FCC PART 15, SUBPART B and C
TEST REPORT

for

SIRIUS LCD REMOTE

MODEL: URC-10000

Prepared for
UNIVERSAL ELECTRONICS, INC.
6101 GATEWAY DRIVE
CYPRESS, CALIFORNIA 90630-4841

Prepared by: Kyle Fujimoto

KYLE FUJIMOTO

Approved by: James Ross

JAMES ROSS

COMPATIBLE ELECTRONICS INC.
114 OLINDA DRIVE
BREA, CALIFORNIA 92823
(714) 579-0500

DATE: AUGUST 22, 2006

	REPORT BODY	APPENDICES					TOTAL
		A	***B***	***C***	***D***	***E***	
PAGES	15	2	2	2	12	9	**42**

TABLE OF CONTENTS

LIST OF APPENDICES

APPENDIX	TITLE
A	Laboratory Recognitions
B	Modifications to the EUT
C	Additional Models Covered Under This Report
D	Diagrams, Charts, and Photos • Test Setup Diagrams • Radiated Emissions Photos • Antenna and Effective Gain Factors
E	Data Sheets

LIST OF FIGURES

FIGURE	TITLE
1	Plot Map And Layout of 3 Meter Radiated Site

GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., 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 endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested:	Sirius LCD Remote Model: URC-10000 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. 6101 Gateway Drive Cypress, California 90630-4841
Test Date:	August 14, 2006
Test Specifications:	EMI 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 – 30 MHz	This test was not performed because the EUT cannot be plugged into the AC public mains.
2	Radiated RF Emissions, 10 kHz – 9300 MHz (Transmitter Portion)	Complies with the limits of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209, and 15.249.
3	Radiated RF Emissions, 10 kHz – 9300 MHz (Digital Portion)	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B.

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Sirius LCD Remote Model: URC-10000. The EMI 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 EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

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 Electrical Staff Engineer

Compatible Electronics, Inc.

Kyle Fujimoto Test Engineer
James Ross Test Engineer

2.4 Date Test Sample was Received

The test sample was received on August 14, 2006.

2.5 Disposition of the Test Sample

The sample has not yet been returned to Universal Electronics, Inc. as of August 22, 2006.

2.6 Abbreviations and Acronyms

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

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network

3. APPLICABLE DOCUMENTS

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

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4 2003	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 - EMI

Setup and operation of the equipment under test.

Specifics of the EUT and Peripherals Tested

The Sirius LCD Remote Model: URC-10000 (EUT) was tested as a stand alone unit and continuously transmitting. The EUT's antenna is a PCB style antenna and is on the PCB itself. The EUT was tested in three orthogonal axis.

After the EUT is activated by pressing the button, the transmission will cease operation once the button is released.

The final radiated data was taken in the mode above. Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

There were no cables connected to the EUT.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIALNUMBER	FCC ID
SIRIUS LCD REMOTE (EUT)	UNIVERSAL ELECTRONICS, INC.	URC-10000	N/A	MG310000

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUE DATE
GENERAL TEST EQUIPMENT USED FOR ALL RF EMISSIONS TESTS					
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
EMI Receiver	Rohde & Schwarz	ESIB40	100172	October 28, 2004	October 28, 2006
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
Preamplifier	Com Power	PA-102	1017	January 19, 2006	Jan. 19, 2006
Biconical Antenna	Com Power	AB-900	15227	March 9, 2006	March 9, 2006
Log Periodic Antenna	Com Power	AL-100	16060	July 17, 2006	July 17, 2006
Loop Antenna	Com Power	AL-130	17089	September 21, 2005	Sept. 21, 2006
Horn Antenna	Antenna Research	DRG-118/A	1053	March 6, 2006	March 6, 2007
Microwave Preamplifier	Com Power	PA-122	181917	January 20, 2006	Jan. 20, 2007
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 of this report for EMI 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.

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 Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com Power Preamplifier Model: PA-102 was used for frequencies from 30 MHz to 1 GHz, and the Com-Power Microwave Preamplifier Model: PA-122 was used for frequencies above 1 GHz. The spectrum analyzer was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps.

The frequencies above 1 GHz were averaged manually by narrowing the video filter down to 10 Hz and putting the sweep time on AUTO on the spectrum analyzer to keep the amplitude reading calibrated.

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

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna
1 GHz to 9.2 GHz	1 MHz	Horn Antenna

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. 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 gunsight method was used when measuring with the horn antenna in order to ensure accurate results. The loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.

7.1.2 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 to obtain the final test data. The final qualification data sheets are located in Appendix E.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.249.

8. CONCLUSIONS

The Sirius LCD Remote Model: URC-10000 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 RECOGNITIONS

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200528-0

Voluntary Control Council for Interference - Registration Numbers: R-983, C-1026, R-984 and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Conformity Assessment Body for the EMC Directive Under the US/EU MRA Appointed by NIST

Compatible Electronics is recognized or on file with the following agencies:

Federal Communications Commission

Industry Canada

Radio-Frequency Technologies (Competent Body)

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.249 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.

APPENDIX C

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

Sirius LCD Remote
Model: URC-10000
S/N: N/A

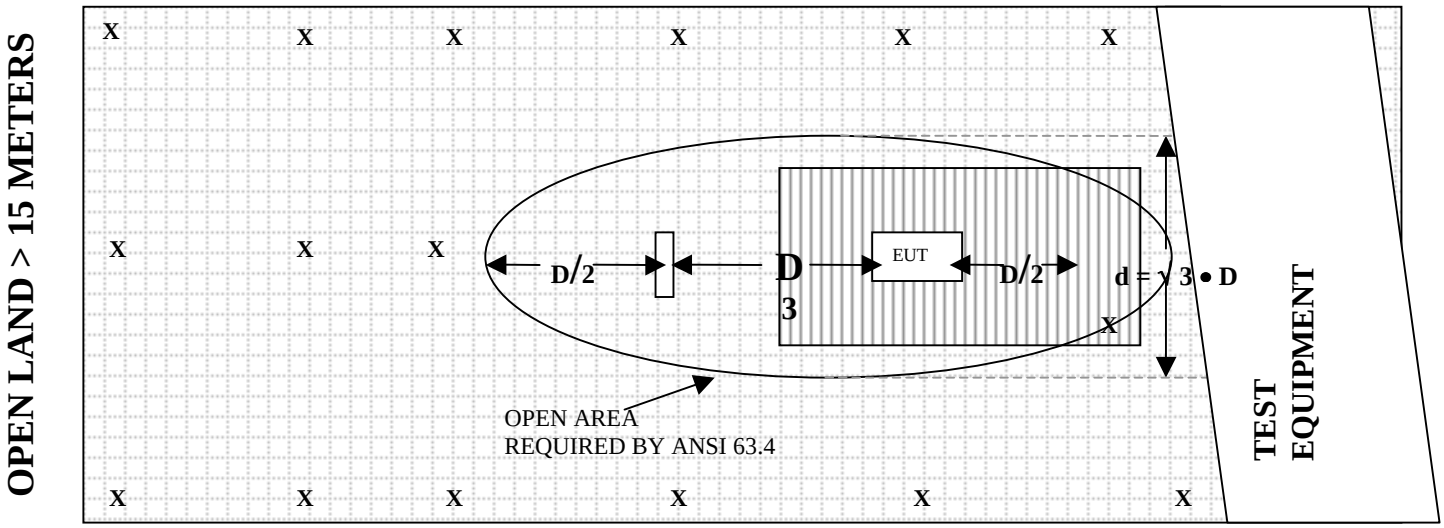
There were no additional models covered under this report.

APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: PLOT MAP AND LAYOUT OF 3 METER RADIATED SITE

OPEN LAND > 15 METERS



OPEN LAND > 15 METERS

X = GROUND RODS	= GROUND SCREEN
D = TEST DISTANCE (meters)	= WOOD COVER

COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15227

CALIBRATION DATE: MARCH 9, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	11.12	120	13.50
35	10.17	125	12.63
40	9.75	140	12.20
45	12.22	150	11.85
50	13.28	160	13.25
60	11.36	175	15.74
70	7.95	180	16.23
80	5.95	200	16.79
90	7.62	250	16.47
100	10.89	300	17.49

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16060

CALIBRATION DATE: JULY 17, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	13.58	700	20.49
400	14.53	800	20.13
500	15.36	900	22.15
600	18.29	1000	22.76

COM-POWER PA-102

PREAMPLIFIER

S/N: 1017

CALIBRATION DATE: JANUARY 19, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	38.3	300	38.4
40	38.4	350	38.4
50	38.3	400	38.0
60	38.4	450	38.1
70	38.5	500	37.5
80	38.4	550	38.0
90	38.4	600	38.0
100	38.4	650	37.7
125	38.1	700	37.7
150	38.5	750	37.7
175	38.4	800	37.0
200	38.3	850	37.2
225	38.3	900	36.6
250	38.1	950	36.3
275	38.3	1000	36.3

COM-POWER PA-122

PREAMPLIFIER

S/N: 181917

CALIBRATION DATE: JANUARY 20, 2006

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	34.697	10.0	36.558
1.5	33.817	10.5	35.048
2.0	33.587	11.0	33.258
2.5	33.804	11.5	32.960
3.0	33.850	12.0	33.312
3.5	33.943	12.5	33.836
4.0	34.399	13.0	34.178
4.5	34.847	13.5	34.197
5.0	35.172	14.0	33.769
5.5	35.383	14.5	33.392
6.0	35.539	15.0	33.387
6.5	34.802	15.5	34.038
7.0	33.793	16.0	34.884
7.5	33.511	16.5	35.740
8.0	33.910	17.0	35.341
8.5	34.907	17.5	34.729
9.0	36.036	18.0	33.760
9.5	36.661		

ANTENNA RESEARCH DRG-118/A

HORN ANTENNA

S/N: 1053

CALIBRATION DATE: MARCH 6, 2006

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	24.46	10.0	39.55
1.5	25.05	10.5	39.86
2.0	28.42	11.0	38.49
2.5	29.91	11.5	40.71
3.0	31.46	12.0	40.59
3.5	31.91	12.5	40.17
4.0	31.55	13.0	39.70
4.5	31.94	13.5	40.84
5.0	32.90	14.0	41.58
5.5	34.07	14.5	45.14
6.0	35.69	15.0	42.20
6.5	33.11	15.5	39.42
7.0	36.51	16.0	38.80
7.5	37.27	16.5	41.08
8.0	37.21	17.0	44.11
8.5	37.16	17.5	46.29
9.0	38.27	18.0	41.61
9.5	39.73		

COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: SEPTEMBER 21, 2005

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-42.84	8.66
0.01	-41.93	9.57
0.02	-41.29	10.21
0.05	-42.37	9.13
0.07	-41.8	9.7
0.1	-41.83	9.67
0.2	-44.13	7.37
0.3	-41.73	9.77
0.5	-41.8	9.7
0.7	-41.53	9.97
1	-41.46	10.04
2	-41.14	10.36
3	-41.26	10.24
4	-41.46	10.04
5	-41.10	10.40
10	-40.83	10.67
15	-41.47	10.03
20	-35.44	16.06
25	-42.37	9.13
30	-42.94	8.56

FRONT VIEW

UNIVERSAL ELECTRONICS, INC.
SIRIUS LCD REMOTE
MODEL: URC-10000
FCC SUBPART B AND C – RADIATED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

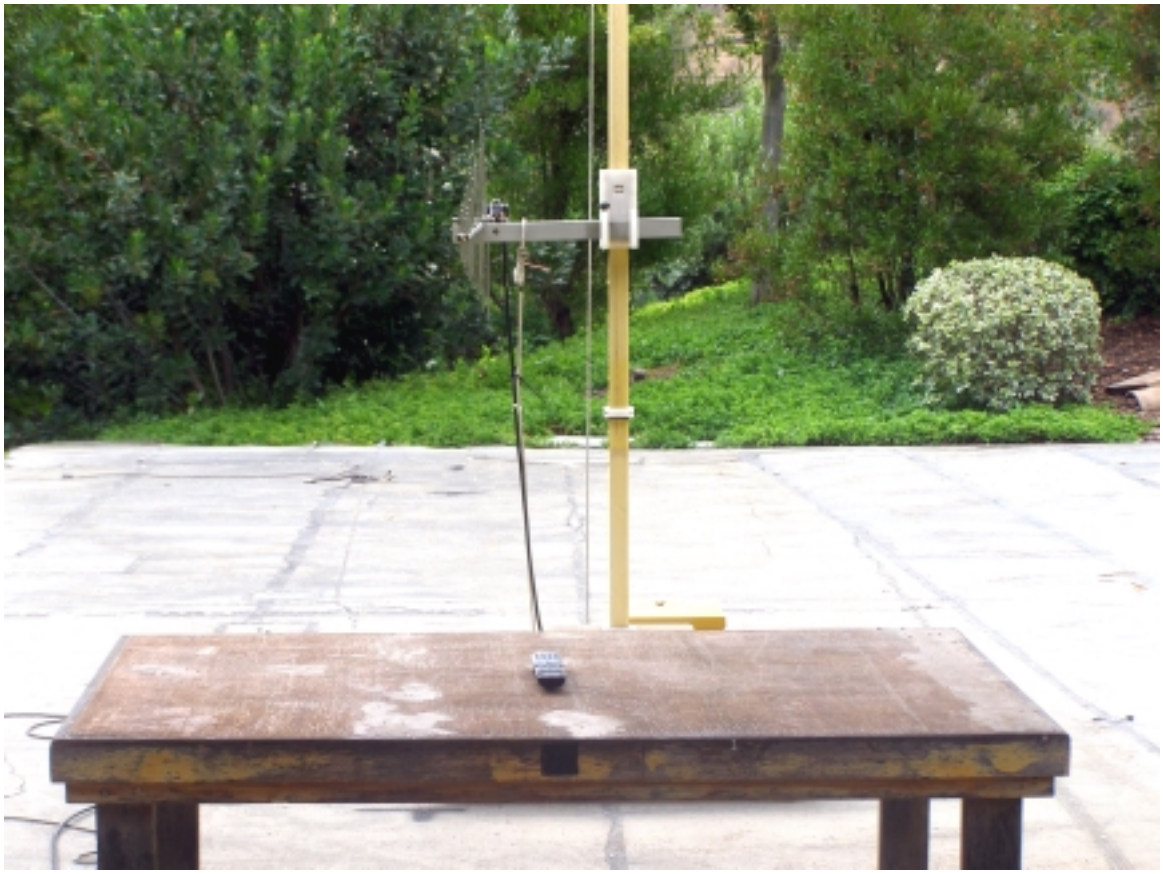
UNIVERSAL ELECTRONICS, INC.
SIRIUS LCD REMOTE
MODEL: URC-10000
FCC SUBPART B AND C – RADIATED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

UNIVERSAL ELECTRONICS, INC.
SIRIUS LCD REMOTE
MODEL: URC-10000
FCC SUBPART B AND C – RADIATED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

UNIVERSAL ELECTRONICS, INC.
SIRIUS LCD REMOTE
MODEL: URC-10000
FCC SUBPART B AND C – RADIATED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

FCC 15.249
Universal Electronics, Inc.
Sirius LCD Remote
Model: URC-10000

Date: 08/14/06
Lab: B/D
Tested By: Falguni Patel

Vertical Polarization - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
908.4	72.97	V	94	-21.03	Peak	1.8	290	
1816.8	36.17	V	54	-17.83	Peak	2.14	270	
2725.2	39.02	V	54	-14.98	Peak	2.61	90	
3633.6	43.42	V	54	-10.58	Peak	2.6	90	
4542	39.57	V	54	-14.43	Peak	1	180	
5450.4		V	54	-54	Peak			No Emission Found
6358.8		V	54	-54	Peak			No Emission Found
7267.2		V	54	-54	Peak			No Emission Found
8175.6		V	54	-54	Peak			No Emission Found
9084		V	54	-54	Peak			No Emission Found

FCC 15.249

Universal Electronics, Inc.
Sirius LCD Remote
Model: URC-10000

Date: 08/14/06
Lab: B/D
Tested By: Falguni Patel

Horizontal Polarization - X-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
908.4	82	H	94	-12	Peak	1	0	
1816.8	36.84	H	54	-17.16	Peak	2.43	90	
2725.2	38.43	H	54	-15.57	Peak	2.51	90	
3633.6	42.26	H	54	-11.74	Peak	2.64	0	
4542	40.38	H	54	-13.62	Peak	1.22	0	
5450.4		H	54	-54	Peak			No Emission Found
6358.8		H	54	-54	Peak			No Emission Found
7267.2		H	54	-54	Peak			No Emission Found
8175.6		H	54	-54	Peak			No Emission Found
9084		H	54	-54	Peak			No Emission Found

FCC 15.249

Universal Electronics, Inc.
Sirius LCD Remote
Model: URC-10000

Date: 08/14/06
Lab: B/D
Tested By: Falguni Patel

Vertical Polarization - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
908.4	80.5	V	94	-13.5	Peak	1	90	
1816.8	39.87	V	54	-14.13	Peak	1.83	0	
2725.2	38.92	V	54	-15.08	Peak	1.83	90	
3633.6	41.58	V	54	-12.42	Peak	2.42	0	
4542	40.42	V	54	-13.58	Peak	1	0	
5450.4		V	54	-54	Peak			No Emission Found
6358.8		V	54	-54	Peak			No Emission Found
7267.2		V	54	-54	Peak			No Emission Found
8175.6		V	54	-54	Peak			No Emission Found
9084		V	54	-54	Peak			No Emission Found

FCC 15.249

Universal Electronics, Inc.
Sirius LCD Remote
Model: URC-10000

Date: 08/14/06
Lab: B/D
Tested By: Falguni Patel

Horizontal Polarization - Y-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
908.4	71.63	H	94	-22.37	Peak	1	270	
1816.8	39.47	H	54	-14.53	Peak	1.82	0	
2725.2	42.89	H	54	-11.11	Peak	2.68	0	
3633.6	48.84	H	54	-5.16	Peak	1.16	0	
4542	39.98	H	54	-14.02	Peak	1.3	0	
5450.4		H	54	-54	Peak			No Emission Found
6358.8		H	54	-54	Peak			No Emission Found
7267.2		H	54	-54	Peak			No Emission Found
8175.6		H	54	-54	Peak			No Emission Found
9084		H	54	-54	Peak			No Emission Found

FCC 15.249

Universal Electronics, Inc.
Sirius LCD Remote
Model: URC-10000

Date: 08/14/06
Lab: B/D
Tested By: Falguni Patel

Vertical Polarization - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
908.4	77.36	V	94	-16.64	Peak	1	270	
1816.8	38.59	V	54	-15.41	Peak	1.42	180	
2725.2	41.66	V	54	-12.34	Peak	2.77	90	
3633.6	48.82	V	54	-5.18	Peak	1.58	90	
4542	42.34	V	54	-11.66	Peak	1.79	90	
5450.4		V	54	-54	Peak			No Emission Found
6358.8		V	54	-54	Peak			No Emission Found
7267.2		V	54	-54	Peak			No Emission Found
8175.6		V	54	-54	Peak			No Emission Found
9084		V	54	-54	Peak			No Emission Found

FCC 15.249

Universal Electronics, Inc.
Sirius LCD Remote
Model: URC-10000

Date: 08/14/06
Lab: B/D
Tested By: Falguni Patel

Horizontal Polarization - Z-Axis

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
908.4	74.81	H	94	-19.19	Peak	1	0	
1816.8	41.3	H	54	-12.7	Peak	1.17	0	
2725.2	37.75	H	54	-16.25	Peak	1.34	90	
3633.6	42.69	H	54	-11.31	Peak	2.06	90	
4542	40.86	H	54	-13.14	Peak	1	0	
5450.4		H	54	-54	Peak			No Emission Found
6358.8		H	54	-54	Peak			No Emission Found
7267.2		H	54	-54	Peak			No Emission Found
8175.6		H	54	-54	Peak			No Emission Found
9084		H	54	-54	Peak			No Emission Found

FCC 15.249 and FCC Class B

Universal Electronics, Inc.
Sirius LCD Remote
Model: URC-10000

Date: 08/14/06
Lab: B/D
Tested By: Falguni Patel

Spurious Emissions - 10 kHz to 9300 MHz

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
								No Spurious Emissions
								from 10 kHz to 9300 MHz
								found from the digital poriton
								for both Vertical and
								Horizontal Polarizations
								No Non-Harmonic Emissions
								from 10 kHz to 9300 MHz
								found from the Tx portion
								for both Vertical and
								Horizontal Polarizations