



M. Flom Associates, Inc.

International Compliance Testing Laboratory

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Transmitter Certification

of

FCC ID: TAI0000TB1
Model: TracMe-1000

to

Federal Communications Commission

Rule Part(s) 95, Confidentiality

Date Of Amended Report: June 20, 2005

On the Behalf of the Applicant:

Razlin Technologies Inc.

At the Request of:

P.O. Deposit Check #1004

Razlin Technologies Inc.
29 Crown Street
Nashua, NH 03060

Attention of:

Adam Rainczuk, VP & COO
514-865-6345; fax: 603-883-8765
Email: arainc@po-box.mcgill.ca

Supervised By:

Michael Findley, Laboratory Manager



List of Exhibits
(FCC **Certification** (Transmitters) - Revised 9/28/98)

Applicant: Razlin Technologies Inc.

FCC ID: TAI0000TB1

By Applicant:

1. Letter Of Authorization
2. Identification Drawings, 2.1033(C)(11)
 - Label
 - Location of Label
 - Compliance Statement
 - Location of Compliance Statement
3. Photographs, 2.1033(C)(12)
4. Documentation: 2.1033(C)
 - (3) User Manual
 - (10) Schematic Diagram
 - (10) Circuit Description
 - Block Diagram
 - Parts List
 - Active Devices
5. Part 95.1015(A) Attestation

By M.F.A. Inc.

- A. Testimonial & Statement of Certification

The Applicant has been cautioned as to the following:

15.21 Information To User.

The users manual or instruction manual for an intentional 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.

15.27(a) Special Accessories.


Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

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Required information per ISO/IEC Guide 25-1990, paragraph 13.2:

- a) **Test Report**
- b) Laboratory: M. Flom Associates, Inc.
(FCC: 31040/SIT) 3356 N. San Marcos Place, Suite 107
(Canada: IC 2044) Chandler, AZ 85225
- c) Report Number: d0550051
- d) Client: Razlin Technologies Inc.
29 Crown Street
Nashua, NH 03060
- e) Identification: TracMe-1000
FCC ID: TAI0000TB1
Description: FRS Beacon
- f) EUT Condition: Not required unless specified in individual tests.
- g) Report Date: May 20, 2005
EUT Received: May 16, 2005
- h, j, k): As indicated in individual tests.
- i) Sampling method: No sampling procedure used.
- l) Uncertainty: In accordance with MFA internal quality manual.
- m) Supervised by: 
Michael Findley, Laboratory Manager
- n) Results: The results presented in this report relate only to the item tested.
- o) Reproduction: This report must not be reproduced, except in full, without written permission from this laboratory.

General Information Required For Certification

Sub-Part 2.948:

(a)(b) **Description Of Measurement Facilities:**

File: 31040/511

A description of the measurement facilities was filed with the Commission and was found to be in compliance with the requirements of Section 2.948, by letter dated March 3, 1997. All pertinent changes will be reported to the Commission by update of A2LA Accreditation.

(b)(4): **Supporting Structures:**

Sketch - Attached Exhibits

(b)(5)(6): **Test Instrumentation:**

List - See Exhibits

2.925: **Identification of an Authorized Device:**

Drawing - See Exhibits

Location of Label - See Photos

(c)(1): **Name and Address of Applicant:**

Razlin Technologies Inc.
29 Crown Street
Nashua, NH 03060

Vendor:

Applicant

(c)(2): **FCC ID:**

TAI0000TB1

Model Number:

TracMe-1000

Photographs:

See List of Exhibits

List of General Information Required for Certification

In Accordance with FCC Rules and Regulations,
Volume II, Part 2 and to

95, Confidentiality

Sub-Part 2.1033

(c)(1): **Name and Address of Applicant:**

Razlin Technologies Inc.
29 Crown Street
Nashua, NH 03060

Manufacturer:

Applicant

(c)(2): **FCC ID:** TAI0000TB1

Model Number: TracMe-1000

(c)(3): **Instruction Manual(s):**

Please See Attached Exhibits

(c)(4): **Type of Emission:** F3E

(c)(5): **FREQUENCY RANGE, MHz:** 462.5625

(c)(6): **Power Rating, Watts:** 0.010
 Switchable Variable N/A

(c)(7): **Maximum Power Rating, Watts:** 0.500

95.647: Antenna Requirement:

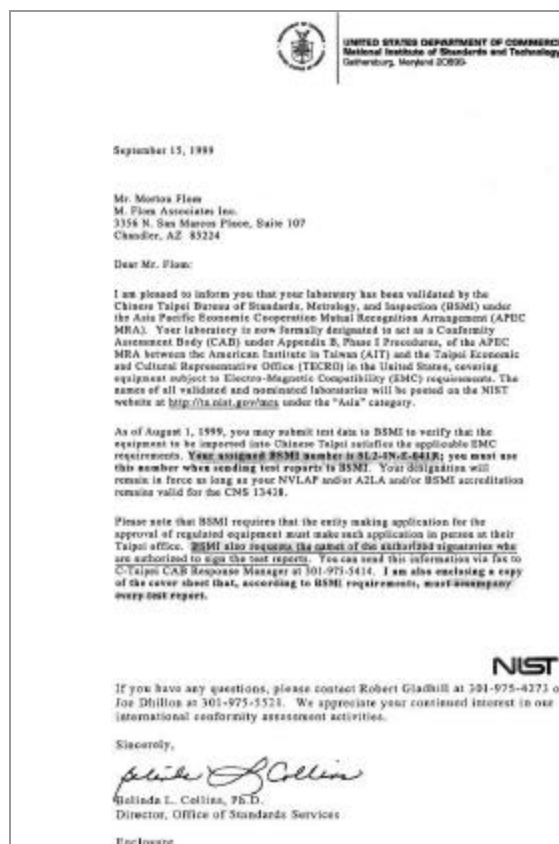
- The antenna is permanently attached to the EUT
- The antenna uses a unique coupling
- The EUT must be professionally installed
- The antenna requirement does not apply



A2LA

"A2LA has accredited M. Flom Associates, Inc. Chandler, AZ for technical competence in the field of Electrical Testing. The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO/IEC 17025 - 1999 'General Requirements for the Competence of Testing and Calibration Laboratories' and any additional program requirements in the identified field of testing."

Certificate Number: **2152-01**



NIST

I am pleased to inform you that your laboratory has been validated by the Chinese Taipei Bureau of Standards, Metrology and Inspection (BSMI) under the Asia Pacific Economic Cooperation Mutual Recognition Agreement (APEC MRA). Your laboratory is now formally designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC MRA between the American Institute in Taiwan (AIT) and the Taipei Economic and Cultural Representative Office (TECRO) in the United States, covering equipment subject to Electro-Magnetic Compatibility (EMC) requirements. The names of all validated and nominated laboratories will be posted on the NIST website at <http://ts.nist.gov/mra> under the 'Asia' category."

BSMI Number: **SL2-IN-E-041R**

Sub-part

2.1033(c)(14):

Test and Measurement Data

All tests and measurement data shown were performed in accordance with FCC Rules and Regulations, Volume II; Part 2, Sub-part J, Sections 2.947, 2.1033(c), 2.1041, 2.1046, 2.1047, 2.1079, 2.1051, 2.1053, 2.1055, 2.1057 and the following individual Parts:

- 21 - Domestic Public Fixed Radio Services
- 22 - Public Mobile Services
- 22 Subpart H - Cellular Radiotelephone Service
- 22.901(d) - Alternative technologies and auxiliary services
- 23 - International Fixed Public Radiocommunication services
- 24 - Personal Communications Services
- 74 Subpart H - Low Power Auxiliary Stations
- 80 - Stations in the Maritime Services
- 80 Subpart E - General Technical Standards
- 80 Subpart F - Equipment Authorization for Compulsory Ships
- 80 Subpart K - Private Coast Stations and Marine Utility Stations
- 80 Subpart S - Compulsory Radiotelephone Installations for Small Passenger Boats
- 80 Subpart T - Radiotelephone Installation Required for Vessels on the Great Lakes
- 80 Subpart U - Radiotelephone Installations Required by the Bridge-to-Bridge Act
- 80 Subpart V - Emergency Position Indicating Radiobeacons (EPIRB'S)
- 80 Subpart W - Global Maritime Distress and Safety System (GMDSS)
- 80 Subpart X - Voluntary Radio Installations
- 87 - Aviation Services
- 90 - Private Land Mobile Radio Services
- 94 - Private Operational-Fixed Microwave Service
- 95 Subpart A - General Mobile Radio Service (GMRS)
- 95 Subpart C - Radio Control (R/C) Radio Service
- 95 Subpart D - Citizens Band (CB) Radio Service
- 95 Subpart E - Family Radio Service
- 95 Subpart F - Interactive Video and Data Service (IVDS)
- 97 - Amateur Radio Service
- 101 - Fixed Microwave Services

Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.4-1992/2000, section 6.1.9, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst-case measurements.

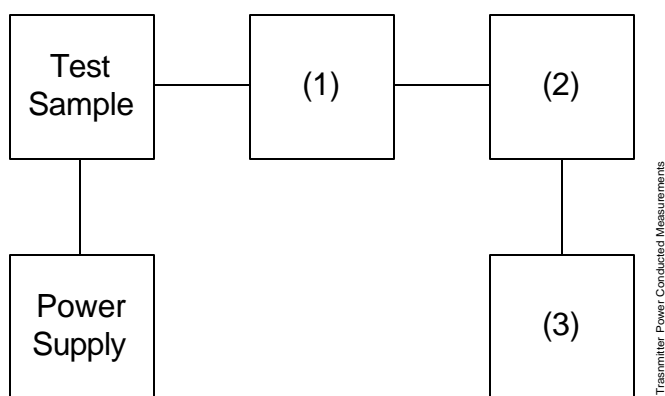
Name of Test: Carrier Output Power (Conducted)
Specification: 47 CFR 2.1046(a)
Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.1

Measurement Procedure

A) The EUT was connected to a resistive coaxial attenuator of normal load impedance, and the unmodulated output power was measured by means of an RF Power Meter.

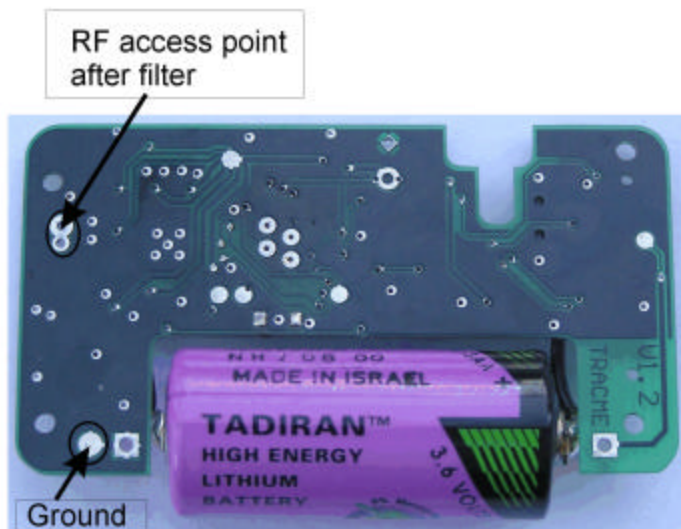
B) Measurement accuracy is $\pm 3\%$.

Transmitter Test Set-Up: RF Power Output



Asset	Description	s/n	Cycle	Last Cal
(1)	Coaxial Attenuator			
X	i00231/2 PASTERNAK PE7021-30 (30 dB)	231 or 232	NCR	
	i00122/3 NARDA 766 (10 dB)	7802 or 7802A	NCR	
(2)	Power Meters			
X	i00020 HP 8901A Power Mode	2105A01087	12 mo.	May-05
(3)	Frequency Counter			
X	i00020 HP 8901A Frequency Mode	2105A01087	12 mo.	May-05

Name of Test: Carrier Output Power (Conducted)



The EUT has no external antenna connection. In order to take conducted measurements the unit was broken open, the antenna wire disconnected and a 50ohm coax connected between the access point shown above and ground. The readings taken were lower than the 10mW output power of the chip because of the in-line attenuation of the filter, the mismatch between the wire antenna feed and the coax, and the coax loss.

Measurement Results
(Worst case)

Frequency of Carrier, MHz = 462.562500
Ambient Temperature = 23°C ± 3°C

Power Setting	RF Power, dBm	RF Power, Watts
High	-0.001	0.010

Performed by:

David E. Lee, Test Engineer

Name of Test: Carrier Output Power (Radiated)
Specification: 47 CFR 2.1046(a)
Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.1
Test Equipment: As per attached page

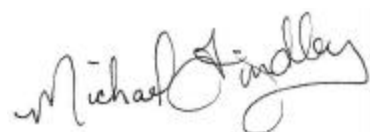
Measurement Procedure (Radiated)

- The EUT was placed on an open-field site and its radiated field strength at a known distance was measured by means of a spectrum analyzer. Equivalent loading of a dipole was calculated from the equation $P_t = ((E \times R)^2 / 49.2)$ watts, where $R = 3m$.
- Measurement accuracy is ± 1.5 dB.

**Measurement Results
(360 deg in 45 deg increments)**

g0550020: 2005-May-20 Fri 10:12:00
State: 2:High Power

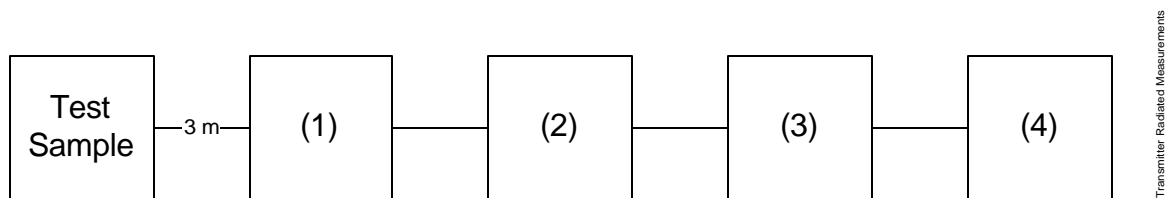
Frequency Tuned, MHz	Frequency Emission, MHz	Meter, dBuV/m	CF, dB	ERP, dBm	ERP, Watts
462.562500	462.562500	70.11	18.5	-8.8	
462.562500	462.562500	68.87	18.5	-10.0	
462.562500	462.562500	69.66	18.5	-9.2	
462.562500	462.562500	70.73	18.5	-8.1	0.000155
462.562500	462.562500	68.87	18.5	-10.0	
462.562500	462.562500	70.73	18.5	-8.1	
462.562500	462.562500	69.57	18.5	-9.3	
462.562500	462.562500	70.35	18.5	-8.5	



Supervised By:

Michael Findley, Laboratory Manager

Transmitter Radiated Measurements



Asset	Description (as applicable)	s/n		
(1) Transducer				
X	i00091	Emco 3115	001469	24 mo. Jan-04
X	i00089	Aprcl Log Periodic	001500	24 mo. Sep-03
(2) High Pass Filter (if required)				
(3) Preamp				
X	i00028	HP 8449 (+30 dB)	2749A00121	12 mo. May-04
(4) Spectrum Analyzer				
	i00048	HP 8566B	2511A01467	12 mo. Jul-04
X	i00029	HP 8563E	3213A00104	12 mo. May-05

Name of Test: Field Strength of Spurious Radiation

Specification: 47 CFR 2.1053(a)

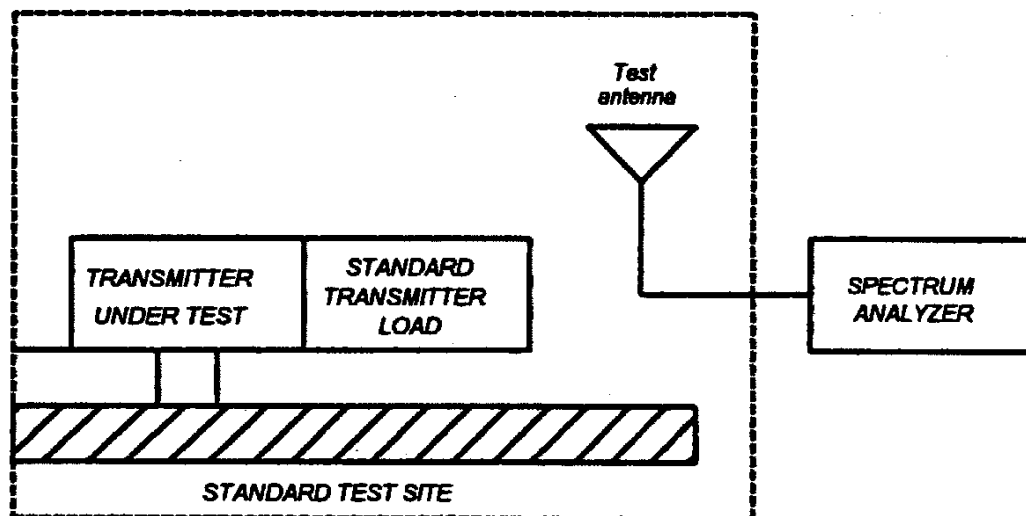
Guide: ANSI/TIA/EIA-603-1992/2001, Paragraph 1.2.12 and Table 16, 47 CFR 22.917

Measurement Procedure

1.2.12.1 Definition: Radiated spurious emissions are emissions from the equipment when transmitting into a non-radiating load on a frequency or frequencies which are outside an occupied band sufficient to ensure transmission of information of required quality for the class of communications desired.

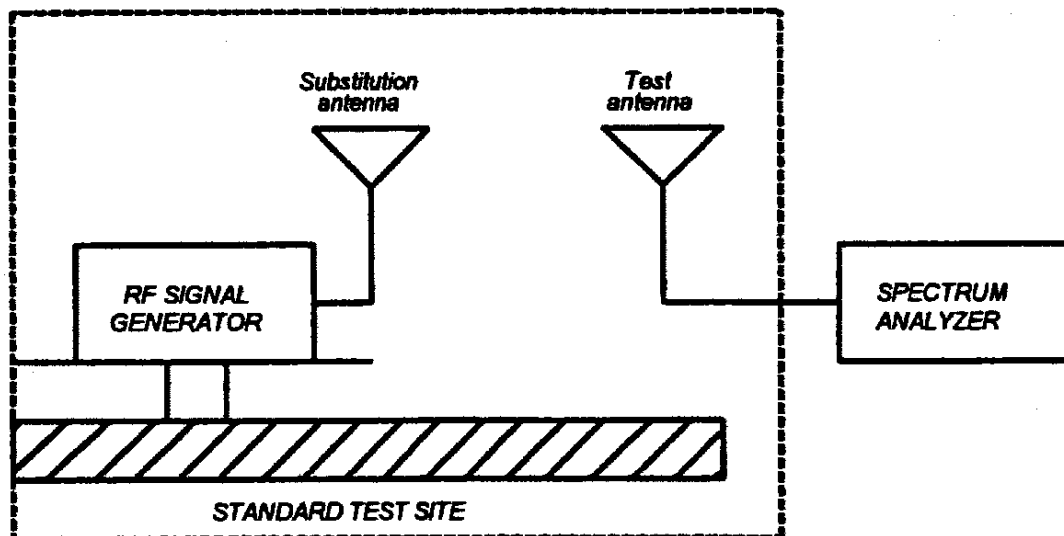
1.2.12.2 Method of Measurement

- A) Connect the equipment as illustrated
- B) Adjust the spectrum analyzer for the following settings:
 - 1) Resolution Bandwidth 100 kHz (<1 GHz), 1 MHz (> 1GHz).
 - 2) Video Bandwidth = 3 times Resolution Bandwidth, or 30 kHz (22.917)
 - 3) Sweep Speed ≤ 2000 Hz/second
 - 4) Detector Mode = Mean or Average Power
- C) Place the transmitter to be tested on the turntable in the standard test site. The transmitter is transmitting into a non-radiating load which is placed on the turntable. The RF cable to this load should be of minimum length.



Name of Test: Field Strength of Spurious Radiation (Cont.)

- D) For each spurious measurement the test antenna should be adjusted to the correct length for the frequency involved. This length may be determined from a calibration ruler supplied with the equipment. Measurements shall be made from the lowest radio frequency generated in the equipment to the tenth harmonic of the carrier, except for the region close to the carrier equal to \pm the test bandwidth (see section 1.3.4.4).
- E) For each spurious frequency, raise and lower the test antenna from 1 m to 4 m to obtain a maximum reading on the spectrum analyzer with the test antenna at horizontal polarity. Repeat this procedure to obtain the highest possible reading. Record this maximum reading.
- F) Repeat step E) for each spurious frequency with the test antenna polarized vertically.



- G) Reconnect the equipment as illustrated.
- H) Keep the spectrum analyzer adjusted as in step B).
- I) Remove the transmitter and replace it with a substitution antenna (the antenna should be half-wavelength for each frequency involved). The center of the substitution antenna should be approximately at the same location as the center of the transmitter. At lower frequencies, where the substitution antenna is very long, this will be impossible to achieve when the antenna is polarized vertically. In such case the lower end of the antenna should be 0.3 m above the ground.

Name of Test: Field Strength of Spurious Radiation (Cont.)

- J) Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a non-radiating cable. With the antennas at both ends horizontally polarized and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.
- K) Repeat step J) with both antennas vertically polarized for each spurious frequency.
- L) Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps J) and K) by the power loss in the cable between the generator and the antenna and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna.
- M) The levels recorded in step L) are absolute levels of radiated spurious emissions in dBm. The radiated spurious emissions in dB can be calculated by the following:

Radiated spurious emissions dB =
 $10\log_{10}(\text{TX power in watts}/0.001) - \text{the levels in step I)}$

NOTE: It is permissible that other antennas provided can be referenced to a dipole.

Test Equipment:

Asset	Description	s/n	Cycle	Last Cal
(as applicable)				
Transducer				
	i00088	EMCO 3109-B 25MHz-300MHz	2336	24 mo. Sep-03
X	i00065	EMCO 3301-B Active Monopole	2635	24 mo. Sep-03
X	i00089	Apriel 2001 200MHz-1GHz	001500	24 mo. Sep-03
X	i00103	EMCO 3115 1GHz-18GHz	9208-3925	24 mo. Jan-04
Amplifier				
X	i00028	HP 8449A	2749A00121	12 mo. May-04
Spectrum Analyzer				
X	i00029	HP 8563E	3213A00104	12 mo. May-05
X	i00033	HP 85462A	3625A00357	12 mo. Sep-04
	i00048	HP 8566B	2511AD1467	12 mo. Jul-04

Name of Test: Field Strength of Spurious Radiation

Harmonically Related:

Frequency Tuned, MHz	Frequency Emission, MHz	Meter, dBuV	CF, dB	dBuV/m	@ m	ERP, dBm
462.562500	925.145000	25.7	27.1	52.8	3	-44.6
462.562500	1387.701300	22.0	27.4	49.4	3	-48.0
462.562500	1850.251300	25.3	31.2	56.5	3	-40.9
462.562500	2312.825000	17.5	32.4	49.8	3	-47.5
462.562500	2775.397500	17.6	32.6	50.3	3	-47.1
462.562500	3237.970000	11.1	34.0	45.1	3	-52.3
462.562500	3700.542500	9.8	37.4	47.2	3	-50.1
462.562500	4163.115000	11.9	39.8	51.7	3	-45.7
462.562500	4625.687500	11.5	39.4	50.8	3	-46.5

Non-Harmonically Related:

Frequency Tuned, MHz	Frequency Emission, MHz	Meter, dBuV	CF, dB	dBuV/m	@ m	ERP, dBm
462.562500	148.833333	29.8	2.6	32.4	10	-64.9
462.562500	243.666667	27.5	2.7	30.1	10	-67.2
462.562500	297.666667	28.1	6.1	34.1	10	-63.3
462.562500	352.193333	27.3	7.7	35.0	10	-62.3
462.562500	381.988333	27.1	8.6	35.7	10	-61.7
462.562500	406.460000	28.8	9.2	38.0	10	-59.4

All other readings were below the limit by more than 20dB



Supervised By:

Michael Findley, Laboratory Manager

Name of Test: Emission Masks (Occupied Bandwidth)
Specification: 47 CFR 2.1049(c)(1)
Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.11
Test Equipment: As per attached page

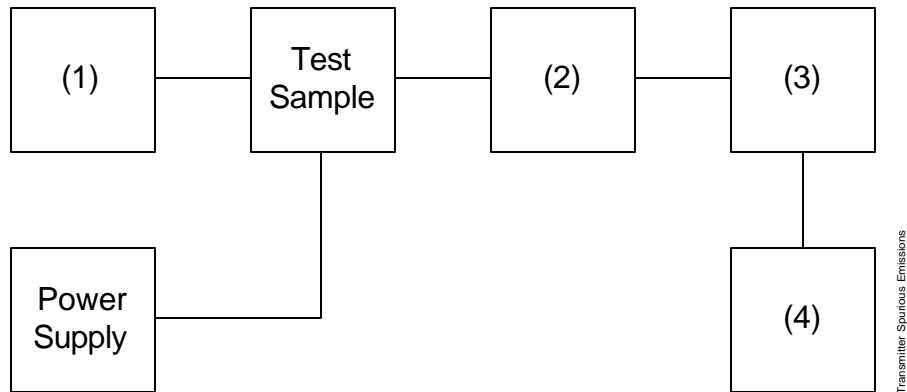
Measurement Procedure

1. The EUT and test equipment were set up as shown on the following page, with the Spectrum Analyzer connected.
2. For EUTs supporting audio modulation, the audio signal generator was adjusted to the frequency of maximum response and with output level set for ± 2.5 kHz deviation (or 50% modulation). With level constant, the signal level was increased 16 dB.
3. For EUTs supporting digital modulation, the digital modulation mode was operated to its maximum extent.
4. The Occupied Bandwidth was measured with the Spectrum Analyzer controls set as shown on the test results.
5. Measurement Results: Attached

Transmitter Spurious Emission

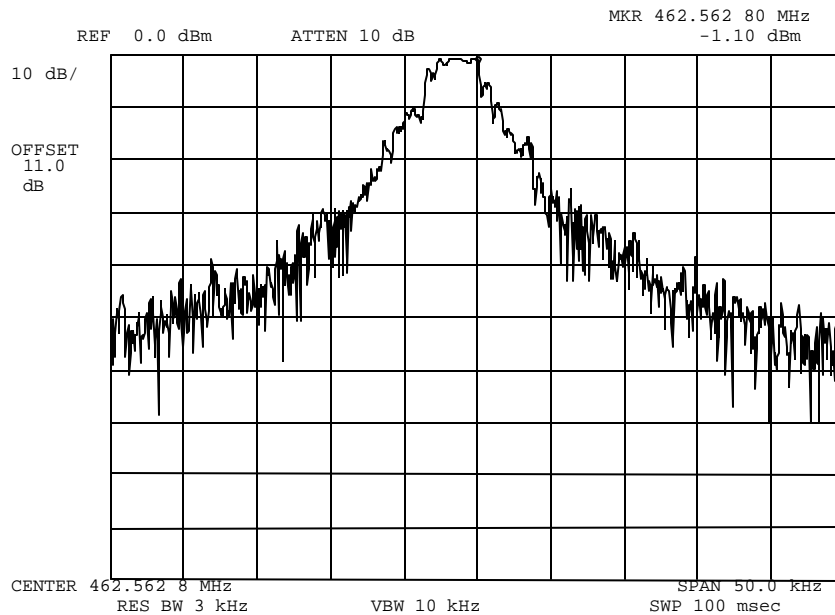
Test A. Occupied Bandwidth (In-Band Spurious)

Test B. Out-of-Band Spurious



Asset (as applicable)	Description	s/n		
(1)	Audio Oscillator/Generator (if required)			
(2)	Coaxial Attenuator (if required)			
i00122	Narda 766-10	7802		NCR
i00123	Narda 766-10	7802A		NCR
i00069	Bird 8329 (30 dB)	1006		NCR
i00113	Sierra 661A-3D	1059		NCR
(3)	Filters; Notch, HP, LP, BP (if required)			
i00126	Eagle TNF-1	100-250		NCR
i00125	Eagle TNF-1	50-60		NCR
i00124	Eagle TNF-1	250-850		NCR
(4)	Spectrum Analyzer			
X	i00048	HP 8566B	2511A01467	12 mo. Jul-04
	i00029	HP 8563E	3213A00104	12 mo. May-05

Name of Test: Emission Masks (Occupied Bandwidth)
 g0550017: 2005-May-17 Tue 13:49:00
 State: 2:High Power



Power:
 Modulation:
 Comments:

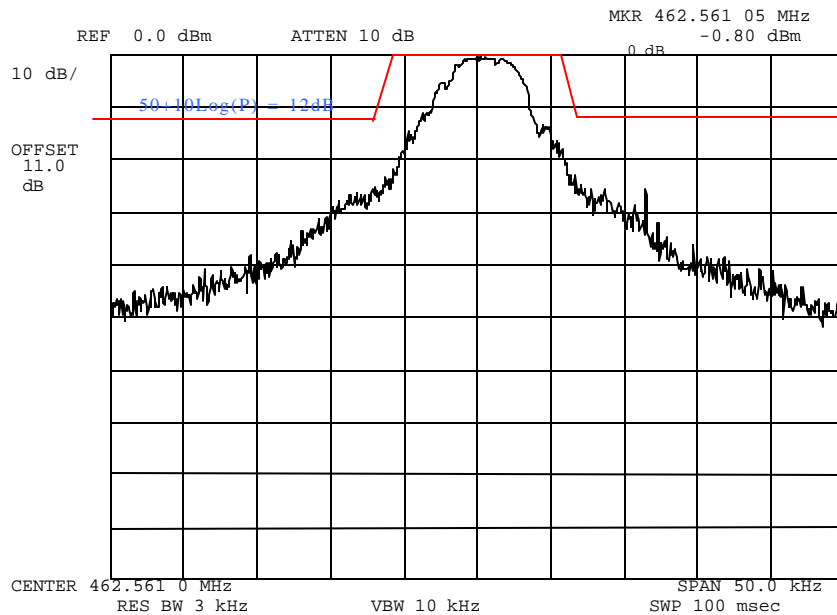
HIGH (Loose Coupled)
 MESSAGE "HELP - EMERGENCY"
 Alternative message "MAYDAY - MAYDAY"
 or "Track Me"



Michael Findley, Laboratory Manager

Supervised By:

Name of Test: Emission Masks (Occupied Bandwidth)
 g0550018: 2005-May-17 Tue 13:52:00
 State: 2:High Power



Power:
 Modulation:

HIGH (Loose Coupled)
 MESSAGE
 95.635(e)(1) MASK 1 (Referenced to 10mW)



Michael Findley, Laboratory Manager

Supervised By:

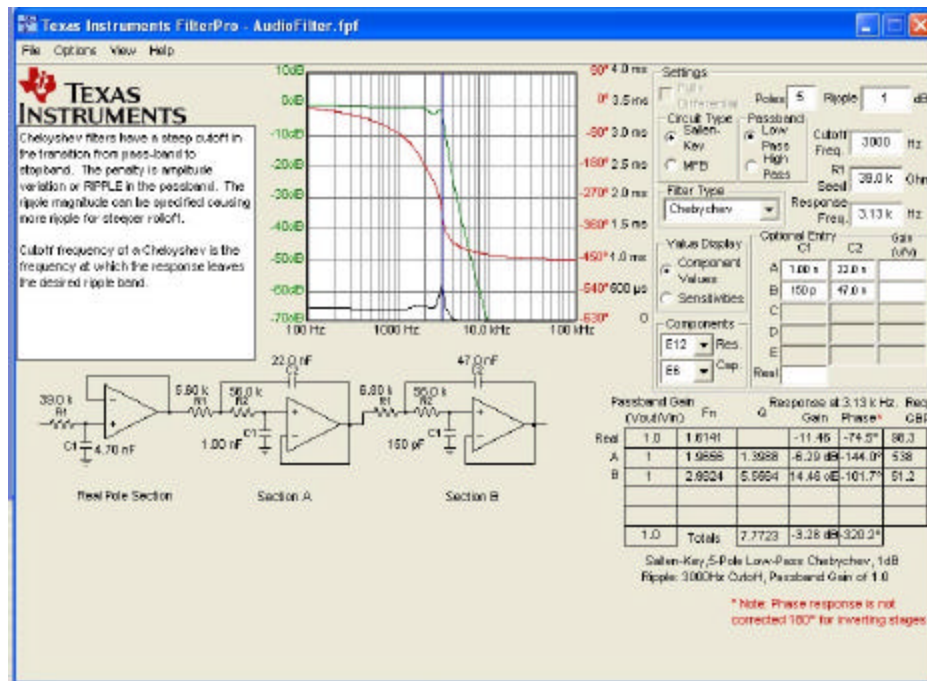
Name of Test: Audio Low Pass Filter (Voice Input)
Specification: 47 CFR 2.1047(a)
Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.15

Measurement Procedure

1. The EUT and test equipment were set up such that the audio input was connected at the input to the modulation limiter, and the modulated stage.
2. The audio output was connected at the output to the modulated stage.
3. Measurement Results:

The device has no audio input. The audio message is preprogrammed into the solid-state memory of the device and cannot be changed by the user. All measurements involving modulation were taken during the message period.

The filter design used in the device is shown below:



Attested By:

David E. Lee, Quality Assurance Manager

Name of Test: Audio Frequency Response
Specification: 47 CFR 2.1047(a)
Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.6
Test Equipment: As per previous page

Measurement Procedure

1. The EUT and test equipment were set up as shown on the following page.
2. The audio signal generator was connected to the audio input circuit/microphone of the EUT.
3. The audio signal input was adjusted to obtain 20% modulation at 1 kHz, and this point was taken as the 0 dB reference level.
4. With input levels held constant and below limiting at all frequencies, the audio signal generator was varied from 100 Hz to 50 kHz.
5. The response in dB relative to 1 kHz was then measured, using the HP 8901A Modulation Analyzer.
6. Measurement Results:

The device has no audio input. The audio message is preprogrammed into the solid-state memory of the device and cannot be changed by the user. All measurements involving modulation were taken during the message period.



Attested By:

David E. Lee, Quality Assurance Manager

Name of Test: Modulation Limiting
Specification: 47 CFR 2.1047(b)
Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.3
Test Equipment: As per previous page

Measurement Procedure

1. The signal generator was connected to the input of the EUT as for "Frequency Response of the Modulating Circuit."
2. The modulation response was measured for each of three frequencies (one of which was the frequency of maximum response), and the input voltage was varied and was observed on an HP 8901A Modulation Analyzer.
3. The input level was varied from 30% modulation (± 1.5 kHz deviation) to at least 20 dB higher than the saturation point.
4. Measurements were performed for both negative and positive modulation and the respective results were recorded.
5. Measurement Results:

The device has no audio input. The audio message is preprogrammed into the solid-state memory of the device and cannot be changed by the user. All measurements involving modulation were taken during the message period.



Attested By:

David E. Lee, Quality Assurance Manager

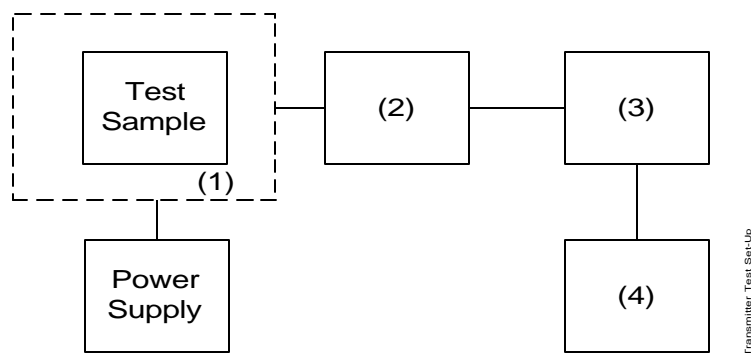
Name of Test: Frequency Stability (Temperature Variation)
Specification: 47 CFR 2.1055(d)(1)
Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.2
Test Conditions: As Indicated
Test Equipment: As per previous page

Measurement Procedure

1. The EUT and test equipment were set up as shown on the following page.
2. With all power removed, the temperature was decreased to -30°C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was noted within one minute.
3. With power OFF, the temperature was raised in 10°C steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.
4. The temperature tests were performed for the worst case.
5. Measurement Results: Attached

Transmitter Test Set-Up

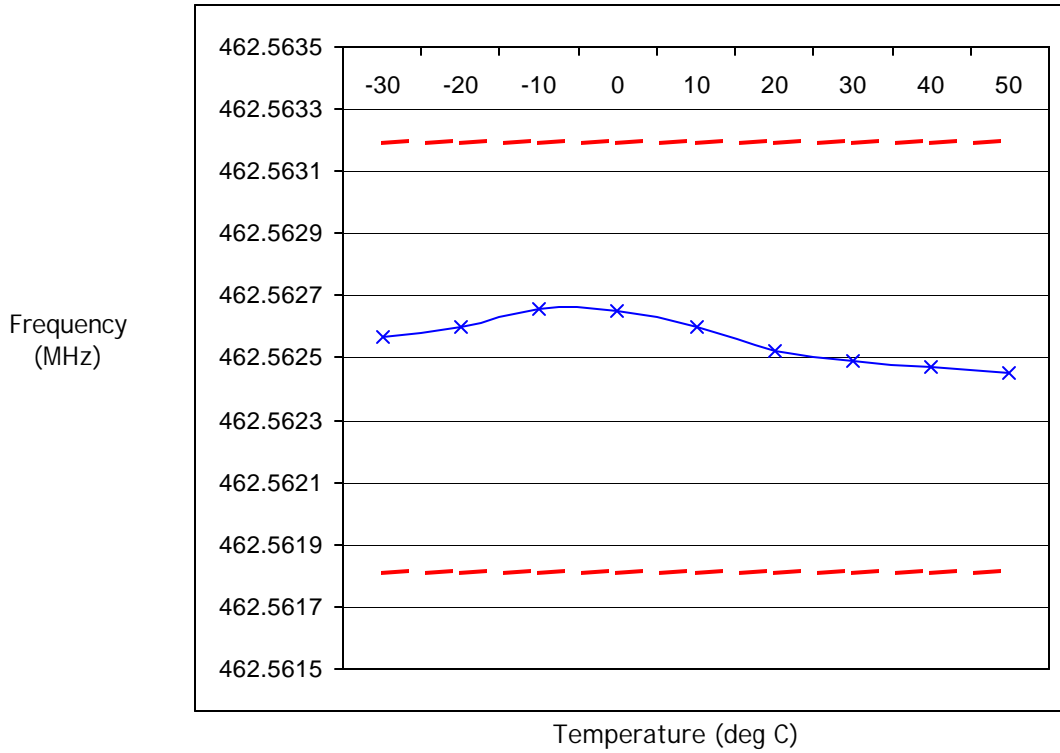
- Test A. Operational Stability
- Test B. Carrier Frequency Stability
- Test C. Operational Performance Stability
- Test D. Humidity
- Test E. Vibration
- Test F. Environmental Temperature
- Test G. Frequency Stability: Temperature Variation
- Test H. Frequency Stability: Voltage Variation



Asset	Description (as applicable)	s/n		
(1)	Temperature, Humidity, Vibration			
X	i00027 Tenny Temp. Chamber	9083-765-234		NCR
(2)	Coaxial Attenuator (if required)			
	i00122 NARDA 766-10	7802		NCR
	i00123 NARDA 766-10	7802A		NCR
	i00113 SIERRA 661A-3D	1059		NCR
	i00069 BIRD 8329 (30 dB)	10066		NCR
(3)	RF Power			
X	i00020 HP 8901A POWER MODE	2105A01087	12 mo.	May-05
(4)	Frequency Counter			
X	i00020 HP 8901A	2105A01087	12 mo.	May-05

Name of Test: Frequency Stability (Temperature Variation)

State:



Supervised By:



Michael Findley, Laboratory Manager

Name of Test: Frequency Stability (Voltage Variation)
Specification: 47 CFR 2.1055(b)(1)
Guide: ANSI/TIA/EIA-603-1992, Paragraph 2.2.2
Test Equipment: As per previous page

Measurement Procedure

1. The EUT was placed in a temperature chamber at $25\pm 5^{\circ}\text{C}$ and connected as for "Frequency Stability - Temperature Variation" test.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. Measurement Results:

The device has an internal battery and the case is sealed during manufacture. The device runs for approximately 72hrs after activation from the 3.6V battery. All testing was done with a fully charged battery.



Attested By:

David E. Lee, Quality Assurance Manager

Name of Test: Necessary Bandwidth and Emission Bandwidth

Specification: 47 CFR 2.202(g)

Modulation = 11K0F3E

Necessary Bandwidth Calculation:

Maximum Modulation (M), kHz	=	3.0
Maximum Deviation (D), kHz	=	2.5
Constant Factor (K)	=	1.0
Necessary Bandwidth (B_N), kHz	=	11.0



Calculated By:

David E. Lee, Quality Assurance Manager

Name of Test: Summary of Applicant Supplied Attestations
Specification: 47 CFR 95
Guide: ANSI/TIA/EIA-603-1992,
Test Conditions: As Indicated
Test Equipment: As per previous page

95.647

Antenna has no gain (as compared to a half-wave dipole) and is vertically polarized.

95.649

There are no provisions for increasing transmitter power.

95.653

Users manual includes instructions and warnings.



Attested on behalf of Applicant By:

David E. Lee, Quality Assurance Manager

**Testimonial
and
Statement of Certification**

This is to certify that:

1. **That** the application was prepared either by, or under the direct supervision of, the undersigned.
2. **That** the technical data supplied with the application was taken under my direction and supervision.
3. **That** the data was obtained on representative units, randomly selected.
4. **That**, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.

Certifying Engineer:



Michael Findley, Laboratory Manager