AquaCheck (Pty) LTD

TEST REPORT FOR

Basic II Wireless Logger, ACBIIWLOGGER

Tested To The Following Standards:

FCC Part 15 Subpart C Sections 15.249
and
RSS -210 Version 7

Report No.: 90751-11

Date of issue: June 18, 2010

ACCREDITED

TESTING
CERT #803.01, 803.02, 803.05, 803.06

This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of EMC testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

Testing the Future
CKC LABORATORIES, INC.

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ADMINISTRATIVE INFORMATION

Test Report Information

REPORT PREPARED FOR:

AquaCheck (Pty) LTD
Office 1, First Floor, 44 Oxford
Dubanville 7550, South Africa

Representative: Emile Jordaan

REPORT PREPARED BY:

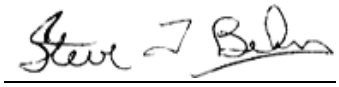
Dianne Dudley
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Project Number: 90751

DATE OF EQUIPMENT RECEIPT: May 4, 2010
DATE(S) OF TESTING: May 4 - June 14, 2010

Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the sample equipment tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.



Steve Behm
Director of Quality Assurance & Engineering Services
CKC Laboratories, Inc.

Test Facility Information

Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):
CKC Laboratories, Inc.
1120 Fulton Place
Fremont, CA 94539

Site Registration & Accreditation Information

Location	Japan	Canada	FCC
Fremont	R-2160, C2332 & T-228	3082B-1	958979

SUMMARY OF RESULTS

Standard / Specification: FCC Part 15 Subpart C

Description	Test Procedure/Method	Results
Occupied Bandwidth	FCC Part 15 Subpart C Section 15.215	Pass
Carrier Field Strength	FCC Part 15 Subpart C Section 15.249	Pass
Spurious Emissions	FCC Part 15 Subpart C Section 15.249	Pass
99% Bandwidth	RSS-210 Version 7	Pass

Conditions During Testing

This list is a summary of the conditions noted for or modifications made to the equipment during testing.

Summary of Conditions
None

EQUIPMENT UNDER TEST (EUT)

EUT DESCRIPTION

The EUT is a wireless logging soil moisture probe, Wireless LOGGER for soil moisture probe.

EQUIPMENT UNDER TEST

Basic II Wireless logger
Manuf: AquaCheck
Model: ACBIIWLOGGER
Serial: 60390

Power Adapter
Manuf: PENERGY
Model: Type: ACH-4E Falcon 771070
Serial: 01039337

PERIPHERAL DEVICES

The EUT was not tested with peripheral devices.

FCC PART 15 SUBPART C

This report contains EMC emissions test results under United States Federal Communications Commission (FCC) 47 CFR 15C requirements for Unlicensed Radio Frequency Devices, Subpart C - Intentional Radiators.

Temperature And Humidity During Testing
The temperature during testing was within +15°C and + 35°C.
The relative humidity was between 20% and 75%.

15.31(e) Voltage Variations
Not applicable to this device because it is battery powered.

15.31(m) Number Of Channels
This device operates on a single channel.

15.33(a) Frequency Ranges Tested
15.249 Radiated Emissions: 9 kHz – 10GHz

15.203 Antenna Requirements
The antenna is an integral part of the EUT and is non-removable; therefore the EUT complies with Section 15.203 of the FCC rules.

EUT Operating Frequency
The EUT was operating at 917.923330MHz.

15.215 Occupied Bandwidth

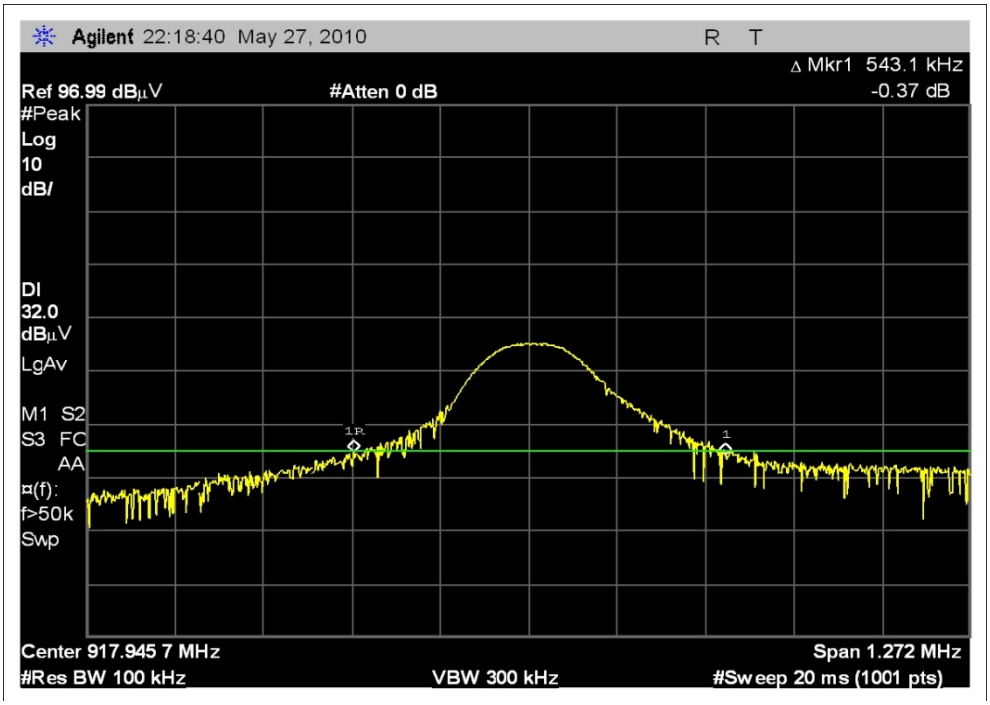
Test Conditions

The EUT transmits at 917.923330MHz.
The Basic II Wireless Logger is connected to Power Adapter for power. The EUT's firmware is set so once the EUT is initialized it continuously transmits without having to communicate with the SOLO unit. SOLO unit is not required for initialization.

Engineer Name: G. Johnson

Test Equipment				
Equipment	**Serial**	**Cal Date**	**Cal Due**	**Asset**
Spectrum Analyzer	US44300408	3/9/2009	3/9/2011	AN02668
Horn Antenna	1064	1/19/2009	1/19/2011	AN02061
Cable	HOL-HF-025-06	3/19/2010	3/19/2012	ANP05138
Cable	26	3/2/2010	3/2/2012	ANP04241

Test Plot



Test Setup Photo

15.249 Carrier Field Strength

Test Data Sheets

Test Location: CKC Laboratories • 5046 Sierra Pines Dr • Mariposa, CA 95338 • (209) 966-5240

Customer: **AquaCheck (Pty) LTD**
Specification: **15.249 Carrier and Spurious Emissions (902-908 MHz Transmitter)**
Work Order #: **90751** Date: 6/8/2010
Test Type: **Radiated Scan** Time: 10:16:52
Equipment: **Basic II Wireless Logger** Sequence#: 2
Manufacturer: AquaCheck Tested By: A. Brar
Model: ACBIIWLOGGER
S/N: 60390

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	3/9/2009	3/9/2011
T1	ANP05300	Cable	RG214/U	3/6/2009	3/6/2011
T2	ANP05440	Cable		1/18/2010	1/18/2012
T3	AN00852	Biconilog Antenna	CBL 6111C	12/22/2008	12/22/2010

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Basic II Wireless Logger*	AquaCheck	ACBIIWLOGGER	60390
Power Adapter	PENERGY	Type: ACH-4E Falcon 771070	01039337

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

Fundamental Readings.
EUT transmits at 917.923330MHz.
The Basic II Logger connected to Power Adapter for power.
The EUT's firmware is set so once the EUT is initialized it continuously transmits without having to communicate with the SOLO unit.
SOLO unit is not required for initialization.

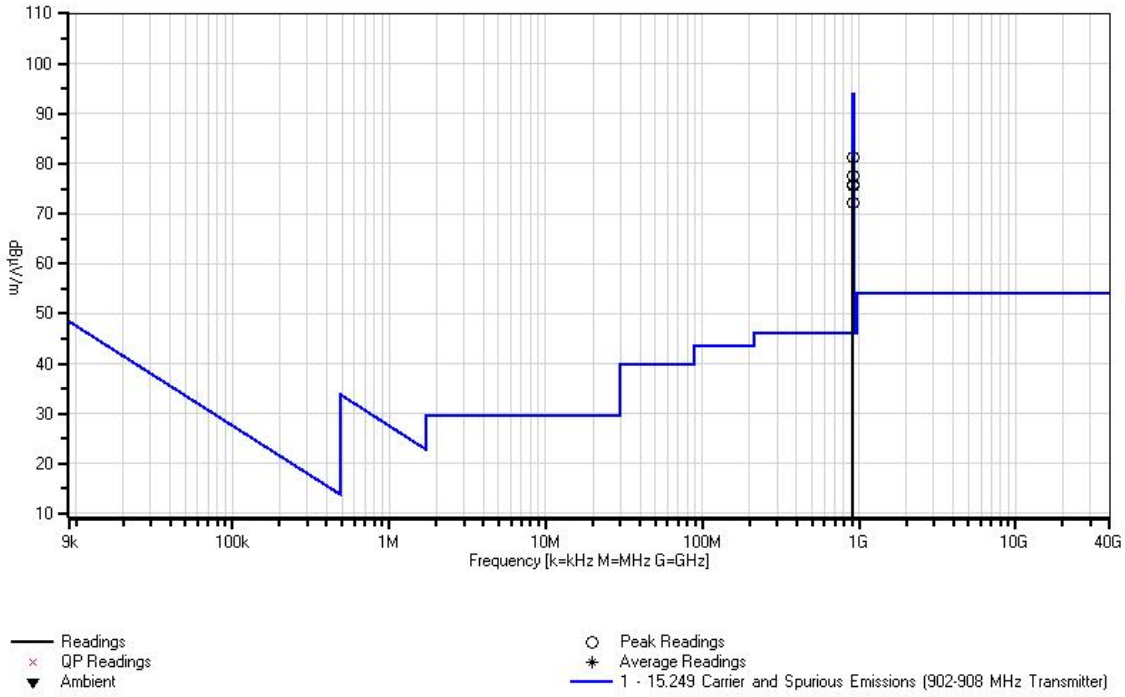
Ext Attn: 0 dB

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	917.929M	55.4	+1.2	+2.0	+22.8		+0.0 15	81.4	94.0 EUT is lying on side, Y Axis.	-12.6	Horiz 209
2	917.946M	51.5	+1.2	+2.0	+22.8		+0.0 34	77.5	94.0 EUT is lying on it's bottom, Z Axis.	-16.5	Vert 110
3	917.948M	49.9	+1.2	+2.0	+22.8		+0.0 345	75.9	94.0 EUT is lying on side, Y Axis.	-18.1	Vert 119

4	917.963M	49.7	+1.2	+2.0	+22.8	+0.035	75.7	94.0	-18.3	Horiz 199 EUT is lying on it's bottom, Z Axis.
5	917.935M	46.3	+1.2	+2.0	+22.8	+0.153	72.3	94.0	-21.7	Vert 158 EUT lying flat, X Axis.
6	917.935M	46.3	+1.2	+2.0	+22.8	+0.309	72.3	94.0	-21.7	Horiz 143 EUT lying flat, X Axis.

CKC Laboratories Date: 6/8/2010 Time: 10:16:52 AquaCheck (Pty) LTD WO#: 90751
15.249 Carrier and Spurious Emissions (902-908 MHz Transmitter) Test Distance: 3 Meters Sequence#: 2 Ext ATTN: 0 dB



Test Setup Photo

15.249 Spurious Emissions

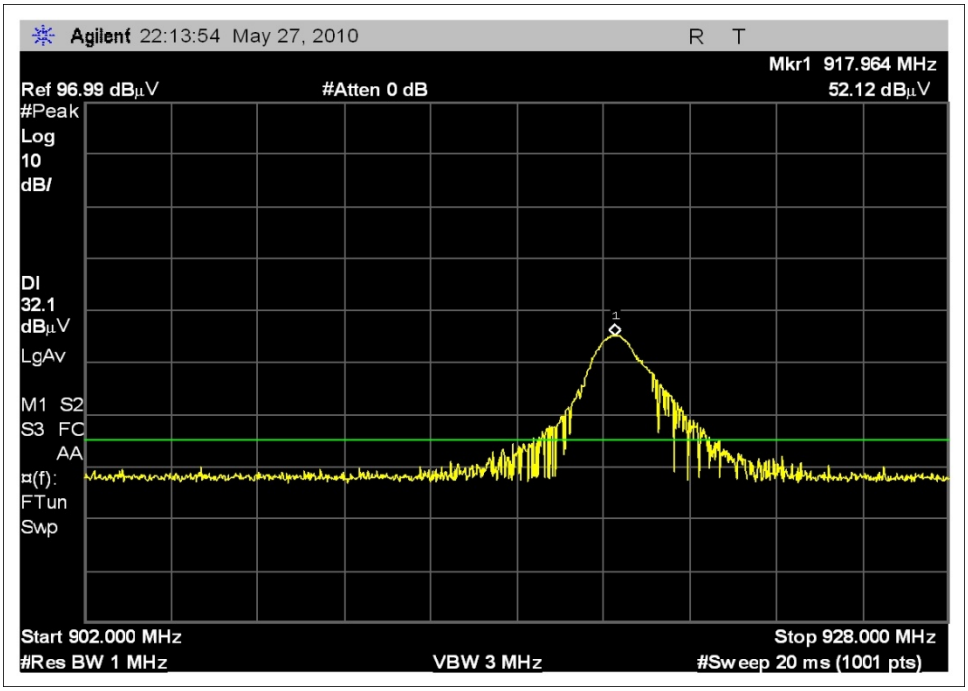
Bandedge Test Conditions

EUT transmits at 917.923330MHz.
The Basic II Wireless Logger is connected to Power Adapter for power. The EUT's firmware is set so once the EUT is initialized it continuously transmits without having to communicate with the SOLO unit. SOLO unit is not required for initialization.

Engineer Name: A. Brar

Test Equipment				
Equipment	**Serial**	**Cal Date**	**Cal Due**	**Asset**
Spectrum Analyzer	US44300408	3/9/2009	3/9/2011	AN02668
Horn Antenna	1064	1/19/2009	1/19/2011	AN02061
Cable	HOL-HF-025-06	3/19/2010	3/19/2012	ANP05138
Cable	26	3/2/2010	3/2/2012	ANP04241

Bandedge Plot



Test Data Sheets

Test Location: CKC Laboratories • 5046 Sierra Pines Dr • Mariposa, CA 95338 • (209) 966-5240

Customer: **AquaCheck (Pty) LTD**
Specification: **15.249 Carrier and Spurious Emissions (902-908 MHz Transmitter)**
Work Order #: **90751** Date: 6/11/2010
Test Type: **Maximized Emissions** Time: 3:43:50 PM
Equipment: **Basic II Wireless Logger** Sequence#: 24
Manufacturer: AquaCheck Tested By: A. Brar
Model: ACBIIWLOGGER
S/N: 60390

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	3/9/2009	3/9/2011
T1	ANP05300	Cable	RG214/U	3/6/2009	3/6/2011
T2	ANP05440	Cable		1/18/2010	1/18/2012
T3	AN00432	Loop Antenna	6502	5/18/2009	5/18/2011

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Basic II Wireless Logger*	AquaCheck	ACBIIWLOGGER	60390

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

Spurious Emissions.
.09-30MHz.
EUT transmits at 917.923330MHz.
The Basic II Logger is not connected to Power Adapter for power. It is running in internal battery.
The EUT's firmware is set so once the EUT is initialized it continuously transmits without having to communicate with the SOLO unit. SOLO unit is not required for initialization.

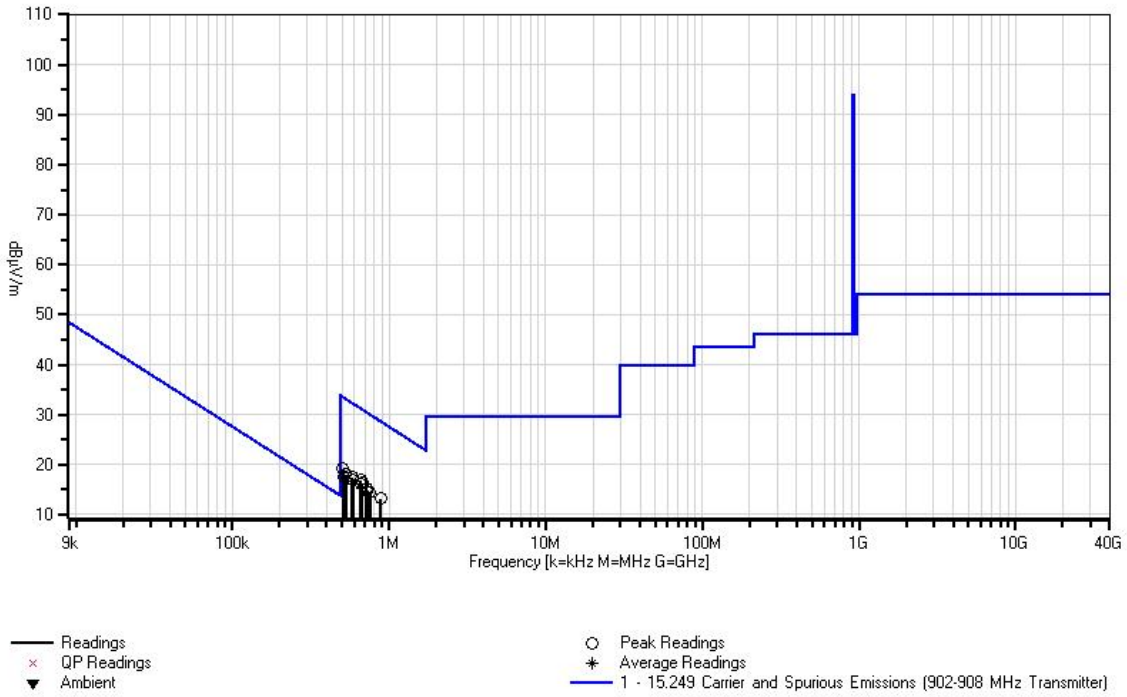
Ext Attn: 0 dB

Measurement Data: Reading listed by margin. Test Distance: 5 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	658.041k	37.6	+0.2	+0.0	+10.1		-31.0 -5	16.9	31.2	-14.3	Perpe 100
2	505.419k	39.9	+0.2	+0.1	+9.9		-31.0 -5	19.1	33.5	-14.4	Perpe 100
3	674.766k	37.0	+0.1	+0.0	+10.2		-31.0 -5	16.3	31.0	-14.7	Perpe 100
4	582.775k	38.5	+0.1	+0.0	+9.9		-31.0 -5	17.5	32.3	-14.8	Perpe 100
5	528.417k	39.0	+0.2	+0.0	+9.9		-31.0 -5	18.1	33.1	-15.0	Paral 100
6	664.313k	36.6	+0.2	+0.0	+10.2		-31.0 -5	16.0	31.1	-15.1	Perpe 100

7	589.047k	38.1	+0.1	+0.0	+9.9	-31.0 -5	17.1	32.2	-15.1	Perpe 100
8	716.580k	35.7	+0.2	+0.0	+10.3	-31.0 -5	15.2	30.5	-15.3	Perpe 100
9	888.018k	33.7	+0.2	+0.1	+10.2	-31.0 -5	13.2	28.6	-15.4	Perpe 100
10	754.213k	35.0	+0.1	+0.1	+10.3	-31.0 -5	14.5	30.0	-15.5	Perpe 100
11	517.964k	38.4	+0.2	+0.1	+9.9	-31.0 -5	17.6	33.3	-15.7	Perpe 100
12	722.852k	35.2	+0.2	+0.0	+10.3	-31.0 -5	14.7	30.4	-15.7	Perpe 100

CKC Laboratories Date: 6/11/2010 Time: 3:43:50 PM AquaCheck (Pty) LTD WO#: 90751
15.249 Carrier and Spurious Emissions (902-908 MHz Transmitter) Test Distance: 5 Meters Sequence#: 24 Ext
ATTN: 0 dB



Test Location: CKC Laboratories • 5046 Sierra Pines Dr • Mariposa, CA 95338 • (209) 966-5240

Customer: **AquaCheck (Pty) LTD**
Specification: **15.249 Carrier and Spurious Emissions (902-908 MHz Transmitter)**
Work Order #: **90751** Date: 6/11/2010
Test Type: **Maximized Emissions** Time: 11:49:28 AM
Equipment: **Basic II Wireless Logger** Sequence#: 16
Manufacturer: AquaCheck Tested By: A. Brar
Model: ACBIIWLOGGER
S/N: 60390

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	3/9/2009	3/9/2011
T1	ANP05300	Cable	RG214/U	3/6/2009	3/6/2011
T2	ANP05440	Cable		1/18/2010	1/18/2012
T3	AN00852	Biconilog Antenna	CBL 6111C	12/22/2008	12/22/2010
T4	AN00730	Preamp	8447D	2/9/2009	2/9/2011
T5	ANP05299	Cable	RG214	3/6/2009	3/6/2011

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Basic II Wireless Logger*	AquaCheck	ACBIIWLOGGER	60390

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

Spurious Emissions.
30-1000MHz.
EUT transmits at 917.923330MHz.
The Basic II Logger is not connected to Power Adapter for power. It is running in internal battery.
The EUT's firmware is set so once the EUT is initialized it continuously transmits without having to communicate with the SOLO unit. SOLO unit is not required for initialization.

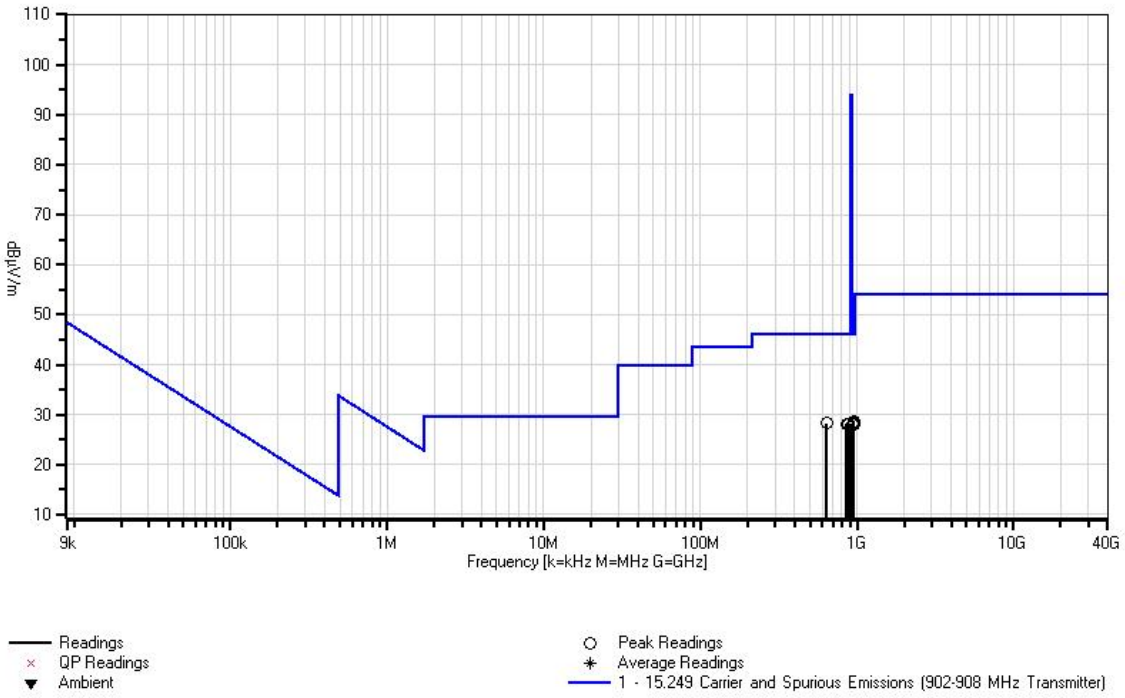
Ext Attn: 0 dB

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	949.786M	29.3	+1.1 +0.4	+2.1	+23.3	-27.5	+0.0 -5	28.7	46.0	-17.3	Horiz 129
2	947.720M	29.0	+1.1 +0.4	+2.1	+23.3	-27.5	+0.0 -5	28.4	46.0	-17.6	Horiz 129
3	951.163M	28.9	+1.1 +0.4	+2.1	+23.3	-27.5	+0.0 373	28.3	46.0	-17.7	Vert 140
4	642.014M	32.7	+1.0 +0.3	+1.5	+19.9	-27.1	+0.0 373	28.3	46.0	-17.7	Vert 140
5	953.918M	28.7	+1.2 +0.4	+2.1	+23.4	-27.5	+0.0 373	28.3	46.0	-17.7	Vert 140
6	956.297M	28.6	+1.2 +0.4	+2.1	+23.4	-27.5	+0.0 373	28.2	46.0	-17.8	Vert 140
7	932.944M	29.1	+1.1 +0.4	+2.1	+23.0	-27.5	+0.0 373	28.2	46.0	-17.8	Vert 140

8	885.857M	29.7	+1.3 +0.3	+1.9	+22.4	-27.4	+0.0 373	28.2	46.0	-17.8	Vert 140
9	936.548M	29.0	+1.1 +0.4	+2.1	+23.1	-27.5	+0.0 373	28.2	46.0	-17.8	Vert 140
10	862.074M	29.9	+1.2 +0.3	+1.9	+22.2	-27.3	+0.0 373	28.2	46.0	-17.8	Vert 140
11	945.716M	28.8	+1.1 +0.4	+2.1	+23.3	-27.5	+0.0 373	28.2	46.0	-17.8	Vert 140

CKC Laboratories Date: 6/11/2010 Time: 11:49:28 AM AquaCheck (Pty) LTD WO#: 90751
15.249 Carrier and Spurious Emissions (902-908 MHz Transmitter) Test Distance: 3 Meters Sequence#: 16 Ext
ATTN: 0 dB



Test Location: CKC Laboratories • 5046 Sierra Pines Dr • Mariposa, CA 95338 • (209) 966-5240

Customer: **AquaCheck (Pty) LTD**
Specification: **15.249 Carrier and Spurious Emissions (902-908 MHz Transmitter)**
Work Order #: **90751** Date: 6/14/2010
Test Type: **Maximized Emissions** Time: 10:27:41
Equipment: **Basic II Wireless Logger** Sequence#: 27
Manufacturer: AquaCheck Tested By: A. Brar
Model: ACBIIWLOGGER
S/N: 60390

***Test Equipment*:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02668	Spectrum Analyzer	E4446A	3/9/2009	3/9/2011
T1	AN02812	Preamp	83017-69004	3/8/2009	3/8/2011
T2	AN02061	Horn Antenna	DRG-118A	1/19/2009	1/19/2011
T3	AN03015	Cable	32022-2-29094K-24TC	2/4/2010	2/4/2012
T4	ANP04241	Cable	FSJ1-50A	3/2/2010	3/2/2012
T5	ANP05138	Cable	FSJ1P-50A-4	3/19/2010	3/19/2012
T6	AN01416	High Pass Filter	84300-80038	2/23/2010	2/23/2012
	AN	Duty Cycle Correction Factor		5/7/2010	5/7/2012

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
Basic II Wireless Logger*	AquaCheck	ACBIIWLOGGER	60390

Support Devices:

Function	Manufacturer	Model #	S/N

Test Conditions / Notes:

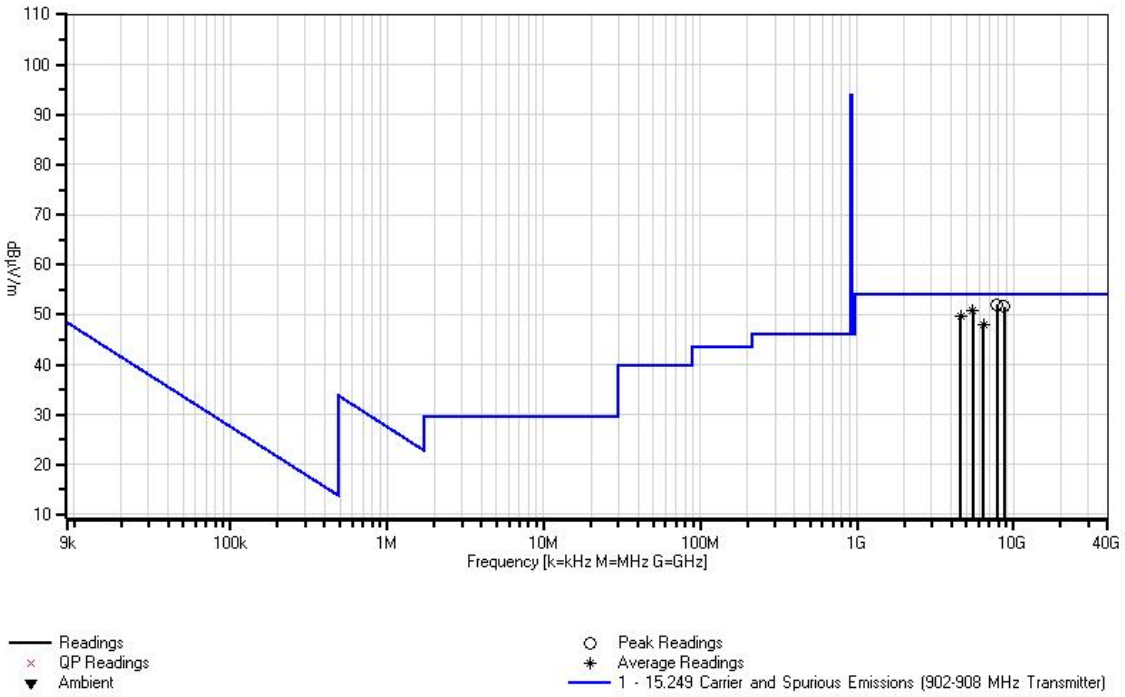
Spurious Emissions.
1-10GHz.
EUT transmits at 917.923330MHz.
The Basic II Logger is not connected to Power Adapter for power. It is running in internal battery.
The EUT's firmware is set so once the EUT is initialized it continuously transmits without having to communicate with the SOLO unit. SOLO unit is not required for initialization.
The duty cycle correction factor is based on the following:
On Time per 100ms = (6.2+10.1)*(100/60.5) = 26.94ms
20*Log(26.94/100) = -11.40dB

Ext Attn: 0 dB

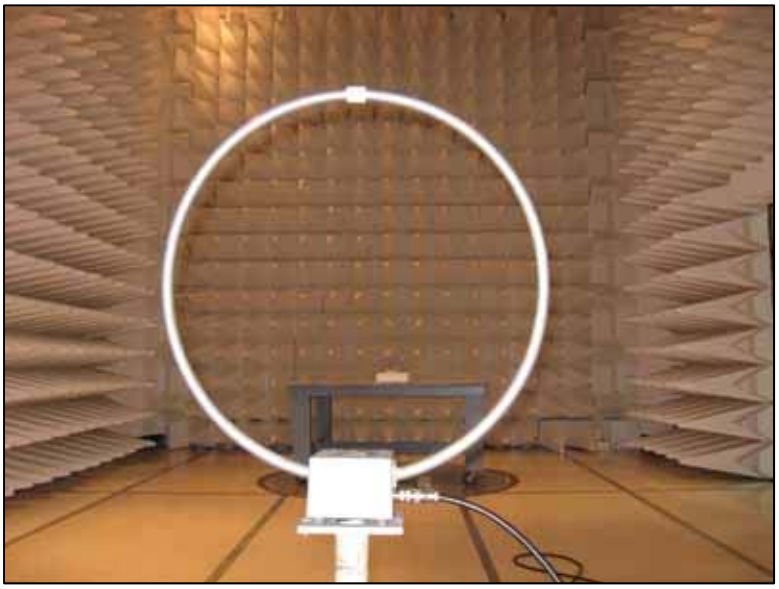
Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBµV	dB	dB	dB	dB	Table	dBµV/m	dBµV/m	dB	Ant
1	7818.262M	42.0	-34.7 +4.7	+38.2 +0.0	+0.7	+1.1	+0.0 27	52.0	54.0	-2.0	Vert 136
2	8726.022M	41.5	-34.8 +4.9	+38.0 +0.0	+0.8	+1.2	+0.0 27	51.6	54.0	-2.4	Vert 136
3	5507.581M Ave	43.8	-32.7 +3.8	+34.4 +0.0	+0.6	+0.9	+0.0 277	50.8	54.0	-3.2	Horiz 135
^	5507.581M	56.0	-32.7 +3.8	+34.4 +0.0	+0.6	+0.9	+0.0 277	63.0	54.0	+9.0	Horiz 135
5	5507.723M Ave	43.7	-32.7 +3.8	+34.4 +0.0	+0.6	+0.9	+0.0 274	50.7	54.0	-3.3	Vert 127
^	5507.723M	56.1	-32.7 +3.8	+34.4 +0.0	+0.6	+0.9	+0.0 274	63.1	54.0	+9.1	Vert 127
7	4589.812M Ave	56.0	-32.6 +3.3	+32.6 +0.4	+0.6	+0.8	+0.0 277	49.7	54.0 Duty Cycle Correction Factor Applied. -11.4dB.	-4.3	Horiz 135
^	4589.812M	67.9	-32.6 +3.3	+32.6 +0.4	+0.6	+0.8	+0.0 277	73.0	54.0	+19.0	Horiz 135
9	6425.710M Ave	40.2	-33.3 +4.2	+35.2 +0.0	+0.7	+1.0	+0.0 27	48.0	54.0	-6.0	Vert 136
^	6425.710M	52.6	-33.3 +4.2	+35.2 +0.0	+0.7	+1.0	+0.0 27	60.4	54.0	+6.4	Vert 136
11	6425.659M Ave	40.1	-33.3 +4.2	+35.2 +0.0	+0.7	+1.0	+0.0 25	47.9	54.0	-6.1	Horiz 105
^	6425.659M	52.3	-33.3 +4.2	+35.2 +0.0	+0.7	+1.0	+0.0 25	60.1	54.0	+6.1	Horiz 105

CKC Laboratories Date: 6/14/2010 Time: 10:27:41 AquaCheck (Pty) LTD WO#: 90751
15.249 Carrier and Spurious Emissions (902-908 MHz Transmitter) Test Distance: 3 Meters Sequence#: 27 Ext
ATTN: 0 dB



Test Setup Photos



.009-30MHz-

30-1000MHz

1-10GHz

RSS - 210 99% Bandwidth

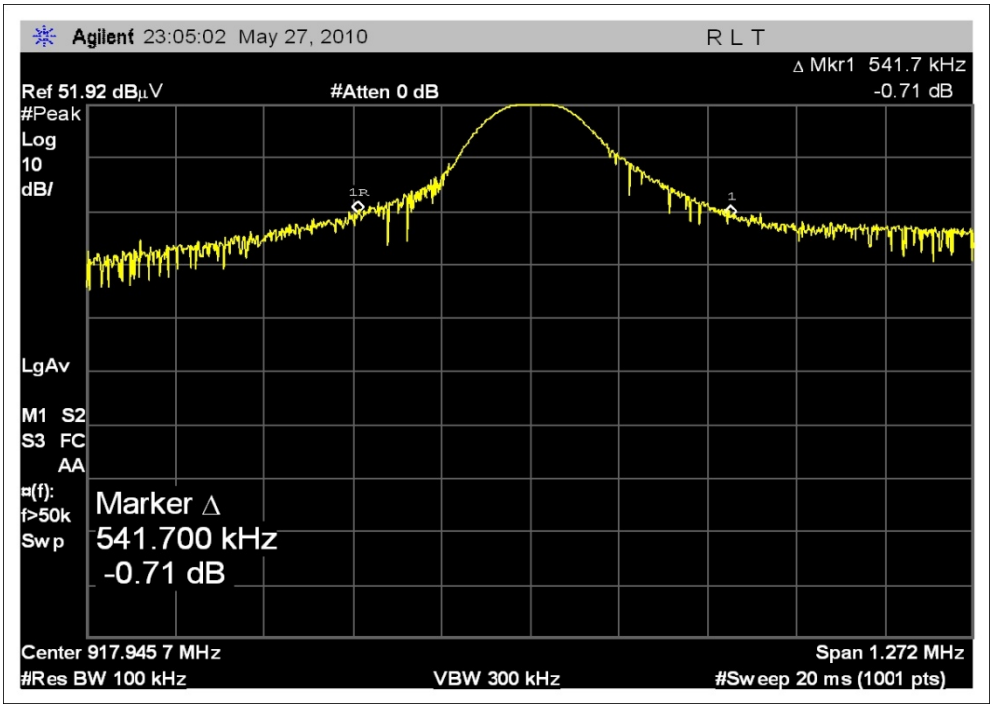
Test Conditions

The EUT transmits at 917.923330MHz.
The Basic II Wireless Logger is connected to Power Adapter for power. The EUT's firmware is set so once the EUT is initialized it continuously transmits without having to communicate with the SOLO unit. SOLO unit is not required for initialization.

Engineer Name: A. Brar

Test Equipment				
Equipment	**Serial**	**Cal Date**	**Cal Due**	**Asset**
Spectrum Analyzer	US44300408	3/9/2009	3/9/2011	AN02668
Horn Antenna	1064	1/19/2009	1/19/2011	AN02061
Cable	HOL-HF-025-06	3/19/2010	3/19/2012	ANP05138
Cable	26	3/2/2010	3/2/2012	ANP04241

Test Plot



Test Setup Photo

SUPPLEMENTAL INFORMATION

Measurement Uncertainty

Uncertainty Value	Parameter
4.73 dB	Radiated Emissions
3.34 dB	Mains Conducted Emissions
3.30 dB	Disturbance Power

The reported measurement uncertainties are calculated based on the worst case of all laboratory environments from CKC Laboratories, Inc. test sites. Only those parameters which require estimation of measurement uncertainty are reported. The reported worst case measurement uncertainty is less than the maximum values derived in CISPR 16-4-2. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2. Compliance is deemed to occur provided measurements are below the specified limits.

Emissions Test Details

TESTING PARAMETERS

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dBµV/m, the spectrum analyzer reading in dBµV was corrected by using the following formula. This reading was then compared to the applicable specification limit.

SAMPLE CALCULATIONS		
	Meter reading	(dBµV)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBµV/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. The following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used.

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
RADIATED EMISSIONS	9kHz	150kHz	200Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the highest readings, this is indicated as a "QP" or an "Ave" on the appropriate rows of the data sheets. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the spectrum analyzer/receiver readings recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the measuring device called "peak hold," the measuring device had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the quasi-peak detector.

Average

For certain frequencies, average measurements may be made using the spectrum analyzer/receiver. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.