



Engineering and Testing for EMC and Safety Compliance



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## FCC & IC Class 2 Permissive Change Report

**M/A-COM, Inc.**  
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**Model: M7300**

**FCC ID: OWDTR-0049-E**  
**IC: 3636B-0049**

**July 17, 2008**

<b>Standards Referenced for this Report</b>	
Part 2: 2007	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
Part 90: 2007	Private Land Mobile Radio Services
TIA-EIA-603-C August 2004	Land Mobile FM or PM Communications Equipment – Measurement and Performance Standards
ANSI/TIA/EIA – 102.CAAA-2002	Digital C4FM/CQPSK Transceiver Measurement Methods
ANSI/TIA/EIA – 102.BAAA-1998	Project 25 FDMA Common Air Interface—New Technology Standards Project—Digital Radio Technical Standards
RSS-119 Issue 9 2007	Land Mobile and Fixed Radio Transmitters and Receivers 27.41 to 960.0 MHz

**Report Prepared By: Richard B. McMurray, P.E.**

Document Number: 2008066

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## 1 Test Result Summary

Test	FCC Reference	IC Reference	Result
Spurious Emissions at Antenna Terminals	2.1046(a), 90.541(b), 90.542(a)(6)	RSS-119 5.4	Complies

## 2 General Information

The following Class 2 Permissive Change report is prepared on behalf of **M/A-COM, Inc.** in accordance with the Federal Communications Commission and Industry Canada Rules and Regulations. The Equipment Under Test (EUT) was the M7300; **FCC ID: OWDTR-0049-E, IC: 3636B-0049.**

All measurements contained in this application were conducted in accordance with FCC Rules and Regulations CFR 47 Parts 2 and 90, and Industry Canada RSS-119. Calibration checks are performed regularly on the instruments, and all accessories including high pass filter, coaxial attenuator, preamplifier and cables.

### 2.1 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.

### 2.2 Related Submittal(s)/Grant(s)

This is a Class II Permissive Change request; the original FCC grant was issued on May 31, 2007.

This permissive change is being requested because the EUT has been mounted within an external chassis/housing and a power supply has been added. The desktop station is a mobile radio mounted inside of an enclosure suitable for a desktop office environment. The user control head is the only other difference between the models.

The Desktop Station is the CS-7000 and contains a M5300 mobile radio and is a product variant of the mobile radio.

### 2.3 Grant Notes

The desktop station version of the product considers antenna selection and co-location at the time of site licensing.

### 3 Tested System Details

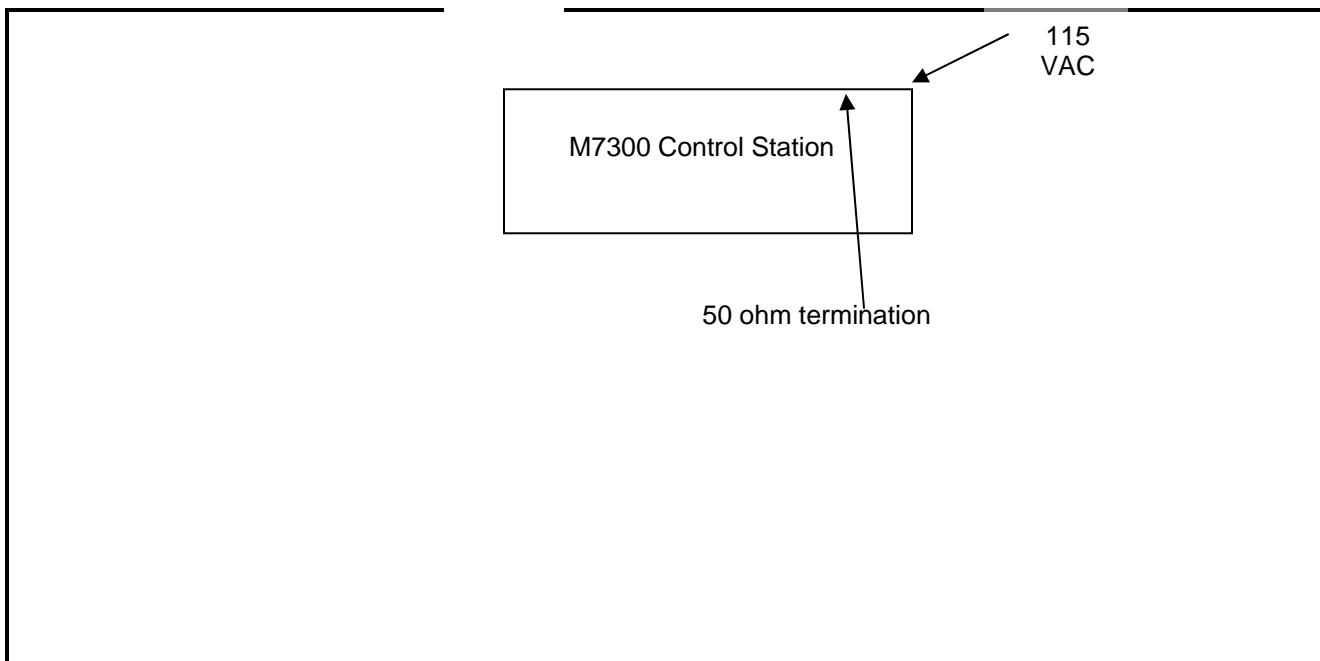
The test sample was received on April 29, 2008. Listed below are the identifiers and descriptions of all equipment, cables, and internal devices used with the EUT for this testing, as applicable. Transmitter radiated spurious emissions was tested in analog mode.

**Table 3-1: Equipment Under Test (EUT)**



Part	Manufacturer	Model	PN	FCC ID	RTL Bar Code
Radio in DeskTop Station	M/A-COM, Inc.	M7300	CT-013892-001 with RU-144750-181	OWDTR-0049-E	18400

**Figure 3-1: Configuration of Tested System**



#### 4 FCC Rules and Regulations Part 2.1053(a): Field Strength of Spurious Radiation; Part 90 90.543(f): Out of Band Emissions Limit; RSS-119 5.8: Unwanted Emissions

##### 4.1 Test Procedure

ANSI/TIA/EIA-603-2002, section 2.2.12

Analog Modulation: The transmitter is terminated with a  $50 \Omega$  load and is modulated with a 2,500 Hz sine wave at an input level 16 dB greater than that required to produce 50% of the rated system deviation at 1,000 Hz. Device with digital modulation: Modulated to its maximum extent using a pseudo-random data sequence – 19,200 bps for OTP and 9,600 bps for P25 and EDACS modes.

The spurious emissions levels were measured, and the device under test was replaced by a substitution antenna connected to a signal generator. This signal generator level was then corrected by subtracting the cable loss from the substitution antenna to the signal generator, and the gain of the antenna was further corrected to a half wave dipole.

##### 4.2 Test Data

###### 4.2.1 CFR 47 Part 90.210 Requirements

All emissions were more than 20 dB below the limit; per 2.1057(c) no data is being reported.

##### Test Personnel:

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Daniel Baltzell		June 4, 2008
Test Technician/Engineer	Signature	Date Of Test

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#### 5 Conclusion

The data in this measurement report shows that the **M/A-COM, Inc. Model M7300, FCC ID: OWDTR-0049-E, IC: 3636B-0049**, complies with all the applicable requirements of Parts 90, 15 and 2 of the FCC Rules, and Industry Canada RSS-119, Issue 9, 2007.

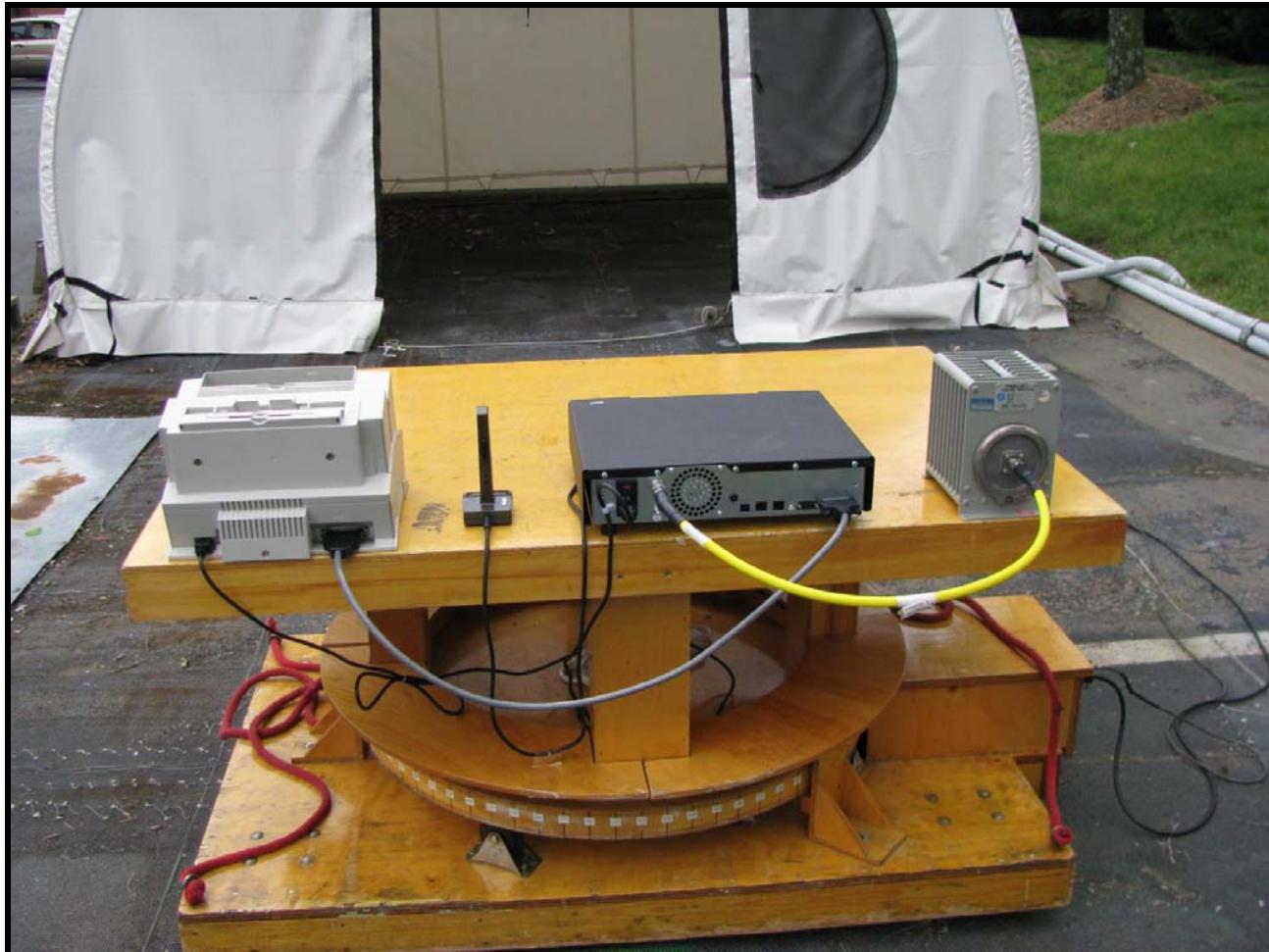
## Appendix A: Test Configuration Photographs



**Photograph 1: Radiated Emissions – Front View**

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Client: M/A-COM, Inc.  
Model: M7300  
FCC ID: OWDTR-0049-E/IC: 3636B-0049  
Standards: FCC Part 90/IC RSS-119  
Report #: 2008066



**Photograph 2: Radiated Emissions – Back View**