

QUALIFICATION TEST REPORT



1350 County Road # 16 P.O. Box 489 Rollinsville, CO 80474 (303) 258-0100 voice (303) 258-0775 fax www.criteriontech.com

EMISSIONS - FCC Part 15

Test Report Number:	010105 237	Date of Issue:	<u>01-24-01</u>
Model No:	Wireless Headset	Date of Test Article Receipt:	<u>01-11-01</u>
Type of product:	Information Technology Equipm	nent	
Manufacturer:	<u>Inovonics</u>		
Address:	2100 Central Avenue		
	Boulder, Colorado 80301		

Test Results: [X] Complies [] Does Not Comply

Michael E. Mussler

Lab Director (NVLAP Signatory)

Willion Starce

Compliance Engineer

Accredited by NIST NVLAP for FCC Part 15, IEC/CISPR22, CNS13438, AS/NZS 3548 Testing

010105_237

Page 1 of 27

Disclaimers:

This report is the confidential property of the client. For the protection of our clients and ourselves, extracts from this test report cannot be produced without prior written approval from Criterion Technology. Reproduction of the complete report can be performed at the client's discretion.

The client is aware that Criterion Technology has performed testing in accordance with the applicable standard(s). Test data is accurate within ANSI parameters for Emissions testing, unless a specific level of accuracy has been defined in writing prior to testing, by Criterion Technology and the client.

Criterion Technology reports apply only to the specific Equipment Under Test (EUT) sample(s) tested under the test conditions described in this report. If the manufacturer intends to use this report as a document demonstrating compliance of this model, additional models of this product must have electrical and mechanical characteristics identical to the device tested for this report. Criterion Technology shall have no liability for any deductions, inferences, or generalizations drawn by the client or others from Criterion Technology issued reports.

Total liability is limited to the amount invoiced for the testing of this EUT and the contents of this report are not warranted.

Compliance with the appropriate governmental standards is the responsibility of the manufacturer. Any questions regarding this report should be directed to:

Laboratory Director Criterion Technology Corp. P.O. Box 489 1350 County Road #16 Rollinsville, Colorado 80474 Phone: 1-303-258-0100 Fax:1-303-258-0775 E-mail: laboratory_director@criteriontech.com

NVLAP Note: Criterion Technology is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for the specific scope of accreditation under Lab Code 100396-0. Test methods included in Lab Code 100396-0 are:

- 1. 12/CIS22 IEC/CISPR22:1993
- 2. 12/CIS22a IEC/CISPR22:1993, Amendment 1:1995 & Amendment 2:1996
- 3. 12/CIS22b CNS13438:1997
- 4. 12/F01 FCC Method 47 Part 15 Digital Devices
- 5. 12/F01a Conducted Emissions, Power Lines, 450 kHz to 30 MHz
- 6. 12/F01b Radiated Emissions
- 7. 12/T51 AS/NZS 3548

The NVLAP Logo on the front cover of this report applies only to data taken for the above test methods.

This report may contain data which is not covered by the NVLAP accreditation.

This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

Criterion Technology has been accredited by the following groups: NVLAP, VCCI, BSMI, NMi (EU Competent Body Accreditation) and Industry Canada. The National Institute for Standards and Technology (NIST) has designated Criterion Technology a Conformity Assessment Body (CAB) for Taiwan (BSMI # SL2-IN-E-007R).

All Criterion Technology instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 9001, ISO Guide 25, ANSI/NCSL Z540-I-1994 and are traceable to national standards.

Table of Contents

Section 1	Executive Summary
Section 2	Emissions Test Standards
Part 2.1	FCC Part 15 Subpart B - Radiated Emissions
Part 2.2	FCC Part 15 Subpart C –Intentional Radiated Fields
Section 3	Test Setup Photographs11
Part 3.1	Radiated Emissions Setup - Front View
Part 3.2	Radiated Emissions Setup - Side View
Part 3.3	Radiated Emissions Setup - Rear View
Section 4	Original Test Data / Plots
Part 4.1	Radiated Emissions Data for 30 MHz to 1,000 MHz
Part 4.2	Radiated Emissions Plot for 30 MHz to 1,000 MHz
Part 4.3	Radiated Emissions Data for 1,000 MHz to 10,000 MHz
Part 4.4	Radiated Emissions Plot for 1,000 MHz to 10,000 MHz
Section 5	Equipment Calibration Information
Section 6	Product Information Forms

Section 1 Executive Summary

The test article was in compliance with all the test standards listed below.

FCC Part 15 Subpart A		
FCC Part 15 Subpart B	Class B	Radiated Emissions
FCC Part 15 Subpart C	15.249	Intentional Radiators

All test methods were performed in accordance with the standards listed above.

010105_237

Section 2 Emissions Test Standards

The emissions tests were performed according to following standards:

FCC Part 15, Subpart B	[] Class A	[X] Class B
FCC Part 15, Subpart C	15.249	

010105_237

Part 2.1 FCC Part 15 Subpart B - Radiated Emissions

Measurement of radiated emissions (electric field) in the frequency range of 1,000 MHz -10,000 MHz were tested in a horizontal and vertical polarization as indicated below:

Environmental conditions of the lab:

Date of Test:	<u>1-11-01</u>
Temperature:	<u>73 °F</u>
Rel. Humidity:	<u>13%</u>
Test Voltage:	Battery

Test location:

Site

Test distance: (antenna to EUT)

[]1 meter	[]Preliminary Measurement	[]Final Measurement
[X]3 meters	[X]Preliminary Measurement	[X]Final Measurement
[]10 meters	[]Preliminary Measurement	[]Final Measurement
[]30 meters	[]Preliminary Measurement	[]Final Measurement

Test instruments: (see Section 5 for calibration information)

- [X] [X]
- Hewlett-Packard Spectrum Analyzer, Model 8566B Hewlett-Packard Quasi Peak Adapter, Model 85650A Hewlett-Packard Tracking Generator, Model 85645A
- [] []
- Rohde and Schwarz Receiver, Model ESHS-30
- [X] Rohde and Schwarz Receiver, Model ESVS-30
- EMCO BiConnical Antenna, Model 3108 []
- EMCO Log Periodic Antenna, Model 3146 Chase BiLog Antenna, Model 1121 1
- [X]
- Mini Circuits Pre-Amp #2 [X]
- Veratech Pre-Amp #3 []
- Antenna Research Assoc. Horn Antenna, Model DRG118/A []

Test accessories:

Test Results of Radiated Emissions: 1,000 MHz - 10,000 MHz

Test Status:	[X]PASS		[] FAIL	
Minimum margin to limit:	<u>15.68</u> dB	at	<u>3631.2016</u> MHz	
Exceeded limit by:	dB	at	MHz	

Remarks: Reference Section 4 for Data Sheets

Part 2.2 FCC Part 15 Subpart C –Intentional Radiated Fields

Measurement of radiated emissions (electric field) in the frequency range of 30 MHz-1,000 MHz were tested in a horizontal and vertical polarization as indicated below:

Environmental conditions of the lab:

Date of Test:	<u>1-11-01 to 1-12-01</u>			
Temperature:	<u>70 °F</u>			
Rel. Humidity:	<u>14%</u>			
Test Voltage:	Battery			
Test location: [X] Criterion Technology Open Area Test Site				

[] [] Pre-Scan In Semi-Anechoic Chamber

In Situ

Test distance: (antenna to EUT)

[]1 meter	[]Preliminary Measurement	[]Final Measurement
[]3 meters	[]Preliminary Measurement	[]Final Measurement
[X]10 meters	[X]Preliminary Measurement	[X]Final Measurement
[]30 meters	[]Preliminary Measurement	[]Final Measurement

Test instruments: (see Section 5 for calibration information)

Hewlett-Packard Spectrum Analyzer, Model 8566B [X] Hewlett-Packard Quasi Peak Adapter, Model 85650A Hewlett-Packard Tracking Generator, Model 85645A [X] [] Rohde and Schwarz Receiver, Model, ESHS-30 Rohde and Schwarz Receiver, Model ESVS-30 []] Chase BiLog Antenna, Model 1121 Antenna Research, Model 1181A (sn: 1057) [X] ΪXΪ Amp3 and High Freq. Cable Set Mini Circuits Pre-Amp, Amp 2 [] EMCO Loop Antenna, Model 6502 []

Test accessories:

Test Results of Radiated Emissions: 30 MHz - 1,000 MHz

Test Status:	[X] PASS	[]	[] FAIL	
Minimum margin to limit:	<u>8.32</u> dB	at	<u>903.2420</u> MHz	
Exceeded limit by:	dB	at	MHz	

Remarks: Reference Section 4 for Data Sheets

Section 3 Test Setup Photographs

Part 3.1 Radiated Emissions Setup - Front View



Part 3.2 Radiated Emissions Setup - Side View



Part 3.3 Radiated Emissions Setup - Rear View



010105_237

Section 4 Original Test Data / Plots

Conducted Emissions Radiated Emissions

Part 4.1 Radiated Emissions Data for 30 MHz to 1,000 MHz

Notes: The third column below contains alpha characters which pertain to the type of measurements made. The following are the definitions for those characters: q = Quasi Peak, m = Maximized (cable, rotation and antenna height), s = scanned but no data taken, and a = average. For the first character in column four, a '-' indicates that value is below the limit while an '*' indicates that value is above the limit If the list is sorted using "I-sort", then quasi-peak and average levels are weighted higher than peak levels and are moved to the front of the scan list. The following keys help to better understand the data: TT: Turntable position in degrees Hght: Height of antenna in centimeters Az: Azimuth, V = Vertical, H= Horizontal

Criterion Technology EUT: Model: Wireless Headset Serial: Prototype 2 Manufacturer: Inovonics Tester: MEM EUT Level: Increased Fo level over prototype 1 EUT Information: tabletop, no cable, fresh Li battery Test information: continuous transmit, 10m, battery, FCC15.249 Fri Jan 12 12:19:32 2001

Special ID: 010105_237

Table 1: Scan List, sorted by margin to limit FCCB10, -30.0dB filter

Freq, MHz	Value	<u>Sts</u>	FCCB10	<u>TT</u>	<u>Hght</u>	Az	Comment
903.2420	75.20	m	39.64	52	133	Н	ln 1, ch 1
907.8004	74.02	m	38.46	329	129	Η	ln 2, ch 8
50.5954	12.01	q	-17.53	270	399	Η	nb, probable ambient
990.2599	24.45	q	-19.07	0	162	V	1st lo for lane1 ch1
994.8147	24.23	q	-19.29	270	100	V	lo lane2 ch8

Table 2: Scan List, sorted by margin to limit SPCL, -30.0dB filter

<u>Freq, MHz</u>	Value	<u>Sts</u>	<u>SPCL</u>	<u>TT</u>	<u>Hght</u>	Az	Comment
903.2420	75.20	m	-8.32	52	133	Н	ln 1, ch 1
907.8004	74.02	m	-9.50	329	129	Н	ln 2, ch 8

<u>Freq, MHz</u>	Value	<u>Sts</u>	FCCB10	<u>TT</u>	<u>Hght</u>	Az	Comment
50.5954	12.01	q	-17.53	270	399	Н	nb, probable ambient
903.2420	75.20	m	39.64	52	133	Н	ln 1, ch 1
907.8004	74.02	m	38.46	329	129	Н	ln 2, ch 8
990.2599	24.45	q	-19.07	0	162	V	1st lo for lane1 ch1
994.8147	24.23	q	-19.29	270	100	V	lo lane2 ch8

Table 3: Scan List for FCCB10, sorted by Frequency, -30.0dB filter

Table 4: Scan List for SPCL, sorted by Frequency, -30.0dB filter

Freq, MHz	Value	<u>Sts</u>	<u>SPCL</u>	<u>TT</u>	<u>Hght</u>	Az	Comment
903.2420	75.20	m	-8.32	52	133	Н	ln 1, ch 1
907.8004	74.02	m	-9.50	329	129	Н	ln 2, ch 8

Table 5: Complete Scan List Sorted by Frequency

Freq, MHz	I-val	Final	Sts	TT	Hght	Az	Time	Comment
50.5954	26.96	12.01	q	270	399	Н	Fri Jan 12 11:56:04 2001	nb, probable ambient
903.2420	73.60	75.20	m	52	133	Н	Thu Jan 11 09:26:36 2001	ln 1, ch 1
907.8004	72.32	74.02	m	329	129	Н	Thu Jan 11 09:36:21 2001	ln 2, ch 8
990.2599	20.93	24.45	q	0	162	v	Fri Jan 12 11:26:31 2001	1st lo for lane1 ch1
994.8147	20.79	24.23	q	270	100	V	Fri Jan 12 11:58:28 2001	lo lane2 ch8



Part 4.2 Radiated Emissions Plot for 30 MHz to 1,000 MHz

Date: Fri Jan 12 12: 19: 07 2001 EUT: Model: Wireless Headset Serial: Prototype 2 Manufacturer: Inovonics Tester: MEM SPiD: 010105_237 EUT Level: Increased Fo level over prototype 1 EUT Information: tabletop, no cable, fresh Li battery Test information: continuous transmit, 10m, battery, FCC15.249 Criterion Technology

Part 4.3 Radiated Emissions Data for 1,000 MHz to 10,000 MHz

Notes:								
The third column below contains alpha characters which pertain to the type of measurements made. The following are the definitions for those characters: q = Quasi Peak, m = Maximized (cable, rotation and antenna height), s = scanned but no data taken, and a = average. For the first character in column four, a '-' indicates that value is below the limit while an '*' indicates that value is above the limit								
If the list is sorted using "I-sort", then quasi-peak and average levels are weighted higher than peak levels and are moved to the front of the scan list.								
The following keys help to better understand the data:								
TT: Turntable position in degrees								
Hght: Height of antenna in centimeters								
Az: Azimuth, V = Vertical, H= Horizontal								

Criterion Technology Thu Jan 11 16:06:10 2001 EUT: Wireless Headset s/n Prototype 2 Manufacturer: Inovonics Tester: ws EUT Level: prototype #2 EUT Information: tabletop in normal operation Test information: Lane 1, Channel 1 and Lane 2, Channel 8, 3M, battery, FCC Class B

Freq, MHz	Value	<u>Sts</u>	FCC-B	<u>TT</u>	<u>Hght</u>	Az	Comment
9935.6620	49.64	а	-4.34	1	150	V	noise floor
9985.8044	49.48	а	-4.50	362	149	Н	noise floor
9078.0040	49.40	а	-4.58	359	150	V	noise floor
9032.4200	49.20	а	-4.78	0	149	Н	noise floor
7262.4032	46.83	а	-7.15	359	150	V	noise floor
8129.1780	46.53	а	-7.45	1	150	V	noise floor
7225.9360	46.45	а	-7.53	0	149	Н	noise floor
8170.2036	46.11	а	-7.87	360	149	Н	noise floor
6354.6028	44.30	а	-9.68	356	140	Н	noise floor
6322.6940	44.04	а	-9.94	0	150	V	noise floor
3631.2016	38.30	а	-15.68	44	161	Н	907.8 ck
4539.0499	37.84	а	-16.14	66	140	Н	907.8 ck
4516.1800	37.61	а	-16.37	74	128	Н	903.2 ck
5446.8024	37.33	а	-16.65	-3	141	V	noise floor
3612.9291	37.32	а	-16.66	305	129	V	903.2 ck
5419.4520	36.63	а	-17.35	359	129	V	noise floor

Table 6: Scan List, sorted by margin to limit FCC-B, -200.0dB filter

Special ID: 010105_237

Table 6. Scan Lis	t sorted by ma	rgin to limit I	FCC-B -200 (dR filter
Table 0: Scall Lis	i, sorieu by ma	irgin to mint r	гсс-д, -200.(ad mer

Freq, MHz	Value	<u>Sts</u>	FCC-B	TT	<u>Hght</u>	Az	Comment
1806.4840	36.23	а	-17.75	239	124	V	903.2 ck
1815.6008	34.87	а	-19.11	226	126	V	907.8 ck
2723.4012	34.65	а	-19.33	161	164	Н	907.8 ck
2709.7260	34.43	а	-19.55	359	151	V	noise floor

Table 7: Scan List for FCC-B, sorted by Frequency, -200.0dB filter

Value	<u>Sts</u>	FCC-B	<u>TT</u>	<u>Hght</u>	Az	Comment
36.23	а	-17.75	239	124	V	903.2 ck
34.87	а	-19.11	226	126	V	907.8 ck
34.43	а	-19.55	359	151	V	noise floor
34.65	а	-19.33	161	164	Н	907.8 ck
37.32	а	-16.66	305	129	V	903.2 ck
38.30	а	-15.68	44	161	Н	907.8 ck
37.61	а	-16.37	74	128	Н	903.2 ck
37.84	а	-16.14	66	140	Н	907.8 ck
36.63	а	-17.35	359	129	V	noise floor
37.33	а	-16.65	-3	141	V	noise floor
44.04	а	-9.94	0	150	V	noise floor
44.30	а	-9.68	356	140	Н	noise floor
46.45	а	-7.53	0	149	Н	noise floor
46.83	а	-7.15	359	150	V	noise floor
46.53	а	-7.45	1	150	V	noise floor
46.11	а	-7.87	360	149	Н	noise floor
49.20	а	-4.78	0	149	Н	noise floor
49.40	а	-4.58	359	150	V	noise floor
49.64	а	-4.34	1	150	V	noise floor
49.48	а	-4.50	362	149	Н	noise floor
	Value 36.23 34.87 34.43 34.65 37.32 38.30 37.61 37.84 36.63 37.33 44.04 44.30 46.45 46.83 46.53 46.11 49.20 49.40 49.64	ValueSts 36.23 a 34.47 a 34.43 a 34.43 a 34.45 a 37.32 a 37.30 a 37.61 a 37.84 a 36.63 a 37.33 a 44.04 a 44.30 a 46.45 a 46.45 a 46.53 a 46.11 a 49.20 a 49.40 a 49.48 a	ValueStsFCC-B 36.23 a -17.75 34.87 a -19.11 34.43 a -19.55 34.65 a -19.33 37.32 a -16.66 38.30 a -15.68 37.61 a -16.37 37.84 a -16.14 36.63 a -17.35 37.33 a -16.65 44.04 a -9.94 44.30 a -9.68 46.45 a -7.53 46.83 a -7.15 46.53 a -7.45 46.11 a -7.87 49.20 a -4.78 49.40 a -4.58 49.48 a -4.50	ValueStsFCC-BTT 36.23 a -17.75 239 34.87 a -19.11 226 34.43 a -19.55 359 34.65 a -19.33 161 37.32 a -16.66 305 38.30 a -15.68 44 37.61 a -16.37 74 37.84 a -16.14 66 36.63 a -17.35 359 37.33 a -16.65 -3 44.04 a -9.94 0 44.30 a -9.68 356 46.45 a -7.53 0 46.83 a -7.15 359 46.53 a -7.45 1 46.11 a -7.87 360 49.20 a -4.78 0 49.40 a -4.58 359 49.48 a -4.50 362	ValueStsFCC-BTTHght 36.23 a -17.75 239 124 34.87 a -19.11 226 126 34.43 a -19.55 359 151 34.65 a -19.33 161 164 37.32 a -16.66 305 129 38.30 a -15.68 44 161 37.61 a -16.37 74 128 37.84 a -16.14 66 140 36.63 a -17.35 359 129 37.33 a -16.65 -3 141 44.04 a -9.94 0 150 44.30 a -9.68 356 140 46.45 a -7.53 0 149 46.53 a -7.15 359 150 46.53 a -7.45 1 150 46.11 a -7.87 360 149 49.20 a -4.58 359 150 49.40 a -4.58 359 150 49.48 a -4.50 362 149	ValueStsFCC-BTTHghtAz 36.23 a -17.75 239 124 V 34.87 a -19.11 226 126 V 34.43 a -19.55 359 151 V 34.65 a -19.33 161 164 H 37.32 a -16.66 305 129 V 38.30 a -15.68 44 161 H 37.61 a -16.37 74 128 H 37.84 a -16.65 -3 141 V 44.04 a -9.94 0 150 V 44.30 a -9.68 356 140 H 46.83 a -7.15 359 150 V 46.53 a -7.87 360 149 H 49.20 a -4.78 0 149 H 49.40 a -4.58 359 150 V 49.64 a -4.34 1 150 V 49.48 a -4.50 362 149 H

Table 8: Complete Scan List Sorted by Frequency

Freq, MHz	I-val	Final	Sts	TT	Hght	Az	Time	Comment
1806.4840	39.05	36.23	а	239	124	V	Thu Jan 11 11:36:12 2001	903.2 ck
1815.6008	37.71	34.87	а	226	126	v	Thu Jan 11 10:35:14 2001	907.8 ck
2709.7260	33.10	34.43	a	359	151	v	Thu Jan 11 11:44:26 2001	noise floor
2723.4012	33.37	34.65	а	161	164	Н	Thu Jan 11 10:45:17 2001	907.8 ck
3612.9291	34.77	37.32	а	305	129	v	Thu Jan 11 11:48:59 2001	903.2 ck
3631.2016	35.71	38.30	а	44	161	Н	Thu Jan 11 10:50:35 2001	907.8 ck
4516.1800	33.41	37.61	a	74	128	Н	Thu Jan 11 11:54:20 2001	903.2 ck
4539.0499	33.50	37.84	а	66	140	Н	Thu Jan 11 10:56:33 2001	907.8 ck

Freq, MHz	I-val	Final	Sts	TT	Hght	Az Time		Comment
5419.4520	28.66	36.63	а	359	129	V	Thu Jan 11 11:58:38 2001	noise floor
5446.8024	29.02	37.33	а	-3	141	v	Thu Jan 11 11:02:07 2001	noise floor
6322.6940	34.67	44.04	а	0	150	v	Thu Jan 11 12:03:08 2001	noise floor
6354.6028	34.77	44.30	а	356	140	Н	Thu Jan 11 11:08:10 2001	noise floor
7225.9360	34.40	46.45	а	0	149	Н	Thu Jan 11 12:06:30 2001	noise floor
7262.4032	34.54	46.83	а	359	150	v	Thu Jan 11 11:11:35 2001	noise floor
8129.1780	34.09	46.53	а	1	150	v	Thu Jan 11 12:09:29 2001	noise floor
8170.2036	34.15	46.11	а	360	149	Н	Thu Jan 11 11:14:51 2001	noise floor
9032.4200	34.08	49.20	а	0	149	Н	Thu Jan 11 12:13:02 2001	noise floor
9078.0040	34.13	49.40	а	359	150	v	Thu Jan 11 11:18:02 2001	noise floor
9935.6620	34.22	49.64	а	1	150	v	Thu Jan 11 12:16:43 2001	noise floor
9985.8044	34.03	49.48	а	362	149	Н	Thu Jan 11 11:21:53 2001	noise floor

Table 8: Complete Scan List Sorted by Frequency



Part 4.4 Radiated Emissions Plot for 1,000 MHz to 10,000 MHz

Section 5 Equipment Calibration Information

Manufacturer	Name/Description	Model Number	Serial Number	Cal. Due
Antenna Research Associates	1-18 GHz Horn	DRG118/A	1056	Verify
Antenna Research Associates	1-18 GHz Horn	DRG118/A	1057	4-29-01
Chase	Bilog 30 - 1000 MHz	CB6111	1121	5-16-01
Dickson	Temperature/ RH Recorder	THDX	5300245	2-19-01
EMCO	Active Loop	6502	2626	10-19-01
EMCO	BiConnical 30-200 MHz	3108	2343	5-15-01
EMCO	Dipole	3121C	722	Verify
EMCO	Log Periodic 200 - 1000 MHz	3146	2763	5-16-01
EMCO	Log Periodic 200 - 1000 MHz	3146	3096	5-16-01
FCC	Current Probe	F-33-2	None	10-25-01
Fluke	Digital Multimeter	87	60800598	12-20-01
Hewlett Packard	Preselector	HP 9445B		3-27-01
Hewlett Packard	Tracking Generator	HP85645A	3210A00124	6-13-01
Hewlett Packard	Quasi Peak Adapter	HP 85650A	2521A00733	7-6-01
Hewlett Packard	Spectrum Analyzer	HP 8566B	2403A07322	7-6-01
Hewlett Packard	Spectrum Analyzer	HP 8566B	2421A00527	7-6-01
Hewlett Packard	Spectrum Analyzer	HP 8591A	2919A00220	1-24-01
Le Croy	Digital Storage Oscilloscope	9450	2141	4-20-01
Microwave Instrumentation Technologies	18-26.5 GHz Horn	12A-18	115300	11-4-01
Mini Circuits	Preamp (AMP2)			5-16-01
Rohde/Schwarz	HF Receiver	ESHS-30	82600/011	8-30-01
Rohde/Schwarz	LISN	ESH2-Z5	828739-001	8-29-01
Rohde/Schwarz	VHF/UHF Receiver	ESVS-30	8634221014	5-25-01
Solar	50 uH LISN	8612-50-TS-100N	967621	10-20-01
Solar	50 uH LISN	8612-50-TS-100N	967622	10-20-01
Tektronix	Oscilloscope	2467B	B051203	12-20-01
Veratech	Preamp (AMP3)			2-9-01
Amplifier Research	Coupler	DC6080	19529	5-3-01
Amplifier Research	E-Field Probe	FP2000	19682	1-27-01
Amplifier Research	E-Field Probe	FP2080	20236	1-26-01

Amplifier Research	Power Amplifier	150A100A	20183	5-3-01
Amplifier Research	Power Amplifier	100W1000M1	20214	5-4-01
Amplifier Research	Power Amplifier	10S1G4	20155	5-4-01
Andrews Heliax Cable	F2-50 Low Loss Coax	F2-50	N/A	5-4-01
EMCO	BiConnical 30-200 MHz	3108	2441	5-15-01
EMCO	Horn	3115	4003	Verif. for Use
FCC	CDN	FCC-801-M3-25	9714	10-23-01
FCC	Current Probe	F-33-1	None	10-26-01
FCC	EM Clamp	F2031	309	3-17-01
Fluke	Digital Multimeter	87	66320753	12-20-01
Fluke	Digital Multimeter	87	68630334	in calibration
Gigatronics	Power Meter	8541C	1830945	10-14-01
Gigatronics	Power Sensor	80301A-410	1831996	10-20-01
Haefely Trench	Coupling Network	IP6.2	083 957-02	9-18-01
Haefely Trench	De-coupling Network	DEC1A	080057-09	9-18-01
Haefely Trench	Dip Generator	PLINE1610	083 970-07	10-26-01
Haefely Trench	EFT Coupling Clamp	IP4A	080-011-06	9-18-01
Haefely Trench	EFT Tester	PEFT Junior	583-333-51	9-18-01
Haefely Trench	ESD Gun	PESD 1600	H605100	10-11-01
Haefely Trench	Impulse Module	PHV 30.2	083991-06	9-18-01
Haefely Trench	Power Supply	PHF555	080-419-05	2-28-01
Haefely Trench	Surge Generator	PSURGE 6.1	083 906-07	9-18-01
Haefely Trench	Surge Network	FP-SURGE 32.1	083925-05	9-18-01
Hewlett Packard	Pulse Generator	HP 8116A	2901G09493	10-5-01
Hewlett Packard	Signal Generator	HP 8648D	3642000145	4-6-01
Hewlett Packard	Spectrum Analyzer	HP 8594E	3412A01039	10-10-01
Lehman Chambers	Semi Anechoic Chamber	N/A	N/A	8-25-01
Tegam	Current Probe	925236-1	12588	10-26-01
Tektronix	Oscilloscope	2465A	B021016	12-20-01

Section 6 Product Information Forms

CRITERION TECHNOLOGY PRODUCT INFORMATION FORM

Company Name: <u>Inovonics</u> Company Address: <u>2100 Central Ave.</u> Boulder, CO. 80301 Contacts: Compliance Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Design Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Design Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Design Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Design Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Design Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Design Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Design Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Design Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Design Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Design Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Design Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Product Information (Check all that Apply) USA_X Canada Euro. Union_ Taiwan_ Japan_ New Zealand Australia_ Other Product Information Name Wireless Headset Model Number Serial Number Prototype 2 Product Dimensions: <u>Fits on head</u> Weight: <u>Unknown</u> Product Power Source: Battery Type Lithium Support Equipment (if used): CPU: Manufacturer N/A Model No. N/A Serial No. N/A Serial No. N/A Keyboard: Manufacturer N/A Model No. N/A Serial No. N	General Information	Date1-24-01		
Company Address: 2100 Central Ave. Boulder, CO 80301 Contacts: Compliance Engineer: Don Hume Phone: 303 939 9336 Email:don@inovonics.com Design Engineer: Don Hume Phone: 303 939 9336 Email:don@inovonics.com Test Description De-Bug Formal (Initial) X Formal (Re-Verification) Market Information (Check all that Apply) USA X Canada Euro. Union Taiwan Japan New Zealand Australia Other Source: Battery Type Lithium Support Equipment (if used): CPU: Manufacturer N/A Model No. N/A Serial No. N/A	Company Name: Inovonics			
Boulder, CO 80301 Contacts: Compliance Engineer: Don Hume Phone: 303 939 9336 Email:don@inovonics.com Design Engineer: Don Hume Phone: 303 939 9336 Est Description De-Bug Formal (Initial) X Market Information (Check all that Apply) USA_X Canada Contacts: Other Product Information Name Wireless Headset Model Number Serial Number Prototype 2 Product Dimensions: Fits on head Weight: Unknown Product Power Source: Battery Type_Lithium Support Equipment (if used): CPU: Manufacturer N/A Model No. N/A Serial No. N/A Ser	Company Address: 2100 Central Ave.			
Contacts: Compliance Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Design Engineer: <u>Don Hume</u> Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Test Description De-BugFormal (Initial) X Formal (Re-Verification) <u>Market Information (Check all that Apply)</u> USA X Canada Euro. Union Taiwan Japan New Zealand Australia Other Product Information Name Wireless HeadsetModel NumberSerial Number_Prototype 2 Product Dimensions: Fits on headWeight: <u>Unknown</u> Product Power Source: Battery Type_Lithium Support Equipment (if used): CPU: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u>	Boulder, CO 80301			
Contacts: Compliance Engineer: Don Hume Phone: 303 939 9336 Email:don@inovonics.com Design Engineer: Don Hume Phone: 303 939 9336 Email:don@inovonics.com Test Description De-Bug Formal (Initial) X Formal (Re-Verification) Australia De-Bug Formal (Initial) X Formal (Re-Verification) Australia Market Information (Check all that Apply) USA X Canada Euro. Union Taiwan Japan New Zealand Australia Other Source: Battery Type Lithium Support Equipment (if used): CPU: Manufacturer N/A Model No. N/A Serial No. N/A				
Compliance Engineer: Don Hume Phone: 303 939 9336 Email:don@inovonics.com Design Engineer: Don Hume Phone: 303 939 9336 Email:don@inovonics.com Test Description	Contacts:			
Design Engineer: Don Hume Phone: <u>303 939 9336</u> Email: <u>don@inovonics.com</u> Test Description De-Bug Formal (Initial) X Formal (Re-Verification) Market Information (Check all that Apply) USA_X Canada Euro. Union Taiwan Japan New Zealand Australia Other Product Information Name_Wireless Headset Model Number Serial Number_Prototype 2 Product Dimensions: Fits on head Weight: Unknown Product Power Source: Battery Type_Lithium Support Equipment (if used): CPU: Manufacturer N/A Model No. N/A Serial No.	Compliance Engineer: Don Hume	Phone: 303 939 9336 Email:don@inovonics.com		
Test Description	Design Engineer: <u>Don Hume</u>	Phone: 303 939 9336 Email:don@inovonics.com		
De-BugFormal (Initial)_XFormal (Re-Verification) Market Information (Check all that Apply) USA_X_CanadaEuro. UnionTaiwanJapanNew ZealandAustralia Other Product Information Name_Wireless HeadsetModel NumberSerial Number_Prototype 2 Product Dimensions: Fits on headWeight: Unknown Product Power Source: Battery Type_Lithium Support Equipment (if used): CPU: Manufacturer N/A Model No. N/A Serial No. N/A Model No. N/A Serial No. N/A Serial No. N/A Serial No. N/A Model No. N/A Serial No. N/A	Test Description			
Market Information (Check all that Apply) USA X Canada Euro. Union Taiwan Japan New Zealand Australia Other Product Information Name_Wireless Headset Model Number	De-BugFormal (Initial) X	Formal (Re-Verification)		
Market Information (Check all that Apply) USA CanadaEuro. UnionTaiwanJapanNew ZealandAustraliaOther Product Information NameWireless Headset Model NumberSerial Number_Prototype 2 Product Dimensions: Fits on head Weight: Unknown Product Power Source: Battery Type	-			
USA_X_CanadaEuro. UnionTaiwanJapanNew ZealandAustralia Other Product Information Name_Wireless HeadsetModel NumberSerial Number_Prototype 2 Product Dimensions: Fits on headWeight: Unknown Product Power Source: Battery Type_Lithium Support Equipment (if used): CPU: Manufacturer N/A Model No. N/A Serial No. N/A Monitor: Manufacturer N/A Model No. N/A Serial No. N/A Model No. N/A Serial No. N/A	Market Information (Check all that Apply)			
Other	USA <u>X</u> Canada Euro. Union Taiwan	Japan New Zealand Australia		
Product Information Name_Wireless Headset Model NumberSerial Number_Prototype 2 Product Dimensions: Fits on head Weight: Unknown Product Power Source: Battery Type_Lithium Support Equipment (if used): CPU: CPU: Manufacturer N/A Model No. N/A Serial No. N/A Monitor: Manufacturer N/A Model No. N/A Model No. N/A Serial No. N/A Serial No. N/A Keyboard: Manufacturer N/A Model No. N/A Mose: Mouse: Mouse:	Other			
Name_Wireless Headset Model Number	Product Information			
Product Dimensions: Fits on head Weight: Unknown Product Power Source: Battery Type Lithium Support Equipment (if used): CPU: Manufacturer N/A Model No. N/A Serial No. N/A Monitor: Manufacturer N/A Model No. N/A Serial No. N/A Keyboard: Manufacturer N/A Model No. N/A Serial No. N/A Keyboard: Manufacturer N/A Model No. N/A Serial No. N/A Model No. N/A	Name Wireless Headset Model Num	ber Serial Number Prototype 2		
Product Dimensions: <u>Fits on head</u> Weight: <u>Unknown</u> Product Power Source: Battery Type Lithium Support Equipment (if used): CPU: Manufacturer <u>N/A Model No. <u>N/A Serial No. N/A Serial No. N/A Serial No. N/A Serial No. <u>N/A Keyboard: Manufacturer N/A Model No. <u>N/A Serial No. N/A Serial No. N/A Serial No. N/A Model No. <u>N/A Model No. N/A Serial No. N/A </u></u></u></u></u>				
Product Power Source: Battery Type Lithium Support Equipment (if used): CPU: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Monitor: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Keyboard: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Model No. <u>N/A</u>	Product Dimensions: Fits on head	Weight: Unknown		
Product Power Source: Battery Type Lithium Support Equipment (if used): CPU: Manufacturer N/A Model No. N/A Serial No. N/A Model No. N/A Serial No. N/A Serial No. N/A Keyboard: Manufacturer N/A Model No. N/A Serial No. N/A Serial No. N/A Serial No. N/A				
Battery Type Lithium Support Equipment (if used): CPU: Manufacturer N/A Model No. N/A Serial No. N/A Monitor: Manufacturer N/A Model No. N/A Serial No. N/A Keyboard: Manufacturer N/A Model No. N/A Serial No. N/A Keyboard: Manufacturer N/A Model No. N/A Serial No. N/A Model No. N/A Serial No. N/A	Product Power Source:			
Support Equipment (if used): CPU: Manufacturer N/A Model No. N/A Serial No. N/A Monitor: Manufacturer N/A Model No. N/A Serial No. N/A Keyboard: Manufacturer N/A Model No. N/A Serial No. N/A Model No. N/A Model No. N/A Serial No. N/A Model No. N/A Mouse:	Battery			
Support Equipment (if used): CPU: Manufacturer N/A Model No. N/A Serial No. N/A Monitor: Manufacturer N/A Model No. N/A Serial No. N/A Model No. N/A Moufacturer N/A Model No. N/A Serial No. N/A Model No. N/A Mote:	Type_Lithium			
CPU: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Monitor: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Keyboard: Manufacturer <u>N/A</u> Serial No. <u>N/A</u> Serial No. <u>N/A</u> Model No. <u>N/A</u>	Sunnort Fauinment (if used).			
Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Monitor: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Keyboard: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Model No. <u>N/A</u>	CPU-			
Model No. <u>N/A</u> Serial No. <u>N/A</u> Monitor: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Keyboard: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Model No. <u>N/A</u>	Manufacturer N/A			
Serial No. <u>N/A</u> Monitor: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Serial No. <u>N/A</u> Keyboard: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Serial No. <u>N/A</u>	Model No. N/A			
Monitor: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Keyboard: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Mouse:	Serial No. N/A			
Monitor: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Keyboard: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Mouse:				
Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Keyboard: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Mouse:	Monitor:			
Model No. <u>N/A</u> Serial No. <u>N/A</u> Keyboard: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Mouse:	Manufacturer N/A			
Serial No. <u>N/A</u> Keyboard: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Mouse:	Model No. N/A			
Keyboard: Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Mouse:	Serial No. N/A			
Manufacturer <u>N/A</u> Model No. <u>N/A</u> Serial No. <u>N/A</u> Mouse:	<u>V</u> - , h e and			
Model No. <u>N/A</u> Serial No. <u>N/A</u> Mouse:	Monufacturer N/A			
Model No. <u>N/A</u> Serial No. <u>N/A</u> Mouse:	Madul Nie N/A			
Mouse:	Nodel No. <u>N/A</u>	<u> </u>		
Mouse:	Serial No. <u>IN/A</u>			
	Mouse:			
Manufacturer <u>N/A</u>	Manufacturer <u>N</u> /A			
Model No. <u>N/A</u>	Model No. N/A			

Serial No. <u>N/A</u>
I/O Cables – Manufacturer P/N Length
Serial Port N/A
Parallel Port N/A
SCSI Port N/A
Other
Operation Software:
Name N/A Version Number
Onarating Modes: (Plaase Include Cycle Time)
Normal Operation, transmits FM on high and low frequency extremes of operational
handwidth (Channel 1 Lane 1 and Channel 8 Lane 2
bandwidth (Channel 1 Lane 1 and Channel 6 Lane 2
Operation Pass/Fail Criteria:
N/A
Test Type – Emissions (Please check all that apply): Information Technology Equipment Class A
Class B X
Oscillator/Clock Frequencies (MHz)
Industrial, Scientific, Medical Equipment
Class A
Class B
Oscillator/Clock Frequencies (MHz)
Unintentional Radiator
Class A
Class B X
Oscillator/Clock Frequencies (MHz) μ Controller clock = 3.68 MHz
osomuon eloek riequoneles (minz) <u>ueomioner eloek – 5.00 minz</u>
Receiver
Type (Regen., Superhet., Direct Conv., Homodyne)
Local Oscillator Frequencies
Frequency

Intentional Radiator

Fundamental Frequency Range Fo = 903.242 MHz (Lane 1 Ch 1), Fo = 907.8004 MHz (Lane 2 Ch 8),

Local Oscillator Frequencies 1^{st} LO = 990.26 MHz for Lane 1 Ch. 1, 1^{st} LO = 994.82 MHz for Lane 2 Ch. 8, 2^{nd} LO = 59.3 MHz Power Output (to antenna) Unknown

Integral Antenna (Yes/No) Yes

Modulation Type (AM, CM, Pulse, Spread Spectrum)	Frequency Modulation
Control Circuits (Microprocessor/Micro-controller)	Unknown
Oscillator/Clock Frequencies (MHz) 3.68 MHz	

<u>N/A_IEC 61000-3-2</u>, Harmonics

Max. Steady State Power Consumed by Product: _____ Watts

<u>N/A</u> **IEC 61000-3-3**, Flicker Meter