# Spectrum Technology, Inc.

## Sceptar II Paging Receiver

**April 08, 2008**

**Report No. SPTE0081**

Report Prepared By


www.nwemc.com
1-888-EMI-CERT



EMC Test Report

NORTHWEST EMC

22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

# Certificate of Test

**Issue Date: April 08, 2008**
**Spectrum Technology, Inc.**
**Model: Sceptar II Paging Receiver**

| Emissions | | | |
|---|---|---|---|
| **Test Description** | **Specification** | **Test Method** | **Pass/Fail** |
| Spurious Radiated Emissions of the Receiver | FCC 15.109:2007 | ANSI C63.4:2003 | **Pass** |

| Modifications made to the product |
|---|
| **See the Modifications section of this report** |

***Test Facility***

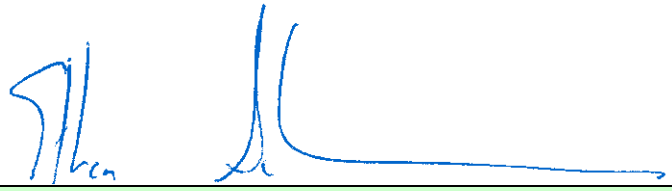
The measurement facility used to collect the data is located at:

Northwest EMC, Inc.
22975 NW Evergreen Parkway, Suite 400
Hillsboro, OR 97124

Phone: (503) 844-4066 Fax: 844-3826

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada (Site Filing #3496A).

**Approved By:**



*Ethan Schoonover, Sultan Lab Manager*

**NVLAP Lab Code: 200630-0**

***This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.***

***Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.***

| Revision Number | Description | Date | Page Number |
|---|---|---|---|
| 00 | None | | |

# Accreditations and Authorizations



**FCC:** Accredited by NVLAP for performance of FCC radio, digital, and ISM device testing. Our Open Area Test Sites, certification chambers, and conducted measurement facilities have been fully described in reports filed with the FCC and accepted by the FCC in letters maintained in our files. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by the FCC as a Telecommunications Certification Body (TCB). This allows Northwest EMC to certify transmitters to FCC specifications in accordance with 47 CFR 2.960 and 2.962.

**NVLAP:** Northwest EMC, Inc. is accredited under the United States Department of Commerce, National Institute of Standards and Technology, and National Voluntary Laboratory Accreditation Program for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 2004/108/EC, and ANSI C63.4. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.

NVLAP LAB CODE 200629-0
NVLAP LAB CODE 200630-0
NVLAP LAB CODE 200676-0
NVLAP LAB CODE 200761-0

**Industry Canada:** Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS 212, Issue 1 (Provisional) and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements.

**CAB:** Designated by NIST and validated by the European Commission as a Conformity Assessment Body (CAB) to conduct tests and approve products to the EMC directive and transmitters to the R&TTE directive, as described in the U.S. - EU Mutual Recognition Agreement.

**TÜV Product Service:** Included in TUV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TUV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TUV's current Listing of CARAT Laboratories, available from TUV. A certificate was issued to represent that this laboratory continues to meet TUV's CARAT Program requirements. Certificate No. USA0604C.

**TÜV Rheinland:** Authorized to carryout EMC tests by order and under supervision of TÜV Rheinland. This authorization is based on "Conditions for EMC-Subcontractors" of November 1992.

**NEMKO:** Assessed and accredited by NEMKO (Norwegian testing and certification body) for European emissions and immunity testing. As a result of NEMKO's laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification (Authorization No. ELA 119).

**Australia/New Zealand:** The National Association of Testing Authorities (NATA), Australia has been appointed by the ACA as an accreditation body to accredit test laboratories and competent bodies for EMC standards. Accredited test reports or assessments by competent bodies must carry the NATA logo. Test reports made by an overseas laboratory that has been accredited for the relevant standards by an overseas accreditation body that has a Mutual Recognition Agreement (MRA) with NATA are also accepted as technical grounds for product conformity. The report should be endorsed with the respective logo of the accreditation body (NVLAP).

**VCCI:** Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. *(Registration Numbers. - Hillsboro: C-1071, R-1025, C-2687, T-289, and R-2318, Irvine: R-1943, C-2766, and T-298, Sultan: R-871, C-1784, and T-294).*

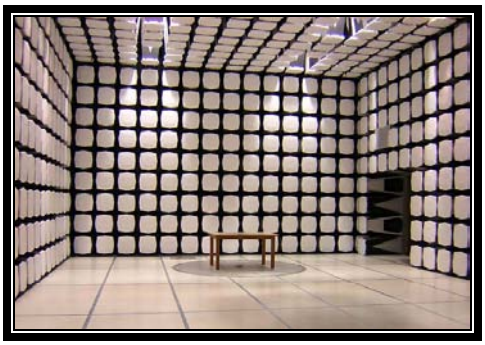
**BSMI:** Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement. License No.SL2-IN-E-1017.

**GOST:** Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification

**MIC:** Northwest EMC, Inc is a CAB designated by MRA partners and recognized by Korea. (*Assigned Lab Numbers: Hillsboro: US0017, Irvine: US0158, Sultan: US0157)*

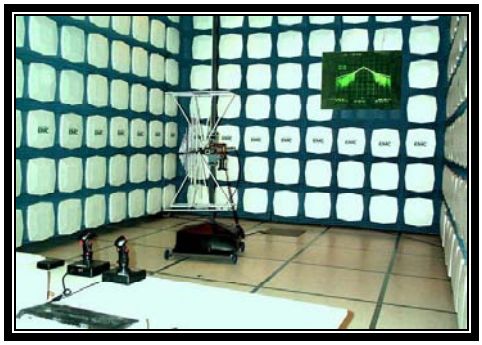
## SCOPE

For details on the Scopes of our Accreditations, please visit:
http://www.nwemc.com/scope.asp

**California – Orange County Facility**
**Labs OC01 – OC13**

41 Tesla Ave. Irvine, CA 92618
(888) 364-2378 Fax: (503) 844-3826



**Oregon – Evergreen Facility**
**Labs EV01 – EV11**

22975 NW Evergreen Pkwy. Suite 400 Hillsboro, OR 97124
(503) 844-4066 Fax: (503) 844-3826

**Washington – Sultan Facility**
**Labs SU01 – SU07**

14128 339th Ave. SE Sultan, WA 98294
(888) 364-2378

## Party Requesting the Test

| | |
|---|---|
| **Company Name:** | Spectrum Technology, Inc. |
| **Address:** | 209 Dayton Street Suite #205 |
| **City, State, Zip:** | Edmonds, WA 98020 |
| **Test Requested By:** | Rod Munro |
| **Model:** | Sceptar II Paging Receiver |
| **First Date of Test:** | April 7, 2008 |
| **Last Date of Test:** | April 7, 2008 |
| **Receipt Date of Samples:** | April 7, 2008 |
| **Equipment Design Stage:** | Production |
| **Equipment Condition:** | No Damage |

## Information Provided by the Party Requesting the Test

| **Functional Description of the EUT (Equipment Under Test):** |
|---|
| Scanning VHF receiver operating in the 151-160MHz, 159-167MHz, and 167-174MHz bands. |

| **Testing Objective:** |
|---|
| Certification of Part 15 scanning receiver. VHF portion only. Battery powered. |

## CONFIGURATION 1 SPTE0081

| EUT | | | |
|---|---|---|---|
| **Description** | **Manufacturer** | **Model/Part Number** | **Serial Number** |
| VHF - M | SCA | Sceptar II Paging Receiver | VHF-M1 |
| VHF - M | SCA | Sceptar II Paging Receiver | VHF-M2 |

## CONFIGURATION 2 SPTE0081

| EUT | | | |
|---|---|---|---|
| **Description** | **Manufacturer** | **Model/Part Number** | **Serial Number** |
| VHF - H | SCA | Sceptar II Paging Receiver | VHF-H1 |
| VHF - H | SCA | Sceptar II Paging Receiver | VHF-H2 |

## CONFIGURATION 3 SPTE0081

| EUT | | | |
|---|---|---|---|
| **Description** | **Manufacturer** | **Model/Part Number** | **Serial Number** |
| VHF-HH | SCA | Sceptar II Paging Receiver | VHF-HH Sample 1 |
| VHF-HH | SCA | Sceptar II Paging Receiver | VHF-HH Sample 2 |

| Equipment modifications | | | | | |
|---|---|---|---|---|---|
| Item | Date | Test | Modification | Note | Disposition of EUT |
| 1 | 4/7/2008 | Spurious Radiated Emissions of the Receiver | Tested as delivered to Test Station. | No EMI suppression devices were added or modified during this test. | Scheduled testing was completed. |

# RADIATED EMISSIONS

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

| MODES OF OPERATION |
|---|
| VHF-M1 receiving Ch 1, 152 MHz. VHF-M2 receiving Ch 2, 159 MHz. |
| VHF-H1 receiving Ch 1, 160 MHz. VHF-H2 receiving Ch 2, 166 MHz. |
| VHF-HH Sample 1 receiving Ch 1, 168 MHz. VHF-HH Sample 2 receiving Ch 2, 173 MHz. |

| POWER SETTINGS INVESTIGATED |
|---|
| Battery |

| FREQUENCY RANGE INVESTIGATED | | | |
|---|---|---|---|
| Start Frequency | 30 MHz | Stop Frequency | 2 GHz |

| SAMPLE CALCULATIONS |
|---|
| Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation |

| TEST EQUIPMENT | | | | | |
|---|---|---|---|---|---|
| Description | Manufacturer | Model | ID | Last Cal. | Interval |
| Spectrum Analyzer | Agilent | E4446A | AAT | 12/7/2007 | 13 |
| Pre-Amplifier | Miteq | AM-1616-1000 | AOL | 12/29/2006 | 16 |
| Antenna, Biconilog | EMCO | 3141 | AXE | 1/15/2008 | 24 |
| EV01 Cables | | Bilog Cables | EVA | 10/23/2007 | 13 |
| Pre-Amplifier | Miteq | AMF-4D-010100-24-10P | APW | 1/3/2008 | 13 |
| Antenna, Horn | EMCO | 3115 | AHC | 8/24/2006 | 24 |
| EV01 Cables | | Double Ridge Horn Cables | EVB | 1/3/2008 | 13 |

| MEASUREMENT BANDWIDTHS | | | | |
|---|---|---|---|---|
| | **Frequency Range (MHz)** | **Peak Data (kHz)** | **Quasi-Peak Data (kHz)** | **Average Data (kHz)** |
| | 0.01 - 0.15 | 1.0 | 0.2 | 0.2 |
| | 0.15 - 30.0 | 10.0 | 9.0 | 9.0 |
| | 30.0 - 1000 | 100.0 | 120.0 | 120.0 |
| | Above 1000 | 1000.0 | N/A | 1000.0 |
| Measurements were made using the bandwidths and detectors specified. No video filter was used. | | | | |

## MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

## TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, a final radiated emissions test was performed. The frequency range investigated (scanned), is also noted in this report. Radiated emissions measurements were made at the EUT azimuth and antenna height such that the maximum radiated emissions level will be detected. This requires the use of a turntable and an antenna positioner. The preferred method of a continuous azimuth search is utilized for frequency scans of the EUT field strength with both polarities of the measuring antenna. A calibrated, linearly polarized antenna was positioned at the specified distance from the periphery of the EUT.

Tests were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna was varied in height above the conducting ground plane to obtain the maximum signal strength. Though specified in the report, the measurement distance shall be 3 meters or 10 meters. At any measurement distance, the antenna height was varied from 1 meter to 4 meters. These height scans apply for both horizontal and vertical polarization, except that for vertical polarization the minimum height of the center of the antenna shall be increased so that the lowest point of the bottom of the antenna clears the ground surface by at least 25 cm.

NORTHWEST EMC

# RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.11.29

| | | | | | |
|---|---|---|---|---|---|
| EUT: | Sceptar II Paging Receiver | | | Work Order: | SPTE0081 |
| Serial Number: | VHF-HH sample 1 /2 | | | Date: | 04/07/08 |
| Customer: | Spectrum Technology, Inc. | | | Temperature: | 21 |
| Attendees: | None | | | Humidity: | 26% |
| Project: | None | | | Barometric Pres.: | 1015.5 |
| Tested by: | Rod Peloquin | Power: | Battery | Job Site: | EV01 |

| TEST SPECIFICATIONS | Test Method |
|---|---|
| FCC 15.109:2007 | ANSI C63.4:2003 |

| TEST PARAMETERS | | | |
|---|---|---|---|
| Antenna Height(s) (m) | 1 - 4 | Test Distance (m) | 3 |

**COMMENTS**

VHF 167 - 174 MHz band. Two scanning VHF receivers on table

**EUT OPERATING MODES**

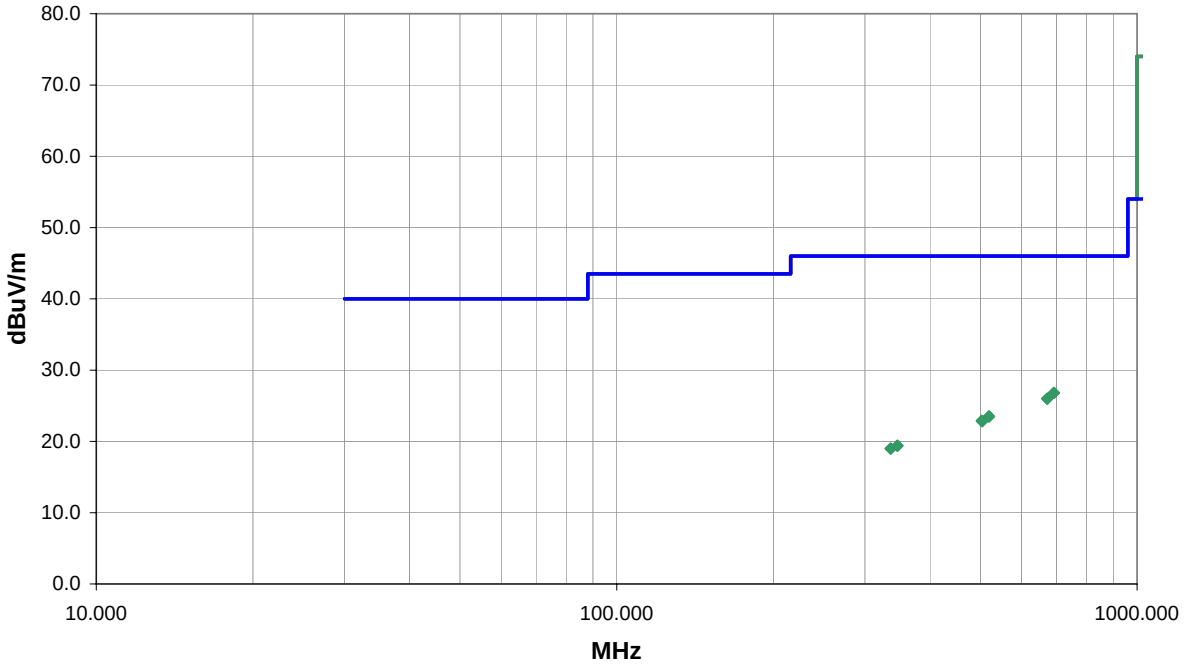
VHF-HH Sample 1 receiving Ch 1, 168 MHz. VHF-HH Sample 2 receiving Ch 2, 173 MHz.

**DEVIATIONS FROM TEST STANDARD**

No deviations.

| | |
|---|---|
| Run # | 3 |
| Configuration # | 3 |
| Results | Pass |

Signature




| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Azimuth (degrees) | Height (meters) | Distance (meters) | External Attenuation (dB) | Polarity | Detector | Distance Adjustment (dB) | Adjusted dBuV/m | Spec. Limit dBuV/m | Compared to Spec. (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 691.946 | 16.7 | 10.1 | 78.0 | 1.5 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 26.8 | 46.0 | -19.2 |
| 692.156 | 16.7 | 10.1 | 133.0 | 1.6 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 26.8 | 46.0 | -19.2 |
| 671.733 | 16.7 | 9.3 | 78.0 | 1.2 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 26.0 | 46.0 | -20.0 |
| 672.116 | 16.7 | 9.3 | 334.0 | 1.5 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 26.0 | 46.0 | -20.0 |
| 519.327 | 16.8 | 6.7 | 172.0 | 1.2 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 23.5 | 46.0 | -22.5 |
| 519.476 | 16.8 | 6.7 | 310.0 | 1.5 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 23.5 | 46.0 | -22.5 |
| 503.043 | 16.9 | 6.0 | 27.0 | 1.2 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 22.9 | 46.0 | -23.1 |
| 504.046 | 16.8 | 6.0 | 216.0 | 1.5 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 22.8 | 46.0 | -23.2 |
| 346.032 | 16.9 | 2.5 | 175.0 | 1.2 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 19.4 | 46.0 | -26.6 |
| 346.529 | 16.9 | 2.5 | 64.0 | 1.5 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 19.4 | 46.0 | -26.6 |
| 336.049 | 16.8 | 2.2 | 187.0 | 1.5 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 19.0 | 46.0 | -27.0 |
| 336.209 | 16.8 | 2.2 | 83.0 | 1.5 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 19.0 | 46.0 | -27.0 |

NORTHWEST EMC

# RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.11.29

| | | | | | |
|---|---|---|---|---|---|
| EUT: | Sceptar II Paging Receiver | | | Work Order: | SPTE0081 |
| Serial Number: | VHF-H1, VHF-H2 | | | Date: | 04/07/08 |
| Customer: | Spectrum Technology, Inc. | | | Temperature: | 21 |
| Attendees: | None | | | Humidity: | 26% |
| Project: | None | | | Barometric Pres.: | 1015.5 |
| Tested by: | Rod Peloquin | Power: | Battery | Job Site: | EV01 |

| TEST SPECIFICATIONS | Test Method |
|---|---|
| FCC 15.109:2007 | ANSI C63.4:2003 |

| TEST PARAMETERS | | | |
|---|---|---|---|
| Antenna Height(s) (m) | 1 - 4 | Test Distance (m) | 3 |

**COMMENTS**

VHF 159 - 167 MHz band. Two scanning VHF receivers on table

**EUT OPERATING MODES**

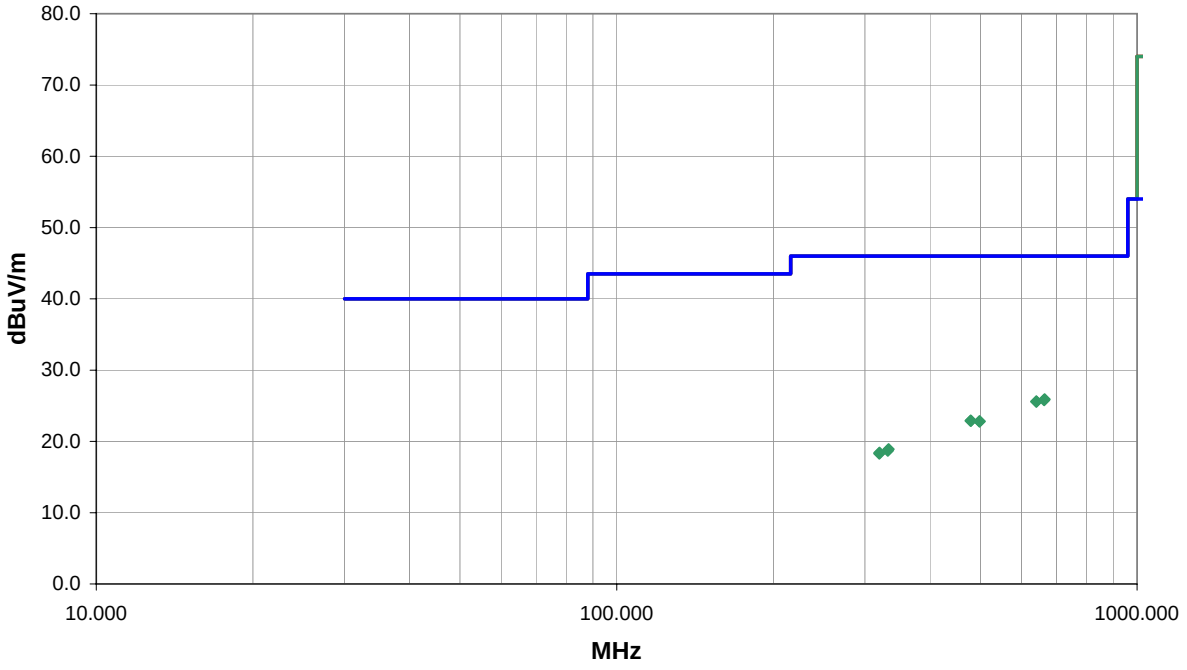
VHF-H1 receiving Ch 1, 160 MHz. VHF-H2 receiving Ch 2, 166 MHz.

**DEVIATIONS FROM TEST STANDARD**

No deviations.

| | |
|---|---|
| Run # | 4 |
| Configuration # | 2 |
| Results | Pass |

Signature




| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Azimuth (degrees) | Height (meters) | Distance (meters) | External Attenuation (dB) | Polarity | Detector | Distance Adjustment (dB) | Adjusted dBuV/m | Spec. Limit dBuV/m | Compared to Spec. (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 664.234 | 16.8 | 9.1 | 215.0 | 1.2 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 25.9 | 46.0 | -20.1 |
| 663.007 | 16.7 | 9.1 | 136.0 | 1.0 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 25.8 | 46.0 | -20.2 |
| 640.106 | 16.7 | 8.9 | 351.0 | 1.2 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 25.6 | 46.0 | -20.4 |
| 640.575 | 16.7 | 8.9 | 330.0 | 1.0 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 25.6 | 46.0 | -20.4 |
| 478.976 | 16.9 | 6.0 | 207.0 | 1.2 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 22.9 | 46.0 | -23.1 |
| 479.177 | 16.9 | 6.0 | 194.0 | 1.0 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 22.9 | 46.0 | -23.1 |
| 497.983 | 16.9 | 5.9 | 179.0 | 1.2 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 22.8 | 46.0 | -23.2 |
| 498.108 | 16.9 | 5.9 | 31.0 | 1.0 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 22.8 | 46.0 | -23.2 |
| 332.962 | 16.8 | 2.1 | 128.0 | 1.0 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 18.9 | 46.0 | -27.1 |
| 331.822 | 16.7 | 2.0 | 266.0 | 1.2 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 18.7 | 46.0 | -27.3 |
| 319.970 | 16.9 | 1.5 | 325.0 | 1.0 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 18.4 | 46.0 | -27.6 |
| 319.744 | 16.8 | 1.5 | 338.0 | 1.2 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 18.3 | 46.0 | -27.7 |

NORTHWEST EMC

# RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.11.29

| | | | | | |
|---|---|---|---|---|---|
| EUT: | Sceptar II Paging Receiver | | | Work Order: | SPTE0081 |
| Serial Number: | VHF-M1, VHF-M2 | | | Date: | 04/07/08 |
| Customer: | Spectrum Technology, Inc. | | | Temperature: | 21 |
| Attendees: | None | | | Humidity: | 26% |
| Project: | None | | | Barometric Pres.: | 1015.5 |
| Tested by: | Rod Peloquin | Power: | Battery | Job Site: | EV01 |

| TEST SPECIFICATIONS | Test Method |
|---|---|
| FCC 15.109:2007 | ANSI C63.4:2003 |

| TEST PARAMETERS | | | |
|---|---|---|---|
| Antenna Height(s) (m) | 1 - 4 | Test Distance (m) | 3 |

**COMMENTS**

VHF 151 - 160 MHz band. Two scanning VHF receivers on table

**EUT OPERATING MODES**

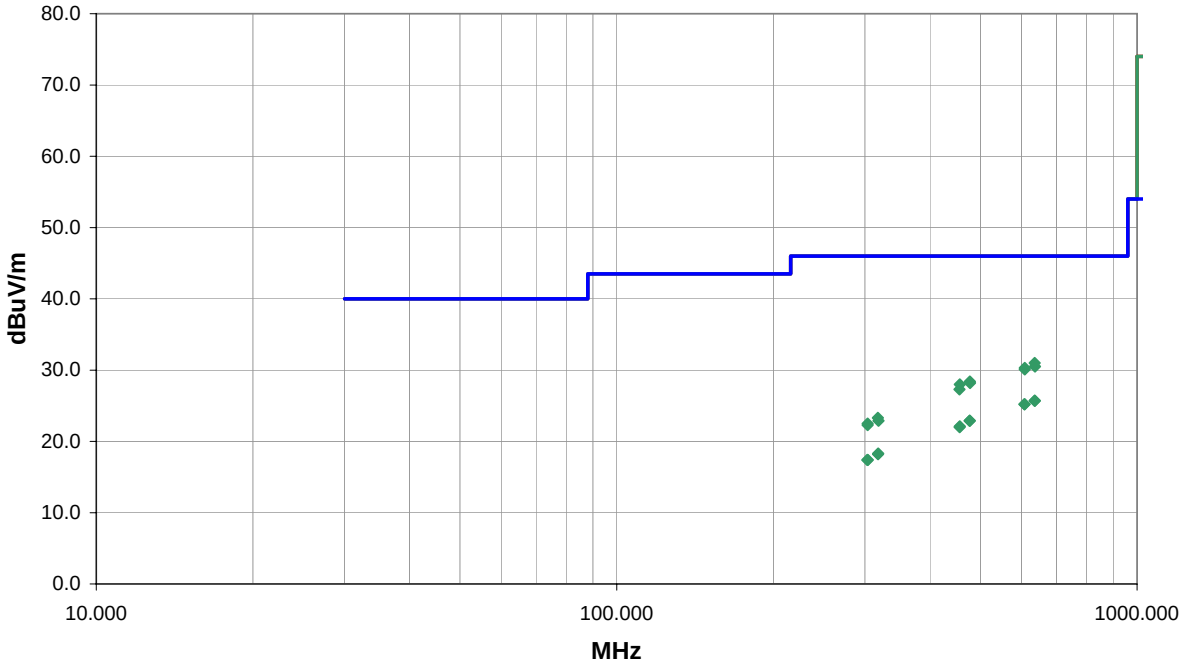
VHF-M1 receiving Ch 1, 152 MHz. VHF-M2 receiving Ch 2, 159 MHz.

**DEVIATIONS FROM TEST STANDARD**

No deviations.

| | |
|---|---|
| Run # | 5 |
| Configuration # | 1 |
| Results | Pass |

Signature




| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Azimuth (degrees) | Height (meters) | Distance (meters) | External Attenuation (dB) | Polarity | Detector | Distance Adjustment (dB) | Adjusted dBuV/m | Spec. Limit dBuV/m | Compared to Spec. (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 635.840 | 22.0 | 9.0 | 86.0 | 1.2 | 3.0 | 0.0 | H-Bilog | PK | 0.0 | 31.0 | 46.0 | -15.0 |
| 636.373 | 21.5 | 9.0 | 220.0 | 1.0 | 3.0 | 0.0 | V-Bilog | PK | 0.0 | 30.5 | 46.0 | -15.5 |
| 608.240 | 21.9 | 8.4 | 88.0 | 1.2 | 3.0 | 0.0 | H-Bilog | PK | 0.0 | 30.3 | 46.0 | -15.7 |
| 608.442 | 21.7 | 8.4 | 126.0 | 1.0 | 3.0 | 0.0 | V-Bilog | PK | 0.0 | 30.1 | 46.0 | -15.9 |
| 477.252 | 22.4 | 6.0 | 165.0 | 1.2 | 3.0 | 0.0 | H-Bilog | PK | 0.0 | 28.4 | 46.0 | -17.6 |
| 477.492 | 22.2 | 6.0 | 296.0 | 1.0 | 3.0 | 0.0 | V-Bilog | PK | 0.0 | 28.2 | 46.0 | -17.8 |
| 456.369 | 22.8 | 5.2 | 167.0 | 1.7 | 3.0 | 0.0 | V-Bilog | PK | 0.0 | 28.0 | 46.0 | -18.0 |
| 455.645 | 22.1 | 5.2 | 69.0 | 1.2 | 3.0 | 0.0 | H-Bilog | PK | 0.0 | 27.3 | 46.0 | -18.7 |
| 635.767 | 16.7 | 9.0 | 220.0 | 1.0 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 25.7 | 46.0 | -20.3 |
| 635.926 | 16.7 | 9.0 | 86.0 | 1.2 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 25.7 | 46.0 | -20.3 |
| 607.649 | 16.8 | 8.4 | 126.0 | 1.0 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 25.2 | 46.0 | -20.8 |
| 607.982 | 16.8 | 8.4 | 88.0 | 1.2 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 25.2 | 46.0 | -20.8 |
| 317.687 | 21.9 | 1.4 | 62.0 | 1.0 | 3.0 | 0.0 | V-Bilog | PK | 0.0 | 23.3 | 46.0 | -22.7 |
| 318.431 | 21.5 | 1.4 | 170.0 | 1.2 | 3.0 | 0.0 | H-Bilog | PK | 0.0 | 22.9 | 46.0 | -23.1 |
| 477.001 | 16.9 | 6.0 | 296.0 | 1.0 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 22.9 | 46.0 | -23.1 |
| 477.008 | 16.9 | 6.0 | 165.0 | 1.2 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 22.9 | 46.0 | -23.1 |
| 303.502 | 21.8 | 0.7 | 157.0 | 1.3 | 3.0 | 0.0 | V-Bilog | PK | 0.0 | 22.5 | 46.0 | -23.5 |
| 303.574 | 21.6 | 0.7 | 302.0 | 1.2 | 3.0 | 0.0 | H-Bilog | PK | 0.0 | 22.3 | 46.0 | -23.7 |
| 456.273 | 16.8 | 5.3 | 69.0 | 1.2 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 22.1 | 46.0 | -23.9 |
| 456.212 | 16.8 | 5.2 | 167.0 | 1.7 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 22.0 | 46.0 | -24.0 |
| 317.998 | 16.9 | 1.4 | 62.0 | 1.0 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 18.3 | 46.0 | -27.7 |

| Freq (MHz) | Amplitude (dBuV) | Factor (dB) | Azimuth (degrees) | Height (meters) | Distance (meters) | External Attenuation (dB) | Polarity | Detector | Distance Adjustment (dB) | Adjusted dBuV/m | Spec. Limit dBuV/m | Compared to Spec. (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 317.910 | 16.8 | 1.4 | 170.0 | 1.2 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 18.2 | 46.0 | -27.8 |
| 303.737 | 16.7 | 0.7 | 302.0 | 1.2 | 3.0 | 0.0 | H-Bilog | QP | 0.0 | 17.4 | 46.0 | -28.6 |
| 303.176 | 16.8 | 0.6 | 157.0 | 1.3 | 3.0 | 0.0 | V-Bilog | QP | 0.0 | 17.4 | 46.0 | -28.6 |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