.3

HIGH POWER

Emission Frequency MHz	Ant. Polarity	dB Below Carrier (dBc)
815.00	0	0
1630.00	V	84.1
2445.00	V	86.1
3260.00	V	74.1
4075.00	V	85.2
4890.00	V	94.6
5705.00	V	92.9
6520.00	V	95.0
7335.00	V	94.0
8150.00	V	96.5

LOW POWER

Emission Frequency MHz	Ant. Polarity	dB Below Carrier (dBc)
815.00	0	0
1630.00	V	77.9
2445.00	V	79.1
3260.00	V	77.5
4075.00	V	85.9
4890.00	V	86.4
5705.00	V	83.5
6520.00	V	84.7
7335.00	V	86.2
8150.00	V	90.0

HIGH POWER

Emission Frequency MHz	Ant. Polarity	dB Below Carrier (dBc)
851.00	0	0
1702.00	V	79.4
2553.00	V	68.8
3404.00	V	77.0
4255.00	V	92.5
5106.00	V	93.8
5957.00	V	80.8
6808.00	V	85.8
7659.00	V	85.6
8510.00	V	90.6

LOW POWER

Emission Frequency MHz	Ant. Polarity	dB Below Carrier (dBc)
851.00	0	0
1702.00	V	74.2
2553.00	V	70.8
3404.00	V	83.7
4255.00	V	88.5
5106.00	V	88.8
5957.00	V	79.0
6808.00	V	82.0
7659.00	V	82.6
8510.00	V	86.0

EMC EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3-Meter Semi-Anechoic Chamber	Panashield	N/A	N/A	Listed 5/10/10	5/10/12
AC Voltmeter	HP	400FL	2213A14499	CAL 6/12/11	6/12/13
Antenna: Active Loop	ETS-Lindgren	6502	00062529	CAL 9/23/10	9/23/12
Frequency Counter	HP	5385A	2730A03025	CAL 8/17/11	8/17/13
Hygro-Thermometer	Extech	445703	0602	CAL 6/15/11	6/15/13
Modulation Analyzer	HP	8901A	3435A06868	CAL 7/18/11	7/18/13
Digital Multimeter	Fluke	FLUKE-77	35053830	CAL 9/9/11	9/9/13
Analyzer Tan Tower Preamplifier	HP	8449B-H02	3008A00372	CAL 10/28/11	10/28/13
Analyzer Tan Tower Quasi-Peak Adapter	HP	85650A	3303A01690	CAL 10/28/11	10/28/13
Analyzer Tan Tower RF Preselector	HP	85685A	3221A01400	CAL 10/28/11	10/28/13
Analyzer Tan Tower Spectrum Analyzer	HP	8566B Opt 462	3138A07786 3144A20661	CAL 10/28/11	10/28/13
Temperature Chamber	Tenney Engineering	TTRC	11717-7	CHAR 4/25/10	4/25/12
Antenna	ETS	3117	35923	12/7/2011	12/7/2013
Antenna	Electro metrics	LPA-25	1122	5/04/2011	5/04/2013
Antenna	Electro metrics	BIA-25	1096	5/04/2011	5/04/2013