

Tripod Data Systems, Inc.

WMBGMR01 in Recon (802.11(b)/(g) Radio Portion)

May 30, 2006

Report No. TRPO0022

Report Prepared By



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

© 2006 Northwest EMC, Inc

EMC Test Report

Certificate of Test

Issue Date: May 30, 2006

Tripod Data Systems, Inc.

Model: WMBGMR01 in Recon (802.11 (b)/(g) Radio Portion)

Emissions				
Test Description	Specification	Test Method	Pass	Fail
AC Powerline Conducted Emissions	FCC 15.207 AC Powerline Conducted Emissions:2005-9	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spurious Radiated Emissions	FCC 15.247(d) Spurious Radiated Emissions:2005-9	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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.

Approved By:



Greg Kiemel, Director of Engineering

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.

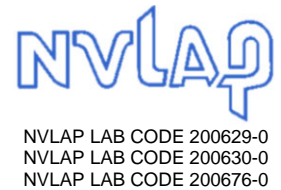
Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested,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

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 89/336/EEC, ANSI C63.4, MIL-STD 461E, DO-160D and SAE J1113. 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.



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 TÜV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TÜV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TÜV's current Listing of CARAT Laboratories, available from TÜV. A certificate was issued to represent that this laboratory continues to meet TÜV's CARAT Program requirements. Certificate No. USA0401C.



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, and R-2318, Irvine: C-2094 and R-1943, Sultan: R-871, C-1784 and R-1761.*)



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.



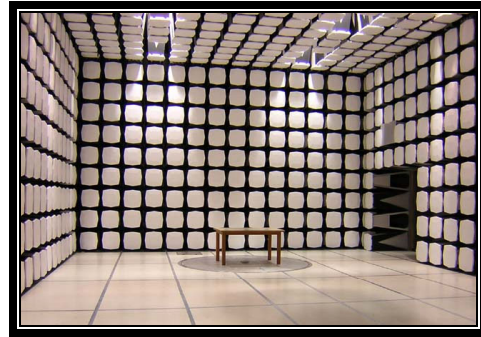
GOST: Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from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



SCOPE

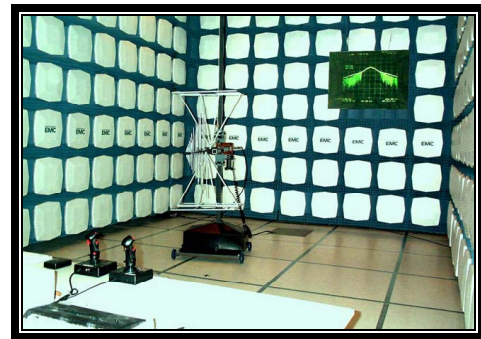
For details on the Scopes of our Accreditations, please visit:

<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 – EV10**

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:	Tripod Data Systems, Inc.
Address:	345 SW Avery Ave
City, State, Zip:	Corvallis, OR 97333
Test Requested By:	Bob Grant
Model:	WMBGMR01 in Recon (802.11(b)/(g) Radio Portion)
First Date of Test:	May 10, 2006
Last Date of Test:	May 19, 2006
Receipt Date of Samples:	May 04, 2006
Equipment Design Stage:	Pre-Production
Equipment Condition:	No visual damage.

Information Provided by the Party Requesting the Test

Clocks/Oscillators:	Not provided.
I/O Ports:	Serial, USB, Power

Functional Description of the EUT (Equipment Under Test):

The EUT is the 802.11(b)/(g) portion of a WiFi – Bluetooth combo radio module hosted in the Recon, a handheld data collector.

Client Justification for EUT Selection:

The product is a representative production sample.

Client Justification for Test Selection:

These test satisfy the FCC 15.247 requirements for the 802.11(b)/(g) portion of the combo radio.

CONFIGURATION 1 TRPO0022**Software/Firmware Running during test**

Description	Version
BTCirroTest	Unknown

EUT

Description	Manufacturer	Model/Part Number	Serial Number
EUT - Bluetooth radio	Tripod Data Systems, Inc.	WMBGMR01	Unknown
EUT - 802.11(b/g) radio	Tripod Data Systems, Inc.	WMBGMR01	Unknown

Peripherals in test setup boundary

Description	Manufacturer	Model/Part Number	Serial Number
Pocket PC Handheld Data Collector	Tripod Data Systems, Inc.	Recon	Compliance Unit 2
DC Power Supply	Cincon Electronics Co.	TR30R050	N/A
GPS	Trimble	Unknown	Unknown

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Leads	No	1.8	Yes	Pocket PC Handheld Data Collector	AC Power
Serial	Yes	1.5	Yes	Pocket PC Handheld Data Collector	GPS
USB	Yes	1.8	Yes	Pocket PC Handheld Data Collector	Unterminated

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	5/10/2006	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	5/19/2006	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

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

Transmitting high channel
Transmitting low channel
Transmitting mid channel

DATA RATES INVESTIGATED

802.11(b), 1Mbps
802.11(b), 11Mbps
802.11(g), 6Mbps
802.11(g), 36Mbps
802.11(g), 54Mbps

POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	30MHz	Stop Frequency	26GHz
-----------------	-------	----------------	-------

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
EV01 cables c,g, h			EVA	3/30/2006	13
EV01 cables g,h,j			EVB	3/30/2006	13
EV01 Cable D			EVD	3/30/2006	13
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	3/23/2006	13
Antenna, Horn	EMCO	3160-09	AHG	NCR	0
EV01 cables g,h,i			EVF	4/17/2006	13
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	2/17/2005	16
Antenna, Horn	EMCO	3160-08	AHK	NCR	0
High Pass Filter	Micro-Tronics	HPM50111	HFO	4/4/2006	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	1/4/2006	13
Antenna, Biconilog	EMCO	3141	AXE	12/28/2005	24
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	8/2/2005	13
Antenna, Horn	EMCO	3115	AHC	8/30/2005	12
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12

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.

EUT:	Recon with WMBGMR01 combo radio chip	Work Order:	TRPO0022
Serial Number:	Compliance Unit 2	Date:	05/10/06
Customer:	Tripod Data Systems, Inc.	Temperature:	22
Attendees:	None	Humidity:	31%
Project:	None	Barometric Pres.:	30.22
Tested by:	Jennifer Herrett	Power:	120VAC/60Hz
		Job Site:	EV01

TEST SPECIFICATIONS		Test Method
FCC 15.247(d) Spurious Radiated Emissions:2005-9		ANSI C63.4:2003

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

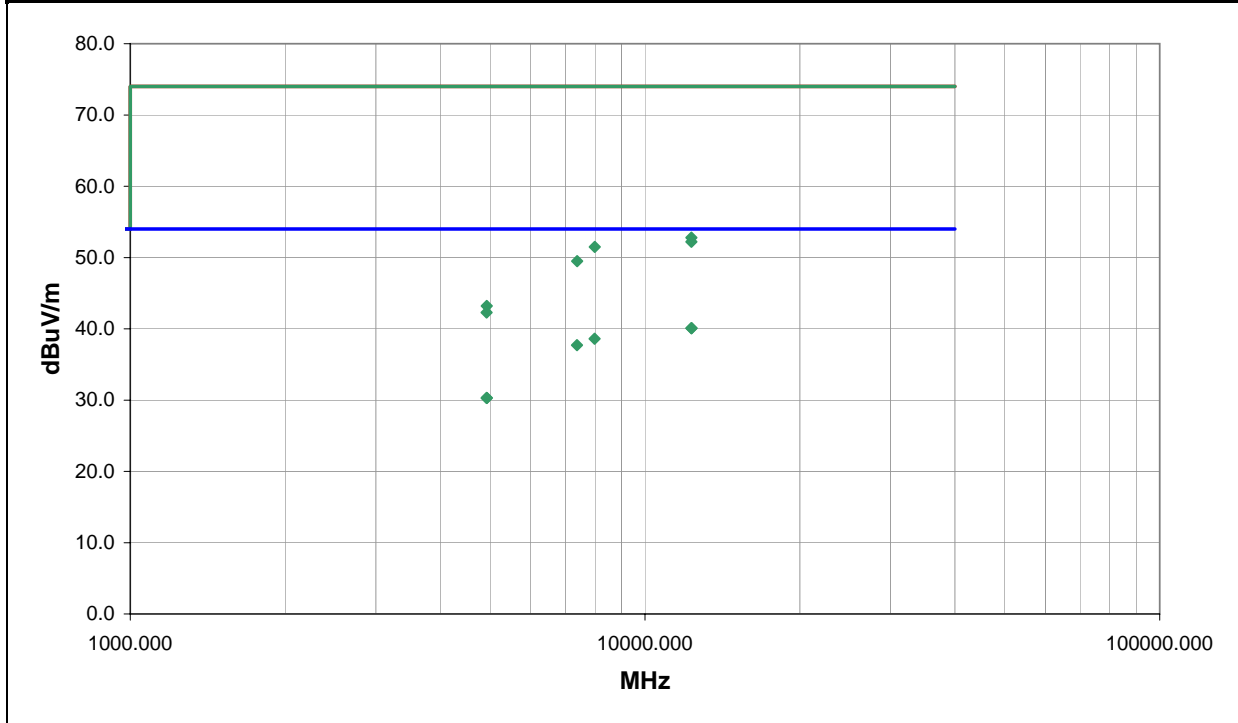
COMMENTS
 WMBGMR01 internal combo chip: 802.11(b)(g) and Bluetooth. EUT oriented vertically.

EUT OPERATING MODES
 Transmitting 802.11(b), 11Mbps, high channel

DEVIATIONS FROM TEST STANDARD
 No deviations.

Run #	5	 Signature
Configuration #	1	
Results	Pass	

NVLAP Lab Code 200630-0



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)
12303.230	24.0	16.1	34.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.1	54.0	-13.9
12313.750	24.0	16.1	360.0	2.4	3.0	0.0	H-Horn	AV	0.0	40.1	54.0	-13.9
7982.820	23.7	14.9	302.0	3.6	3.0	0.0	H-Horn	AV	0.0	38.6	54.0	-15.4
7379.160	24.1	13.6	59.0	1.1	3.0	0.0	V-Horn	AV	0.0	37.7	54.0	-16.3
12307.200	36.7	16.1	34.0	1.1	3.0	0.0	V-Horn	PK	0.0	52.8	74.0	-21.2
12310.940	36.1	16.1	360.0	2.4	3.0	0.0	H-Horn	PK	0.0	52.2	74.0	-21.8
7984.480	36.6	14.9	302.0	3.6	3.0	0.0	H-Horn	PK	0.0	51.5	74.0	-22.5
4927.690	23.6	6.7	57.0	1.4	3.0	0.0	H-Horn	AV	0.0	30.3	54.0	-23.7
4928.350	23.6	6.7	116.0	1.4	3.0	0.0	V-Horn	AV	0.0	30.3	54.0	-23.7
7381.620	35.9	13.6	59.0	1.1	3.0	0.0	V-Horn	PK	0.0	49.5	74.0	-24.5
4927.330	36.5	6.7	116.0	1.4	3.0	0.0	V-Horn	PK	0.0	43.2	74.0	-30.8
4922.390	35.6	6.7	57.0	1.4	3.0	0.0	H-Horn	PK	0.0	42.3	74.0	-31.7

EUT: Recon with WMBGMR01 combo radio chip		Work Order: TRPO0022	
Serial Number: Compliance Unit 2			Date: 05/10/06
Customer: Tripod Data Systems, Inc.			Temperature: 22
Attendees: None			Humidity: 31%
Project: None			Barometric Pres.: 30.22
Tested by: David Divergigelis	Power: 120VAC/60Hz	Job Site: EV01	

TEST SPECIFICATIONS	Test Method
FCC 15.247(d) Spurious Radiated Emissions:2005-9	ANSI C63.4:2003

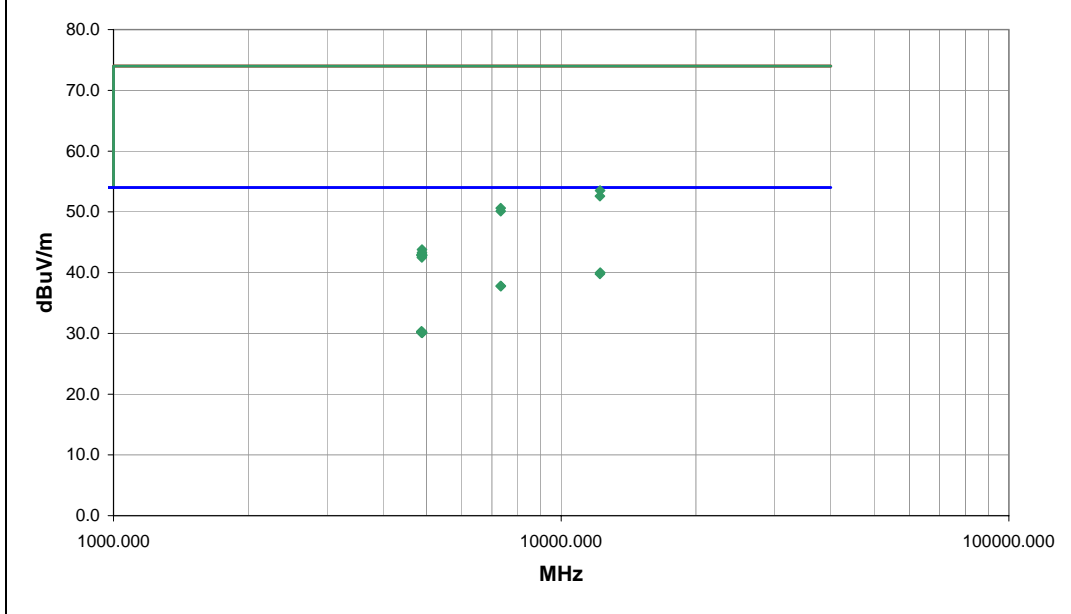
TEST PARAMETERS
Antenna Height(s) (m) 1 - 4 Test Distance (m) 3

COMMENTS
WMBGMR01 internal combo chip: 802.11(b)(g) and Bluetooth.

EUT OPERATING MODES
Transmitting 802.11, mid channel

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	6	NVLAP Lab Code 200630-0	Signature <i>David Divergigelis</i>
Configuration #	1		
Results	Pass		



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)	Comments
12219.100	23.9	16.1	337.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.0	54.0	-14.0	802.11(b) @ 11Mbps
12204.350	23.6	16.2	347.0	3.8	3.0	0.0	H-Horn	AV	0.0	39.8	54.0	-14.2	802.11(b) @ 11Mbps
7327.580	24.4	13.4	330.0	3.4	3.0	0.0	V-Horn	AV	0.0	37.8	54.0	-16.2	802.11(b) @ 11Mbps
7331.510	24.4	13.4	159.0	1.2	3.0	0.0	H-Horn	AV	0.0	37.8	54.0	-16.2	802.11(b) @ 11Mbps
12211.620	37.4	16.1	337.0	1.1	3.0	0.0	V-Horn	PK	0.0	53.5	74.0	-20.5	802.11(b) @ 11Mbps
12207.650	36.5	16.1	347.0	3.8	3.0	0.0	H-Horn	PK	0.0	52.6	74.0	-21.4	802.11(b) @ 11Mbps
7324.370	37.2	13.4	159.0	1.2	3.0	0.0	H-Horn	PK	0.0	50.6	74.0	-23.4	802.11(b) @ 11Mbps
4875.780	23.8	6.5	0.0	2.3	3.0	0.0	H-Horn	AV	0.0	30.3	54.0	-23.7	802.11(b) @ 1Mbps
4875.780	23.8	6.5	0.0	3.6	3.0	0.0	H-Horn	AV	0.0	30.3	54.0	-23.7	802.11(g) @ 6Mbps
4878.410	23.7	6.5	347.0	3.1	3.0	0.0	V-Horn	AV	0.0	30.2	54.0	-23.8	802.11(b) @ 11Mbps
4880.330	23.7	6.5	114.0	1.9	3.0	0.0	V-Horn	AV	0.0	30.2	54.0	-23.8	802.11(g) @ 36Mbps
4883.810	23.7	6.5	193.0	2.5	3.0	0.0	H-Horn	AV	0.0	30.2	54.0	-23.8	802.11(g) @ 36Mbps
4884.520	23.7	6.5	92.0	1.9	3.0	0.0	V-Horn	AV	0.0	30.2	54.0	-23.8	802.11(g) @ 6Mbps
4885.360	23.7	6.5	192.0	1.9	3.0	0.0	V-Horn	AV	0.0	30.2	54.0	-23.8	802.11(g) @ 54Mbps
7324.990	36.7	13.4	330.0	3.4	3.0	0.0	V-Horn	PK	0.0	50.1	74.0	-23.9	802.11(b) @ 11Mbps
4885.130	23.6	6.5	0.0	1.7	3.0	0.0	V-Horn	AV	0.0	30.1	54.0	-23.9	802.11(b) @ 1Mbps
4885.300	23.6	6.5	360.0	3.2	3.0	0.0	H-Horn	AV	0.0	30.1	54.0	-23.9	802.11(b) @ 11Mbps
4886.200	23.6	6.5	120.0	3.6	3.0	0.0	H-Horn	AV	0.0	30.1	54.0	-23.9	802.11(g) @ 54Mbps
4887.530	37.3	6.5	193.0	2.5	3.0	0.0	H-Horn	PK	0.0	43.8	74.0	-30.2	802.11(g) @ 36Mbps
4886.620	36.8	6.5	120.0	3.6	3.0	0.0	H-Horn	PK	0.0	43.3	74.0	-30.7	802.11(g) @ 54Mbps

SPURIOUS RADIATED EMISSIONS DATA SHEET

EUT: Recon with WMBGMR01 combo radio chip		Work Order: TRPO0022	
Serial Number: Compliance Unit 2			Date: 05/10/06
Customer: Tripod Data Systems, Inc.			Temperature: 22
Attendees: None			Humidity: 31%
Project: None			Barometric Pres.: 30.22
Tested by: David Divergigelis	Power: 120VAC/60Hz	Job Site: EV01	

TEST SPECIFICATIONS		Test Method	
FCC 15.247(d) Spurious Radiated Emissions:2005-9		ANSI C63.4:2003	

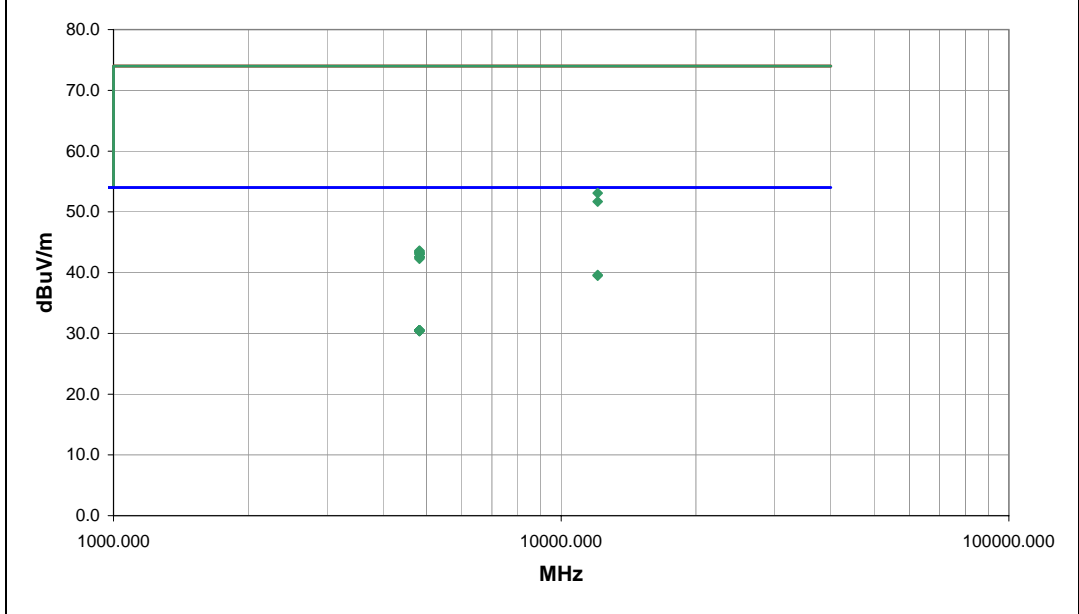
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS
WMBGMR01 internal combo chip: 802.11(b)(g) and Bluetooth.

EUT OPERATING MODES
Transmitting 802.11, low channel

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	7	NVLAP Lab Code 200630-0	Signature <i>David Divergigelis</i>
Configuration #	1		
Results	Pass		



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)	Comments
12059.820	23.5	16.1	110.0	1.1	3.0	0.0	V-Horn	AV	0.0	39.6	54.0	-14.4	802.11(b) @ 1Mbps
12059.830	23.4	16.1	287.0	1.2	3.0	0.0	H-Horn	AV	0.0	39.5	54.0	-14.5	802.11(b) @ 1Mbps
12061.830	37.0	16.1	110.0	1.1	3.0	0.0	V-Horn	PK	0.0	53.1	74.0	-20.9	802.11(b) @ 1Mbps
12060.020	35.6	16.1	287.0	1.2	3.0	0.0	H-Horn	PK	0.0	51.7	74.0	-22.3	802.11(b) @ 1Mbps
4819.212	24.1	6.4	189.0	2.6	3.0	0.0	H-Horn	AV	0.0	30.5	54.0	-23.5	802.11(g) @ 54Mbps
4819.968	24.1	6.4	23.0	3.1	3.0	0.0	V-Horn	AV	0.0	30.5	54.0	-23.5	802.11(b) @ 1Mbps
4820.621	24.1	6.4	60.0	2.7	3.0	0.0	H-Horn	AV	0.0	30.5	54.0	-23.5	802.11(b) @ 11Mbps
4820.753	24.1	6.4	12.0	1.0	3.0	0.0	V-Horn	AV	0.0	30.5	54.0	-23.5	802.11(g) @ 36Mbps
4820.928	24.1	6.4	154.0	3.1	3.0	0.0	V-Horn	AV	0.0	30.5	54.0	-23.5	802.11(b) @ 11Mbps
4821.702	24.1	6.4	138.0	1.0	3.0	0.0	V-Horn	AV	0.0	30.5	54.0	-23.5	802.11(g) @ 6Mbps
4823.948	24.1	6.4	239.0	1.2	3.0	0.0	H-Horn	AV	0.0	30.5	54.0	-23.5	802.11(b) @ 1Mbps
4827.854	24.1	6.4	114.0	1.0	3.0	0.0	V-Horn	AV	0.0	30.5	54.0	-23.5	802.11(g) @ 54Mbps
4821.439	24.0	6.4	287.0	2.6	3.0	0.0	H-Horn	AV	0.0	30.4	54.0	-23.6	802.11(g) @ 36Mbps
4822.023	24.0	6.4	332.0	2.7	3.0	0.0	H-Horn	AV	0.0	30.4	54.0	-23.6	802.11(g) @ 6Mbps
4822.416	37.2	6.4	239.0	1.2	3.0	0.0	H-Horn	PK	0.0	43.6	74.0	-30.4	802.11(b) @ 1Mbps
4822.363	37.1	6.4	189.0	2.6	3.0	0.0	H-Horn	PK	0.0	43.5	74.0	-30.5	802.11(g) @ 54Mbps
4823.975	36.9	6.4	60.0	2.7	3.0	0.0	H-Horn	PK	0.0	43.3	74.0	-30.7	802.11(b) @ 11Mbps
4824.135	36.9	6.4	138.0	1.0	3.0	0.0	V-Horn	PK	0.0	43.3	74.0	-30.7	802.11(g) @ 6Mbps
4826.156	36.7	6.4	23.0	3.1	3.0	0.0	V-Horn	PK	0.0	43.1	74.0	-30.9	802.11(b) @ 1Mbps
4826.294	36.6	6.4	12.0	1.0	3.0	0.0	V-Horn	PK	0.0	43.0	74.0	-31.0	802.11(g) @ 36Mbps

EUT: Recon with WMBGMR01 combo radio chip		Work Order: TRPO0022
Serial Number: Compliance Unit 2		Date: 05/10/06
Customer: Tripod Data Systems, Inc.		Temperature: 22
Attendees: None		Humidity: 31%
Project: None		Barometric Pres.: 30.22
Tested by: David Divergigelis	Power: 120VAC/60Hz	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247(d) Spurious Radiated Emissions:2005-9	ANSI C63.4:2003

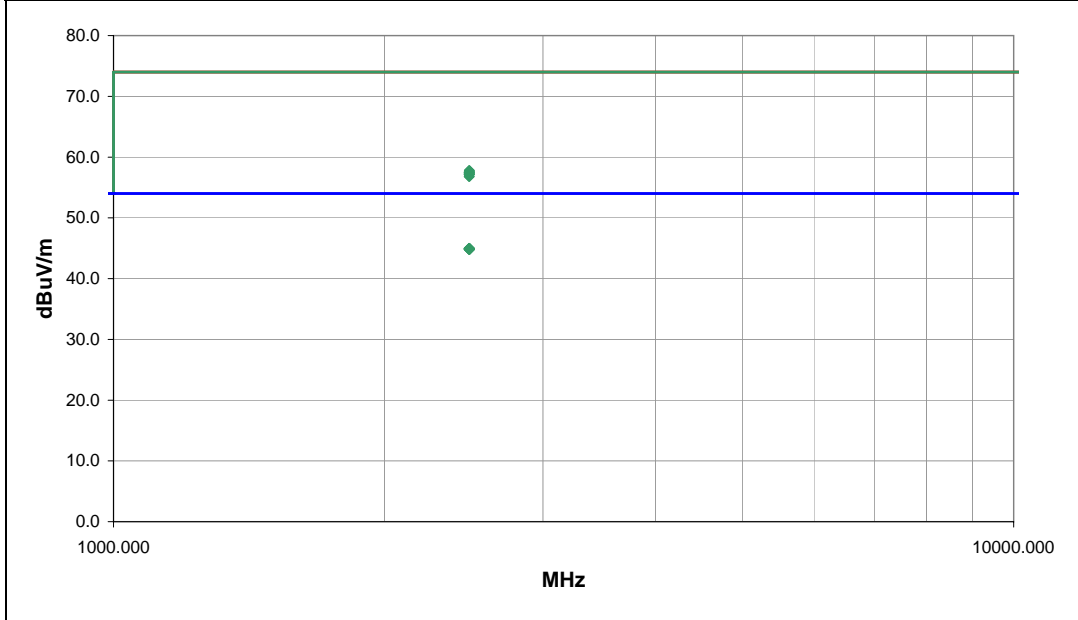
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS
WMBGMR01 internal combo chip: 802.11(b)(g) and Bluetooth.

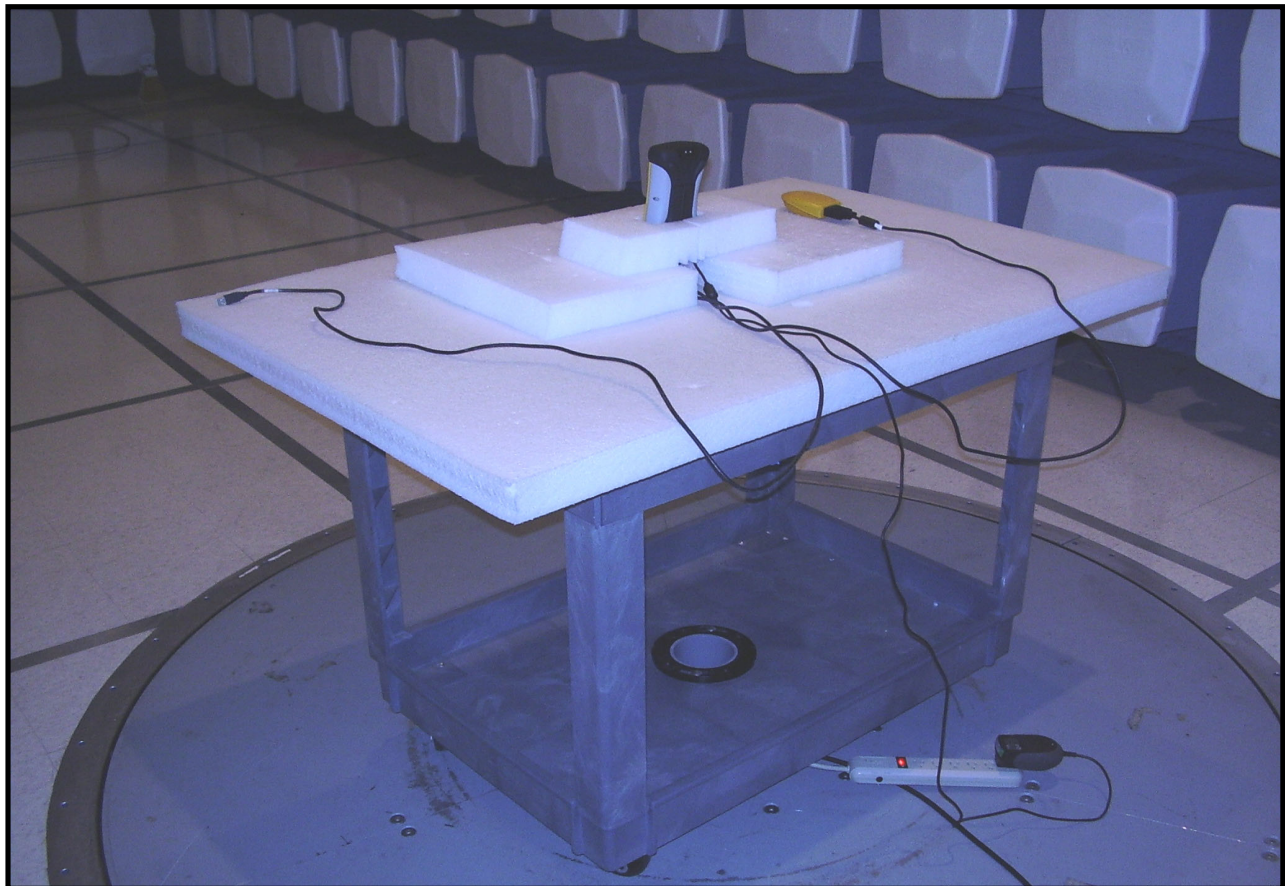
EUT OPERATING MODES
Transmitting 802.11, high channel

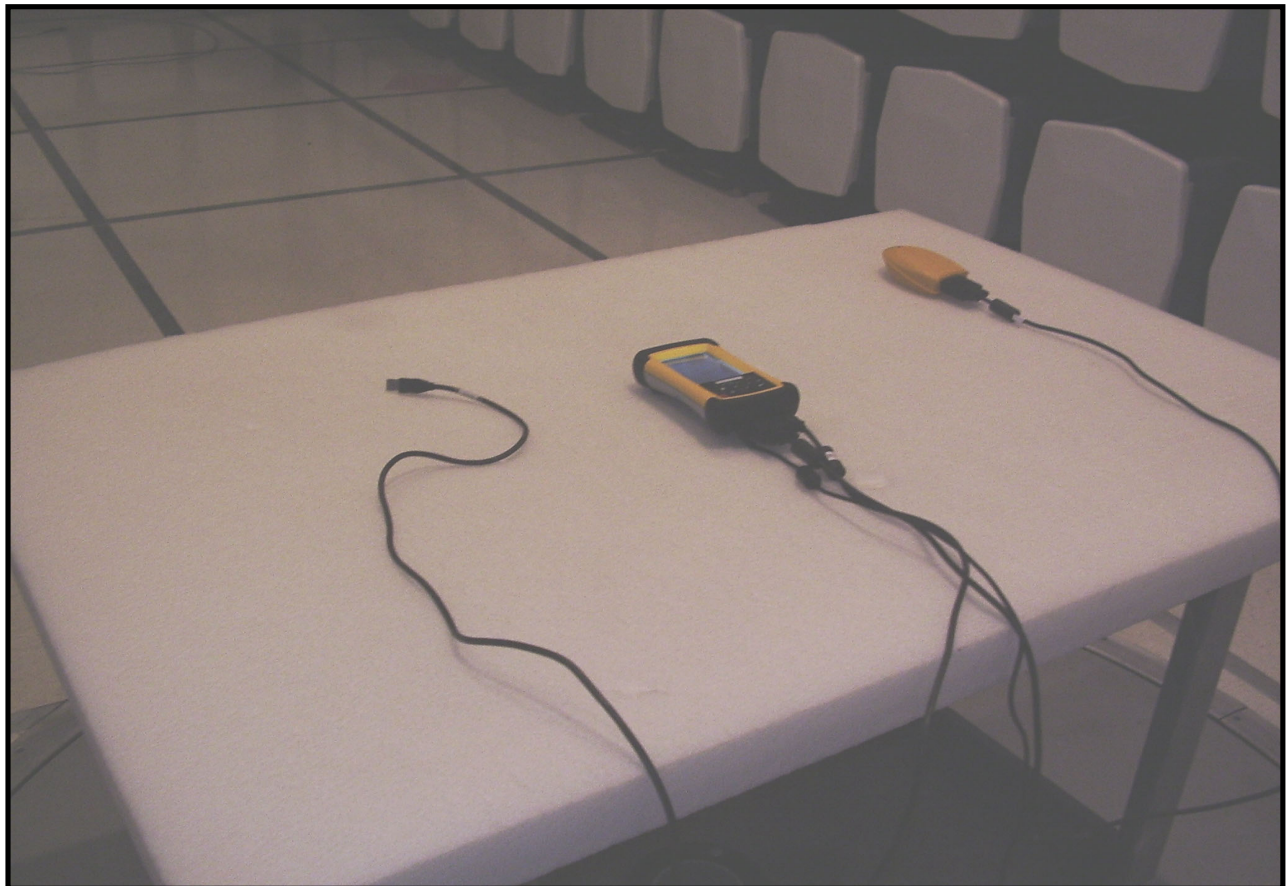
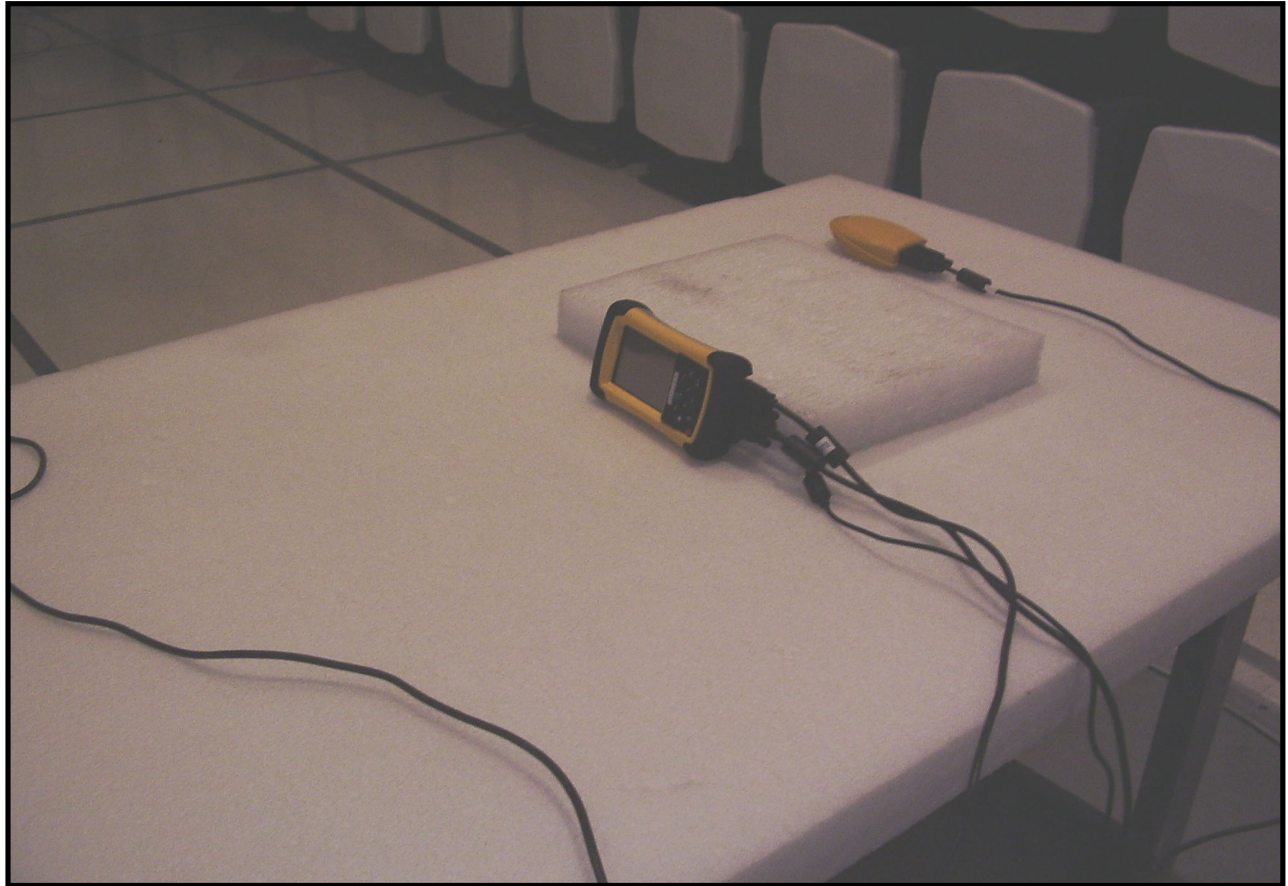
DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	8	NVLAP Lab Code 200630-0	Signature <i>David Divergigelis</i>
Configuration #	1		
Results	Pass		



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)	Comments
2483.133	24.5	0.5	101.0	2.7	3.0	20.0	V-Horn	AV	0.0	45.0	54.0	-9.0	802.11(b) @ 1 Mbps
2484.493	24.5	0.5	293.0	1.1	3.0	20.0	V-Horn	AV	0.0	45.0	54.0	-9.0	802.11(b) @ 1 Mbps
2484.847	24.5	0.5	92.0	1.2	3.0	20.0	H-Horn	AV	0.0	45.0	54.0	-9.0	802.11(b) @ 1 Mbps
2482.582	24.4	0.5	111.0	2.5	3.0	20.0	H-Horn	AV	0.0	44.9	54.0	-9.1	802.11(b) @ 11Mbps
2482.676	24.4	0.5	57.0	2.8	3.0	20.0	V-Horn	AV	0.0	44.9	54.0	-9.1	802.11(g) @ 54Mbps
2482.821	24.4	0.5	66.0	2.7	3.0	20.0	V-Horn	AV	0.0	44.9	54.0	-9.1	802.11(b) @ 11Mbps
2482.882	24.4	0.5	34.0	1.2	3.0	20.0	H-Horn	AV	0.0	44.9	54.0	-9.1	802.11(g) @ 6Mbps
2482.883	24.4	0.5	152.0	2.4	3.0	20.0	H-Horn	AV	0.0	44.9	54.0	-9.1	802.11(g) @ 36Mbps
2483.868	24.4	0.5	277.0	2.3	3.0	20.0	H-Horn	AV	0.0	44.9	54.0	-9.1	802.11(g) @ 54Mbps
2484.160	24.4	0.5	-1.0	2.7	3.0	20.0	V-Horn	AV	0.0	44.9	54.0	-9.1	802.11(g) @ 6Mbps
2484.216	24.4	0.5	216.0	1.1	3.0	20.0	V-Horn	AV	0.0	44.9	54.0	-9.1	802.11(g) @ 6Mbps
2484.268	24.4	0.5	191.0	2.4	3.0	20.0	H-Horn	AV	0.0	44.9	54.0	-9.1	802.11(g) @ 6Mbps
2484.364	24.4	0.5	160.0	1.2	3.0	20.0	H-Horn	AV	0.0	44.9	54.0	-9.1	802.11(b) @ 1 Mbps
2484.462	24.4	0.5	135.0	1.1	3.0	20.0	H-Horn	AV	0.0	44.9	54.0	-9.1	802.11(g) @ 54Mbps
2484.546	24.4	0.5	119.0	1.1	3.0	20.0	V-Horn	AV	0.0	44.9	54.0	-9.1	802.11(b) @ 11Mbps
2485.477	24.4	0.5	8.0	1.2	3.0	20.0	H-Horn	AV	0.0	44.9	54.0	-9.1	802.11(b) @ 11Mbps
2483.776	24.3	0.5	169.0	2.6	3.0	20.0	V-Horn	AV	0.0	44.8	54.0	-9.2	802.11(g) @ 36Mbps
2484.460	24.3	0.5	263.0	3.2	3.0	20.0	V-Horn	AV	0.0	44.8	54.0	-9.2	802.11(g) @ 54Mbps
2484.513	24.3	0.5	265.0	1.1	3.0	20.0	H-Horn	AV	0.0	44.8	54.0	-9.2	802.11(g) @ 36Mbps
2484.557	24.3	0.5	176.0	3.3	3.0	20.0	V-Horn	AV	0.0	44.8	54.0	-9.2	802.11(g) @ 36Mbps





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

Transmitting 802.11 at 11Mbps, high channel
Transmitting 802.11 at 11Mbps, mid channel
Transmitting 802.11 at 11Mbps, low channel

POWER SETTINGS INVESTIGATED

120VAC/60Hz

SAMPLE CALCULATIONS

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
LISN	Solar	9252-50-R-24-BNC	LIQ	12/13/2005	13
LISN	Solar	9252-50-R-24-BNC	LIP	12/13/2005	13
Quasi-Peak Adapter	Hewlett-Packard	85650A	AQD	12/21/2005	13
Spectrum Analyzer Display	Hewlett Packard	85662A	AAID	12/21/2005	13
Spectrum Analyzer	Hewlett-Packard	8568B	AAI	12/21/2005	13
Attenuator	Coaxicom	66702 2910-20	RBS	12/19/2005	13
High Pass Filter	T.T.E.	7766	HFG	12/19/2005	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, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50 Ω .

EUT:	Recon with WMBGMR01 combo radio chip	Work Order:	TRPO0022
Serial Number:	Compliance Unit 2	Date:	05/19/06
Customer:	Tripod Data Systems, Inc.	Temperature:	24
Attendees:	None	Humidity:	38%
Project:	None	Barometric Pres.:	30.04
Tested by:	David Divergigelis	Power:	120VAC/60Hz
		Job Site:	EV07

TEST SPECIFICATIONS		Test Method
FCC 15.207 Class B:2005-10		ANSI C63.4:2003

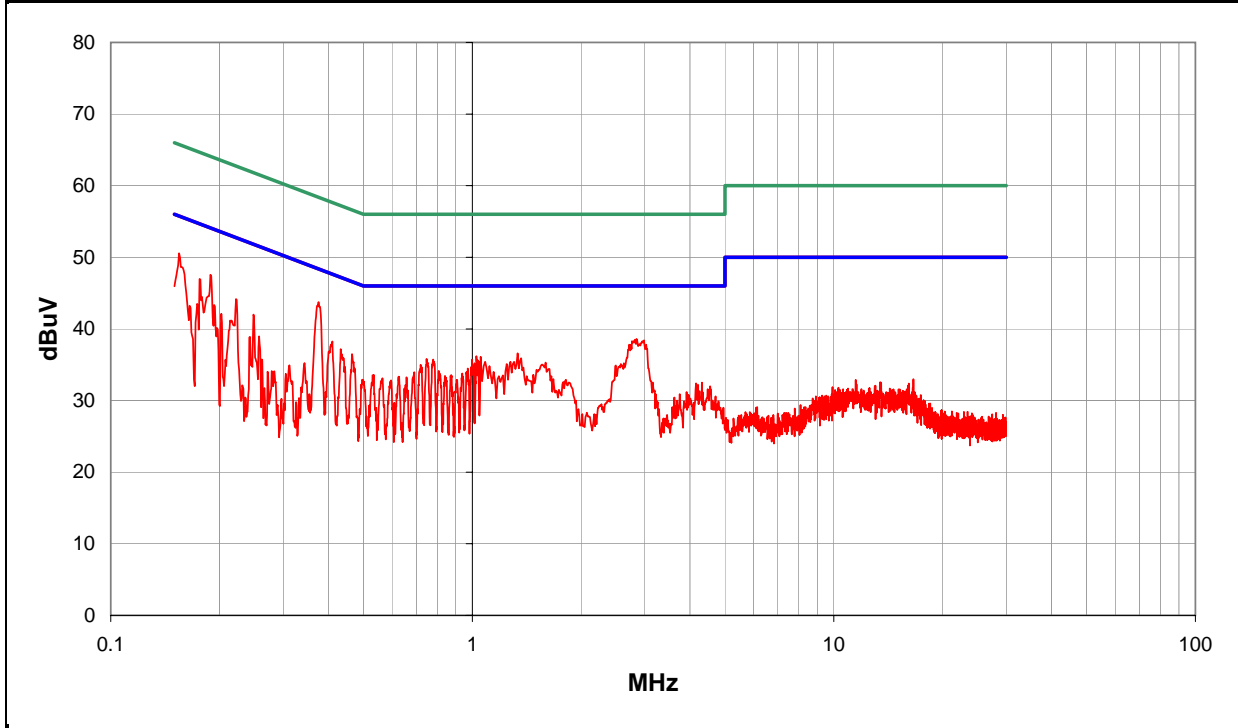
TEST PARAMETERS	
Cable or Line Tested	L1

COMMENTS
 WMBGMR01 internal combo chip: 802.11(b)(g) and Bluetooth.

EUT OPERATING MODES
 Transmitting 802.11 at 11Mbps, low channel

DEVIATIONS FROM TEST STANDARD
 No deviations.

Run #	1	NVLAP Lab Code 200630-0	Signature <i>David Divergigelis</i>
Configuration #	1		
Results	Pass		



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.376	21.5	2.2	0.0	20.0		43.7	48.4	-4.6
0.155	27.7	2.8	0.0	20.0		50.5	55.8	-5.2
0.189	24.8	2.8	0.0	20.0		47.6	54.1	-6.5
2.846	18.1	0.5	0.0	20.0		38.6	46.0	-7.4
0.176	24.2	2.8	0.0	20.0		47.0	54.7	-7.7
0.222	21.5	2.7	0.0	20.0		44.2	52.7	-8.6
1.335	16.1	0.5	0.0	20.0		36.6	46.0	-9.4
0.410	16.1	2.1	0.0	20.0		38.2	47.6	-9.4
1.027	15.7	0.5	0.0	20.0		36.2	46.0	-9.8
0.248	19.4	2.6	0.0	20.0		42.0	51.8	-9.8
1.055	15.6	0.5	0.0	20.0		36.1	46.0	-9.9
0.433	15.1	2.1	0.0	20.0		37.2	47.2	-10.0
0.465	14.5	2.0	0.0	20.0		36.5	46.6	-10.1
0.748	14.6	1.2	0.0	20.0		35.8	46.0	-10.2
0.779	14.6	1.1	0.0	20.0		35.7	46.0	-10.3
0.999	15.2	0.5	0.0	20.0		35.7	46.0	-10.3
1.036	15.1	0.5	0.0	20.0		35.6	46.0	-10.4
0.193	20.6	2.7	0.0	20.0		43.3	53.9	-10.6
1.045	14.9	0.5	0.0	20.0		35.4	46.0	-10.6

EUT: Recon with WMBGMR01 combo radio chip	Work Order: TRPO0022
Serial Number: Compliance Unit 2	Date: 05/19/06
Customer: Tripod Data Systems, Inc.	Temperature: 24
Attendees: None	Humidity: 38%
Project: None	Barometric Pres.: 30.04
Tested by: David Divergigelis	Power: 120VAC/60Hz
	Job Site: EV07

TEST SPECIFICATIONS	Test Method
FCC 15.207 Class B:2005-10	ANSI C63.4:2003

TEST PARAMETERS
Cable or Line Tested: N

COMMENTS
 WMBGMR01 internal combo chip: 802.11(b)(g) and Bluetooth.

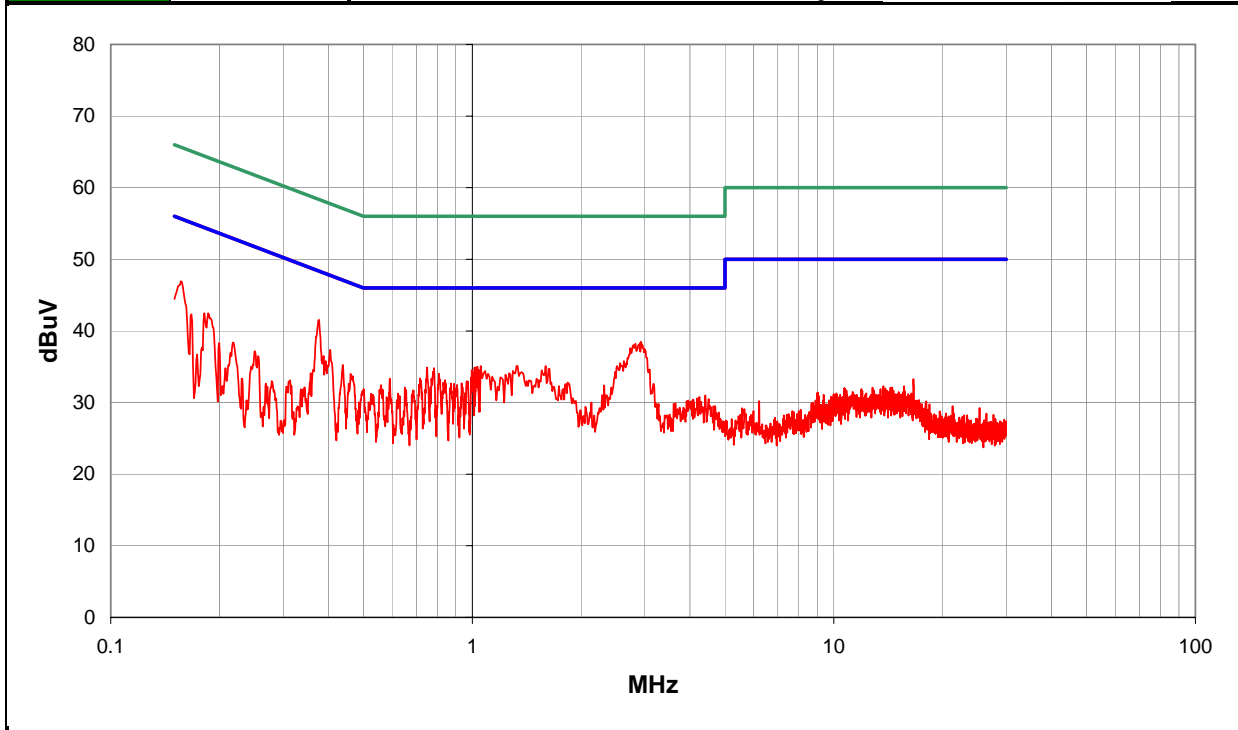
EUT OPERATING MODES
 Transmitting 802.11 at 11Mbps, low channel

DEVIATIONS FROM TEST STANDARD
 No deviations.

Run #	2
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0

Signature *David Divergigelis*



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.376	19.3	2.2	0.0	20.0		41.5	48.4	-6.8
2.926	18.0	0.5	0.0	20.0		38.5	46.0	-7.5
0.156	24.1	2.8	0.0	20.0		46.9	55.7	-8.7
0.404	15.2	2.2	0.0	20.0		37.4	47.8	-10.4
1.055	14.6	0.5	0.0	20.0		35.1	46.0	-10.9
1.325	14.6	0.5	0.0	20.0		35.1	46.0	-10.9
1.595	14.6	0.5	0.0	20.0		35.1	46.0	-10.9
1.033	14.5	0.5	0.0	20.0		35.0	46.0	-11.0
1.015	14.4	0.5	0.0	20.0		34.9	46.0	-11.1
0.749	13.7	1.2	0.0	20.0		34.9	46.0	-11.1
0.784	13.7	1.1	0.0	20.0		34.8	46.0	-11.2
0.996	14.0	0.5	0.0	20.0		34.5	46.0	-11.5
1.036	14.0	0.5	0.0	20.0		34.5	46.0	-11.5
1.045	14.0	0.5	0.0	20.0		34.5	46.0	-11.5
0.438	13.2	2.1	0.0	20.0		35.3	47.1	-11.8
1.265	13.6	0.5	0.0	20.0		34.1	46.0	-11.9
0.182	19.7	2.8	0.0	20.0		42.5	54.4	-11.9
0.809	13.0	1.0	0.0	20.0		34.0	46.0	-12.0
0.994	13.0	0.5	0.0	20.0		33.5	46.0	-12.5

EUT:	Recon with WMBGMR01 combo radio chip	Work Order:	TRPO0022
Serial Number:	Compliance Unit 2	Date:	05/19/06
Customer:	Tripod Data Systems, Inc.	Temperature:	24
Attendees:	None	Humidity:	38%
Project:	None	Barometric Pres.:	30.04
Tested by:	David Divergigelis	Power:	120VAC/60Hz
		Job Site:	EV07

TEST SPECIFICATIONS	Test Method
FCC 15.207 Class B:2005-10	ANSI C63.4:2003

TEST PARAMETERS	
Cable or Line Tested	N

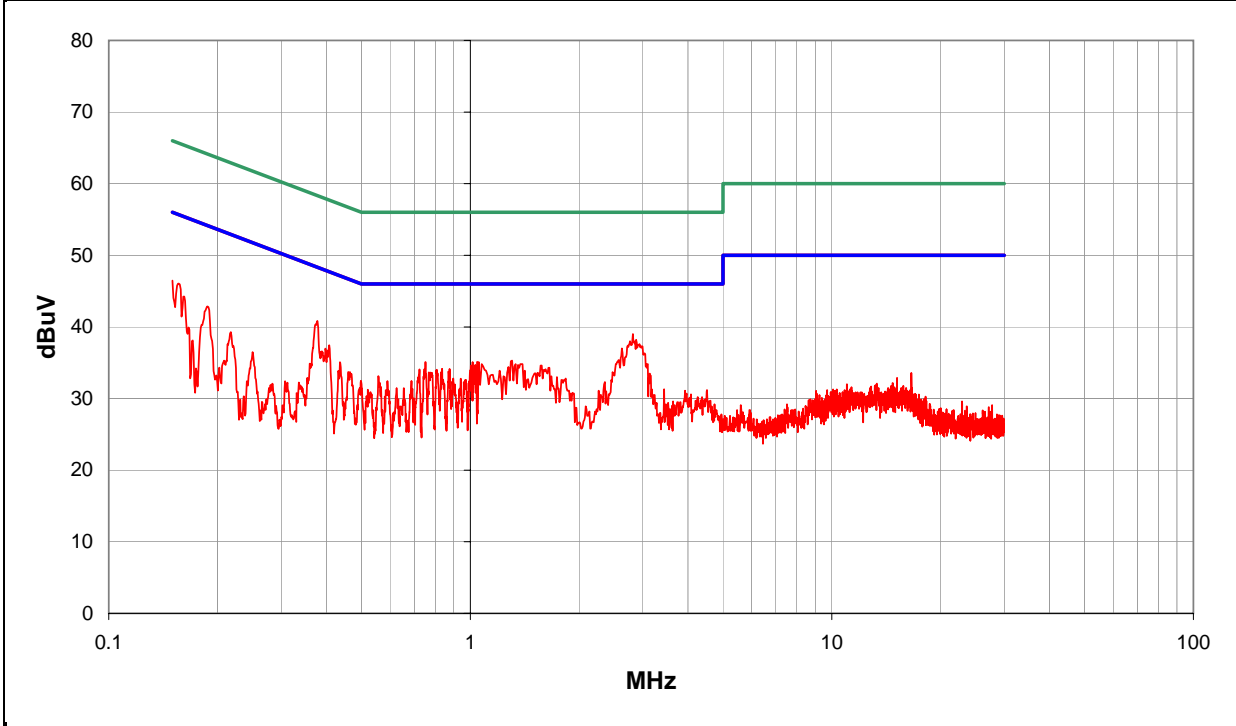
COMMENTS
 WMBGMR01 internal combo chip: 802.11(b)(g) and Bluetooth.

EUT OPERATING MODES
 Transmitting 802.11 at 11Mbps, mid channel

DEVIATIONS FROM TEST STANDARD
 No deviations.

Run #	3	Signature <i>David Divergigelis</i>
Configuration #	1	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
2.816	18.5	0.5	0.0	20.0		39.0	46.0	-7.0
0.378	18.6	2.2	0.0	20.0		40.8	48.3	-7.5
2.626	16.5	0.5	0.0	20.0		37.0	46.0	-9.0
0.150	23.6	2.9	0.0	20.0		46.5	56.0	-9.5
0.155	23.2	2.8	0.0	20.0		46.0	55.7	-9.7
0.407	15.3	2.1	0.0	20.0		37.4	47.7	-10.3
1.305	14.8	0.5	0.0	20.0		35.3	46.0	-10.7
1.015	14.6	0.5	0.0	20.0		35.1	46.0	-10.9
1.045	14.6	0.5	0.0	20.0		35.1	46.0	-10.9
1.055	14.6	0.5	0.0	20.0		35.1	46.0	-10.9
0.751	13.9	1.2	0.0	20.0		35.1	46.0	-10.9
0.161	21.4	2.8	0.0	20.0		44.2	55.4	-11.2
1.075	14.3	0.5	0.0	20.0		34.8	46.0	-11.2
1.335	14.3	0.5	0.0	20.0		34.8	46.0	-11.2
1.375	14.3	0.5	0.0	20.0		34.8	46.0	-11.2
1.032	14.2	0.5	0.0	20.0		34.7	46.0	-11.3
0.187	20.1	2.8	0.0	20.0		42.9	54.2	-11.3
1.003	14.1	0.5	0.0	20.0		34.6	46.0	-11.4
1.565	14.1	0.5	0.0	20.0		34.6	46.0	-11.4

EUT:	Recon with WMBGMR01 combo radio chip	Work Order:	TRPO0022
Serial Number:	Compliance Unit 2	Date:	05/19/06
Customer:	Tripod Data Systems, Inc.	Temperature:	24
Attendees:	None	Humidity:	38%
Project:	None	Barometric Pres.:	30.04
Tested by:	David Divergigelis	Power:	120VAC/60Hz
		Job Site:	EV07

TEST SPECIFICATIONS	Test Method
FCC 15.207 Class B:2005-10	ANSI C63.4:2003

TEST PARAMETERS	
Cable or Line Tested	L1

COMMENTS
WMBGMR01 internal combo chip: 802.11(b)(g) and Bluetooth.

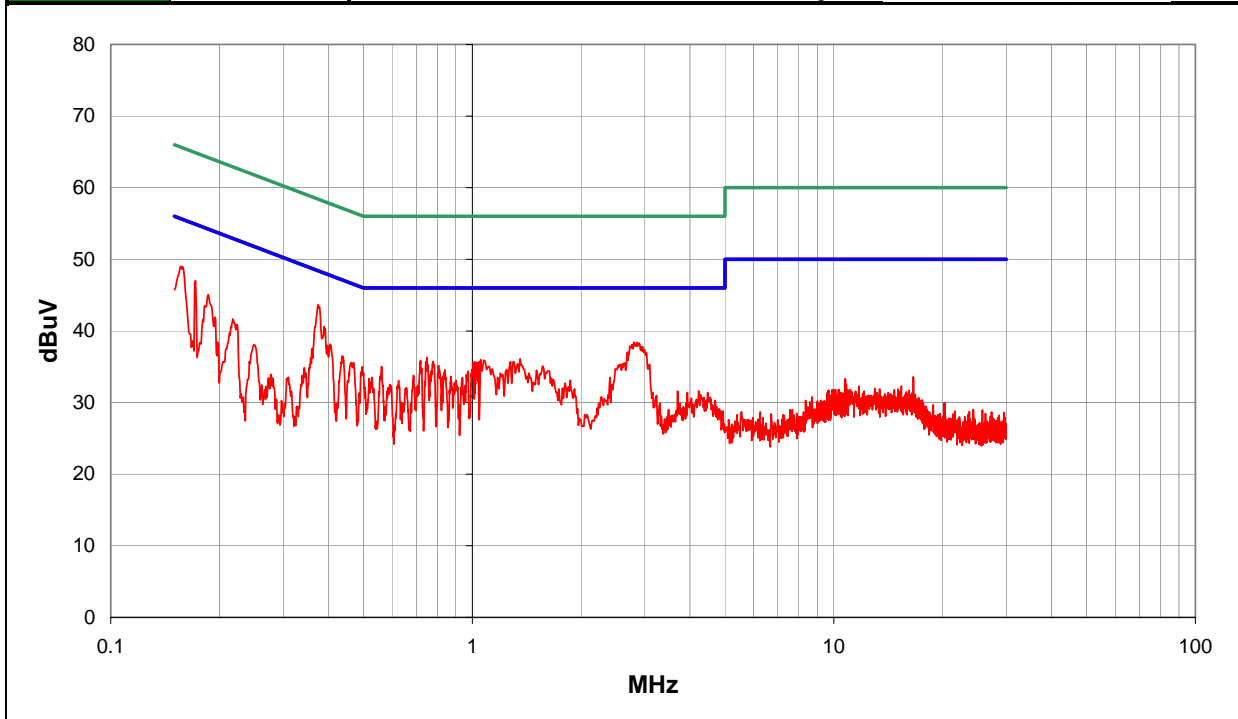
EUT OPERATING MODES
Transmitting 802.11 at 11Mbps, mid channel

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	4
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0

Signature *David Divergigelis*



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.374	21.4	2.2	0.0	20.0		43.6	48.4	-4.8
0.156	26.2	2.8	0.0	20.0		49.0	55.7	-6.6
2.796	17.9	0.5	0.0	20.0		38.4	46.0	-7.6
0.172	24.2	2.8	0.0	20.0		47.0	54.9	-7.9
0.186	22.3	2.8	0.0	20.0		45.1	54.2	-9.2
0.749	15.1	1.2	0.0	20.0		36.3	46.0	-9.7
1.355	15.6	0.5	0.0	20.0		36.1	46.0	-9.9
1.055	15.5	0.5	0.0	20.0		36.0	46.0	-10.0
0.719	14.6	1.3	0.0	20.0		35.9	46.0	-10.1
0.779	14.6	1.1	0.0	20.0		35.7	46.0	-10.3
1.015	15.2	0.5	0.0	20.0		35.7	46.0	-10.3
1.045	15.2	0.5	0.0	20.0		35.7	46.0	-10.3
1.275	15.2	0.5	0.0	20.0		35.7	46.0	-10.3
1.031	15.1	0.5	0.0	20.0		35.6	46.0	-10.4
1.004	15.0	0.5	0.0	20.0		35.5	46.0	-10.5
1.036	15.0	0.5	0.0	20.0		35.5	46.0	-10.5
0.436	14.4	2.1	0.0	20.0		36.5	47.1	-10.7
0.806	14.1	1.0	0.0	20.0		35.1	46.0	-10.9
1.565	14.6	0.5	0.0	20.0		35.1	46.0	-10.9

EUT:	Recon with WMBGMR01 combo radio chip	Work Order:	TRPO0022
Serial Number:	Compliance Unit 2	Date:	05/19/06
Customer:	Tripod Data Systems, Inc.	Temperature:	24
Attendees:	None	Humidity:	38%
Project:	None	Barometric Pres.:	30.04
Tested by:	David Divergigelis	Power:	120VAC/60Hz
		Job Site:	EV07

TEST SPECIFICATIONS		Test Method
FCC 15.207 Class B:2005-10		ANSI C63.4:2003

TEST PARAMETERS	
Cable or Line Tested	L1

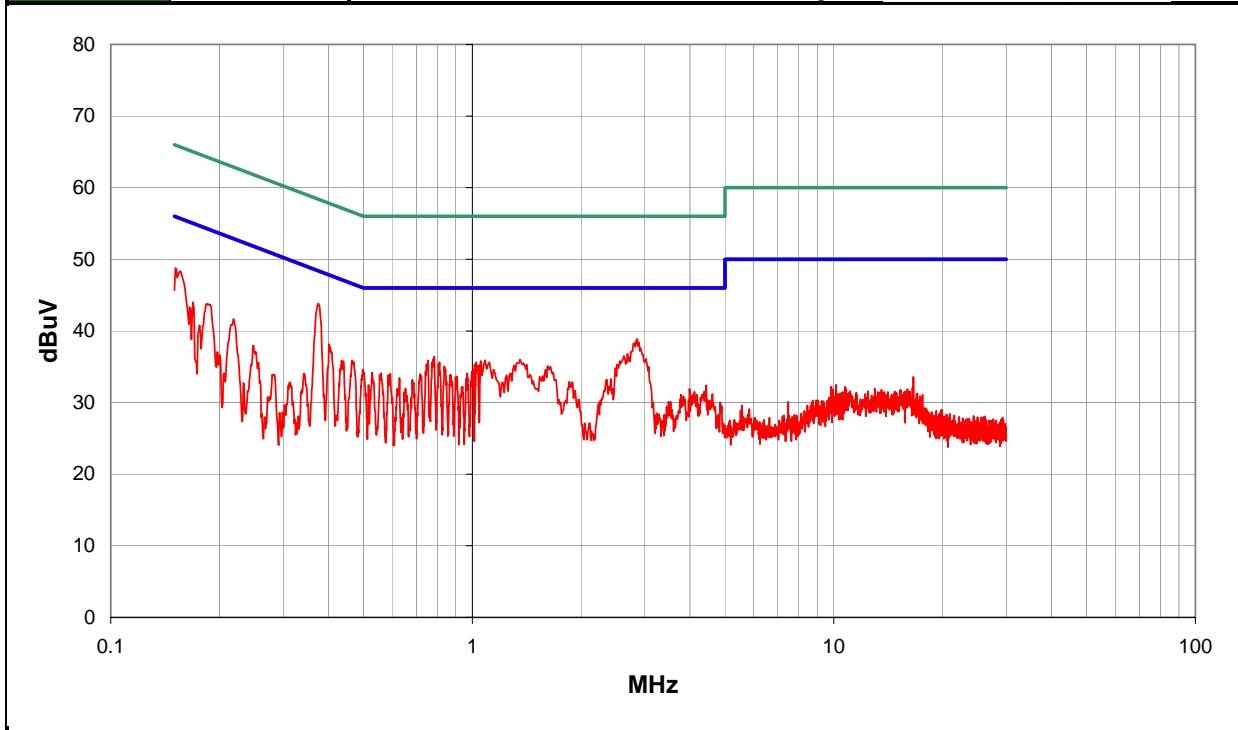
COMMENTS
WMBGMR01 internal combo chip: 802.11(b)(g) and Bluetooth.

EUT OPERATING MODES
Transmitting 802.11 at 11Mbps, high channel

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	5	Signature <i>David Divergigelis</i>
Configuration #	1	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.375	21.6	2.2	0.0	20.0		43.8	48.4	-4.6
2.856	18.4	0.5	0.0	20.0		38.9	46.0	-7.1
0.151	25.9	2.9	0.0	20.0		48.8	56.0	-7.2
0.784	15.3	1.1	0.0	20.0		36.4	46.0	-9.6
0.402	16.0	2.2	0.0	20.0		38.2	47.8	-9.7
1.355	15.5	0.5	0.0	20.0		36.0	46.0	-10.0
1.085	15.4	0.5	0.0	20.0		35.9	46.0	-10.1
0.754	14.7	1.2	0.0	20.0		35.9	46.0	-10.1
1.055	15.3	0.5	0.0	20.0		35.8	46.0	-10.2
0.811	14.6	1.0	0.0	20.0		35.6	46.0	-10.4
1.025	15.1	0.5	0.0	20.0		35.6	46.0	-10.4
0.184	21.0	2.8	0.0	20.0		43.8	54.3	-10.5
1.015	14.8	0.5	0.0	20.0		35.3	46.0	-10.7
0.465	13.9	2.0	0.0	20.0		35.9	46.6	-10.7
1.045	14.7	0.5	0.0	20.0		35.2	46.0	-10.8
1.615	14.6	0.5	0.0	20.0		35.1	46.0	-10.9
0.837	14.1	1.0	0.0	20.0		35.1	46.0	-10.9
0.169	21.2	2.8	0.0	20.0		44.0	55.0	-11.0
0.218	19.0	2.7	0.0	20.0		41.7	52.9	-11.2

EUT:	Recon with WMBGMR01 combo radio chip	Work Order:	TRPO0022
Serial Number:	Compliance Unit 2	Date:	05/19/06
Customer:	Tripod Data Systems, Inc.	Temperature:	24
Attendees:	None	Humidity:	38%
Project:	None	Barometric Pres.:	30.04
Tested by:	David Divergigelis	Power:	120VAC/60Hz
		Job Site:	EV07

TEST SPECIFICATIONS

FCC 15.207 Class B:2005-10	Test Method
	ANSI C63.4:2003

TEST PARAMETERS

Cable or Line Tested	N
----------------------	---

COMMENTS

WMBGMR01 internal combo chip: 802.11(b)(g) and Bluetooth.

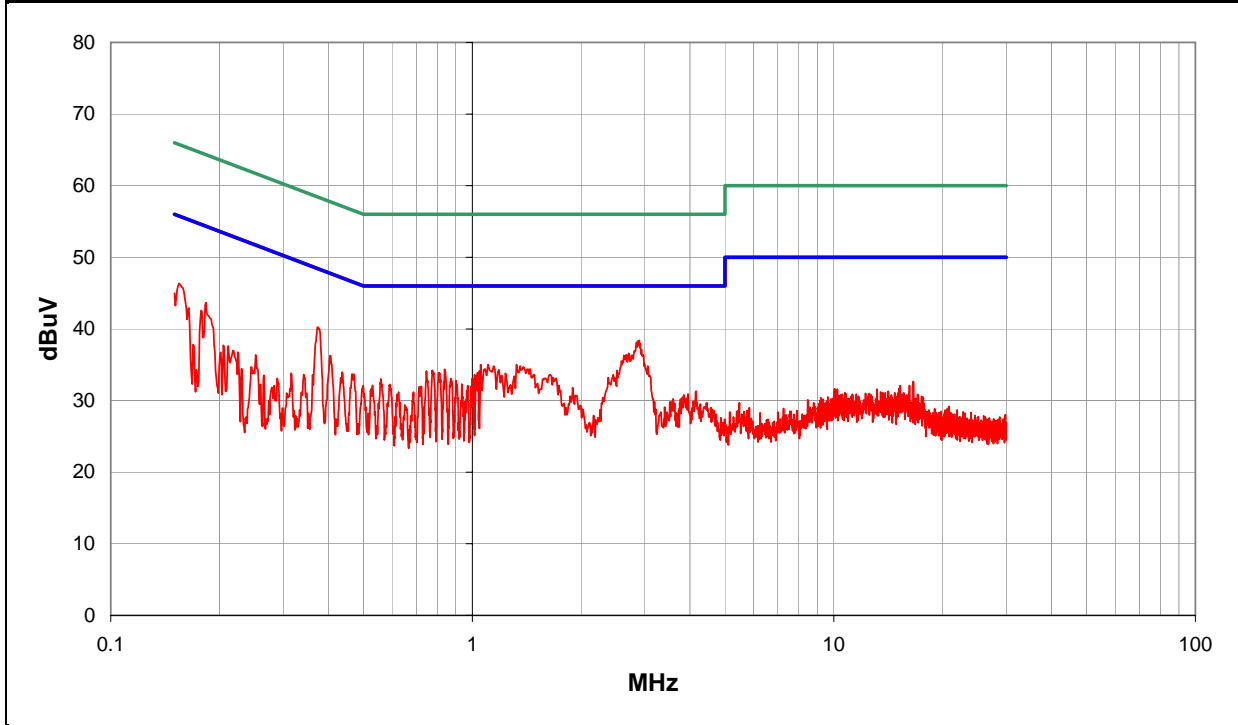
EUT OPERATING MODES

Transmitting 802.11 at 11Mbps, high channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	6	NVLAP Lab Code 200630-0	Signature <i>David Divergigelis</i>
Configuration #	1		
Results	Pass		



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
2.896	17.9	0.5	0.0	20.0		38.4	46.0	-7.6
0.373	18.0	2.2	0.0	20.0		40.2	48.4	-8.2
0.155	23.5	2.8	0.0	20.0		46.3	55.8	-9.4
0.183	20.9	2.8	0.0	20.0		43.7	54.3	-10.7
1.055	14.5	0.5	0.0	20.0		35.0	46.0	-11.0
1.105	14.5	0.5	0.0	20.0		35.0	46.0	-11.0
1.325	14.5	0.5	0.0	20.0		35.0	46.0	-11.0
0.404	14.1	2.2	0.0	20.0		36.3	47.8	-11.5
0.838	13.4	0.9	0.0	20.0		34.3	46.0	-11.7
1.185	13.8	0.5	0.0	20.0		34.3	46.0	-11.7
0.775	13.1	1.1	0.0	20.0		34.2	46.0	-11.8
0.747	12.9	1.2	0.0	20.0		34.1	46.0	-11.9
1.045	13.6	0.5	0.0	20.0		34.1	46.0	-11.9
0.178	19.8	2.8	0.0	20.0		42.6	54.6	-12.0
1.034	13.4	0.5	0.0	20.0		33.9	46.0	-12.1
0.808	12.8	1.0	0.0	20.0		33.8	46.0	-12.2
1.235	13.3	0.5	0.0	20.0		33.8	46.0	-12.2
1.015	13.1	0.5	0.0	20.0		33.6	46.0	-12.4
1.635	13.1	0.5	0.0	20.0		33.6	46.0	-12.4

