# SUBMITTAL APPLICATION REPORT

## FOR

## GRANT OF CERTIFICATION CFR47, 15.249 and RSS-210 Low Power Transmitter

FOR

## MODEL: 011-01204 2460 MHz Transmitter

FOR

## GARMIN INTERNATIONAL, INC.

1200 East 151st Street Olathe, KS 66062

**Test Report Number: 070621** 



ROGERS LABS, INC.

4405 West 259<sup>th</sup> Terrace Louisburg, KS 66053 Phone / Fax (913) 837-3214

## ENGINEERING TEST REPORT FOR APLLICATION of GRANT of CERTIFICATION

FOR

## CFR47, PART 15C - INTENTIONAL RADIATORS Paragraph 15.249, Low Power Transmitter Industry Canada, RSS-210

For

## GARMIN INTERNATIONAL, INC.

1200 East 151st Street Olathe, KS 66062 Doug Kealey,

Model: 011-01204 wireless remote transmitter Frequency 2460 MHz FCC ID#: IPH-01204

Test Date: June 21, 2007

Certifying Engineer:

Scot DRogers

Scot D. Rogers ROGERS LABS, INC. 4405 West 259<sup>th</sup> Terrace Louisburg, KS 66053 Phone: (913) 837-3214 FAX: (913) 837-3214

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 Louisburg, KS 66053
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 Test to: FCC 15c (15.249), IC RSS-210

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## FORWARD

The following is submitted for consideration in obtaining a Grant of Certification for a low power intentional radiator operating under CFR47 Paragraph 15.249 and Industry Canada standard RSS-210.

Name of Applicant:

GARMIN INTERNATIONAL, INC. 1200 East 151st Street Olathe, KS 66062

Model: 011-01204 wireless transmitter.

FCC I.D.: IPH-01204 IC: 1792A-01204

Frequency Range: 2460 MHz.

Operating Power: 92.9 dBµV/m @ 3-meters (3 meter effective radiated measurement).

## 1) Applicable Standards & Test Procedures

a) In accordance with the Federal Communications Code of Federal Regulations, dated
October 1, 2006, Part 2, Subpart J, Paragraphs 2.907, 2.911, 2.913, 2.925, 2.926, 2.1031
through 2.1057, and applicable parts of paragraph 15, Part 15C Paragraph 15.249, and
Industry Canada standard RSS-210 the following information is submitted.
b) Test procedures used are the established Methods of Measurement of Radio-Noise
Emissions as described in the ANSI 63.4-2003 Document FCC, documents DA00-1407
and DA00-705 and/or TIA/EIA 603-1.

### 2.1033(b) Application for Certification

(1)	Manufacturer:	GARMIN INTERNATIONAL, INC.
		1200 East 151st Street
		Olathe, KS 66062

- (2) Identification: Model: 011-01204 Remote FCC I.D.: IPH-01204 IC: 1792A-01204
- (3) Instruction Book:

Refer to Exhibit for Instruction Manual.

(4) Description of Circuit Functions:

Refer to Exhibit of Operational Description.

(5) Block Diagram with Frequencies:

Refer to Exhibit of Operational Description.

(6) Report of Measurements:

Report of measurements follows in this Report.

- (7) Photographs: Construction, Component Placement, etc.:Refer to Exhibit for photographs of equipment.
- (8) No Peripheral Equipment was Necessary.
- (9) Transition Provisions of 15.37 are not being requested.
- (10) Equipment is not a scanning receiver and this section is not applicable.
- (11) The equipment does not operate in the 59 64 GHz frequency band and this section is not applicable.
- (12) The equipment is not software defined and this section is not applicable.

## 2) Equipment Tested

<u>Equipment</u>	Model	<u>FCC I.D.#</u>
EUT	011-01204	IPH-01204

## 3) Equipment Function and Testing Procedures

The EUT is a 2460 MHz radio transmitter used to transmit control commands to a remote display panel. The 011-01204 wireless transmitter is a wireless link used for transmitting control signals to a marine display panel. The device signals the display panel when a button on the transmitter is depressed. The unit is marketed for use to incorporate a wireless control link for the GPS display. Test software was installed in the test sample for testing purposes. The modified software allowed the transmitter to be set to transmit continuous wave or modulated signal. The unit operates from internal 1.5-volt batteries and has no provision to connect to utility power. For testing purposes, new batteries, supplied by the manufacturer, were used to power the EUT. The device utilizes a permanently connected antenna system with no provision for user replacement. A test sample was supplied offering antenna port conducted emissions testing for this and other submittal reports. The unit has no provision to connect to external auxiliary equipment.

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## 4) Equipment and Cable Configurations Conducted Emission Test Procedure

The unit typically operates from internal 1.5-volt batteries and has no provision to connect to utility power. Therefore no AC line conducted emissions testing was performed. For testing purposes, new batteries were used to power the EUT.

### **Radiated Emission Test Procedure**

The EUT was placed on a rotating 1 x 1.5-meter wooden platform, 0.8 meters above the ground plane at a distance of 3 meters from the FSM antenna. EMI energy was maximized by equipment placement, raising and lowering the FSM antenna, changing the antenna polarization, and by rotating the turntable. Each emission was maximized before data was taken using a spectrum analyzer. Refer to photographs in the exhibits for EUT placement.

## 5) List of Test Equipment

A Hewlett Packard 8591EM Spectrum Analyzer was used as the measuring device for the emissions testing of frequencies below 1 GHz. A Hewlett Packard 8562A Spectrum Analyzer was used as the measuring device for testing the emissions at frequencies above 1 GHz. The analyzer settings used are described in the following table. Refer to the appendix for a complete list of test equipment.

HP 8591 EM ANALYZER SETTINGS					
	CONDUCTED EMISSIONS				
RBW	AVG. BW	DETECTOR FUNCTION			
9 kHz	30 kHz	Peak / Quasi Peak			
	RADIATED EMISSIONS				
RBW	AVG. BW	DETECTOR FUNCTION			
120 kHz	300 kHz	Peak / Quasi Peak			
I	IP 8562A ANALYZER SETTING:	S			
RBW	VIDEO BW	DETECTOR FUNCTION			
100 kHz	100 kHz	PEAK			
1 MHz	1 MHz	Peak / Average			
		<u>CAL. DATES</u> <u>DUE.</u> 10/06 10/07			

EQUIPMENT MFG.	MODEL	CAL. DATES	DUE.
LISN Comp. Design	FCC-LISN-2-MOD.CD	10/06	10/07
Antenna ARA	BCD-235-B	10/06	10/07
Antenna EMCO	3147	10/06	10/07
Antenna EMCO	3143	5/07	5/08
AnalyzerHP	8591EM	5/07	5/08
AnalyzerHP	8562A	2/07	2/08

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## 6) Units of Measurements

Conducted EMI	Data is in $dB\mu V$ ; $dB$ referenced to one microvolt.
Radiated EMI	Data is in $dB\mu V/m$ ; $dB/m$ referenced to one microvolt per meter.

## 7) Test Site Locations

Conducted EMI	The AC power line conducted emissions tests were performed in a
	shielded screen room located at Rogers Labs, Inc., 4405 W. 259 <sup>th</sup>
	Terrace, Louisburg, KS.
Radiated EMI	The radiated emissions tests were performed at the 3 meters, Open
	Area Test Site (OATS) located at Rogers Labs, Inc., 4405 W. 259 <sup>th</sup>
	Terrace, Louisburg, KS.
Site Approval	Refer to Appendix for FCC Site Approval Letter, Reference #
	90910, and Industry Canada Site Approval code IC3041-1.

## 8) SUBPART B – UNINTENTIONAL RADIATORS Conducted EMI

The unit typically operates from internal 1.5-volt batteries and has no provision to connect to utility power. Therefore no AC line conducted emissions testing was performed. For testing purposes, new 3 volt batteries were used to power the EUT.

#### Radiated EMI

The EUT was arranged in a typical equipment configuration and operated through all of its various modes. Preliminary testing was performed in a screen room with the EUT positioned 1 meter from the FSM. Radiated emissions measurements were performed to identify the frequencies, which produced the highest emissions. Plots were made of the frequency spectrum from 30 MHz to 22,000 MHz for the preliminary testing. Refer to figures one through six for plots of the radiated emissions spectrum taken in a screen room. The highest radiated emission was then re-maximized at the OATS location before final radiated emissions measurements were performed. Final data was taken with the EUT located at the OATS at a distance of 3 meters between the EUT and the receiving antenna. The frequency spectrum from 30 MHz to 25,000 MHz was searched for radiated emissions. Measured emission levels were maximized by EUT placement on the table, rotating the turntable through 360 degrees, varying the antenna height between 1 and 4 meters above the ground plane and changing antenna position between horizontal and vertical polarization. Antennas used were Broadband Biconical from 30 to 200 MHz, Biconilog from 30 to 1000 MHz, Log Periodic from 200 MHz to 5 GHz and or, Double Ridge or Pyramidal horns and mixers from 4 GHz to 40 GHz, notch filters and appropriate amplifiers were utilized.

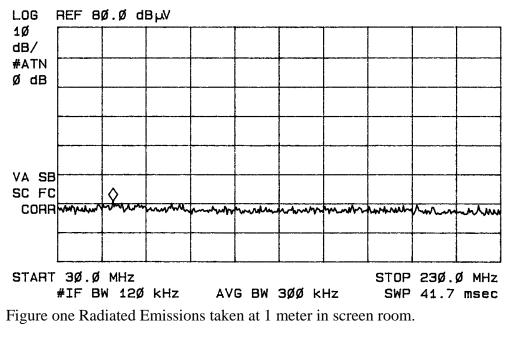
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MARKER	ACTV DET: PEAK
55.Ø MHz	MEAS DET: PEAK OP
2Ø.73 dBµV	MKR 55.Ø MHz
·	2Ø.73 dBµV





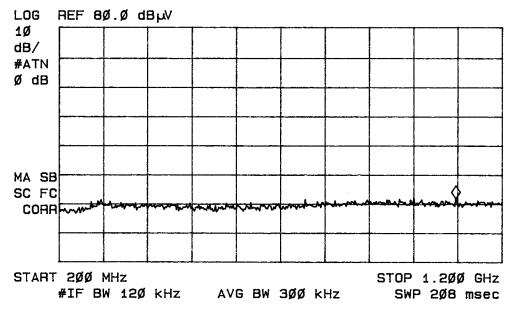


Figure two Radiated Emissions taken at 1 meter in screen room.

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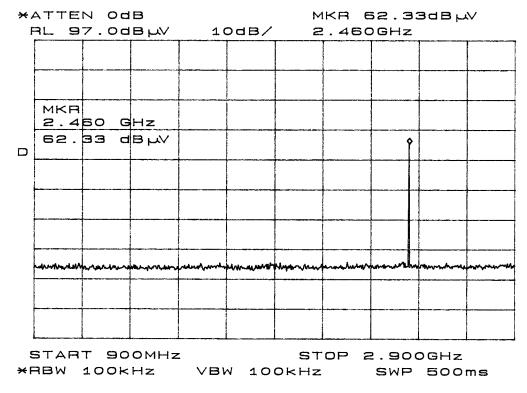


Figure three Radiated Emissions taken at 1 meter in screen room.

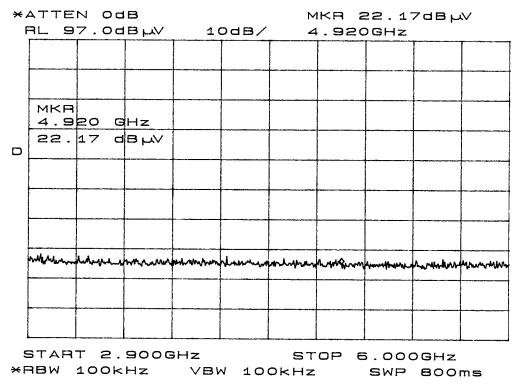


Figure four Radiated Emissions taken at 1 meter in screen room.

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*ATTEN Odb MKR 29.67dBW											
AL	97	7.0	d	B⊬V	10	DdB/	9	.810	DGHz		
1	< R . 8 :	10	G	Hz							
0 29	€.€	37	b	B⊬V							
-	mm	Names	m	- grage with generation	almonus	mulur	un markene		mar	a	the states and the
START 6.000GHz STOP 12.000GHz *RBW 100kHz VBW 100kHz SWP 2.0sec											

Figure five Radiated Emissions taken at 1 meter in screen room.

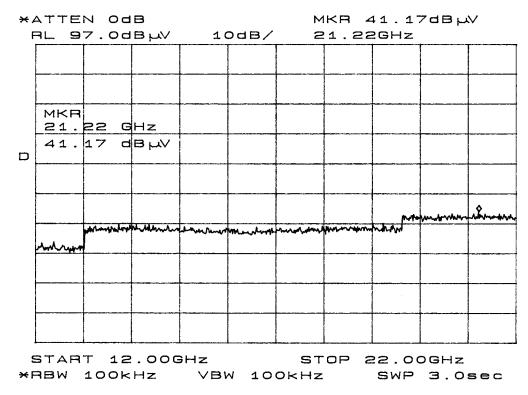


Figure six Radiated Emissions taken at 1 meter in screen room.

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Frequency in MHz	FSM Horz. (dBµV)	FSM Vert. (dBµV)	A.F. (dB/m)	Amp. Gain (dB)	RFS Horz. @ 3m (dBµV/m)	RFS Vert. @ 3m (dBµV/m)	FCC Class B Limit @ 3m (dBµV/m)

**General Radiated Emissions Data from EUT** 

Note: no emissions above 20 dB below the limits were found emanating from this device other than the fundamental and harmonics. Other emissions present had amplitudes at least 20 dB below the limit.

## Summary of Results for Conducted Emissions

The unit typically operates from internal batteries and has no provision to connect to utility power. For testing purposes, new batteries were used to power the EUT.

Therefore no AC line conducted emissions testing was performed. The conducted

emissions for the EUT meet the requirements for CISPR 22 and FCC Part 15B CLASS B

Digital Devices.

## Summary of Results for Radiated Emissions

The radiated emissions for the EUT meet the requirements for CISPR 22 and FCC Part

15B CLASS B Digital Devices. The EUT had at least a 20 dB minimum margin below the quasi-peak limit. Other emissions were present with amplitudes at least 20 dB below the limit.

## Statement of Modifications and Deviations

No modifications to the EUT were required for the unit to meet the CISPR 22 or FCC Part 15B CLASS B emissions standards. There were no deviations or exceptions to the specifications.

## 9) Subpart C - Intentional Radiators

As per CFR47 Part 15, Subpart C, paragraph 15.249 and RSS-210 the following information

is submitted.

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#### 15.203 Antenna Requirements

The unit is produced with a permanently attached antenna and has no provision for user service, replacement, or antenna modification. The requirements of 15.203 are fulfilled and there are no deviations or exceptions to the specification.

#### 15.205 Restricted Bands of Operation

Spurious emissions falling in the restricted frequency bands of operation were measured at a distance of three meters at the OATS. The EUT utilizes frequency, determining circuitry, which generates harmonics falling in the restricted bands. Emissions were checked at the OATS, using appropriate antennas or pyramidal horns, amplification stages, and a spectrum analyzer. No other significant emission was observed which fell into the restricted bands of operation.

Sample Calculations: RFS (dB $\mu$ V/m @ 3m) = FSM(dB $\mu$ V) + A.F.(dB) - Gain(dB) = 24.0 + 33.4 - 30 = 27.4

Frequency in MHz	FSM Horz. (dBµV)	FSM Vert. (dBµV)	A.F. (dB/m)	Amp. Gain (dB)	RFS Horz. @ 3m (dBµV/m)	RFS Vert. @ 3m (dBµV/m)	FCC Class B Limit @ 3m (dBµV/m)
2390.0	24.0	16.7	33.4	30	27.4	20.1	54
2483.5	26.2	18.3	33.8	30	30.0	22.1	54
4920.0	29.0	18.5	39.7	30	38.7	28.2	54
7380.0	18.0	17.7	36.7	30	24.7	24.4	54

#### **Radiated Emissions Data in Restricted Bands (15.205)**

Other emissions present had amplitudes at least 20 dB below the margin.

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#### Summary of Results for Radiated Emissions in Restricted Bands

The radiated emissions for the EUT meet the requirements for FCC Part 15C Intentional Radiators. The EUT had a 15.3 dB minimum margin below the limits. Both average and peak amplitudes were checked for compliance with the regulations. No other emissions where found in the restricted frequency bands. Other emissions were present with amplitudes at least 20 dB below the FCC Limits.

#### 15.209 Radiated Emissions Limits; General Requirements

#### **Radiated EMI**

The EUT was arranged in a typical equipment configuration and operated through all of its various modes. Preliminary testing was performed in a screen room with the EUT positioned 1 meter from the FSM. Radiated emissions measurements were performed to identify the frequencies, which produced the highest emissions. Emissions were checked in the screen room from 30 to 25,000 MHz and plots were made of the frequency spectrum from 30 MHz to 22,000 MHz for the preliminary testing. The highest radiated emission was then re-maximized at this location before final radiated emissions measurements were performed. Final data was taken with the EUT located at the open area test site at a distance of 3 meters between the EUT and the receiving antenna. The frequency spectrum from 30 MHz to 25,000 MHz was searched for radiated emissions. Measured emission levels were maximized by EUT placement on the table, rotating the turntable through 360 degrees, varying the antenna height between 1 and 4 meters above the ground plane and changing antenna polarization between horizontal and vertical. Antennas used were Broadband Biconical from 30 MHz to 200 MHz to 200 MHz, Biconilog from 30

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MHz to 1000 MHz, Log Periodic from 200 MHz to 5 GHz, and/or Double Ridge or

Pyramidal Horns from 4 GHz to 40 GHz.

Frequency in MHz	FSM Horz. (dBµV)	FSM Vert. (dBµV)	A.F. (dB/m)	Amp. Gain (dB)	RFS Horz. @ 3m (dBµV/m)	RFS Vert. @ 3m (dBµV/m)	FCC Class B Limit @ 3m (dBµV/m)

#### **General Radiated Emissions Data from EUT (15.209)**

Note: no emissions above 20 dB were found emanating from this device other than the fundamental and harmonics. Other emissions present had amplitudes at least 20 dB below the limit.

#### Summary of Results for Radiated Emissions

The radiated emissions for the EUT meet the requirements for CISPR 22 and FCC Part 15B CLASS B Digital Devices. The EUT had at least a 20 dB minimum margin below the quasi-peak limit. Other emissions were present with amplitudes at least 20 dB below the limit.

### 15.249 Operation in the Band 2400-2483.5 MHz

The power output was measured on an open field test site @ 3 meters.

The EUT was placed on a wooden turntable 0.8 meters above the ground plane and at a distance of 3 meters from the FSM antenna. The peak and average amplitude of the carrier frequency was measured using a spectrum analyzer. The peak and average amplitude of the spurious emissions were measured using a spectrum analyzer then data recorded from the analyzer display.

Emissions radiated outside of the specified bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in 15.209, whichever is the lesser attenuation. The amplitude of each emission was maximized by varying the FSM antenna height, polarization, and by

rotating the turntable. A Biconilog Antenna was used for measuring emissions from 30ROGERS LABS, INC.GARMIN INTERNATIONAL, INC.4405 W. 259th TerraceMODEL: 011-01204Louisburg, KS 66053Test #: 070621Phone/Fax: (913) 837-3214Test to: FCC 15c (15.249), IC RSS-210Page 17 of 27Ollou204 Tx Test Report 6/29/2007

to 1000 MHz, a Log Periodic Antenna for 200 to 5000 MHz, and Double Ridge or

Pyramidal Horn Antennas from 4 GHz to 40 GHz. Emissions were measured in  $dB\mu V/m$  @ 3 meters.

The power output was measured at the open area test site at a three-meter distance. Data was taken per Paragraph 2.1046(a), 15.249 and RSS-210. The 2400 and 2483.5 MHz band edges are protected due to the 2460 MHz frequency channel of operation. Refer to figures seven through twelve showing plots of the antenna conducted performance displaying compliance with the specifications. Band edges comply with the specifications as presented in the table for section 15.205 above.

Sample Calculation RFS (dB $\mu$ V/m @ 3m) = FSM(dB $\mu$ V) + A.F.(dB) - Gain(dB) = 89.0 + 33.9 -3 0 = 92.9

Emission Frequency (MHz)	FSM Horz. (dBµV)	FSM Vert. (dBµV)	Ant. Factor (dB)	Amp Gain (dB)	RFS Horz. @ 3m (dBµV/m)	RFS Vert. @ 3m (dBµV/m)	Limit @ 3m (dBµV/m)
2460.0	89.0	87.5	33.9	30	92.9	91.4	94
4920.0	29.0	18.5	39.7	30	38.7	28.2	54
7380.0	18.0	17.7	36.7	30	24.7	24.4	54
9840.0	18.1	18.3	38.4	30	26.5	26.7	54

**Radiated Emissions Data from EUT (15.249)** 

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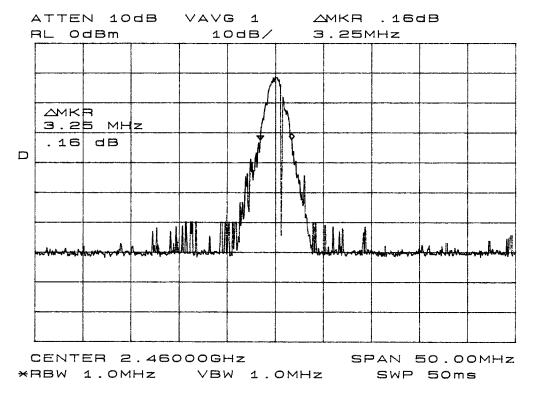
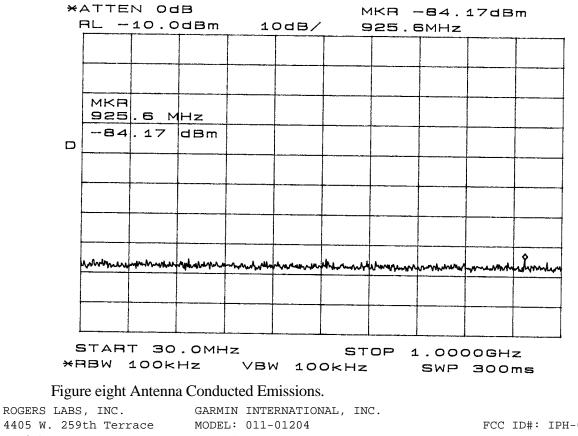


Figure seven Band edge and Occupied Bandwidth (Antenna Conducted).



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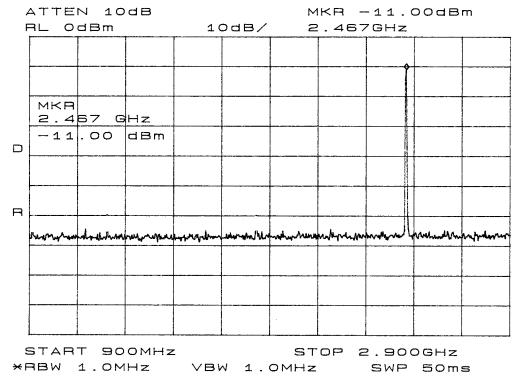


Figure nine Antenna Conducted Emissions.

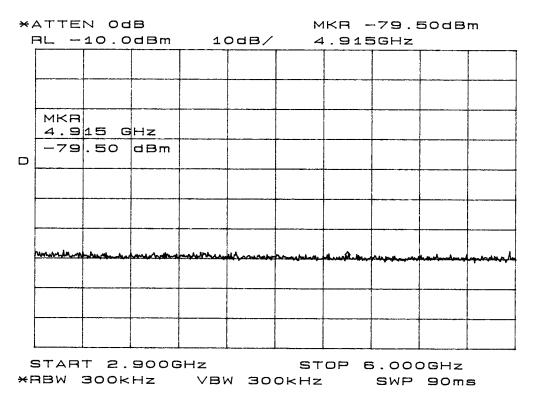


Figure ten Antenna Conducted Emissions.

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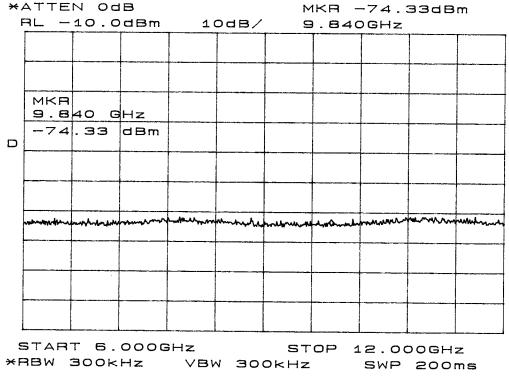
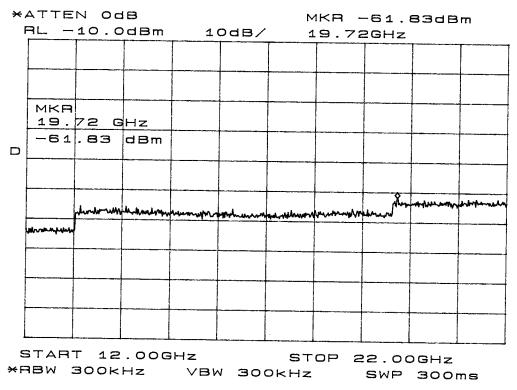


Figure eleven Antenna Conducted Emissions.





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#### Summary of Results for Radiated Emissions of Intentional Radiator

The EUT had the highest emission of 92.9 dB $\mu$ V/m at 3 meters at the fundamental frequency of operation. The EUT had a worst-case of 15.3 dB margin below the limit for the harmonic emissions. The radiated emissions for the EUT meet the requirements for FCC Part 15.249 Intentional Radiators. There are no measurable emissions in the restricted bands other than those recorded in this report. Other emissions were present with amplitudes at least 20 dB below the FCC Limits. The specifications of 15.249 were met; there are no deviations or exceptions to the requirements.

#### Statement of Modifications and Deviations

No modifications to the EUT were required for the unit to meet the FCC Part 15C or RSS-210 emissions standards. There were no deviations to the specifications.

## **APPENDIX**

Model: 011-01204 wireless DATA TRANSMITTER

- 1. Test Equipment List
- 2. Rogers Qualifications
- 3. FCC Site Approval Letter
- 4. IC Site Approval

 ROGERS LABS, INC.
 GARMIN INTERNATIONAL, INC.

 4405 W. 259th Terrace
 MODEL: 011-01204

 Louisburg, KS 66053
 Test #: 070621

 Phone/Fax: (913) 837-3214
 Test to: FCC 15c (15.249), IC RSS-210

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## TEST EQUIPMENT LIST FOR ROGERS LABS, INC.

The test equipment used is maintained in calibration and good operating condition. Use of this calibrated equipment ensures measurements are traceable to national standards.

1 1	Calibration Date		
Oscilloscope Scope: Tektronix 2230	2/07		
Wattmeter: Bird 43 with Load Bird 8085	2/07 140 2/07		
Power Supplies: Sorensen SRL 20-25, SRL 40-25, DCR 150, DCR 140			
H/V Power Supply: Fluke Model: 408B (SN: 573)	2/07 2/07		
R.F. Generator: HP 606A			
R.F. Generator: HP 8614A	2/07		
R.F. Generator: HP 8640B	2/07		
Spectrum Analyzer: HP 8562A,	2/07		
Mixers: 11517A, 11970A, 11970K, 11970U, 11970V, 1197	0W		
HP Adapters: 11518, 11519, 11520			
Spectrum Analyzer: HP 8591EM	5/07		
Frequency Counter: Leader LDC825	2/07		
Antenna: EMCO Biconilog Model: 3143	5/07		
Antenna: EMCO Log Periodic Model: 3147	10/06		
Antenna: Antenna Research Biconical Model: BCD 235	10/06		
Antenna: EMCO Dipole Set 3121C	2/07		
Antenna: C.D. B-101	2/07		
Antenna: Solar 9229-1 & 9230-1	2/07		
Antenna: EMCO 6509	2/07		
Audio Oscillator: H.P. 201CD	2/07		
R.F. Power Amp 65W Model: 470-A-1010	2/07		
R.F. Power Amp 50W M185- 10-501	2/07		
R.F. PreAmp CPPA-102	2/07		
LISN 50 $\mu$ Hy/50 ohm/0.1 $\mu$ f	10/06		
LISN Compliance Eng. 240/20	2/07		
LISN Fischer Custom Communications FCC-LISN-50-16-2-08	2/07		
Peavey Power Amp Model: IPS 801	2/07		
Power Amp A.R. Model: 10W 1010M7	2/07		
Power Amp EIN Model: A301	2/07		
ELGAR Model: 1751	2/07		
	2/07		
ELGAR Model: TG 704A-3D			
ESD Test Set 2010i	2/07		
Fast Transient Burst Generator Model: EFT/B-101	2/07		
Current Probe: Singer CP-105	2/07		
Current Probe: Solar 9108-1N	2/07		
Field Intensity Meter: EFM-018	2/07		
KEYTEK Ecat Surge Generator	2/07		
Shielded Room 5 M x 3 M x 3.0 M			
5/2/2007			

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### QUALIFICATIONS

#### Of

### SCOT D. ROGERS, ENGINEER

### **ROGERS LABS, INC.**

Mr. Rogers has approximately 17 years experience in the field of electronics. Six years working in the automated controls industry and 6 years working with the design, development and testing of radio communications and electronic equipment.

### **POSITIONS HELD**

Systems Engineer:	A/C Controls Mfg. Co., Inc. 6 Years
Electrical Engineer:	Rogers Consulting Labs, Inc. 5 Years
Electrical Engineer:	Rogers Labs, Inc. Current

#### **EDUCATIONAL BACKGROUND:**

- 1) Bachelor of Science Degree in Electrical Engineering from Kansas State University.
- 2) Bachelor of Science Degree in Business Administration Kansas State University.
- 3) Several Specialized Training courses and seminars pertaining to Microprocessors and Software programming.

Scot DRogers

Scot D. Rogers

June 21, 2007 Date

#### FEDERAL COMMUNICATIONS COMMISSION

Laboratory Division 7435 Oakland Mills Road Columbia, MD 21046

May 16, 2006

**Registration Number: 90910** 

Rogers Labs, Inc. 4405 West 259th Terrace Louisburg, KS 66053

Attention: Scot Rogers

Re: Measurement facility located at Louisburg 3 & 10 meter site Date of Renewal: May 16, 2006

Dear Sir or Madam:

Your request for renewal of the registration of the subject measurement facility has been received. The information submitted has been placed in your file and the registration has been renewed. The name of your organization will remain on the list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that the file must be updated for any changes made to the facility and the registration must be renewed at least every three years.

Measurement facilities that have indicated that they are available to the public to perform measurement services on a fee basis may be found on the FCC website <u>www.fcc.gov</u> under E-Filing, OET Equipment Authorization Electronic Filing, Test Firms.

hylfis Parish

Information Technician

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Industry Industrie Canada Canada

May 23<sup>rd</sup>, 2006

OUR FILE: 46405-3041 Submission No: 115252

Rogers Labs Inc. 4405 West 259<sup>th</sup> Terrace Louisburg, KY USA 66053

Dear Sir/Madame:

The Bureau has received your application for the Alternate Test Site or OATS and the filing is satisfactory to Industry Canada.

Please reference to the file number (3041-1) in the body of all test reports containing measurements performed on the site.

In the future, to obtain or renew a unique registration number, you may demonstrate that the site has been accredited to ANSI C63.4-2003 or later.

If the site is not accredited to ANSI C63.4-2003 or later, the test facility shall submit test data demonstrating conformance with the ANSI standard. The Department will evaluate the filing to determine if recognition shall be granted.

The frequency for re-validation of the test site and the information that is required to be filed or retained by the testing party shall comply with the requirements established by the accrediting organization. However, in all cases, test site re-validation shall occur on an interval not to exceed two years.

If you have any questions, you may contact the Bureau by e-mail at <u>certification.bureau@ic.gc.ca</u> Please reference our file number above for all correspondence.

Yours sincerely,

a

Robert Corey Manager Certification Certification and Engineering Bureau 3701 Carling Ave., Building 94 Ottawa, Ontario K2H 8S2



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