



MET Laboratories, Inc. *Safety Certification - EMI - Telecom Environmental Simulation*
914 WEST PATAPSCO AVENUE • BALTIMORE, MARYLAND 21230-3432 • PHONE (410) 354-3300 • FAX (410) 354-3313

October 6, 2006

Spectrum Management, L.L.C.
2545 Tarpley Road
Carrollton, TX 75006

Dear Jerry W. Culpepper,

Enclosed is the EMC test report for the Spectrum Management, L.L.C., TracPac C. The Spectrum Management, L.L.C., TracPac C was tested to the requirements of the FCC Certification rules under Title 47 of the CFR Part 95 for an Intentional Radiator.

Thank you for using the services of MET Laboratories, Inc. If you have any questions regarding these results or if MET can be of further service to you, please feel free to contact me.

Sincerely yours,

MET LABORATORIES, INC.

Angela D. Brown
Documentation Department

Reference: (\Spectrum Management, L.L.C.\ EMC19678-FCC95 Rev 1)

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Electromagnetic Compatibility Test Report

For the

**Spectrum Management, L.L.C.
TracPac C**

Tested under

**FCC Certification Rules
Title 47 of the CFR, Part 95,
LPRS Transmitter**

MET Report: 19678-FCC95

October 6, 2006

Prepared For:

**Spectrum Management, L.L.C.
2545 Tarpley Road
Carrollton, TX 75006**

Prepared By:
MET Laboratories, Inc.
914 W. Patapsco Avenue
Baltimore, MD 21230



Spectrum Management, L.L.C.
TracPac C
FCC ID: NBI-MTAG216C

CFR Title 47 Part 95

Electromagnetic Compatibility Test Report

For the

Spectrum Management, L.L.C.
TracPac C

Tested Under

FCC Certification Rules
Title 47 of the CFR, Part 95,
LPRS Transmitter

Len Knight
Project Engineer, Electromagnetic Compatibility Lab

Angela D. Brown
Documentation Department

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of Part 24 Subpart E and Part 15 Subpart B of the FCC Rules under normal use and maintenance.

Kevin A. Mehaffey
Manager, Electromagnetic Compatibility Lab



Spectrum Management, L.L.C.
TracPac C
FCC ID: NBI-MTAG216C

CFR Title 47 Part 95

Report Status Sheet

Revision	Report Date	Reason for Revision
Ø	August 29, 2006	Initial Issue.
1	October 6, 2006	Revision of Frequency Range of Operation



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List of Terms and Abbreviations

AC	Alternating Current
ACF	Antenna Correction Factor
Cal	Calibration
d	Measurement Distance
dB	Deci Bels
dBμV	Deci-Bels above one micro Volt
dBμV/m	Deci-Bels above one micro Volt per meter
DC	Direct Current
DCF	Distance Correction Factor
E	Electric Field
EUT	Equipment Under Test
ERP	Effective Radiated Power
e.i.r.p	equivalent isotropically radiated power
f	Frequency
FCC	Federal Communications Commission
GHz	Giga Hertz
Hz	Hertz
IEC	International Electrotechnical Commission
kHz	kilohertz
kV	kilo Volt
LISN	Line Impedance Stabilization Network
MHz	MegaHertz
RF	Radio Frequency
RMS	Root-Mean-Square
V/m	Volts per meter



1.0 Requirements Summary

Reference	Description	Compliance
Part 95, 95.639 (e)	Peak Radiated Power	Complies
Part 95, 95.635 (c) (1)	Spurious Emissions	Complies
Part 95, 95.633 (d)(2)	Occupied Bandwidth	See Exhibit A
Part 95, 95.629 (b)(2)	Frequency Stability	See Exhibit A

Table 1. Requirements Summary of EMC Part 95 Compliance Testing



2.0 Equipment Configuration

2.1 Overview

An EMC evaluation to determine compliance of the Spectrum Management, L.L.C. TracPac C with the requirements of Part 95 was performed. All references are to the most current version of Title 47 of the Code of Federal Regulations in effect. In accordance with §2.1033, the following data is presented in support of the Certification of the Spectrum Management, L.L.C. TracPac C. Spectrum Management, L.L.C. should retain a copy of this document which should be kept on file for at least two years after the manufacturing of the TracPac C has been **permanently** discontinued.

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 95, in accordance with purchase order number 9900005304. All tests were conducted using measurement procedure *ANSI C63.4-1992*.

Type of Submission/Rule:	Part 95 Original Filing
Model(s) Tested:	TracPac C
Model(s) Covered:	TracPac C
EUT Specifications:	Primary Power: 3.7 V Lithium Ion Rechargeable Battery
	FCC ID NBI-MTAG216C
	Emission Designator: 900 HA1D
	RF Power Output: Watts ERP: 0.0938 mW (216 MHz) 0.196 mW (216.4749 MHz) 0.785 mW (216.979 MHz)
	Equipment Frequency Range: 216.0125 – 216.9875 MHz
	Frequency Stability: 50 ppm
Analysis:	The results obtained relate only to the item(s) tested.
Evaluated by:	Len Knight
Date(s):	October 6, 2006



2.2 Test Site

All testing was performed at MET Laboratories, Inc., 914 West Patapsco Avenue, Baltimore, MD 21230. All equipment used in making physical determinations is accurate and bears recent traceability to the National Institute of Standards and Technology.

Radiated Emissions measurements were performed in a semi-anechoic chamber. In accordance with §2.948(a)(3), a complete site description is contained at MET Laboratories. In accordance with §2.948(d), MET Laboratories has been accredited by the National Voluntary Laboratory Accreditation Program (Lab Code: 100273-0).

2.3 Description of Test Sample

The TracPac C, Equipment Under Test (EUT) for the remainder of this document, is powered from a 3.7 V Lithium Ion Rechargeable Battery supply.

The TracPac Transmitter is a device used to track stolen currency. It is typically inserted into a stack of bills which would reside in a bank teller's drawer. The stack of currency is then placed over a magnet which puts the unit into a sleep mode, and will be activated if the money is removed from the magnet. Once activated, a CDMA module operating in the PCS1900 band places a data call to a central reporting station. It's location can be provided by either the data from the surrounding cellular towers, or from location based data from the cellular carrier. Also part of the device is a VHF transmitter which is also activated once removed from the magnet. It transmits an RF signal which can be detected by mobile receivers to provide an additional method to locate the device.

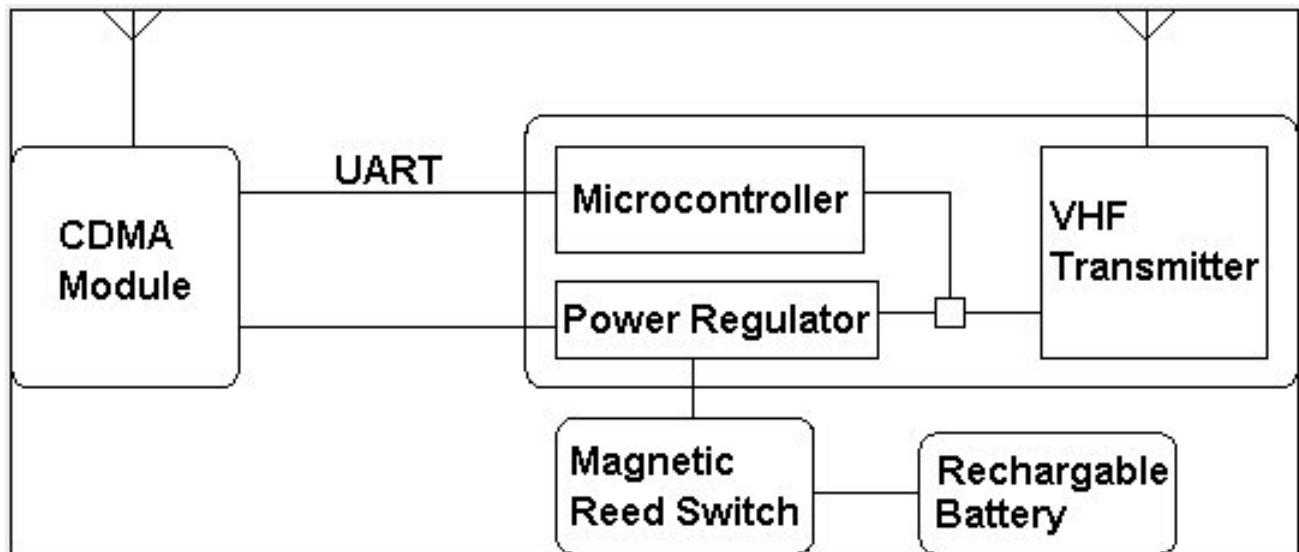


Figure 1. Functional Block Diagram



Spectrum Management, L.L.C.
TracPac C
FCC ID: NBI-MTAG216C

Electromagnetic Compatibility
Equipment Configuration
CFR Title 47 Part 95



Photograph 1. Test Samples



2.4 Equipment Configuration

The EUT was set up as outlined in Figure 1. All significant electronics, incorporated as part of the EUT are included in the following list.

Name / Description	Manufacturer	Part Number	Serial Number
CDMA Module	Wavecom, Inc.	Q2438F	N/A
VHF Transmitter	Spectrum Management, LLC	TracPac-1531	V6915
VHF Transmitter	Spectrum Management, LLC	TracPack-1531	V2684
VHF Transmitter	Spectrum Management, LLC	TracPac-1531	V2253
Rechargeable Battery	Ultralife	UBP005	040201912
Rechargeable Battery	Ultralife	UBP005	041402559

Table 2. Equipment Configuration

2.5 Mode of Operation

The VHF transmitter, which is an LPRS Transmitter, can operate anywhere from Channel 1 to Channel 40. The channel of operation for each Trac Pac is determined at the factory. For the purpose of testing, MET Laboratories was supplied with three test samples operating at Channel 1, Channel 20, and Channel 40. During testing, each transmitter was set to a test mode which put it into continuous transmit operation.

2.6 Modifications

2.9.1 Modifications to EUT

No modifications were made to the EUT.

2.9.2 Modifications to Test Standard

No modifications were made to the test standard.

2.10 Disposition of EUT

The test sample including all support equipment submitted to the Electro-Magnetic Compatibility Lab for testing was returned to Spectrum Management, L.L.C. upon completion of testing.



3.0 Electromagnetic Compatibility Criteria for Intentional Radiators

3.1 Peak Radiated Power

Test Requirement(s): The peak radiated power of an LPRS transmitter shall not exceed 100 mW or 20 dBm as stated in 95.639 (e).

Test Procedures: The EUT was placed on a non-conductive table 0.8 meters above the ground plane in a semi-anechoic chamber. A measurement antenna was positioned at a distance of 3 meters from the EUT. For each point of measurement, the turntable was rotated and the antenna height was varied between 1 m and 4 m, in order to find the maxima for each fundamental carrier. The EUT was positioned in both the flat laying and the upright standing position. Measurements were made using a peak detector with a 120 kHz bandwidth. This was done for each EUT at channel 1, channel 20 and channel 40.

Antenna substitution was used to determine the E.R.P. of each EUT. The EUT was replaced with a dipole antenna connected to a signal generator peak set to the frequency of each carrier. The amplitude on the signal generator was set so that the field strength measured was equivalent to the field strength of the EUT's emissions. The cable loss and antenna gain were then used to calculate the ERP of the EUT at each fundamental channel.

Test Results: The EUT complied with the requirement(s) of this section.

Test Engineer(s): Len Knight

Test Date(s): 7/24/2006



Spectrum Management, L.L.C.
TracPac C
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Electromagnetic Compatibility
Criteria for Intentional Radiators
CFR Title 47 Part 95

Frequency (MHz)	Channel	Cable Loss	ACF (dB/m)	Corrected Level (dBuV/m)	Signal Generator (dBm)	Antenna Gain (dBi)	Corrected to 1/2 Wave Dipole	Cable Loss (dB)	ERP (dBm)	Ant Pol (H/V)	Detector Function
216.0115	1	1.27	10.5	91.47	-9.2	2.184	0.034	1.123	-10.289	H	Peak
216.0115	1	1.27	10.7	83.95	-13.9	0.992	-1.158	1.12	-16.178	V	Peak
216.4749	20	1.27	10.5	94.94	-5.9	2.116	-0.034	1.15	-7.084	H	Peak
216.4749	20	1.27	10.7	90.08	-7.7	0.992	-1.158	1.15	-10.008	V	Peak
216.9790	40	1.27	10.5	101.03	0.2	2.048	-0.102	1.16	-1.062	H	Peak
216.9790	40	1.27	10.7	92.42	-5.4	0.994	-1.156	1.16	-7.716	V	Peak

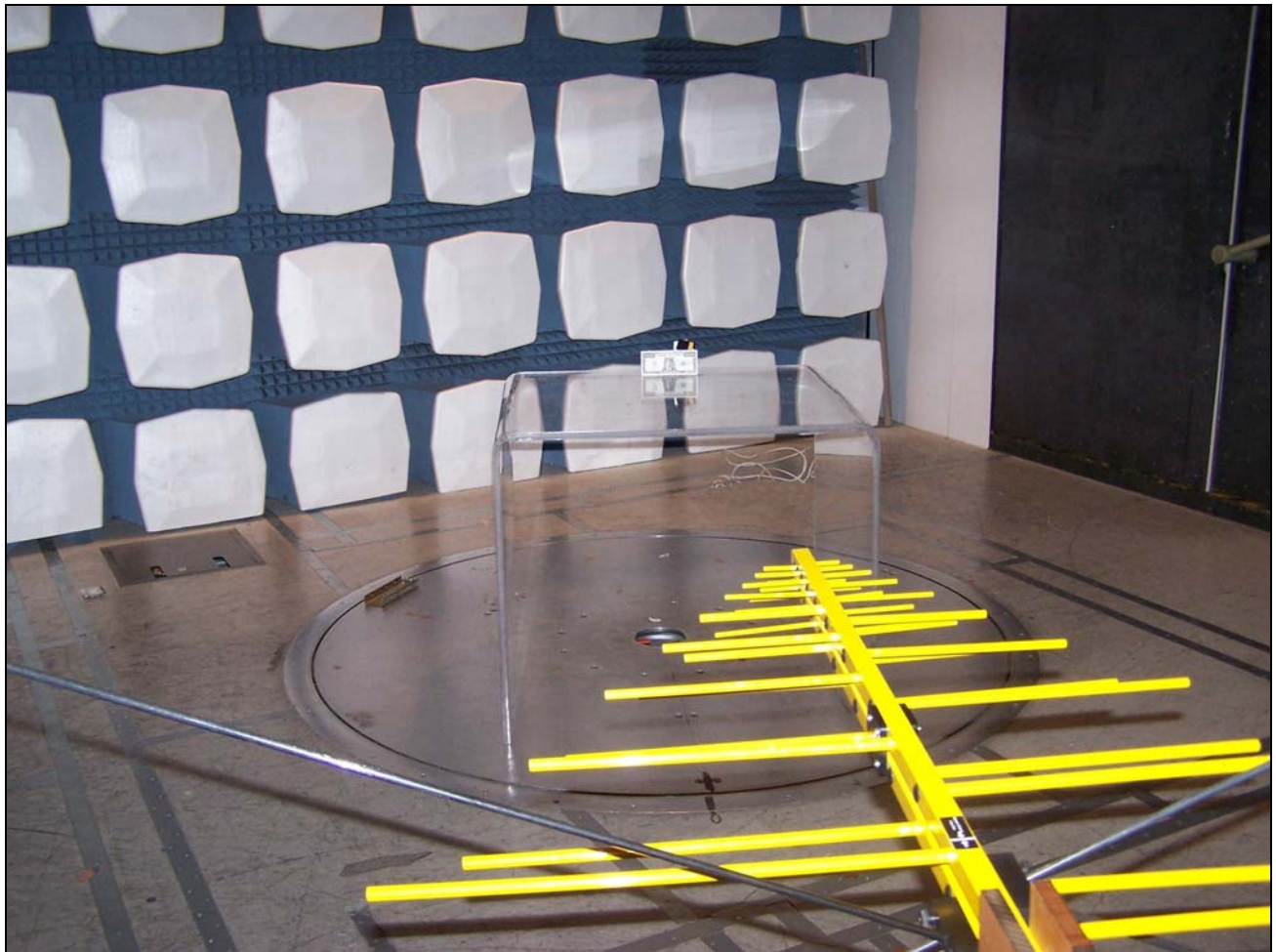
Table 3. ERP for Peak Fundamental Carrier



Spectrum Management, L.L.C.
TracPac C
FCC ID: NBI-MTAG216C

Electromagnetic Compatibility
Criteria for Intentional Radiators
CFR Title 47 Part 95

Peak Radiated Power, Test Setup



Photograph 2. Peak Radiated Power Test Setup



3.2 Spurious Emissions

Test Requirement(s): § 95.635 (c) (1): **Spurious Emissions:** Spurious emissions must be attenuated by -30dBc from 12.5-22.5 kHz from the carrier frequency. On frequencies greater than 22.5 kHz away from the carrier must be attenuated to -13 dBm of radiated power.

Test Procedures: The EUT was placed on a non-conductive table 0.8 meters above the ground plane in a semi-anechoic chamber. A measurement antenna was positioned at a distance of 3 meters from the EUT. For each point of measurement, the turntable was rotated and the antenna height was varied between 1 m and 4 m, in order to find the maximum spurious emissions. The EUT was positioned in both the flat laying and the upright standing position. Measurements were made using a peak detector with a 120 kHz bandwidth for below 1 GHz, measurements were made using a peak detector with a 1 MHz resolution bandwidth.

Antenna substitution was used to determine the E.R.P. of the EUT's spurious emissions. The EUT was replaced with a dipole antenna connected to a signal generator peak set to the frequency of each spurious emission. The amplitude on the signal generator was set so that the field strength measured was equivalent to the field strength of the EUT's emissions. The cable loss and antenna gain were then used to calculate the ERP of the EUT at each peak spurious emission.

Test Results: The EUT complied with the requirement(s) of this section.

Test Engineer: Len Knight

Test Date(s): 7/31/2006



Spectrum Management, L.L.C.
TracPac C
FCC ID: NBI-MTAG216C

Electromagnetic Compatibility
Criteria for Intentional Radiators
CFR Title 47 Part 95

Frequency (MHz)	Channel	Maximum Level (dBuV/m)	Ant Pol (H/V)	Cable Loss (dB)	Signal Generator (dBm)	Antenna Gain (dBi)	Corrected to 1/2 Wave Dipole	ERP (dBm)	Detector Function
432.01002	1	71.48	H	1.54	-29.9	6.45	4.3	-27.14	Peak
432.01002	1	64.6	V	1.54	-37.6	6.7	4.55	-34.59	Peak
648.021042	1	61.63	H	1.75	-39	6.5	4.35	-36.4	Peak
648.021042	1	52.36	V	1.75	-50.8	6.7	4.55	-48	Peak
864.034068	1	52.16	H	2.01	-50.9	6.35	4.2	-48.71	Peak
864.034068	1	49.48	V	2.01	-54	6.7	4.55	-51.46	Peak
1.08008	1	48.35	H	2.63	-52.9	6.152	N/A	-49.378	Peak
1.08008	1	41.71	V	2.63	-61.2	6.236	N/A	-57.594	Peak
Frequency (MHz)	Channel	Maximum Level (dBuV/m)	Ant Pol (H/V)	Cable Loss (dB)	Signal Generator (dBm)	Antenna Gain (dBi)	Corrected to 1/2 Wave Dipole	ERP (dBm)	Detector Function
432.962926	20	62.75	H	1.54	-38.9	6.45	4.3	-36.14	Peak
432.962926	20	56.7	V	1.54	-45.6	6.7	4.55	-42.59	Peak
649.445892	20	67.53	H	1.75	-33	6.5	4.35	-30.4	Peak
649.445892	20	65.34	V	1.75	-37	6.7	4.55	-34.2	Peak
865.93487	20	57.67	H	1.98	-44.9	6.35	4.2	-42.68	Peak
865.93487	20	52.45	V	1.98	-50.8	6.7	4.55	-48.23	Peak
1.082467	20	42.26	H	2.33	-59.2	6.152	N/A	-55.378	Peak
1.082467	20	40.71	V	2.33	-62	6.236	N/A	-58.094	Peak
Frequency (MHz)	Channel	Maximum Level (dBuV/m)	Ant Pol (H/V)	Cable Loss (dB)	Signal Generator (dBm)	Antenna Gain (dBi)	Corrected to 1/2 Wave Dipole	ERP (dBm)	Detector Function
433.95792	40	73.45	H	1.54	-28.2	6.45	4.3	-25.44	Peak
433.95792	40	67.64	V	1.54	-34.6	6.7	4.55	-31.59	Peak
650.949405	40	61.03	H	1.73	-39.3	6.5	4.35	-36.68	Peak
650.949405	40	53.17	V	1.73	-50	6.7	4.55	-47.18	Peak
867.933375	40	52.81	H	1.96	-50.3	6.35	4.2	-48.06	Peak
867.933375	40	47.23	V	1.96	-57.9	6.7	4.55	-55.31	Peak
1.08495	40	45.68	H	2.3	-55.3	6.152	N/A	-51.448	Peak
1.08495	40	40.88	V	2.3	-61.9	6.236	N/A	-57.964	Peak

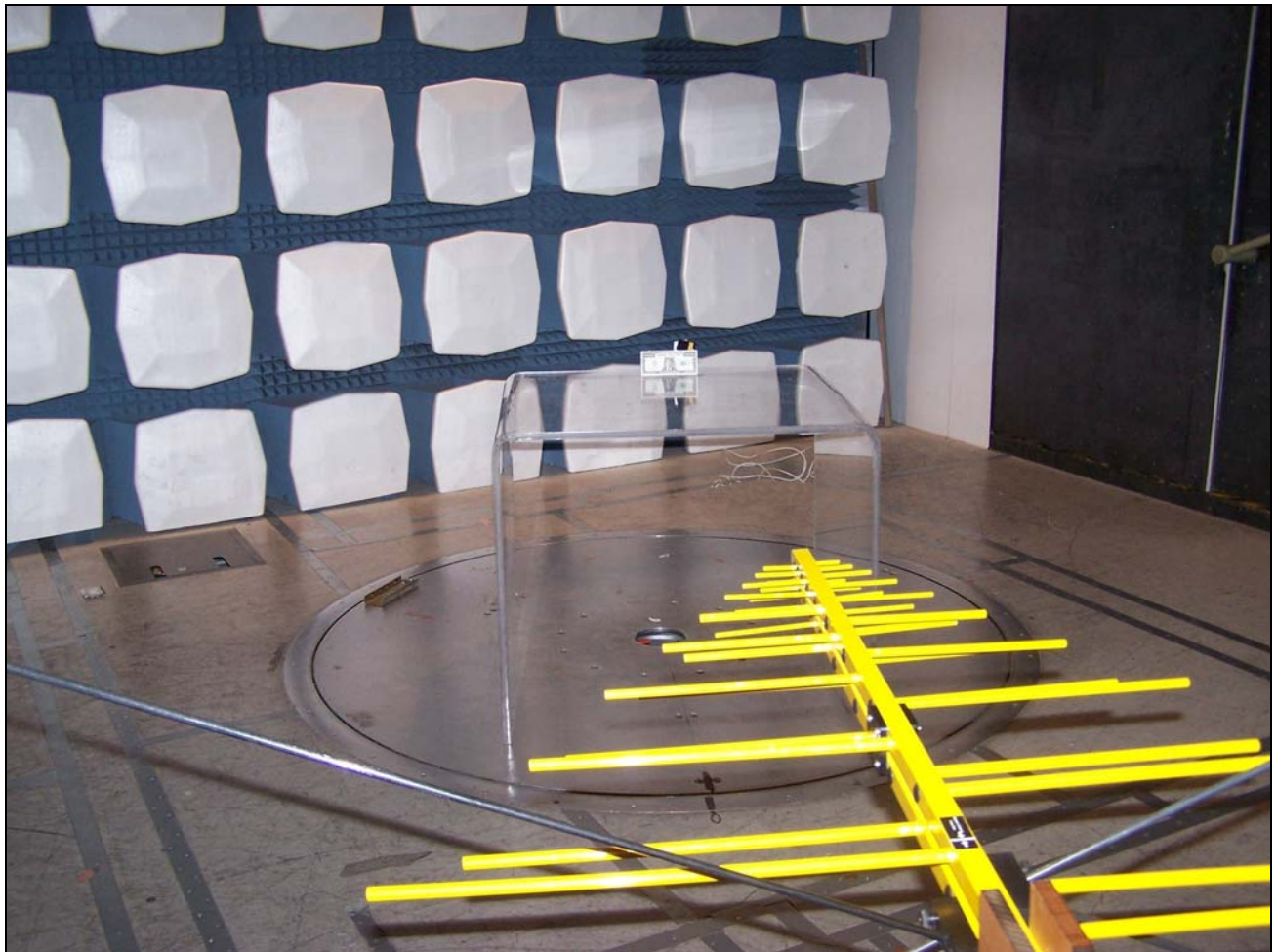
Table 4. ERP for Peak Spurious Emissions



Spectrum Management, L.L.C.
TracPac C
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Electromagnetic Compatibility
Criteria for Intentional Radiators
CFR Title 47 Part 95

Spurious Emissions, Test Setup



Photograph 3. Spurious Emissions Test Setup



Spectrum Management, L.L.C.
TracPac C
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Electromagnetic Compatibility
Test Equipment
CFR Title 47 Part 95

4.0 Test Equipment

Calibrated test equipment utilized during testing was maintained in a current state of calibration per the requirements of *ANSI/NCSL Z540-1-1994* and *ANSI/ISO/IEC 17025:2000*.

MET #	EQUIPMENT	MANUFACTURER	MODEL#	CAL DATE	CAL DUE
1T4300	SEMI-ANECHOIC CHAMBER # 1	EMC TEST SYSTEMS	NONE	02/17/2006	01/17/2009
1T4303	ANTENNA; BILOG	SCHAFNER - CHASE EMC	CBL6140A	06/20/2006	06/20/2007
1T4409	EMI RECEIVER	ROHDE & SCHWARTZ	ESIB7	04/21/2006	04/21/2007
1T4554	THERMO-HYGROMETER	CONTROL COMPANY	56-627-9	04/11/2006	04/11/2008
1T4288	SPECTRUM ANALYZER	HEWLETT PACKARD	8563A	01/12/2006	01/12/2007
1T2658	ANTENNA; BICON	EMCO	3109	07/13/2006	07/13/2007
1T4271	GENERATOR; RF SIGNAL	HEWLETT PACKARD	8648C	02/12/2006	02/12/2007
1T2342	ANTENNA; LPA	EMCO	3146	03/21/2006	03/21/2007

Note: Functionally verified test equipment is verified using calibrated instrumentation at the time of testing.



5.0 Compliance Information

5.1 Certification Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 2, Subpart I — Marketing of Radio frequency devices:

§ 2.801 Radio-frequency device defined.

As used in this part, a radio-frequency device is any device which in its operation is capable of Emitting radio-frequency energy by radiation, conduction, or other means. Radio- frequency devices include, but are not limited to:

- (a) The various types of radio communication transmitting devices described throughout this chapter.
- (b) The incidental, unintentional and intentional radiators defined in Part 15 of this chapter.*
- (c) The industrial, scientific, and medical equipment described in Part 18 of this chapter.
- (d) Any part or component thereof which in use emits radio-frequency energy by radiation, conduction, or other means.

§ 2.803 Marketing of radio frequency devices prior to equipment authorization.

- (a) Except as provided elsewhere in this chapter, no person shall sell or lease, or offer for sale or lease (including advertising for sale or lease), or import, ship or distribute for the purpose of selling or leasing or offering for sale or lease, any radio frequency device unless:
 - (1) In the case of a device subject to certification, such device has been authorized by the Commission in accordance with the rules in this chapter and is properly identified and labeled as required by §2.925 and other relevant sections in this chapter; or
 - (2) In the case of a device that is not required to have a grant of equipment authorization issued by the Commission, but which must comply with the specified technical standards prior to use, such device also complies with all applicable administrative (including verification of the equipment or authorization under a Declaration of Conformity, where required), technical, labeling and identification requirements specified in this chapter.
- (d) Notwithstanding the provisions of paragraph (a) of this section, the offer for sale solely to business, commercial, industrial, scientific or medical users (but not an offer for sale to other parties or to end users located in a residential environment) of a radio frequency device that is in the conceptual, developmental, design or pre-production stage is permitted prior to equipment authorization or, for devices not subject to the equipment authorization requirements, prior to a determination of compliance with the applicable technical requirements *provided* that the prospective buyer is advised in writing at the time of the offer for sale that the equipment is subject to the FCC rules and that the



equipment will comply with the appropriate rules before delivery to the buyer or to centers of distribution.

- (e)(1) Notwithstanding the provisions of paragraph (a) of this section, prior to equipment authorization or determination of compliance with the applicable technical requirements any radio frequency device may be operated, but not marketed, for the following purposes and under the following conditions:
 - (i) *Compliance testing;*
 - (ii) Demonstrations at a trade show provided the notice contained in paragraph (c) of this section is displayed in a conspicuous location on, or immediately adjacent to, the device;
 - (iii) Demonstrations at an exhibition conducted at a business, commercial, industrial, scientific or medical location, but excluding locations in a residential environment, provided the notice contained in paragraphs (c) or (d) of this section, as appropriate, is displayed in a conspicuous location on, or immediately adjacent to, the device;
 - (iv) Evaluation of product performance and determination of customer acceptability, provided such operation takes place at the manufacturer's facilities during developmental, design or pre-production states; or
 - (v) Evaluation of product performance and determination of customer acceptability where customer acceptability of a radio frequency device cannot be determined at the manufacturer's facilities because of size or unique capability of the device, provided the device is operated at a business, commercial, industrial, scientific or medical user's site, but not at a residential site, during the development, design or pre-production stages.
- (e)(2) For the purpose of paragraphs (e)(1)(iv) and (e)(1)(v) of this section, the term *manufacturer's facilities* includes the facilities of the party responsible for compliance with the regulations and the manufacturer's premises, as well as the facilities of other entities working under the authorization of the responsible party in connection with the development and manufacture, but not the marketing, of the equipment.
- (f) For radio frequency devices subject to verification and sold solely to business, commercial, industrial, scientific and medical users (excluding products sold to other parties or for operation in a residential environment), parties responsible for verification of the devices shall have the option of ensuring compliance with the applicable technical specifications of this chapter at each end user's location after installation, provided that the purchase or lease agreement includes a proviso that such a determination of compliance be made and is the responsibility of the party responsible for verification of the equipment.



**The following is extracted from Title 47 of the Code of Federal Regulations, Part 2, Subpart J —
Equipment Authorization Procedures:**

§ 2.901 Basis and Purpose

- (a) In order to carry out its responsibilities under the Communications Act and the various treaties and international regulations, and in order to promote efficient use of the radio spectrum, the Commission has developed technical standards for radio frequency equipment and parts or components thereof. The technical standards applicable to individual types of equipment are found in that part of the rules governing the service wherein the equipment is to be operated.¹ *In addition to the technical standards provided, the rules governing the service may require that such equipment be verified by the manufacturer or importer*, be authorized under a Declaration of Conformity, or receive an equipment authorization from the Commission by one of the following procedures: certification or registration.
- (b) The following sections describe the verification procedure, the procedure for a Declaration of Conformity, and the procedures to be followed in obtaining certification from the Commission and the conditions attendant to such a grant.

§ 2.907 Certification.

- (a) Certification is an equipment authorization issued by the Commission, based on representation and test data submitted by the applicant.
- (b) Certification attaches to all units subsequently marketed by the grantee which are identical (see Section 2.908) to the sample tested except for permissive changes or other variations authorized by the Commission pursuant to Section 2.1043.

¹ In this case, the equipment is subject to the rules of Part 15. More specifically, the equipment falls under Subpart B (of Part 15), which deals with unintentional radiators.



§ 2.948 Description of measurement facilities.

- (a) Each party making measurements of equipment that is subject to an equipment authorization under Part 15 or Part 18 of this chapter, regardless of whether the measurements are filed with the Commission or kept on file by the party responsible for compliance of equipment marketed within the U.S. or its possessions, shall compile a description of the measurement facilities employed.
 - (1) If the measured equipment is subject to the verification procedure, the description of the measurement facilities shall be retained by the party responsible for verification of the equipment.
 - (i) *If the equipment is verified through measurements performed by an independent laboratory, it is acceptable for the party responsible for verification of the equipment to rely upon the description of the measurement facilities retained by or placed on file with the Commission by that laboratory. In this situation, the party responsible for the verification of the equipment is not required to retain a duplicate copy of the description of the measurement facilities.*
 - (ii) If the equipment is verified based on measurements performed at the installation site of the equipment, no specific site calibration data is required. It is acceptable to retain the description of the measurement facilities at the site at which the measurements were performed.
 - (2) If the equipment is to be authorized by the Commission under the certification procedure, the description of the measurement facilities shall be filed with the Commission's Laboratory in Columbia, Maryland. The data describing the measurement facilities need only be filed once but must be updated as changes are made to the measurement facilities or as otherwise described in this section. At least every three years, the organization responsible for filing the data with the Commission shall certify that the data on file is current.



5.2 Label and User's Manual Information

The following is extracted from Title 47 of the Code of Federal Regulations, Part 15, Subpart A — General:

§ 15.19 Labeling requirements.

(a) *In addition to the requirements in Part 2 of this chapter, a device subject to certification or verification shall be labeled as follows:*

- (1) Receivers associated with the operation of a licensed radio service, e.g., FM broadcast under Part 73 of this chapter, land mobile operation under Part 90, etc., shall bear the following statement in a conspicuous location on the device:

This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

- (2) A stand-alone cable input selector switch, shall bear the following statement in a conspicuous location on the device:

This device is verified to comply with Part 15 of the FCC Rules for use with cable television service.

- (3) All other devices shall bear the following statement in a conspicuous location on the device:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

- (4) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified under paragraph (a) of this section is required to be affixed only to the main control unit.
- (5) When the device is so small or for such use that it is not practicable to place the statement specified under paragraph (a) of this section on it, the information required by this paragraph shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed. However, the FCC identifier or the unique identifier, as appropriate, must be displayed on the device.

§ 15.21 Information to user.

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



The following is extracted from Title 47 of the Code of Federal Regulations, Part 15, Subpart B — Unintentional Radiators:

§ 15.105 Information to the user.

- (a) For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.