Engineering and Testing for EMC and Safety Compliance

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Class II Permissive Change Report

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Model: M7100^{IP} VHF Mobile Radio (136-174 MHz)

FCC ID: OWDTR-0035-E
IC: 3636B-0035

August 30, 2007

Standards Referenced for this Report	
Part 2: 2006	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
Part 90: 2006	Private Land Mobile Radio Services
ANSI TIA-603-C-2004	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
ANSI/TIA/EIA – 102.CAAA; 2002	Digital C4FM/CQPSK Transceiver Measurement Methods
Industry Canada RS-119 Issue 9 June 2007	Land Mobile and Fixed Radio Transmitters and Receivers Operating in the Frequency Range 27.41- 960 MHz

Frequency Range (MHz)	Rated Transmit Power (W) Conducted	Frequency Tolerance (ppm)	Emission Designator
136-174	51.52	5.0	16K0F3E (Voice)
136-174	51.52	5.0	11K0F3E (Voice)
136-174	51.52	5.0	14K2F1D (2 level WB)
136-174	51.52	5.0	14K2F1E (2 level WB)
136-174	51.52	5.0	9K9F1D (2 level NB 9600)
136-174	51.52	5.0	9K9F1E (2 level NB 9600)
136-174	51.52	5.0	7K1F1D (2 level NB 4800)
136-174	51.52	5.0	7K1F1E (2 level NB 4800)
136-174	51.52	5.0	8K4F1D (P25)
136-174	51.52	5.0	8K4F1E (P25)

Report Prepared by Test Engineer: Daniel W. Baltzell

Document Number: 2007209

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1 General Information

The following Class II Permissive Change Report is prepared on behalf of **M/A-COM, Inc**. in accordance with the Federal Communications Commission and Industry Canada. The Equipment Under Test (EUT) was the **M7100 VHF Mobile Radio, FCC ID: OWDTR-0035-E**, **IC: 3636B-0035**. 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 the applicable FCC Rules and Regulations in CFR 47. Calibration checks are performed regularly on the instruments, and all accessories including high pass filter, coaxial attenuator, preamplifier and cables.

1.1 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the parking lot of Rhein Tech Laboratories, Inc., 360 Herndon Parkway, Suite 1400, Herndon, Virginia, 20170. This site has been fully described in a report submitted to and approved by the Federal Communications Commission to perform AC line conducted and radiated emissions testing.

1.2 Related Submittal(s)/Grant(s)

The purpose of this Class II Permissive Change is to add wall mount and desktop control station configurations which contain the original radio. There have been no changes to the original radio. These configuration additions are considered accessories to the basic mobile radio. Since these configurations are powered from the AC mains (and the radio in the original submittal was not), AC line conducted emissions are submitted. Unintentional digital radiated emissions are also contained in this report for reference.

The original FCC grant was issued March 21, 2005; a permissive change grant was issued December 12, 2006.

2 Tested System Details

The test sample was received on August 7, 2007. The identifiers and descriptions of all equipment, cables, and internal devices used with the EUT for this test are list below.

Table 2-1: Equipment under Test (EUT)

Part	Manufacturer	Model	PN/SN	FCC ID	Cable Description	RTL Bar Code
M7100 Wall Mount Station	M/A-COM, Inc.	M7100	DSWD02	N/A	3 m RF Coax Cable, 3 m RJ-11 Tone Remote Interconnect Cable, 2.2 m AC Power Cable (gray), 2.2 m AC Power Cable (black), installed internal to wall mount	18064
M7100 Desktop Station	M/A-COM, Inc.	M7100	DSDX07-VS with RU101188V12 Radio (UHF-L, 50 Watts)	N/A	RJ-11 Tone Remote Interconnect Cable, AC Power Cable (black), installed on desktop,	18063
M7100; VHF	M/A-COM, Inc.	MAHG-SHMXX	9011251	OWDTR-0035-E	N/A	18057

Table 2-2: Support Equipment

Part	Manufacturer	Model	PN/SN	FCC ID	Cable Description	RTL Bar Code
Handset/ Microphone	M/A-COM, Inc.	N/A	19C851086P15	N/A	1.5 m unshielded I/O	18058
IDA Tone Remote Base Controller	M/A-COM, Inc.	24-66H	06-44-163J.35	N/A	1.7 m unshielded Power; 3 m unshielded I/O; 0.4 m unshielded handset (coiled)	18059

Figure 2-1: Configuration of Tested System Desktop Configuration

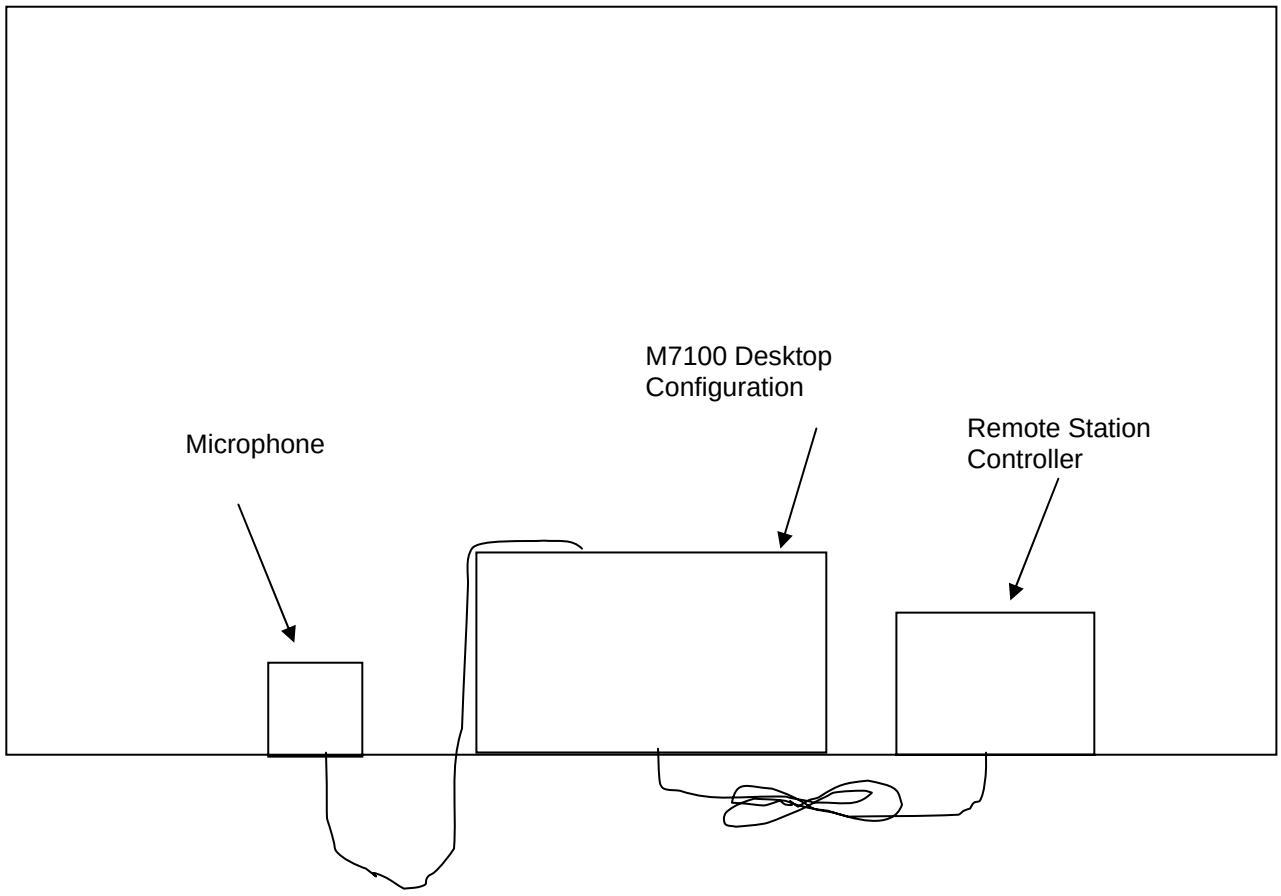
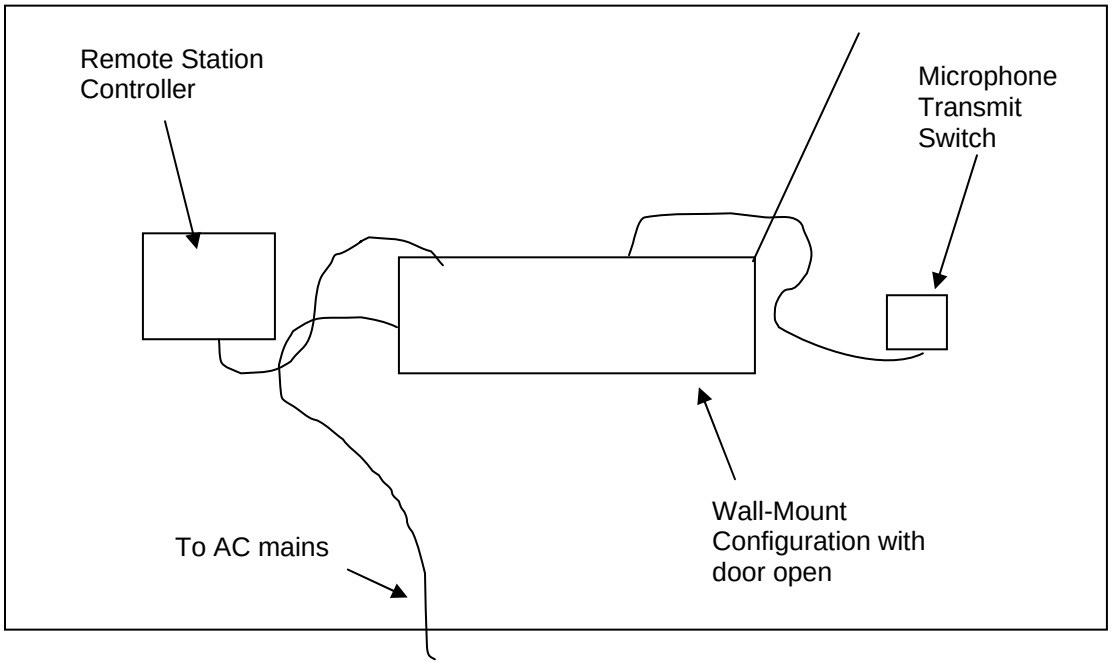


Figure 2-2: Configuration of Tested System Wall Mount Configuration



3 Radiated Emissions

3.1 Amendments to Emissions Test Methodology

3.1.1 Deviations from Test Methodology

There was no deviation from, additions to, or exclusions from, the test method.

3.2 Radiated Emissions Measurements

3.2.1 Site and Test Description

Before final radiated emissions measurements were made on the OATS, the EUT was scanned indoors at both one and three meter distances. This was done in order to determine its emission spectrum signal. 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 emission measurements on the OATS, at each frequency, in order to ensure that maximum emission amplitudes were measured. Final radiated emissions measurements were made on the OATS at a distance of 3 meters. The EUT was placed on a non-conductive turntable. At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the emissions maximum levels. Measurements were taken using both horizontal and vertical antenna polarization. The spectrum analyzer's 6 dB bandwidth was set to 120 kHz, and the analyzer was operated in the quasi-peak detection mode. No video filter less than 10 times the resolution bandwidth was used. The highest emission amplitudes relative to the appropriate limit were measured and recorded in this report.

3.2.2 Field Strength Calculations

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FI(dB\mu V/m) = SAR(dB\mu V) + SCF(dB/m)$$

FI = Field Intensity
SAR = Spectrum Analyzer Reading
SCF = Site Correction Factor

The Site Correction Factor (SCF) used in the above equation is determined empirically, and is expressed in the following equation:

$$SCF(dB/m) = -PG(dB) + AF(dB/m) + CL(dB)$$

SCF = Site Correction Factor
PG = Pre-Amplifier Gain
AF = Antenna Factor
CL = Cable Loss

The field intensity in microvolts per meter can then be determined according to the following equation:

$$FI(\mu V/m) = 10^{FI(dB\mu V/m)/20}$$

For example, assume a signal frequency of 125 MHz has a received level measured as 49.3 dBuV. The total Site Correction Factor (antenna factor plus cable loss minus preamplifier gain) for 125 MHz is –11.5 dB/m. The actual radiated field strength is calculated as follows:

$$49.3dB\mu V - 11.5dB/m = 37.8dB\mu V/m$$
$$10^{37.8/20} = 10^{1.89} = 77.6\mu V/m$$

3.2.3 Measurement Uncertainty

Rhein Tech Laboratories, Inc. has implemented procedures to minimize errors that occur from test instruments, calibration, procedures, and test setups. Test instrument and calibration errors are documented from the manufacturer or calibration lab. Other errors have been defined and calculated within the Rhein Tech Quality Manual, Section 6.1. Rhein Tech implements the following procedures to minimize errors that may occur: yearly as well as daily calibration methods, technician training, and emphasis to employees on avoiding error.

3.2.4 Test Limits

FCC Class B Radiated Emissions	
Frequency (MHz)	**At 3 m (dBμV/m)**
30-88	40.0
88-216	43.5
216-960	46.0
>1000	54

Table 3-1: Radiated Emissions Test Equipment

Barcode	Manufacturer	Model	Part Type	Serial Number	Calibration Due
901053	Schaffner Chase	CBL6112B	Bi-Log Antenna (20 MHz–2 GHz)	2648	11/01/07
900905	Rhein Tech Laboratories	PR-1040	OATS 1 Preamplifier 40 dB (30 MHz–2 GHz)	1006	05/16/08
900913	Hewlett Packard	85462A	EMI Receiver RF Section (9 kHz–6.5 GHz)	3325A00159	03/21/08

3.2.5 Radiated Emissions Data

Table 3-2: Radiated Emissions Test Data for Desktop Configuration

Emission 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)
51.903	Qp	H	170	1.8	39.3	-22.1	17.2	40.0	-22.8
108.555	Qp	V	190	1.0	44.7	-17.3	27.4	43.5	-16.1
111.992	Qp	H	0	2.9	44.7	-17.1	27.6	43.5	-15.9
113.400	Qp	V	190	1.0	47.3	-17.2	30.1	43.5	-13.4
114.000	Qp	H	180	2.9	47.9	-17.2	30.7	43.5	-12.8
128.400	Qp	V	190	1.0	32.8	-17.0	15.8	43.5	-27.7
213.359	Qp	H	260	1.3	38.6	-17.8	20.8	43.5	-22.7
274.825	Qp	V	270	1.5	31.9	-14.2	17.7	46.0	-28.3
310.925	Qp	H	10	1.2	39.4	-13.1	26.3	46.0	-19.7
310.925	Qp	V	170	1.5	35.7	-13.1	22.6	46.0	-23.4
393.325	Qp	V	0	1.5	38.1	-10.2	27.9	46.0	-18.1
466.350	Qp	V	330	1.0	34.5	-8.6	25.9	46.0	-20.1

Test Personnel:

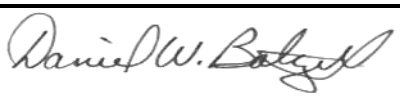
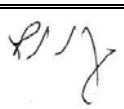
Daniel W. Baltzell		August 22, 2007
Test Engineer	Signature	Date Of Test

Table 3-3: Radiated Emissions Test Data for Wall Mount Configuration

Emission 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)
42.000	Qp	V	0	1.0	42.6	-16.0	26.6	40.0	-13.4
44.000	Qp	V	0	1.0	47.8	-15.3	32.5	40.0	-7.5
46.000	Qp	V	270	1.5	50.7	-16.3	34.4	40.0	-5.6
76.000	Qp	V	0	1.5	53.1	-22.8	30.3	40.0	-9.7
80.000	Qp	V	0	1.0	52.3	-22.2	30.1	40.0	-9.9
114.000	Qp	V	0	1.0	49.2	-17.2	32.0	43.5	-11.5
118.000	Qp	V	0	1.0	47.6	-17.0	30.6	43.5	-12.9
134.003	Qp	V	0	1.0	49.1	-17.0	32.1	43.5	-11.4
138.003	Qp	V	0	1.0	55.8	-17.3	38.5	43.5	-5.0
148.000	Qp	H	90	1.8	54.3	-17.8	36.5	43.5	-7.0
148.902	Qp	V	0	1.0	59.3	-17.9	41.4	43.5	-2.1
151.302	Qp	V	350	1.0	59.7	-18.0	41.7	43.5	-1.8
154.102	Qp	V	0	1.0	59.2	-18.1	41.1	43.5	-2.4
181.000	Qp	V	350	2.4	51.7	-18.8	32.9	43.5	-10.6
191.100	Qp	H	315	1.0	51.6	-18.8	32.8	43.5	-10.7
199.100	Qp	V	0	1.8	46.3	-17.9	28.4	43.5	-15.1
219.100	Qp	H	315	1.0	45.2	-17.8	27.4	46.0	-18.6

Test Personnel:

Rick McLay		August 16, 2007
Test Engineer	Signature	Date Of Test

4 AC Conducted Emissions - FCC Rules and Regulations Part 15 §15.207; RSS-Gen 7.2.2: Conducted Limits

4.1 Site and Test Description

The power line conducted emissions measurements were performed in a Series 81 type shielded enclosure manufactured by Rayproof. The EUT was assembled on a wooden table 80 centimeters high. Power was fed to the EUT through a 50-ohm/50 microhenry Line Impedance Stabilization Network (LISN). The EUT LISN was fed power through an A.C. filter box on the outside of the shielded enclosure. The filter box and EUT LISN housing are bonded to the ground plane of the shielded enclosure. A second LISN, the peripheral LISN, provides isolation for the EUT test peripherals. This peripheral LISN was also fed A.C. power. A metal power outlet box, which is bonded to the ground plane and electrically connected to the peripheral LISN, powers the EUT host peripherals.

The spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the EUT LISN was connected to the spectrum analyzer input through a Solar 100 kHz high-pass filter. The filter is used to prevent overload of the spectrum analyzer from noise below 100 kHz. Conducted emission levels were measured on each current-carrying line with the spectrum analyzer operating in the CISPR quasi-peak mode (or peak mode if applicable).

The analyzer's 6 dB bandwidth was set to 9 kHz. Video filter less than 10 times the resolution bandwidth is not used. Average measurements are performed in linear mode using a 10 kHz resolution bandwidth, a 1 Hz video bandwidth, and by increasing the sweep time in order to obtain a calibrated measurement. The emission spectrum was scanned from 150 kHz to 30 MHz. The highest emission amplitudes relative to the appropriate limits were measured and have been recorded.

4.2 Test Limits

Class A Line-Conducted Emissions		
	Limit (dBµV)	
Frequency (MHz)	Quasi-Peak	Average
0.15 to 0.50	79	66
0.50 to 30.0	73	60

Class B Line-Conducted Emissions		
	Limit (dBµV)	
Frequency (MHz)	Quasi-Peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5.00	56	46
5.00 to 30.00	60	50

Table 4-1: Conducted Emissions Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Date
901215	Hewlett Packard	8596EM	Spectrum Analyzer (9 kHz-12.8 GHz)	3826A00144	10/16/07
901084	AFJ International	LS16	16A LISN	16010020082	3/28/08

4.3 Conducted Emissions Test Data

Table 4-2: Conducted Emissions Test Data – Mode TX, Neutral Side Line 1, Desktop Configuration

Temperature: 74°F Humidity: 57%									
Emission Frequency (MHz)	Test Detector	Analyzer Reading (dBuV)	Site Correction Factor (dB)	Emission Level (dBuV)	QP Limit (dBuV)	QP Margin (dBuV)	AV Limit (dBuV)	AV Margin (dBuV)	Pass/ Fail
0.171	Av	37.8	0.2	38.0	64.9	-26.9	54.9	-16.9	Pass
0.171	Qp	37.7	0.2	37.9	64.9	-27.0	54.9	-17.0	Pass
0.279	Av	40.6	0.2	40.8	60.8	-20.0	50.8	-10.0	Pass
0.279	Qp	46.0	0.2	46.2	60.8	-14.6	50.8	-4.6	Pass
0.342	Pk	43.8	0.2	44.0	59.2	-15.2	49.2	-5.2	Pass
0.421	Pk	41.2	0.2	41.4	57.4	-16.0	47.4	-6.0	Pass
2.360	Pk	37.8	1.1	38.9	56.0	-17.1	46.0	-7.1	Pass
7.170	Pk	37.2	1.5	38.7	60.0	-21.3	50.0	-11.3	Pass
29.090	Pk	35.9	2.8	38.7	60.0	-21.3	50.0	-11.3	Pass

Table 4-3: Conducted Emissions Test Data – Mode TX, Hot Side Line 2, Desktop Configuration

Temperature: 74°F Humidity: 57%									
Emission Frequency (MHz)	Test Detector	Analyzer Reading (dBuV)	Site Correction Factor (dB)	Emission Level (dBuV)	QP Limit (dBuV)	QP Margin (dBuV)	AV Limit (dBuV)	AV Margin (dBuV)	Pass/ Fail
0.170	Av	40.4	0.2	40.6	65.0	-24.4	55.0	-14.4	Pass
0.170	Qp	41.7	0.2	41.9	65.0	-23.1	55.0	-13.1	Pass
0.278	Pk	49.7	0.2	49.9	60.9	-11.0	50.9	-1.0	Pass
0.340	Av	47.0	0.2	47.2	59.2	-12.0	49.2	-2.0	Pass
0.340	Qp	46.8	0.2	47.0	59.2	-12.2	49.2	-2.2	Pass
0.419	Pk	40.4	0.2	40.6	57.5	-16.9	47.5	-6.9	Pass
1.680	Pk	42.9	0.8	43.7	56.0	-12.3	46.0	-2.3	Pass
8.200	Pk	37.7	1.7	39.4	60.0	-20.6	50.0	-10.6	Pass
28.350	Pk	35.9	2.8	38.7	60.0	-21.3	50.0	-11.3	Pass

Table 4-4: Conducted Emissions Test Data – Mode RX, Neutral Side Line 1, Desktop Configuration

Temperature: 74°F Humidity: 57%									
Emission Frequency (MHz)	**Test Detector**	**Analyzer Reading (dBuV)**	**Site Correction Factor (dB)**	**Emission Level (dBuV)**	**QP Limit (dBuV)**	**QP Margin (dBuV)**	**AV Limit (dBuV)**	**AV Margin (dBuV)**	**Pass/ Fail**
0.207	Pk	46.0	0.2	46.2	63.3	-17.1	53.3	-7.1	Pass
0.278	Pk	48.1	0.2	48.3	60.9	-12.6	50.9	-2.6	Pass
0.343	Pk	40.0	0.2	40.2	59.1	-18.9	49.1	-8.9	Pass
0.420	Pk	41.7	0.2	41.9	57.4	-15.5	47.4	-5.5	Pass
0.650	Pk	39.4	0.3	39.7	56.0	-16.3	46.0	-6.3	Pass
9.590	Pk	31.4	1.8	33.2	60.0	-26.8	50.0	-16.8	Pass

Table 4-5: Conducted Emissions Test Data – Mode RX, Hot Side Line 2, Desktop Configuration

Temperature: 74°F Humidity: 57%									
Emission Frequency (MHz)	**Test Detector**	**Analyzer Reading (dBuV)**	**Site Correction Factor (dB)**	**Emission Level (dBuV)**	**QP Limit (dBuV)**	**QP Margin (dBuV)**	**AV Limit (dBuV)**	**AV Margin (dBuV)**	**Pass/ Fail**
0.206	Pk	42.7	0.2	42.9	63.4	-20.5	53.4	-10.5	Pass
0.278	Pk	41.8	0.2	42.0	60.9	-18.9	50.9	-8.9	Pass
0.342	Pk	46.4	0.2	46.6	59.2	-12.6	49.2	-2.6	Pass
0.420	Pk	36.8	0.2	37.0	57.4	-20.4	47.4	-10.4	Pass
1.330	Pk	37.4	0.7	38.1	56.0	-17.9	46.0	-7.9	Pass
17.790	Pk	32.1	2.3	34.4	60.0	-25.6	50.0	-15.6	Pass

Test Personnel:

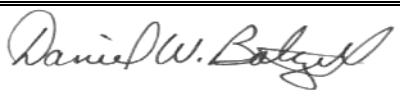
Daniel W. Baltzell		August 21, 2007
Test Engineer	Signature	Date Of Test

Table 4-6: Conducted Emissions Test Data – Mode TX, Neutral Side Line 1, Wall Mount Configuration

Temperature: 77.2°F Humidity: 50%									
Emission Frequency (MHz)	**Test Detector**	**Analyzer Reading (dBuV)**	**Site Correction Factor (dB)**	**Emission Level (dBuV)**	**QP Limit (dBuV)**	**QP Margin (dBuV)**	**AV Limit (dBuV)**	**AV Margin (dBuV)**	**Pass/ Fail**
0.174	Qp	49.6	0.2	49.8	64.8	-15.0	54.8	-5.0	Pass
1.390	Pk	44.2	0.7	44.9	56.0	-11.1	46.0	-1.1	Pass
1.770	Pk	44.0	0.9	44.9	56.0	-11.1	46.0	-1.1	Pass
6.430	Pk	43.2	1.5	44.7	60.0	-15.3	50.0	-5.3	Pass
7.520	Pk	42.4	1.6	44.0	60.0	-16.0	50.0	-6.0	Pass
8.580	Pk	41.2	1.7	42.9	60.0	-17.1	50.0	-7.1	Pass
17.200	Pk	36.3	2.3	38.6	60.0	-21.4	50.0	-11.4	Pass

Table 4-7: Conducted Emissions Test Data – Mode TX, Hot Side Line 2, Wall Mount Configuration

Temperature: 77.2°F Humidity: 50%									
Emission Frequency (MHz)	**Test Detector**	**Analyzer Reading (dBuV)**	**Site Correction Factor (dB)**	**Emission Level (dBuV)**	**QP Limit (dBuV)**	**QP Margin (dBuV)**	**AV Limit (dBuV)**	**AV Margin (dBuV)**	**Pass/ Fail**
0.179	Qp	47.2	0.2	47.4	64.5	-17.1	54.5	-7.1	Pass
1.030	Pk	39.8	0.5	40.3	56.0	-15.7	46.0	-5.7	Pass
2.120	Pk	38.0	1.0	39.0	56.0	-17.0	46.0	-7.0	Pass
8.610	Pk	37.8	1.7	39.5	60.0	-20.5	50.0	-10.5	Pass
11.120	Pk	36.2	1.9	38.1	60.0	-21.9	50.0	-11.9	Pass
17.580	Pk	39.5	2.3	41.8	60.0	-18.2	50.0	-8.2	Pass
24.750	Pk	38.6	2.7	41.3	60.0	-18.7	50.0	-8.7	Pass

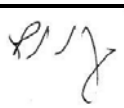
Table 4-8: Conducted Emissions Test Data – Mode RX, Neutral Side Line 1, Wall Mount Configuration

Temperature: 77.2°F Humidity: 50%									
Emission Frequency (MHz)	**Test Detector**	**Analyzer Reading (dBuV)**	**Site Correction Factor (dB)**	**Emission Level (dBuV)**	**QP Limit (dBuV)**	**QP Margin (dBuV)**	**AV Limit (dBuV)**	**AV Margin (dBuV)**	**Pass/ Fail**
0.205	Pk	41.0	0.2	41.2	63.4	-22.2	53.4	-12.2	Pass
0.274	Pk	42.7	0.2	42.9	61.0	-18.1	51.0	-8.1	Pass
0.358	Pk	46.3	0.2	46.5	58.8	-12.3	48.8	-2.3	Pass
0.358	Qp	23.4	0.2	23.6	58.8	-35.2	48.8	-25.2	Pass
0.414	Pk	34.4	0.2	34.6	57.6	-23.0	47.6	-13.0	Pass
1.390	Pk	41.3	0.7	42.0	56.0	-14.0	46.0	-4.0	Pass
1.770	Pk	41.2	0.9	42.1	56.0	-13.9	46.0	-3.9	Pass
5.010	Pk	40.2	1.3	41.5	60.0	-18.5	50.0	-8.5	Pass
17.320	Pk	35.5	2.3	37.8	60.0	-22.2	50.0	-12.2	Pass

Table 4-9: Conducted Emissions Test Data – Mode RX, Hot Side Line 2, Wall Mount Configuration

Temperature: 77.2°F Humidity: 50%									
Emission Frequency (MHz)	**Test Detector**	**Analyzer Reading (dBuV)**	**Site Correction Factor (dB)**	**Emission Level (dBuV)**	**QP Limit (dBuV)**	**QP Margin (dBuV)**	**AV Limit (dBuV)**	**AV Margin (dBuV)**	**Pass/ Fail**
0.177	Pk	39.8	0.2	40.0	64.6	-24.6	54.6	-14.6	Pass
0.205	Pk	42.6	0.2	42.8	63.4	-20.6	53.4	-10.6	Pass
0.276	Pk	47.1	0.2	47.3	60.9	-13.6	50.9	-3.6	Pass
0.358	Pk	41.2	0.2	41.4	58.8	-17.4	48.8	-7.4	Pass
0.414	Pk	40.0	0.2	40.2	57.6	-17.4	47.6	-7.4	Pass
2.830	Pk	39.8	1.1	40.9	56.0	-15.1	46.0	-5.1	Pass
5.010	Pk	39.4	1.3	40.7	60.0	-19.3	50.0	-9.3	Pass
6.080	Pk	38.9	1.5	40.4	60.0	-19.6	50.0	-9.6	Pass
18.110	Pk	40.4	2.3	42.7	60.0	-17.3	50.0	-7.3	Pass

Test Personnel:

Rick McLay		August 13, 2007
Test Engineer	Signature	Date Of Test

5 Conclusion

The data in this measurement report shows that the **M/A-COM, Inc**. Model **M7100 VHF Mobile Radio, FCC ID: OWDTR-0035-E, IC: 3636B-0035,** when used in control station applications, complies with all the applicable requirements of FCC Parts 90, 15 and 2 and Industry Canada RSS-119.