

**FCC PART 15 SUBPART B
TEST REPORT***for***WEBTUNER RF/IR MEDIA PLAYER REMOTE 2012
MODEL: URC-5150BC0-XXX-R**

Prepared for

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DATE: MARCH 24, 2014

	REPORT BODY	APPENDICES					TOTAL
		A	B	C	D	E	
PAGES	16	2	2	2	14	21	57

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TABLE OF CONTENTS

Section / Title	PAGE
GENERAL REPORT SUMMARY	4
SUMMARY OF TEST RESULTS	4
1. PURPOSE	5
2. ADMINISTRATIVE DATA	6
2.1 Location of Testing	6
2.2 Traceability Statement	6
2.3 Cognizant Personnel	6
2.4 Date Test Sample was Received	6
2.5 Disposition of the Test Sample	6
2.6 Abbreviations and Acronyms	6
3. APPLICABLE DOCUMENTS	7
4. DESCRIPTION OF TEST CONFIGURATION	8
4.1 Description of Test Configuration – Emissions	8
4.1.1 Cable Construction and Termination	8
5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT	9
5.1 EUT and Accessory List	9
5.2 Emissions Test Equipment	10
6. TEST SITE DESCRIPTION	11
6.1 Test Facility Description	11
6.2 EUT Mounting, Bonding and Grounding	11
6.3 Facility Environmental Characteristics	11
7. TEST PROCEDURES	12
7.1 RF Emissions	12
7.1.1 Conducted Emissions Test	12
7.1.2 Radiated Emissions (Spurious and Harmonics) Test	13
7.1.3 RF Emissions Test Results	15
8. CONCLUSIONS	16

LIST OF APPENDICES

APPENDIX	TITLE
A	Laboratory Accreditations and Recognitions
B	Modifications to the EUT
C	Additional Models
D	Diagram, Charts, and Photos <ul style="list-style-type: none">• Test Setup Diagram• Antenna and Amplifier Factors• Radiated Emissions Photos
E	Data Sheets

LIST OF FIGURES

FIGURE	TITLE
1	Conducted Emissions Test Setup
2	Plot Map And Layout of Radiated Test Site

LIST OF TABLES

TABLE	TITLE
1.0	Radiated Emission Results

GENERAL REPORT SUMMARY

Compatible Electronics Inc. generates this electromagnetic emission test report, which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

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

Device Tested: WebTuner RF/IR Media Player Remote 2012
Model: URC-5150BC0-XXX-R
S/N: N/A

Product Description: See Expository Statement

Modifications: The EUT was not modified in order to meet the specifications.

Manufacturer: Universal Electronics, Inc.
201 East Sandpointe Avenue, 8th Floor
Santa Ana, California 92707

Test Date(s): January 29, 2014

Test Specifications: Emissions requirements
CFR Title 47, Part 15, Subpart B and Subpart C, Sections 15.205, 15.209, and 15.249

Test Procedure: ANSI C63.4

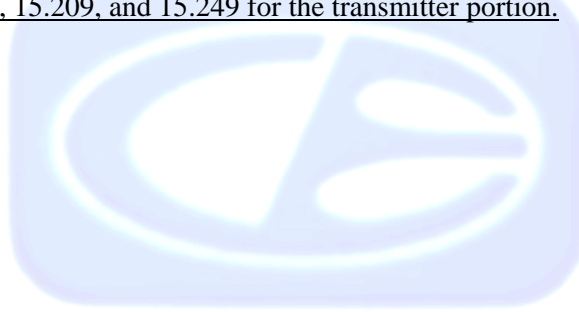
Test Deviations: The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions 150 kHz to 30 MHz	This test was not performed because the EUT operates on battery power and does not connect to the AC mains.
2	Radiated RF Emissions 10 kHz to 25000 MHz (Transmitter and Digital Portion)	Complies with the Class B limits of CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249.

1. PURPOSE

This document is a qualification test report based on the emissions tests performed on the WebTuner RF/IR Media Player Remote 2012, Model: URC-5150BC0-XXX-R (EUT). The Emissions measurements were performed according to the measurement procedure described in ANSI C63.4. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the Class B specification limits defined by CFR Title 47, Part 15, Subpart B for the digital portion; and the limits defined in Subpart C, sections 15.205, 15.209, and 15.249 for the transmitter portion.



2. ADMINISTRATIVE DATA

2.1 Location of Testing

The Emissions tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Universal Electronics, Inc.

Jesse Mendez Senior Electrical Core Engineer

Compatible Electronics Inc.

Andrew Tiffany Test Engineer

James Ross Test Engineer

Kyle Fujimoto Test Engineer

2.4 Date Test Sample was Received

The test sample was received prior to the initial test date of January 29, 2014.

2.5 Disposition of the Test Sample

The test sample has not been returned to Universal Electronics, Inc. as of the date of the test report.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

FCC	Federal Communications Commission
RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
ITE	Information Technology Equipment
LISN	Line Impedance Stabilization Network
NVLAP	National Voluntary Laboratory Accreditation Program
CFR	Code of Federal Regulations
N/A	Not Applicable
Ltd.	Limited
Inc.	Incorporated
NCR	No Calibration Required
URC	Universal Remote Control

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this Emissions Test Report.

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4: 2009	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration – Emissions

The WebTuner RF/IR Media Player Remote 2012, Model: URC-5150BC0-XXX-R (EUT) was tested as a stand alone unit. The EUT had a special test program that allowed the low, middle, or high channels, to be tested while continuously transmitting.

It was determined that the emissions were at their highest level when the EUT was operating in the above configuration. The final emissions data was taken in this mode of operation and any cables were maximized. All initial investigations were performed with the measurement receiver in manual mode scanning the frequency range continuously. Photographs of the test setup are in Appendix D of this report.

4.1.1 Cable Construction and Termination

There were no external cables connected to the EUT.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
WEBTUNER RF/IR MEDIA PLAYER REMOTE 2012 (EUT)	UNIVERSAL ELECTRONICS, INC.	URC-5150BC0-XXX-R	N/A	MG3-5150

5.2 Emissions Test Equipment

EQUIPMENT TYPE	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CAL. CYCLE
GENERAL TEST EQUIPMENT USED IN LAB B					
Computer	Compaq	CQ5210F	CNX9360CF9	N/A	N/A
Monitor	Hewlett Packard	HPs2031a	3CQ046N3MD	N/A	N/A
EMI Receiver	Rohde & Schwarz	ESIB40	100194	November 19, 2012	2 Year
GENERAL TEST EQUIPMENT USED IN LAB A					
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	2637A03618	May 30, 2013	1 Year
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	2648A13404	May 30, 2013	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01363	May 30, 2013	1 Year
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
CombiLog Antenna	Com-Power	AC-220	61060	May 29, 2013	1 Year
Preamplifier	Com-Power	PA-103	1582	December 30, 2013	1 Year
Preamplifier	Com-Power	PA-118	181656	January 13, 2014	1 Year
Preamplifier	Com-Power	PA-840	711013	May 17, 2012	2 Year
Loop Antenna	Com-Power	AL-130	17089	January 29, 2013	2 Year
Horn Antenna	Com-Power	AH-118	071175	February 29, 2012	2 Year
Horn Antenna	Com-Power	AH-826	0071957	N/A	N/A
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A

6. TEST SITE DESCRIPTION**6.1 Test Facility Description**

Please refer to section 2.1 and 7.1.2 of this report for Emissions test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was not grounded.

6.3 Facility Environmental Characteristics

When applicable refer to the data sheets in Appendix E for the relative humidity, air temperature, and barometric pressure.

7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The measurement receiver was used as a measuring meter. The data was collected with the measurement receiver in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A transient limiter was used for the protection of the measurement receiver's input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the measurement receiver. The output of the second LISN was terminated by a 50-ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics conducted emissions software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.

Test Results:

This test was not performed because the EUT operates on battery power and does not connect to the AC mains.

7.1.2 Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer, along with the quasi-peak adapter, and EMI Receiver were used as a measuring meter. Amplifiers were used to increase the sensitivity of the instrument. The Com-Power Preamplifier Model: PA-103 was used for frequencies from 30 MHz to 1 GHz, the Com-Power Microwave Preamplifier Model: PA-118 was used for frequencies from 1 GHz to 18 GHz, and the Com-Power Microwave Preamplifier Model: PA-840 were used for frequencies above 18 GHz. The spectrum analyzer and EMI Receiver were used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer and EMI receiver records the highest measured reading over the sweeps.

The quasi-peak function was used only for those readings which are marked accordingly on the data sheets.

The frequencies above 1 GHz were adjusted by a "duty cycle correction factor", derived from $20 \log(\text{dwell time} / 100 \text{ ms})$.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
10 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 1000 MHz	120 kHz	CombiLog Antenna
1 GHz to 25 GHz	1 MHz	Horn Antennas

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT by the Radiated Emission Manual Test software. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gun sight method was used when measuring with the horn antenna in order to ensure accurate results. The loop antenna was also rotated in the vertical axis in order to ensure accurate results.

Radiated Emissions (Spurious and Harmonics) Test (continued)

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3-meter test distance from 30 MHz to 25 GHz and at a 10-meter distance from 10 kHz to 30 MHz to obtain the final test data.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Sections 15.209 and 15.249.



7.1.3 RF Emissions Test Results

Table 1.0 RADIATED EMISSION RESULTS
 WebTuner RF/IR Media Player Remote 2012, Model: URC-5150BC0-XXX-R

Frequency MHz	Corrected Reading* dBuV	Specification Limit dBuV	Delta (Cor. Reading – Spec. Limit) dB
7275 (V) (Z-Axis)	46.27 (A)	54.00	-7.73
7275 (H) (Y-Axis)	44.67 (A)	54.00	-9.33
7350 (H) (Y-Axis)	43.84 (A)	54.00	-10.16
7425 (H) (Y-Axis)	43.63 (A)	54.00	-10.37
7425 (V) (Z-Axis)	43.49 (A)	54.00	-10.51
7350 (V) (Z-Axis)	43.26 (A)	54.00	-10.74

Notes:

- * The complete emissions data is given in Appendix E of this report.
- (H) Horizontal
- (V) Vertical
- (A) Average

8. CONCLUSIONS

The WebTuner RF/IR Media Player Remote 2012, Model: URC-5150BC0-XXX-R (EUT), as tested, meets all of the Class B specification limits defined in CFR Title 47, Part 15, Subpart B for the digital portion; and the limits defined in Subpart C, sections 15.205, 15.209, and 15.249 for the transmitter portion.





APPENDIX A

LABORATORY ACCREDITATIONS AND RECOGNITIONS

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

LABORATORY ACCREDITATIONS AND RECOGNITIONS

NVLAP LAB CODES 200063-0,
200528-0, 200527-0

For US, Canada, Australia/New Zealand, Japan, Taiwan, Korea, and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025. Please follow the link to the NIST/NVLAP site for each of our facilities' NVLAP certificate and scope of accreditation

NVLAP listing links

[Agoura Division](#) / [Brea Division](#) / [Silverado/Lake Forest Division](#)

.Quote from ISO-ILAC-IAF Communiqué on 17025:

"A laboratory's fulfillment of the requirements of ISO/IEC 17025:2005 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 Quality Management Systems — Requirements."



ANSI listing [CETCB](#)



Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for EMC under the US/EU Mutual Recognition Agreement (MRA).

US/EU MRA list [NIST MRA site](#)



Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for Taiwan/BSMI under the US/APEC (Asia-Pacific Economic Cooperation) Mutual Recognition Agreement (MRA).

APEC MRA list [NIST MRA site](#)

We are also listed for IT products by the following country/agency:



VCCI Support member: Please visit http://www.vcci.jp/vcci_e/



FCC Listing, from FCC OET site

[FCC test lab search](#) <https://fjallfoss.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm>



Compatible Electronics IC listing can be found at:

<http://www.ic.gc.ca/eic/site/ic1.nsf/eng/home>



APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.249 and/or FCC **Class B** specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT during the testing.



APPENDIX C

ADDITIONAL MODELS

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

WebTuner RF/IR Media Player Remote 2012
Model: URC-5150BC0-XXX-R
S/N: N/A

No additional models covered under this report.



APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS



FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

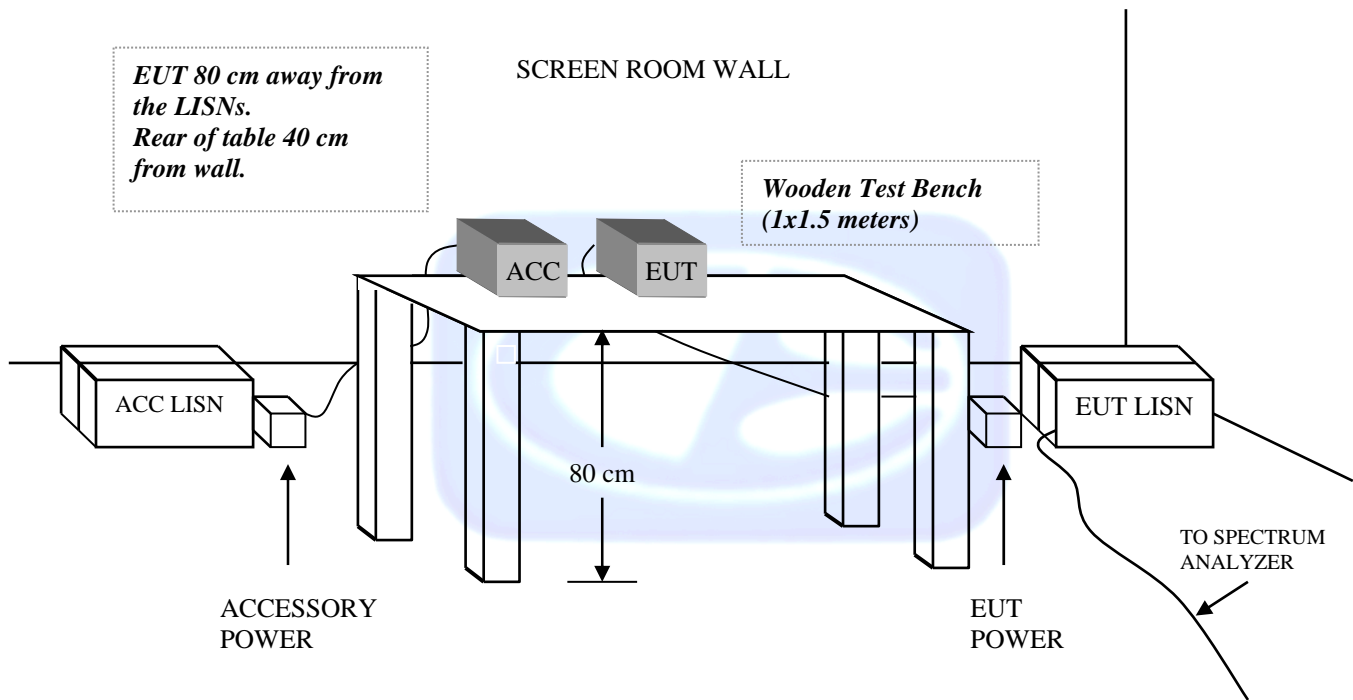
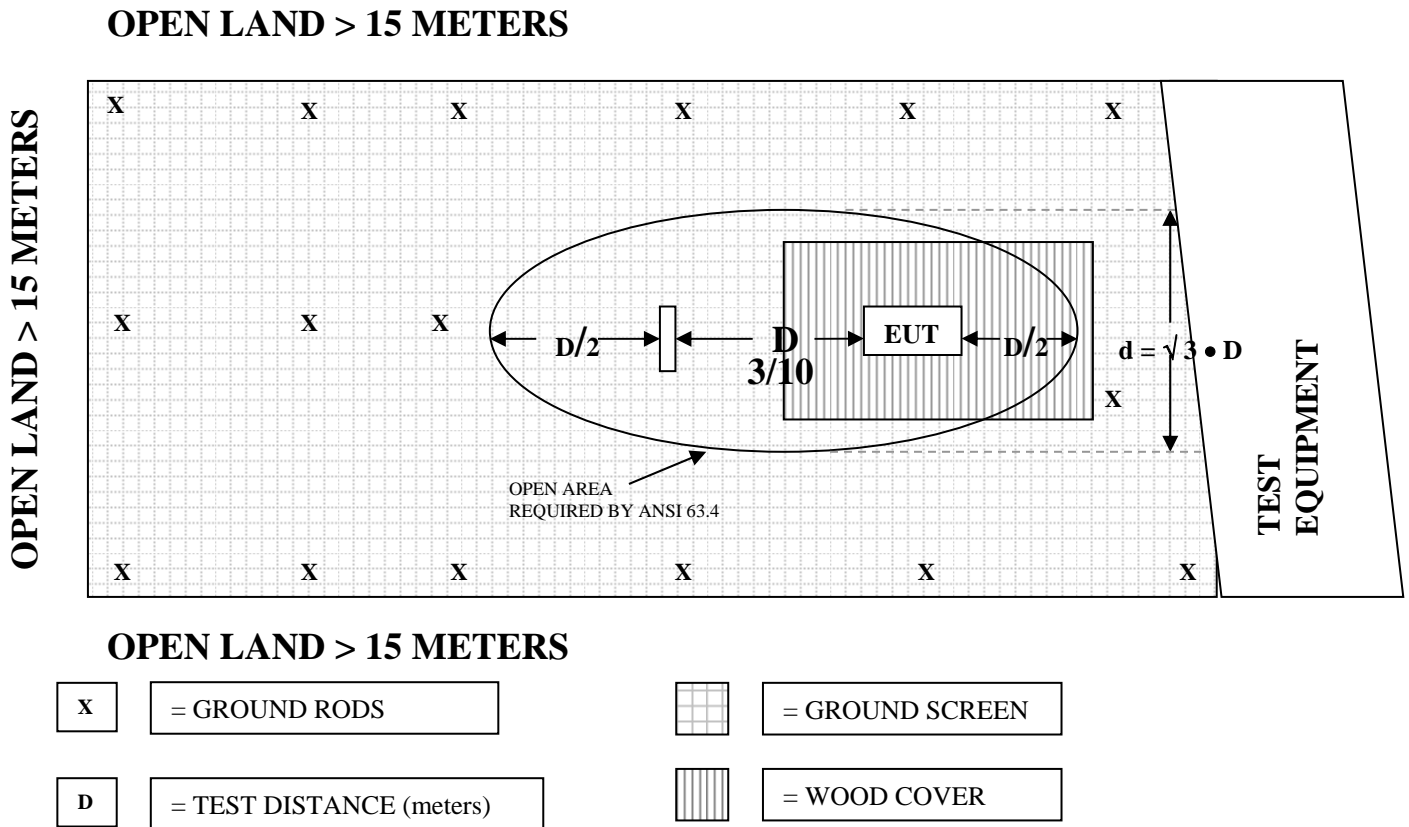


FIGURE 2: PLOT MAP AND LAYOUT OF THE RADIATED TEST SITE



COM-POWER AL-130**LOOP ANTENNA**

S/N: 17089

CALIBRATION DATE: JANUARY 29, 2013

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-42.5	9
0.01	-42.3	9.2
0.02	-42.1	9.4
0.03	-41.4	10.1
0.04	-41.8	9.7
0.05	-42.4	9.1
0.06	-42.3	9.2
0.07	-42.5	9
0.08	-42.4	9.1
0.09	-42.5	9
0.1	-42.5	9
0.2	-42.7	8.8
0.3	-42.6	8.9
0.4	-42.5	9
0.5	-42.7	8.8
0.6	-42.7	8.8
0.7	-42.5	9
0.8	-42.3	9.2
0.9	-42.2	9.3
1	-42.2	9.3
2	-41.8	9.7
3	-41.7	9.8
4	-41.7	9.8
5	-41.5	10
6	-41.6	9.9
7	-41.4	10.1
8	-41	10.5
9	-40.8	10.7
10	-41.3	10.2
15	-41.4	10.1
20	-41.2	10.3
25	-42.6	8.9
30	-41.7	9.8

COM-POWER AC-220

COMBILOG ANTENNA

S/N: 61060

CALIBRATION DATE: MAY 29, 2013

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	19.40	200	9.10
35	19.10	250	11.40
40	19.70	300	11.90
45	18.00	350	14.20
50	16.80	400	15.20
60	12.50	450	16.50
70	7.30	500	17.10
80	4.40	550	16.20
90	8.00	600	17.70
100	8.80	650	19.10
120	10.50	700	20.00
125	10.60	750	21.50
140	8.60	800	21.50
150	11.20	850	21.70
160	8.90	900	22.70
175	9.60	950	22.10
180	8.50	1000	22.90

COM POWER AH-118**HORN ANTENNA**

S/N: 071175

CALIBRATION DATE: FEBRUARY 29, 2012

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	23.6	10.0	37.7
1.5	22.0	10.5	38.4
2.0	28.7	11.0	38.0
2.5	29.3	11.5	38.2
3.0	30.6	12.0	39.0
3.5	30.4	12.5	42.4
4.0	31.1	13.0	40.8
4.5	33.4	13.5	40.0
5.0	35.3	14.0	39.7
5.5	35.1	14.5	43.5
6.0	36.9	15.0	42.7
6.5	37.4	15.5	39.7
7.0	37.6	16.0	39.2
7.5	36.2	16.5	39.7
8.0	38.4	17.0	42.2
8.5	39.3	17.5	47.6
9.0	37.4	18.0	51.2
9.5	38.0		

COM-POWER AH826**HORN ANTENNA**

S/N: 71957

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	33.5	22.5	35.5
18.5	33.5	23.0	35.9
19.0	34.0	23.5	35.7
19.5	34.0	24.0	35.6
20.0	34.3	24.5	36.0
20.5	34.9	25.0	36.2
21.0	34.7	25.5	36.1
21.5	35.0	26.0	36.2
22.0	35.0	26.5	35.7

COM-POWER PA-103**PREAMPLIFIER**

S/N: 1582

CALIBRATION DATE: DECEMBER 30, 2013

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	32.60	300	32.40
40	32.70	350	32.00
50	32.50	400	32.20
60	32.50	450	32.00
70	32.50	500	32.00
80	32.40	550	31.90
90	32.50	600	31.80
100	32.40	650	31.80
125	32.40	700	31.70
150	32.30	750	31.60
175	32.30	800	31.70
200	32.30	850	31.50
225	31.60	900	31.00
250	32.40	950	31.30
275	32.30	1000	31.40

COM-POWER PA-118**PREAMPLIFIER**

S/N: 181656

CALIBRATION DATE: JANUARY 13, 2014

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	24.90	6.0	25.40
1.1	25.30	6.5	25.20
1.2	26.00	7.0	24.40
1.3	26.20	7.5	24.00
1.4	26.30	8.0	23.90
1.5	26.40	8.5	24.50
1.6	26.50	9.0	25.20
1.7	26.60	9.5	24.80
1.8	26.50	10.0	24.90
1.9	26.60	11.0	25.40
2.0	26.70	12.0	24.50
2.5	26.90	13.0	24.30
3.0	27.00	14.0	25.20
3.5	27.10	15.0	25.90
4.0	26.60	16.0	25.60
4.5	26.10	17.0	23.70
5.0	26.40	18.0	25.80
5.5	25.80		

COM-POWER PA-840**MICROWAVE PREAMPLIFIER**

S/N: 711013

CALIBRATION DATE: MAY 17, 2012

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	25.81	31.0	25.77
19.0	24.57	31.5	25.36
20.0	23.46	32.0	25.15
21.0	22.51	32.5	25.13
22.0	23.85	33.0	25.52
23.0	23.31	33.5	25.24
24.0	24.44	34.0	25.08
25.0	25.42	34.5	25.27
26.0	25.71	35.0	23.99
26.5	25.66	35.5	24.67
27.0	25.84	36.5	24.80
27.5	25.29	37.0	26.27
28.0	25.46	37.5	24.86
28.5	25.58	38.0	24.64
29.0	26.16	38.5	23.46
29.5	26.14	39.0	21.29
30.0	26.01	39.5	20.83
30.5	25.67	40.0	19.96



FRONT VIEW

UNIVERSAL ELECTRONICS, INC.
WEBTUNER RF/IR MEDIA PLAYER REMOTE 2012
MODEL: URC-5150BC0-XXX-R
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

UNIVERSAL ELECTRONICS, INC.
WEBTUNER RF/IR MEDIA PLAYER REMOTE 2012
MODEL: URC-5150BC0-XXX-R
FCC SUBPART B AND C – RADIATED EMISSIONS – ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



FRONT VIEW

UNIVERSAL ELECTRONICS, INC.
WEBTUNER RF/IR MEDIA PLAYER REMOTE 2012
MODEL: URC-5150BC0-XXX-R
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



REAR VIEW

UNIVERSAL ELECTRONICS, INC.
WEBTUNER RF/IR MEDIA PLAYER REMOTE 2012
MODEL: URC-5150BC0-XXX-R
FCC SUBPART B AND C – RADIATED EMISSIONS – BELOW 1 GHz

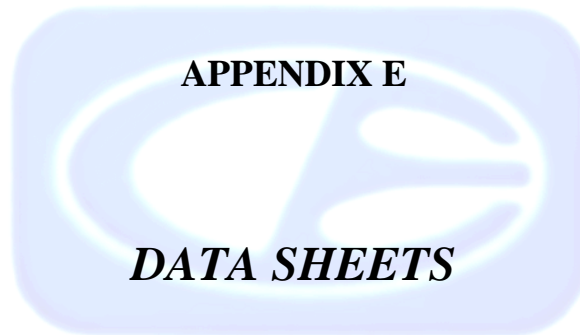
**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



RADIATED EMISSIONS

DATA SHEETS

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Low Channel
 X-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2425	93.09	V	114	-20.91	Peak	1.25	155	
2425	73.09	V	94	-20.91	Avg	1.25	155	
4850	53.52	V	74	-20.48	Peak	1.25	165	
4850	33.52	V	54	-20.48	Avg	1.25	165	
7275	58.93	V	74	-15.07	Peak	2.5	135	
7275	38.93	V	54	-15.07	Avg	2.5	135	
9700	55.41	V	74	-18.59	Peak	2.5	135	
9700	35.41	V	54	-18.59	Avg	2.5	135	
12125								No Emission Detected
14550								No Emission Detected
16975								No Emission Detected
19400								No Emission Detected
21825								No Emission Detected
24250								No Emission Detected

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

Low Channel
X-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2425	100.63	H	114	-13.37	Peak	1.25	155	
2425	80.63	H	94	-13.37	Avg	1.25	155	
4850	57.23	H	74	-16.77	Peak	1.25	165	
4850	37.23	H	54	-16.77	Avg	1.25	165	
7275	58.21	H	74	-15.79	Peak	1.25	155	
7275	38.21	H	54	-15.79	Avg	1.25	155	
9700	55.87	H	74	-18.13	Peak	1.25	155	No Emission
9700	35.87	H	54	-18.13	Avg	1.25	155	Detected
12125								No Emission
12125								Detected
14550								No Emission
14550								Detected
16975								No Emission
16975								Detected
19400								No Emission
19400								Detected
21825								No Emission
21825								Detected
24250								No Emission
24250								Detected

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Low Channel
 Y-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2425	96.44	V	114	-17.56	Peak	1.25	155	
2425	76.44	V	94	-17.56	Avg	1.25	155	
4850	55.82	V	74	-18.18	Peak	1.25	155	
4850	35.82	V	54	-18.18	Avg	1.25	155	
7275	60.32	V	74	-13.68	Peak	1.25	135	
7275	40.32	V	54	-13.68	Avg	1.25	135	
9700	60.88	V	74	-13.12	Peak	1.25	135	
9700	40.88	V	54	-13.12	Avg	1.25	135	
12125								No Emission Detected
14550								No Emission Detected
16975								No Emission Detected
19400								No Emission Detected
21825								No Emission Detected
24250								No Emission Detected

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Low Channel
 Y-Axis - Horizontal**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2425	91.12	H	114	-22.88	Peak	1.25	0	
2425	71.12	H	94	-22.88	Avg	1.25	0	
4850	56.48	H	74	-17.52	Peak	1.35	165	
4850	36.48	H	54	-17.52	Avg	1.35	165	
7275	64.67	H	74	-9.33	Peak	1.25	135	
7275	44.67	H	54	-9.33	Avg	1.25	135	
9700	56.45	H	74	-17.55	Peak	1.25	145	
9700	36.45	H	54	-17.55	Avg	1.25	145	
12125								No Emission Detected
14550								No Emission Detected
16975								No Emission Detected
19400								No Emission Detected
21825								No Emission Detected
24250								No Emission Detected

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Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Low Channel
 Z-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2425	100.68	V	114	-13.32	Peak	1	315	
2425	80.68	V	94	-13.32	Avg	1	315	
4850	55.09	V	74	-18.91	Peak	1.25	135	
4850	35.09	V	54	-18.91	Avg	1.25	135	
7275	66.27	V	74	-7.73	Peak	1.25	165	
7275	46.27	V	54	-7.73	Avg	1.25	165	
9700	58.26	V	74	-15.74	Peak	1.25	165	
9700	38.26	V	54	-15.74	Avg	1.25	165	
12125								No Emission Detected
12125								
14550								No Emission Detected
14550								
16975								No Emission Detected
16975								
19400								No Emission Detected
19400								
21825								No Emission Detected
21825								
24250								No Emission Detected
24250								

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Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
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**Low Channel
 Z-Axis - Horizontal**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2425	98.13	H	114	-15.87	Peak	1.25	155	
2425	78.13	H	94	-15.87	Avg	1.25	155	
4850	58.13	H	74	-15.87	Peak	1.25	155	
4850	38.13	H	54	-15.87	Avg	1.25	155	
7275	61.37	H	74	-12.63	Peak	1.25	155	
7275	41.37	H	54	-12.63	Avg	1.25	155	
9700	57.76	H	74	-16.24	Peak	1.25	155	
9700	37.76	H	54	-16.24	Avg	1.25	155	
12125								No Emission Detected
14550								No Emission Detected
16975								No Emission Detected
19400								No Emission Detected
21825								No Emission Detected
24250								No Emission Detected

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Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Middle Channel
 X-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2450	94.91	V	114	-19.09	Peak	1.25	315	
2450	74.91	V	94	-19.09	Avg	1.25	315	
4900	53.23	V	74	-20.77	Peak	1.35	165	
4900	33.23	V	54	-20.77	Avg	1.35	165	
7350	58.72	V	74	-15.28	Peak	1.25	175	
7350	38.72	V	54	-15.28	Avg	1.25	175	
9800	56.13	V	74	-17.87	Peak	1.25	175	
9800	36.13	V	54	-17.87	Avg	1.25	175	
12250								No Emission Detected
14700								No Emission Detected
17150								No Emission Detected
19600								No Emission Detected
22050								No Emission Detected
24500								No Emission Detected

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Middle Channel
 X-Axis - Horizontal**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2450	100.97	H	114	-13.03	Peak	1.25	135	
2450	80.97	H	94	-13.03	Avg	1.25	135	
4900	55.38	H	74	-18.62	Peak	1.35	145	
4900	35.38	H	54	-18.62	Avg	1.35	145	
7350	60.92	H	74	-13.08	Peak	1.25	165	
7350	40.92	H	54	-13.08	Avg	1.25	165	
9800	54.68	H	74	-19.32	Peak	1.35	175	
9800	34.68	H	54	-19.32	Avg	1.35	175	
12250								No Emission Detected
14700								No Emission Detected
17150								No Emission Detected
19600								No Emission Detected
22050								No Emission Detected
24500								No Emission Detected

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Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Middle Channel
 Y-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2450	95.68	V	114	-18.32	Peak	1.25	135	
2450	75.68	V	94	-18.32	Avg	1.25	135	
4900	53.06	V	74	-20.94	Peak	1.25	165	
4900	33.06	V	54	-20.94	Avg	1.25	165	
7350	59.62	V	74	-14.38	Peak	1.25	155	
7350	39.62	V	54	-14.38	Avg	1.25	155	
9800	59.58	V	74	-14.42	Peak	1.25	155	
9800	39.58	V	54	-14.42	Avg	1.25	155	
12250								No Emission Detected
14700								No Emission Detected
17150								No Emission Detected
19600								No Emission Detected
22050								No Emission Detected
24500								No Emission Detected

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Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Middle Channel
 Y-Axis - Horizontal**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2450	93.48	H	114	-20.52	Peak	1.25	155	
2450	73.48	H	94	-20.52	Avg	1.25	155	
4900	52.96	H	74	-21.04	Peak	1.35	145	
4900	32.96	H	54	-21.04	Avg	1.35	145	
7350	63.84	H	74	-10.16	Peak	1.25	155	
7350	43.84	H	54	-10.16	Avg	1.25	155	
9800	54.93	H	74	-19.07	Peak	1.25	155	
9800	34.93	H	54	-19.07	Avg	1.25	155	
12250								No Emission Detected
14700								No Emission Detected
17150								No Emission Detected
19600								No Emission Detected
22050								No Emission Detected
24500								No Emission Detected

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Middle Channel
 Z-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2450	98.11	V	114	-15.89	Peak	1.25	225	
2450	78.11	V	94	-15.89	Avg	1.25	225	
4900	54.36	V	74	-19.64	Peak	1.25	265	
4900	34.36	V	54	-19.64	Avg	1.25	265	
7350	63.26	V	74	-10.74	Peak	1.35	225	
7350	43.26	V	54	-10.74	Avg	1.35	225	
9800	60.14	V	74	-13.86	Peak	1.35	225	
9800	40.14	V	54	-13.86	Avg	1.35	225	
12250								No Emission Detected
12250								
14700								No Emission Detected
14700								
17150								No Emission Detected
17150								
19600								No Emission Detected
19600								
22050								No Emission Detected
22050								
24500								No Emission Detected
24500								

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**Middle Channel
 Z-Axis - Horizontal**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2450	100.5	H	114	-13.5	Peak	1.25	155	
2450	80.5	H	94	-13.5	Avg	1.25	155	
4900	55.82	H	74	-18.18	Peak	1.25	165	
4900	35.82	H	54	-18.18	Avg	1.25	165	
7350	55.87	H	74	-18.13	Peak	1.55	135	
7350	35.87	H	54	-18.13	Avg	1.55	135	
9800	55.32	H	74	-18.68	Peak	1.55	135	
9800	35.32	H	54	-18.68	Avg	1.55	135	
12250								No Emission Detected
14700								No Emission Detected
17150								No Emission Detected
19600								No Emission Detected
22050								No Emission Detected
24500								No Emission Detected

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**High Channel
 X-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2475	92.79	V	114	-21.21	Peak	1.25	165	
2475	72.79	V	94	-21.21	Avg	1.25	165	
4950	52.56	V	74	-21.44	Peak	1.35	175	
4950	32.56	V	54	-21.44	Avg	1.35	175	
7425	60.38	V	74	-13.62	Peak	1.25	225	
7425	40.38	V	54	-13.62	Avg	1.25	225	
9900	54.76	V	74	-19.24	Peak	1.25	225	
9900	34.76	V	54	-19.24	Avg	1.25	225	
12375								No Emission Detected
12375								
14850								No Emission Detected
14850								
17325								No Emission Detected
17325								
19800								No Emission Detected
19800								
22275								No Emission Detected
22275								
24750								No Emission Detected
24750								

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**High Channel
 X-Axis - Horizontal**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2475	98.72	H	114	-15.28	Peak	1.25	165	
2475	78.72	H	94	-15.28	Avg	1.25	165	
4950	55.33	H	74	-18.67	Peak	1.25	155	
4950	35.33	H	54	-18.67	Avg	1.25	155	
7425	58.61	H	74	-15.39	Peak	1.35	145	
7425	38.61	H	54	-15.39	Avg	1.35	145	
9900	52.33	H	74	-21.67	Peak	1.45	165	
9900	32.33	H	54	-21.67	Avg	1.45	165	
12375								No Emission
12375								Detected
14850								No Emission
14850								Detected
17325								No Emission
17325								Detected
19800								No Emission
19800								Detected
22275								No Emission
22275								Detected
24750								No Emission
24750								Detected

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**High Channel
 Y-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2475	97.84	V	114	-16.16	Peak	1.25	155	
2475	77.84	V	94	-16.16	Avg	1.25	155	
4950	52.16	V	74	-21.84	Peak	1.25	165	
4950	32.16	V	54	-21.84	Avg	1.25	165	
7425	55.62	V	74	-18.38	Peak	1.35	175	
7425	35.62	V	54	-18.38	Avg	1.35	175	
9900	54.41	V	74	-19.59	Peak	1.35	175	
9900	34.41	V	54	-19.59	Avg	1.35	175	
12375								No Emission Detected
14850								No Emission Detected
17325								No Emission Detected
19800								No Emission Detected
22275								No Emission Detected
24750								No Emission Detected

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
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High Channel
Y-Axis - Horizontal

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2475	92.57	H	114	-21.43	Peak	1.25	155	
2475	72.57	H	94	-21.43	Avg	1.25	155	
4950	54.86	H	74	-19.14	Peak	1.35	165	
4950	34.86	H	54	-19.14	Avg	1.35	165	
7425	63.63	H	74	-10.37	Peak	1.25	175	
7425	43.63	H	54	-10.37	Avg	1.25	175	
9900	53.48	H	74	-20.52	Peak	1.25	175	
9900	33.48	H	54	-20.52	Avg	1.25	175	
12375								No Emission Detected
12375								
14850								No Emission Detected
14850								
17325								No Emission Detected
17325								
19800								No Emission Detected
19800								
22275								No Emission Detected
22275								
24750								No Emission Detected
24750								

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**High Channel
 Z-Axis - Vertical**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2475	100.35	V	114	-13.65	Peak	1.25	155	
2475	80.35	V	94	-13.65	Avg	1.25	155	
4950	56.13	V	74	-17.87	Peak	1.25	155	
4950	36.13	V	54	-17.87	Avg	1.25	155	
7425	63.49	V	74	-10.51	Peak	1.35	225	
7425	43.49	V	54	-10.51	Avg	1.35	225	
9900	59.73	V	74	-14.27	Peak	1.25	135	
9900	39.73	V	54	-14.27	Avg	1.25	135	
12375								No Emission Detected
12375								
14850								No Emission Detected
14850								
17325								No Emission Detected
17325								
19800								No Emission Detected
19800								
22275								No Emission Detected
22275								
24750								No Emission Detected
24750								

FCC 15.249

Universal Electronics, Inc.
 WebTuner RF/IR Media Player Remote 2012
 Model: URC-5150BC0-XXX-R

Date: 01/29/2014
 Lab: B
 Tested By: Kyle Fujimoto

**High Channel
 Z-Axis - Horizontal**

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
2475	97.52	H	114	-16.48	Peak	1.25	155	
2475	77.52	H	94	-16.48	Avg	1.25	155	
4950	56.11	H	74	-17.89	Peak	1.35	165	
4950	36.11	H	54	-17.89	Avg	1.35	165	
7425	57.03	H	74	-16.97	Peak	1.25	225	
7425	37.03	H	54	-16.97	Avg	1.25	225	
9900	58.39	H	74	-15.61	Peak	1.25	225	
9900	38.39	H	54	-15.61	Avg	1.25	225	
12375								No Emission Detected
12375								
14850								No Emission Detected
14850								
17325								No Emission Detected
17325								
19800								No Emission Detected
19800								
22275								No Emission Detected
22275								
24750								No Emission Detected
24750								

