FCC PART 15 SUBPART B and C
TEST REPORT

for

POWER 4 SYSTEM

Model: USS-POWER4-A

Prepared for

UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION
11172 ELM AVENUE
RANCHO CUCAMONGA, CALIFORNIA 91730

Prepared by:_____

KYLE FUJIMOTO

Approved by:_____

MICHAEL CHRISTENSEN

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

DATE: JANUARY 7, 2010

	REPORT	APPENDICES					TOTAL
	BODY	*A*	*B*	*C*	*D*	*E*	
PAGES	16	2	2	2	12	26	**60**

TABLE OF CONTENTS

LIST OF APPENDICES

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

LIST OF FIGURES

FIGURE	TITLE
1	Conducted Emissions Test Setup For Floor Standing Units
2	Plot Map and Layout of the Radiated Test Site

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 endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested:	Universal Surveillance Systems Corporation Model: USS-POWER4-A S/N: N/A
Product Description:	See Expository Statement
Modifications:	No modifications were made to the EUT during the testing.
Customer:	Universal Surveillance Systems Corporation 11172 Elm Avenue Rancho Cucamonga, California 91730
Test Date(s):	December 14, 15, and 16, 2009
Test Specifications:	EMI requirements CFR Title 47, Part 15 Subpart B; and Subpart C, Sections 15.205 and 15.209
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	Complies with the **Class A** limits of **CFR** Title 47, Part 15, Subpart B; and Subpart C Section 15.207. Highest reading in relation to spec limit: 59.90 (QP) dBuV @ 6.356 MHz (*U = 1.12 dB)
2	Radiated RF Emissions 9 kHz – 1000 MHz	Complies with the **Class A** limits of **CFR** Title 47, Part 15, Subpart B; and Subpart C Sections 15.205 and 15.209. Highest reading in relation to spec limit: 41.18 (QP) dBuV @ 200.027 MHz (*U = 4.22 dB)

*U = Expanded Uncertainty with a coverage factor of k=2

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Power 4 System, Model: USS-POWER4-A. 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 A** specification limits defined by CFR Title 47, Part 15, Subpart B for the digital portion; and Subpart C, sections 15.205, 15.207, and 15.209 for the transmitter portion.

Note: The receiver portion was not performed because it is exempt from the technical provisions in CFR Title 47, Part 15, Subpart B per CFR Title 47, Part 15, Subpart B, section 15.101 (b).

Note #2: This report covers the Booster Tx Pedestal portion. The controller box, the Power 4 Rx Booster Pedestal, and the 58 kHz contained in the Booster Tx Pedestal is part of the system that transmits and receives at 58 kHz. The data for this will be contained in the Compatible Electronics test report number: **B91216A1.**

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.

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 Surveillance Systems Corporation

Janki Bhalodia	R&D Technologist
Ed Redublo	Head of R&D

Compatible Electronics Inc.

Kyle Fujimoto	Test Engineer
Michael Christensen	Lab Manager, Brea Division

2.4 Date Test Sample was Received

The test sample was received prior to the date of testing.

2.5 Disposition of the Test Sample

The test sample was returned prior to the date of this 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
IR	Infrared

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

The Power 4 System, Model: USS-POWER4-A (EUT) consists of a Power 4 Tx Booster Pedestal, a Power 4 Receiver Booster Pedestal, and a 4 AM Controller Box.

The controller box was connected as follows:

4 AM CONTROLLER BOX		
Port Name	**Connected To**	**Comments**
TX1	Power 4 Rx Booster Pedestal	Part of EUT System
TX2	Power 4 Tx Booster Pedestal	Part of EUT System
RX1	Power 4 Rx Booster Pedestal	Part of EUT System
RX2	Accessory Power 4 Rx Booster Pedestal #1	This Rx Booster is only for termination purposes to fully terminate the controller box.
RX3	Power 4 Tx Booster Pedestal	Part of EUT System
RX4	Accessory Power 4 Rx Booster Pedestal #2	This Rx Booster is only for termination purposes to fully terminate the controller box.
PC	Ethernet Adapter	To allow an RJ-45 connector to a router
POWER	AC Adapter	To Provide power to the Box.

The ethernet adapter was also connected to a router and AC Adapter via its ethernet and power ports, respectively. The Power 4 Tx Booster Pedestal and Power 4 Rx Booster Pedestal were also connected to their respecitve AC adapters via their respecitive power ports.

The entire system was continuously transmitting and receiving at 24 kHz and 58 kHz. The EUT was tested in both the minimum power and maximum power.

Note #1: The digital portion emissions were tested to the **Class A** limits specification limits defined by CFR Title 47, Part 15, Subpart B.

Note #2: This report covers the Booster Tx Pedestal portion. The controller box, the Power 4 Rx Booster Pedestal, and the 58 kHz contained in the Booster Tx Pedestal is part of the system that transmits and receives at 58 kHz. The data for this will be contained in the Compatible Electronics test report number: **B91216A1.**

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

Cable 1 This is a 1-meter unshielded cable connecting the 4 AM Controller Box PC port to the ethernet adapter. The cable has an RJ-9 connector at each end.

Cable 2 This is a 2-meter unshielded cable connecting the ethernet adapter to the AC Adapter. The cable has a 1/8 inch power connector at the ethernet adapter end and is hard wired into the AC Adapter.

Cable 3 This is a 15.24-meter unshielded cable connecting the ethernet adapter to the router. The cable has an RJ-45 connector at each end.

Cable 4 This is a 5-meter foil shielded cable connecting the 4 AM Controller Box RX4 port to the Power 4 Rx Booster Pedestal (accessory unit #2). The cable has an RJ-45 connector at each end. The shield of the cable is unterminated at each end.

Cable 5 This is a 5-meter foil shielded cable connecting the 4 AM Controller Box RX3 port to the Power 4 Tx Booster Pedestal. The cable has an RJ-45 connector at each end. The cable was bundled to a length of 1 meter. The shield of the cable is unterminated at each end.

Cable 6 This is a 5-meter foil shielded cable connecting the 4 AM Controller Box RX2 port to the Power 4 Rx Booster Pedestal (accessory unit #1). The cable has an RJ-45 connector at each end. The cable was bundled to a length of 1 meter. The shield of the cable is unterminated at each end.

Cable 7 This is a 5-meter foil shielded cable connecting the 4 AM Controller Box RX1 port to the Power 4 Rx Booster Pedestal. The cable has an RJ-45 connector at each end. The cable was bundled to a length of 1 meter. The shield of the cable is unterminated at each end.

Cable 8 This is a 5-meter foil shielded cable connecting the 4 AM Controller Box TX1 port to the Power 4 Tx Booster Pedestal. The cable has an RJ-45 connector at each end. The cable was bundled to a length of 1 meter. The shield of the cable is unterminated at each end.

Cable 9 This is a 5-meter foil shielded cable connecting the 4 AM Controller Box TX2 port to the Power 4 Rx Booster Pedestal. The cable has an RJ-45 connector at each end. The cable was bundled to a length of 1 meter. The shield of the cable is unterminated at each end.

Cable 10 This is a 5-meter unshielded cable connecting the Power 4 Rx Booster Pedestal to the AC Adapter. The cable has a 2-pin terminal block at the Power 4 RX Booster Pedestal end. The cable was bundled to a length of 1 meter.

Cable 11 This is a 2-meter unshielded cable connecting the Power 4 Tx Booster Pedestal to the AC Adapter. The cable has a 2-pin terminal block at the Power 4 TX Booster Pedestal end. The cable was bundled to a length of 1 meter.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
POWER 4 SYSTEM (EUT)	UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION	USS-POWER4-A	N/A	*See Note Below this Table
POWER 4 AM CONTROLLER BOX	UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION	USS-POWER4-CONTROLLER	N/A	X2TUSS-POWER4-A00
ETHERNET ADAPTER	N/A	N/A	152	N/A
AC ADAPTER FOR ETHERNET ADAPTER	IPD	SA1A-120-0420	P/N: SW-1250AR	N/A
AC ADAPTER FOR USS-POWER 4/RX	MAXIM	MA4815U7	N/A	N/A
AC ADAPTER FOR USS-POWER 4/TX	MAXIM	MA481507	N/A	N/A
POWER 4 BOOSTER RX PEDESTAL	UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION	USS-POWER 4/RX	N/A	N/A
POWER 4 BOOSTER TX PEDESTAL	UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION	USS-POWER 4/TX	N/A	X2TUSS-POWER4-B00
POWER 4 BOOSTER RX PEDESTAL (ACCESSORY)	UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION	USS-POWER 4/RX	N/A	N/A
POWER 4 BOOSTER RX PEDESTAL (ACCESSORY)	UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION	USS-POWER 4/RX	N/A	N/A
ROUTER (ACCESSORY)	NETGEAR	FVS114	168261BD0019F	N/A

*The FCC ID will be shown for any equipment that will have the FCC ID label placed on its chassis.

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. CYCLE
GENERAL TEST EQUIPMENT USED FOR ALL RF EMISSIONS TESTS					
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08784	May 29, 2009	1 Year
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	2648A14530	May 29, 2009	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650A	2430A00424	May 29, 2009	1 Year
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
Radiated Emissions Data Capture Program	Compatible Electronics	2.0	N/A	N/A	N/A
CombiLog Antenna	Com Power	AC-220	61027	June 12, 2009	1 Year
Loop Antenna	Com Power	AL-130	17089	September 29, 2008	2 Year
Preamplifier	Com-Power	PA-103	1582	January 12, 2009	1 Year
Turntable	Com Power	TT-100	N/A	N/A	N/A
RF CONDUCTED EMISSIONS TEST EQUIPMENT					
Emissions Program	Compatible Electronics	2.3 (SR19)	N/A	N/A	N/A
LISN	Com Power	LI-215	12076	September 28, 2009	1 Year
LISN	Com Power	LI-215	12090	September 28, 2009	1 Year
Transient Limiter	Com Power	252A910	1	September 28, 2009	1 Year

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

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

6.2 EUT Mounting, Bonding and Grounding

The Controller Box was mounted on a 0.8 meter non-conductive surface above the ground plane.

The Power 4 Booster Tx Pedestal and Power 4 Booster Rx Pedestal were placed directly on the non-conductive carpet above the ground plane. The carpet is less than 12mm thick.

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 Conducted Emissions Test

The spectrum analyzer was used as a measuring meter. The data was collected with the spectrum analyzer 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 spectrum analyzer input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the spectrum analyzer. 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.

Note: Due to the fact the transmitter portion limits for conducted emissions (**FCC 15.207)** have a lower limit than the digital portion limits for conducted emissions (**Class A**), the data was taken with the lower limits (**FCC 15.207**).

Test Results:

The EUT complies with the **Class A (digital portion)** limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, section 15.207 **(transmitter portion)** for conducted emissions.

7.2 Radiated Emissions (Spurious, Fundamental, and Harmonics) Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. A preamplifier was used to increase the sensitivity of the instrument. 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 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

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 loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.

Radiated Emissions (Spurious, Fundamental, 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 (except for the fundamental) was tested at a 10-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 A (digital portion)** limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, sections 15.205, and 15.209 (transmitter portion) for radiated emissions.

8. CONCLUSIONS

The Power 4 System, Model: USS-POWER4-A, as tested, meets all of the **Class A** 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, 15.207, and 15.209 for the transmitter portion.

Note #2: This report covers the Booster Tx Pedestal portion. The controller box, the Power 4 Rx Booster Pedestal, and the 58 kHz contained in the Booster Tx Pedestal is part of the system that transmits and receives at 58 kHz. The data for this will be contained in the Compatible Electronics test report number: **B91216A1.**

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

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.207, FCC 15.209, or FCC **Class A** 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 COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

Power 4 System
Model: USS-POWER4-A
S/N: N/A

There were no additional models covered under this report.

APPENDIX D

DIAGRAMS, CHARTS AND PHOTOS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP FOR FLOOR STANDING UNITS

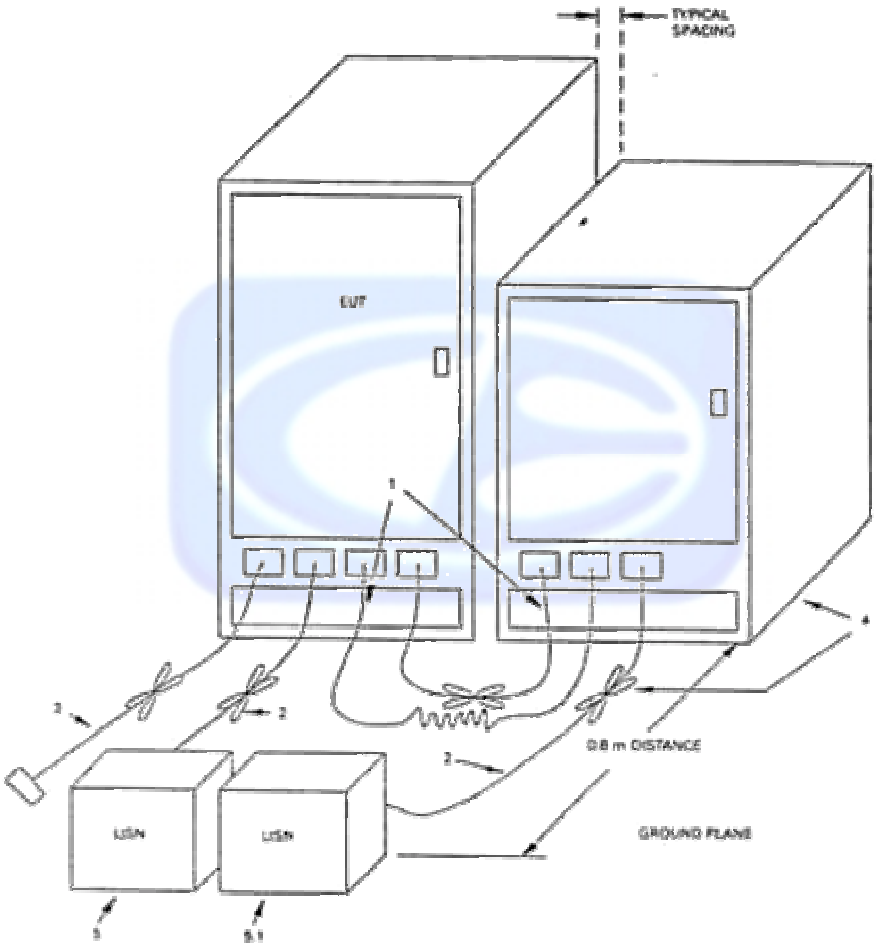
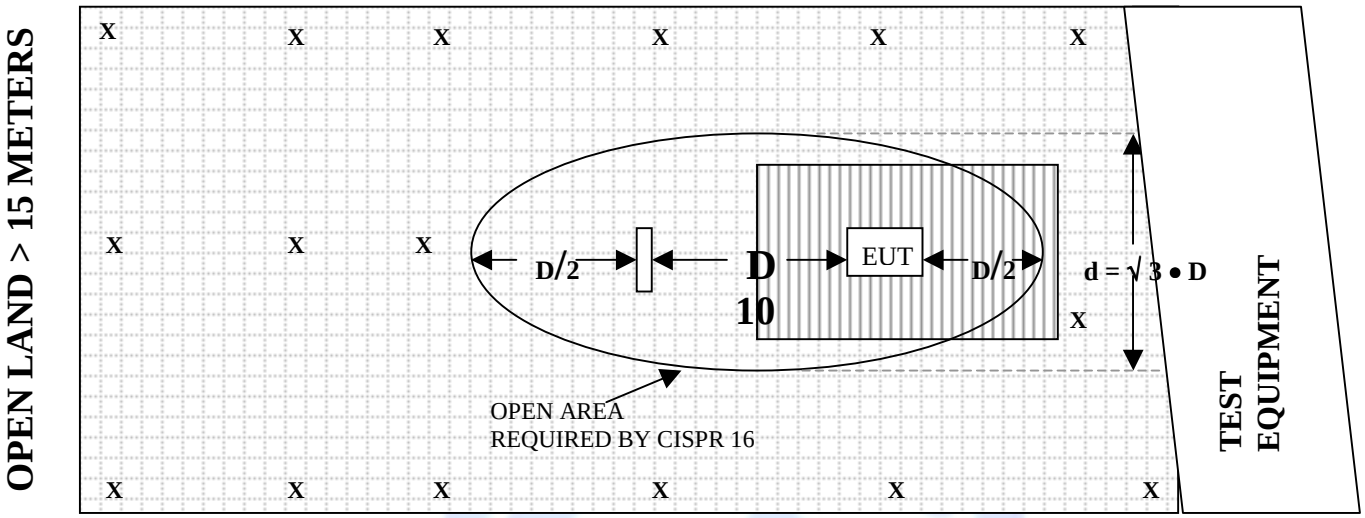


FIGURE 2: PLOT MAP AND LAYOUT OF THE RADIATED TEST SITE

OPEN LAND > 15 METERS



OPEN LAND > 15 METERS

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

COM-POWER AC-220

COMBILOG ANTENNA

S/N: 61027

CALIBRATION DATE: JUNE 12, 2009

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
25	17.8	180	9.2
30	18.0	200	9.6
35	17.5	250	12.5
40	18.4	275	12.7
45	16.0	300	13.4
50	16.3	400	15.5
60	13.1	500	17.3
70	7.9	600	19.0
80	6.9	700	20.1
90	8.2	800	21.3
100	9.1	900	22.6
120	9.6	1000	23.1
125	10.3	1200	23.1
140	9.3	1400	24.5
150	8.4	1600	29.2
160	8.0	1800	24.2
175	9.6	2000	23.8

COM-POWER PA-103

PREAMPLIFIER

S/N: 1582

CALIBRATION DATE: JANUARY 12, 2009

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	33.6	300	33.4
40	33.7	350	33.2
50	33.6	400	33.2
60	33.5	450	33.1
70	33.6	500	32.9
80	33.6	550	33.0
90	33.7	600	32.8
100	33.7	650	33.0
125	33.5	700	32.7
150	33.6	750	32.9
175	33.7	800	32.6
200	33.4	850	32.6
225	33.4	900	32.6
250	33.4	950	32.4
275	33.3	1000	32.7

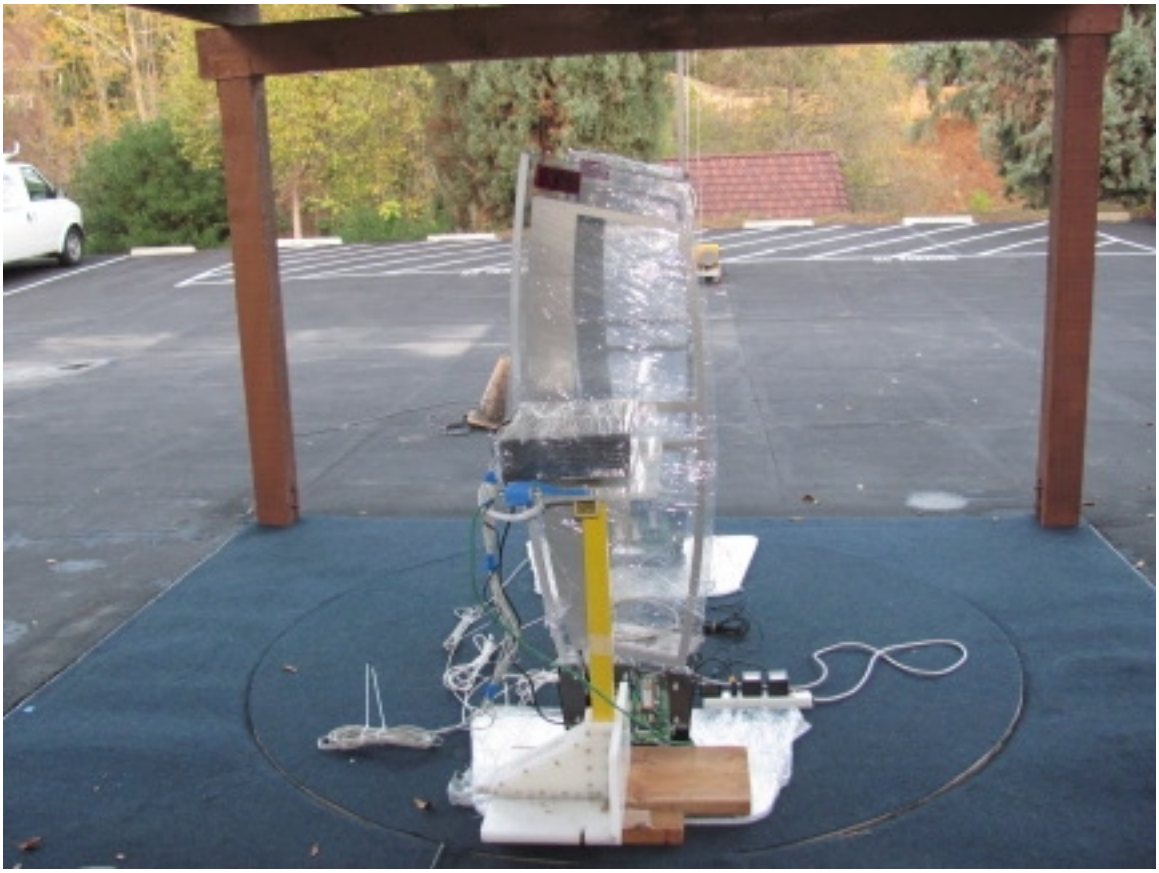
COM-POWER AL-130

LOOP ANTENNA

S/N: 17089

CALIBRATION DATE: SEPTEMBER 29, 2008

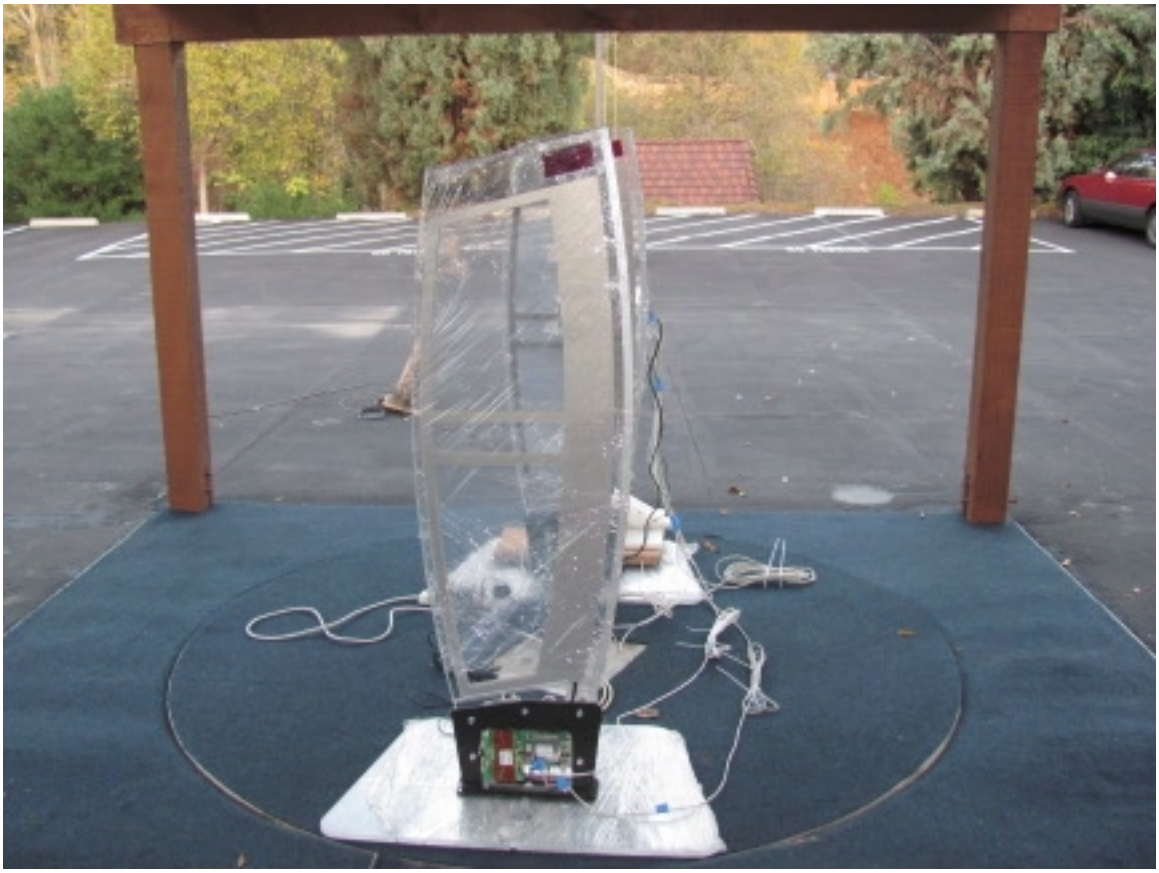
FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-41.57	9.93
0.01	-42.06	9.44
0.02	-42.43	9.07
0.05	-42.50	9.00
0.07	-42.10	9.40
0.1	-42.03	9.47
0.2	-44.50	7.00
0.3	-41.93	9.57
0.5	-41.90	9.60
0.7	-41.73	9.77
1	-41.23	10.27
2	-40.90	10.60
3	-41.20	10.30
4	-41.30	10.20
5	-40.70	10.80
10	-41.10	10.40
15	-42.17	9.33
20	-42.00	9.50
25	-42.20	9.30
30	-43.10	8.40



FRONT VIEW

UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION
POWER 4 SYSTEM
Model: USS-POWER4-A
FCC 15.209 – RADIATED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

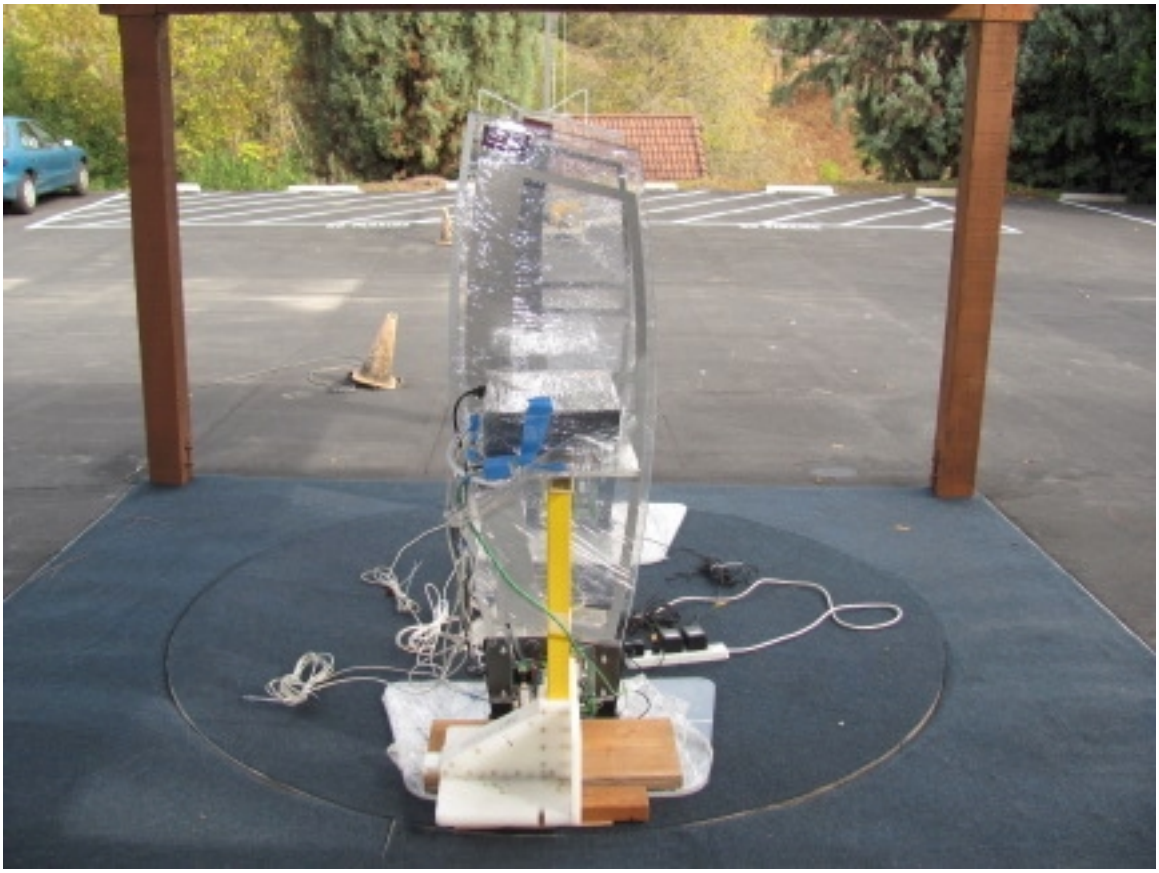
UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION
POWER 4 SYSTEM
Model: USS-POWER4-A
FCC 15.209 – RADIATED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

FRONT VIEW

UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION
POWER 4 SYSTEM
Model: USS-POWER4-A
FCC SUBPART B – RADIATED EMISSIONS

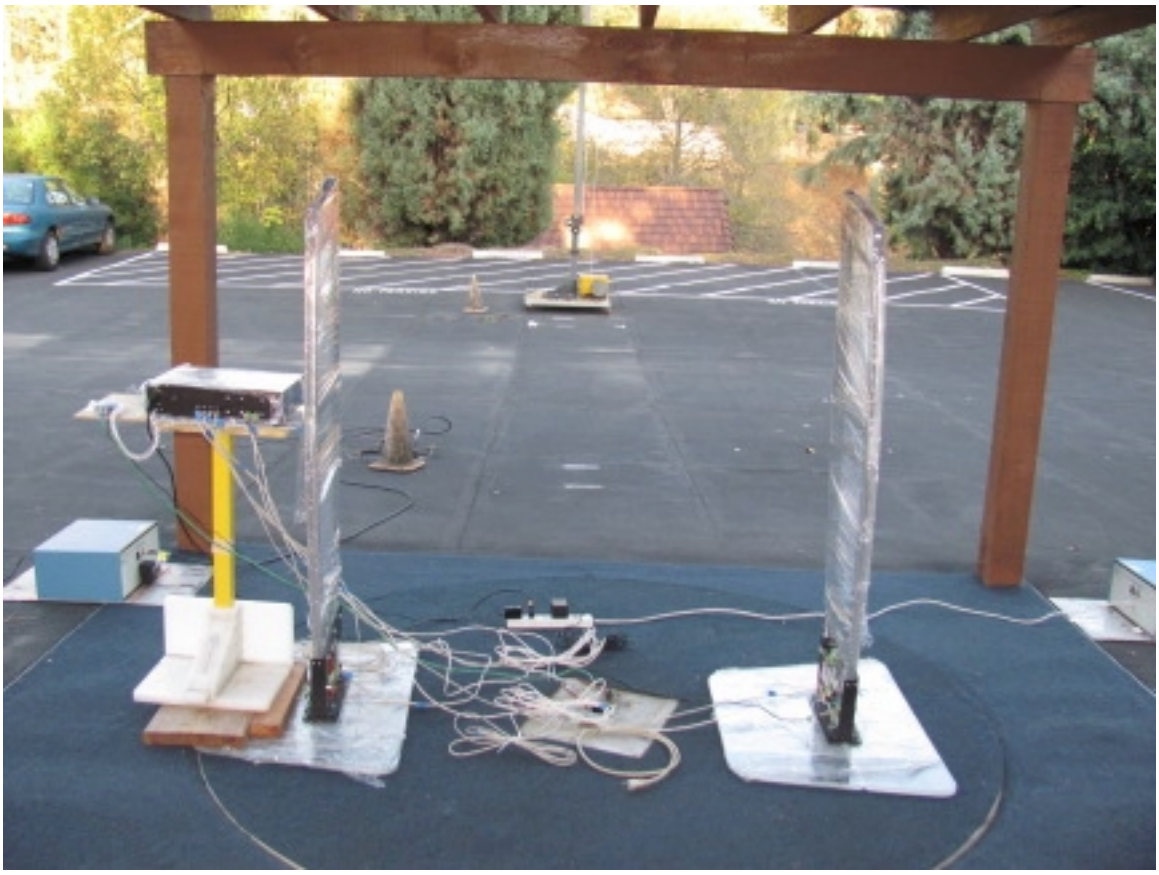
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION
POWER 4 SYSTEM
Model: USS-POWER4-A
FCC SUBPART B – RADIATED EMISSIONS

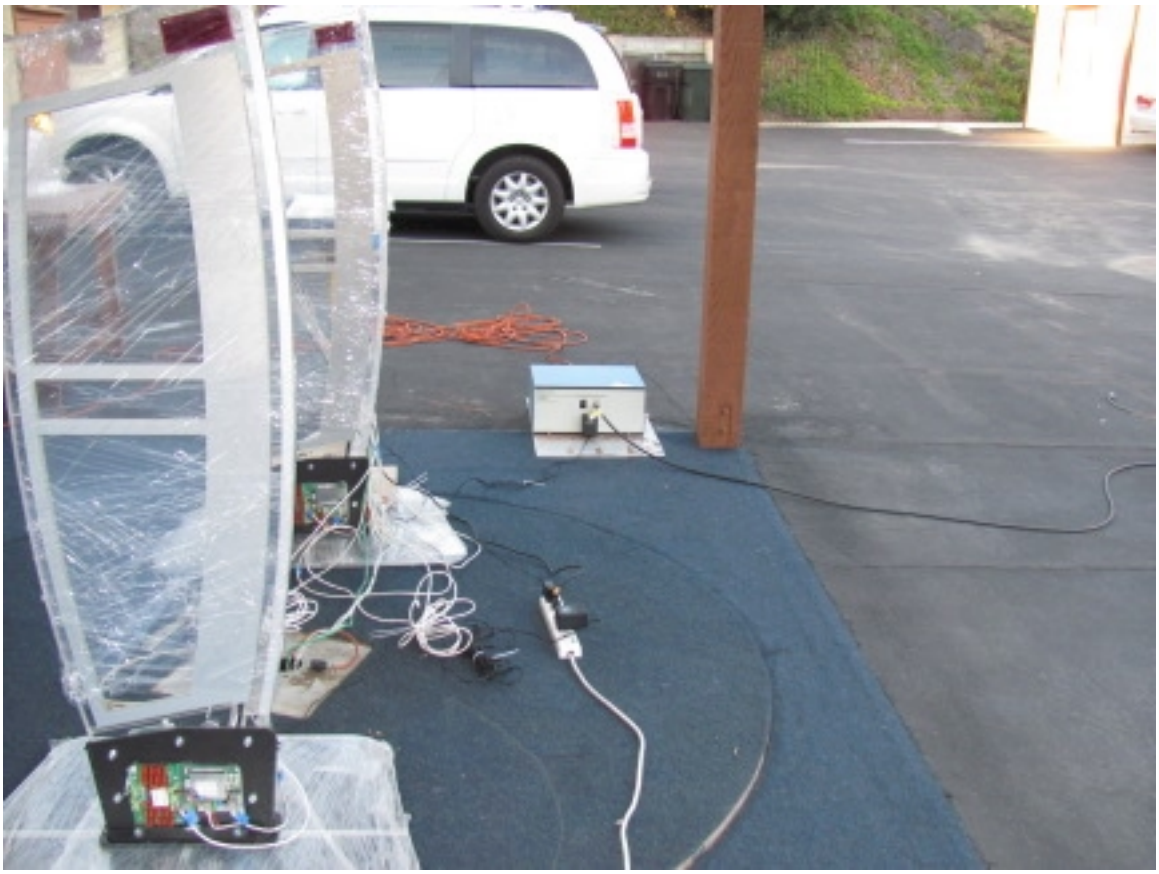
PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION
POWER 4 SYSTEM
Model: USS-POWER4-A
FCC 15.207 and FCC SUBPART B – CONDUCTED EMISSIONS –
POWER 4 TX BOOSTER PEDESTAL

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



REAR VIEW

UNIVERSAL SURVEILLANCE SYSTEMS CORPORATION
POWER 4 SYSTEM
Model: USS-POWER4-A
FCC 15.207 and FCC SUBPART B – CONDUCTED EMISSIONS –
POWER 4 TX BOOSTER PEDESTAL

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

FCC 15.209

Universal Surveillance Systems
Power 4 System
Model: USS-Power4-A

Dates: 12/14/09 and 12/15/09
Lab: A
Tested By: Kyle Fujimoto

Transmit Mode - Maximum Power
Test Distance: 10 Meters
Corrected Spec Limit at 10 Meters = [40 Log (spec test dist./actual test dist.)] + spec limit

Freq. (kHz)	Level (dBuV)	Pol (v/h)	Spec Limit (at 10 Meters)	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
24.27	88.77	V	98.99	-10.218	Peak	1	225	
48.54	67.23	V	92.97	-25.737	Peak	1	225	
72.81	57.53	V	89.45	-31.915	Peak	1	225	
97.08	52.55	V	86.95	-34.396	Peak	1	225	
121.35	50.08	V	85.01	-34.928	Peak	1	225	
145.62	74.86	V	83.42	-8.5647	Peak	1	135	
169.89	72.25	V	82.09	-9.8357	Peak	1	135	
194.16	62.79	V	80.93	-18.136	Peak	1	90	
218.43	59.96	V	79.90	-19.943	Peak	1	90	
242.7	53.78	V	78.99	-25.208	Peak	1	90	

Limit in uV/m = 2400/F (kHz) at 300 Meters from 9 kHz to 490 kHz
Limit in uV/m = 24000/F (kHz) at 30 Meters from 490 kHz to 1705 kHz
Limit in uV/m = 30 at 30 Meters from 1705 kHz to 30 MHz
dBuV/m = 20 log (uV/m)

FCC 15.209
Universal Surveillance Systems
Power 4 System
Model: USS-Power4-A

Dates: 12/14/09 and 12/15/09
Lab: A
Tested By: Kyle Fujimoto

Transmit Mode - Maximum Power
Test Distance: 10 Meters

Corrected Spec Limit at 10 Meters = [40 Log (spec test dist./actual test dist.)] + spec limit

Freq. (kHz)	Level (dBuV)	Pol (v/h)	Spec Limit (at 10 Meters)	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
24.27	81.87	H	98.99	-17.118	Peak	1	225	
48.54	52.23	H	92.97	-40.737	Peak	1	225	
72.81	48.64	H	89.45	-40.805	Peak	1	225	
97.08	57.34	H	86.95	-29.606	Peak	1	225	
121.35	44.38	H	85.01	-40.628	Peak	1	225	
145.62	39.53	H	83.42	-43.895	Peak	1	225	
169.89	60.98	H	82.09	-21.106	Peak	1	225	
194.16	56.61	H	80.93	-24.316	Peak	1	225	
218.43	54.23	H	79.90	-25.673	Peak	1	190	
242.7	55.27	H	78.99	-23.718	Peak	1	180	

Limit in uV/m = 2400/F (kHz) at 300 Meters from 9 kHz to 490 kHz
Limit in uV/m = 24000/F (kHz) at 30 Meters from 490 kHz to 1705 kHz
Limit in uV/m = 30 at 30 Meters from 1705 kHz to 30 MHz
dBuV/m = 20 log (uV/m)

FCC 15.209
Universal Surveillance Systems
Power 4 System
Model: USS-Power4-A

Dates: 12/14/09 and 12/15/09
Lab: A
Tested By: Kyle Fujimoto

Transmit Mode - Minimum Power
Test Distance: 10 Meters

Corrected Spec Limit at 10 Meters = [40 Log (spec test dist./actual test dist.)] + spec limit

Freq. (kHz)	Level (dBuV)	Pol (v/h)	Spec Limit (at 10 Meters)	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
24.27	77.57	V	98.99	-21.418	Peak	1	90	
48.54	55.64	V	92.97	-37.327	Peak	1	90	
72.81	56.24	V	89.45	-33.205	Peak	1	90	
97.08	44.54	V	86.95	-42.406	Peak	1	90	
121.35	41.88	V	85.01	-43.128	Peak	1	90	
145.62	43.13	V	83.42	-40.295	Peak	1	90	
169.89	63.76	V	82.09	-18.326	Peak	1	90	
194.16	60.32	V	80.93	-20.606	Peak	1	90	
218.43	57.5	V	79.90	-22.403	Peak	1	90	
242.7	55.79	V	78.99	-23.198	Peak	1	90	

Limit in uV/m = 2400/F (kHz) at 300 Meters from 9 kHz to 490 kHz
Limit in uV/m = 24000/F (kHz) at 30 Meters from 490 kHz to 1705 kHz
Limit in uV/m = 30 at 30 Meters from 1705 kHz to 30 MHz
dBuV/m = 20 log (uV/m)

FCC 15.209
Universal Surveillance Systems
Power 4 System
Model: USS-Power4-A

Dates: 12/14/09 and 12/15/09
Lab: A
Tested By: Kyle Fujimoto

Transmit Mode - Minimum Power
Test Distance: 10 Meters

Corrected Spec Limit at 10 Meters = [40 Log (spec test dist./actual test dist.)] + spec limit

Freq. (kHz)	Level (dBuV)	Pol (v/h)	Spec Limit (at 10 Meters)	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
24.27	70.07	H	98.99	-28.918	Peak	1	135	
48.54	41.9	H	92.97	-51.067	Peak	1	135	
72.81	47.64	H	89.45	-41.805	Peak	1	135	
97.08	53.74	H	86.95	-33.206	Peak	1	135	
121.35	41.28	H	85.01	-43.728	Peak	1	150	
145.62	39.58	H	83.42	-43.845	Peak	1	135	
169.89	59.43	H	82.09	-22.656	Peak	1	135	
194.16	58.96	H	80.93	-21.966	Peak	1	135	
218.43	54.43	H	79.90	-25.473	Peak	1	135	
242.7	51.16	H	78.99	-27.828	Peak	1	135	

Limit in uV/m = 2400/F (kHz) at 300 Meters from 9 kHz to 490 kHz
Limit in uV/m = 24000/F (kHz) at 30 Meters from 490 kHz to 1705 kHz
Limit in uV/m = 30 at 30 Meters from 1705 kHz to 30 MHz
dBuV/m = 20 log (uV/m)

FCC 15.209

Universal Surveillance Systems
Power 4 System
Model: USS-Power4-A

Dates: 12/14/09 and 12/15/09
Lab: A
Tested By: Kyle Fujimoto

Transmit Mode - Maximum Power (Worst Case)
Test Distance: 10 Meters - Non-Harmonic Spurious Emissions from the Transmitter Portion
Corrected Spec Limit at 10 Meters = [40 Log (spec test dist./actual test dist.)] + spec limit

Freq. (kHz)	Level (dBuV)	Pol (v/h)	Spec Limit (at 10 Meters)	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
173.2	66.91	V	81.92	-15.008	Peak	1	90	
173.2	56.52	H	81.92	-25.398	Peak	1	180	

Limit in uV/m = 2400/F (kHz) at 300 Meters from 9 kHz to 490 kHz
Limit in uV/m = 24000/F (kHz) at 30 Meters from 490 kHz to 1705 kHz
Limit in uV/m = 30 at 30 Meters from 1705 kHz to 30 MHz
dBuV/m = 20 log (uV/m)

Test Location : Compatible Electronics Page : 1/2
Customer : Universal Surveillance Systems Date : 12/15/2009
Manufacturer : Universal Surveillance Systems Time : 10:29:25
Eut name : Power 4 System Lab : A
Model : USS-Power4-A Test Distance : 10
Serial # : N/A
Specification : FCC Class A
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Test Type: Radiated Emissions Qual - Maximum Power - Entire System
Test Range: 30 MHz to 1 GHz (Vertical and Horizontal)
Clocks: 20 MHz and 50 MHz - Entire System
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	48.066	47.40	0.52	16.19	33.62	30.49	39.10	-8.61
2V	53.283	44.00	0.53	15.18	33.57	26.15	39.10	-12.95
3V	60.054	50.70	0.60	13.07	33.50	30.87	39.10	-8.23
4V	72.460	52.30	0.70	7.64	33.60	27.04	39.10	-12.06
5H	80.043	47.00	0.70	6.91	33.60	21.01	39.10	-18.09
6V	85.649	39.90	0.76	7.65	33.66	14.65	39.10	-24.45
7V	108.595	44.30	1.17	9.33	33.63	21.17	43.50	-22.33
8V	116.791	42.80	1.24	9.53	33.56	20.00	43.50	-23.50
9V	133.378	55.60	1.34	9.73	33.54	33.13	43.50	-10.37
10V	150.053	54.90	1.40	8.40	33.60	31.10	43.50	-12.40
11V	152.718	43.00	1.42	8.29	33.61	19.10	43.50	-24.40
12V	175.063	41.60	1.60	9.59	33.70	19.10	43.50	-24.40
13V	188.832	50.50	1.71	9.38	33.53	28.07	43.50	-15.43
14V	199.806	56.90	1.80	9.60	33.40	34.89	43.50	-8.61
15V	200.026	63.70	1.80	9.60	33.40	41.70	43.50	-1.80
16V	200.027Qp	63.18	1.80	9.60	33.40	41.18	43.50	-2.32
17H	200.042	64.40	1.80	9.60	33.40	44.40	43.50	-1.10
18H	200.043Qp	64.31	1.80	9.60	33.40	42.31	43.50	-1.19
19V	200.287	59.50	1.80	9.62	33.40	37.52	43.50	-5.98
20H	209.834	48.10	1.88	10.22	33.40	26.81	43.50	-16.69
21V	210.007	43.90	1.88	10.23	33.40	22.62	43.50	-20.88
22H	228.920	47.60	2.00	11.36	33.40	27.56	46.40	-18.84
23V	250.068	43.80	2.00	12.50	33.40	24.90	46.40	-21.50
24H	258.974	33.90	2.04	12.57	33.36	15.15	46.40	-31.25
25V	265.275	34.90	2.06	12.62	33.34	16.25	46.40	-30.15
26V	267.026	50.20	2.07	12.64	33.33	31.58	46.40	-14.82
27V	280.036	48.50	2.14	12.85	33.32	30.17	46.40	-16.23
28H	280.044	45.40	2.14	12.85	33.32	27.07	46.40	-19.33
29V	300.041	52.00	2.30	13.40	33.40	34.30	46.40	-12.10
30H	300.045	57.20	2.30	13.40	33.40	39.50	46.40	-6.90
31V	319.802	37.90	2.42	13.87	33.32	20.87	46.40	-25.53
32V	320.041	42.20	2.43	13.87	33.32	25.18	46.40	-21.22
33H	320.238	33.40	2.43	13.88	33.32	16.39	46.40	-30.01
34V	325.041	40.80	2.46	13.99	33.30	23.95	46.40	-22.45
35V	350.041	41.60	2.60	14.53	33.20	25.53	46.40	-20.87

Test Location : Compatible Electronics Page : 2/2
Customer : Universal Surveillance Systems Date : 12/15/2009
Manufacturer : Universal Surveillance Systems Time : 10:29:25
Eut name : Power 4 System Lab : A
Model : USS-Power4-A Test Distance : 10
Serial # : N/A
Specification : FCC Class A
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Test Type: Radiated Emissions Qual - Maximum Power - Entire System
Test Range: 30 MHz to 1 GHz (Vertical and Horizontal)
Clocks: 20 MHz and 50 MHz - Entire System
Test Engineer: Kyle Fujimoto

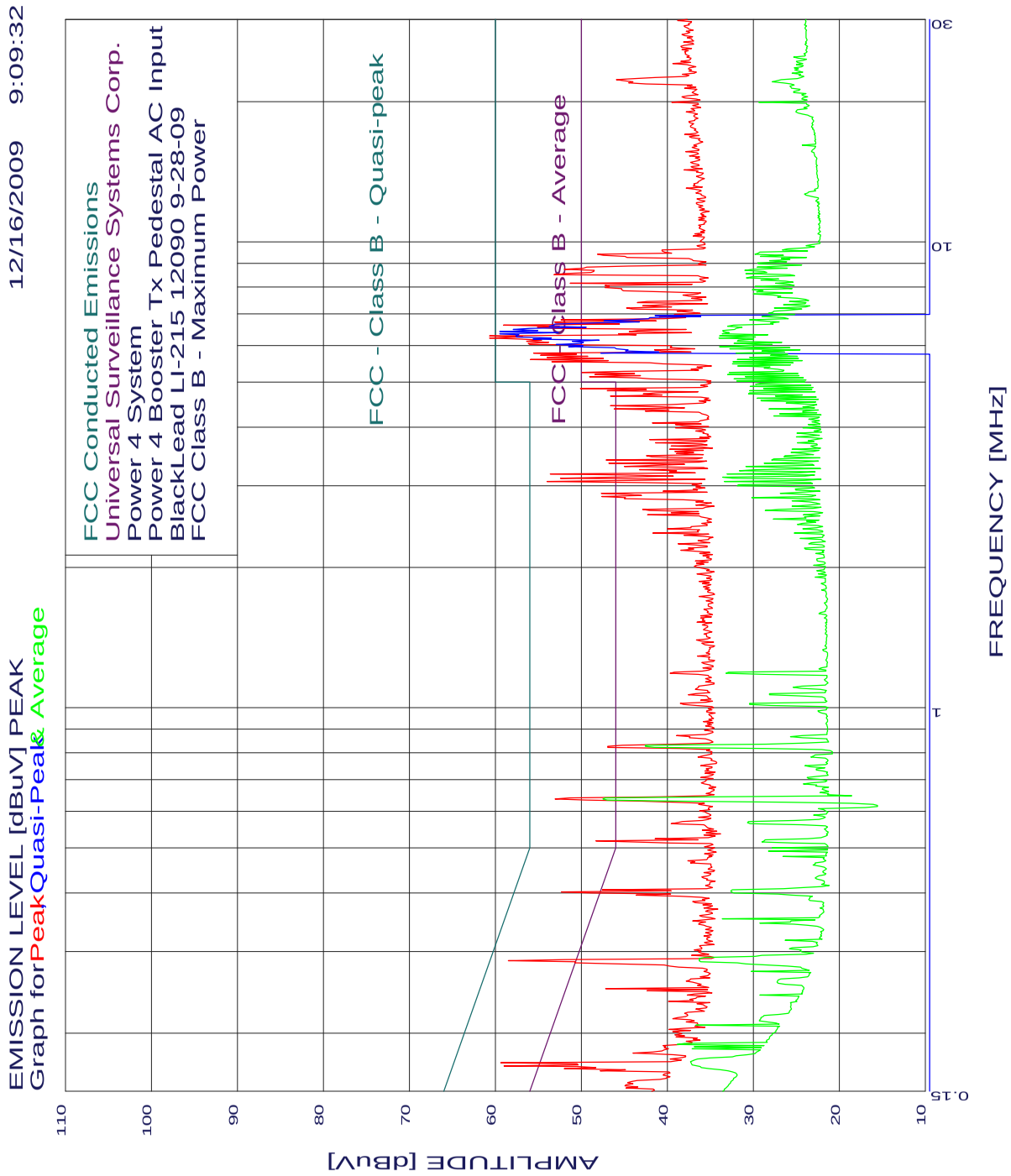
Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
36V	350.090	40.90	2.60	14.53	33.20	24.83	46.40	-21.57
37V	371.948	39.30	2.65	14.97	33.20	23.71	46.40	-22.69
38V	400.041	44.30	2.70	15.50	33.20	29.30	46.40	-17.10
39V	400.258	43.80	2.70	15.51	33.20	28.81	46.40	-17.59
40H	400.260	42.90	2.70	15.51	33.20	27.91	46.40	-18.49
41V	483.403	36.70	4.90	17.03	32.96	25.66	46.40	-20.74
42V	539.851	31.10	6.26	18.02	32.98	22.40	46.40	-24.00
43V	575.041	44.30	6.45	18.60	32.90	36.46	46.40	-9.94
44H	751.480	32.80	7.72	20.74	32.89	28.36	46.40	-18.04

Test Location : Compatible Electronics Page : 1/2
Customer : Universal Surveillance Systems Date : 12/15/2009
Manufacturer : Universal Surveillance Systems Time : 13:18:53
Eut name : Power 4 System Lab : A
Model : USS-Power4-A Test Distance : 10
Serial # : N/A
Specification : FCC Class A
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Test Type: Radiated Emissions Qual - Minimum Power
Test Range: 30 MHz to 1 GHz (Vertical and Horizontal)
Clocks: 20 MHz and 50 MHz - Entire System
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
1V	30.310	37.90	0.60	17.97	33.60	22.86	39.10	-16.24
2V	46.750	35.20	0.53	16.11	33.63	18.21	39.10	-20.89
3H	66.826	42.30	0.67	9.47	33.57	18.87	39.10	-20.23
4V	78.010	41.00	0.70	7.09	33.60	15.19	39.10	-23.91
5H	85.876	48.10	0.76	7.68	33.66	22.88	39.10	-16.22
6H	108.915	39.90	1.18	9.33	33.62	16.79	43.50	-26.71
7H	108.953	43.50	1.18	9.34	33.62	20.39	43.50	-23.11
8H	110.631	39.60	1.19	9.38	33.61	16.56	43.50	-26.94
9V	113.792	35.60	1.22	9.45	33.58	12.69	43.50	-30.81
10V	120.022	39.00	1.26	9.60	33.54	16.33	43.50	-27.17
11H	125.015	42.50	1.30	10.30	33.50	20.60	43.50	-22.90
12V	132.023	35.20	1.33	9.82	33.53	12.82	43.50	-30.68
13H	133.365	51.50	1.34	9.73	33.54	29.03	43.50	-14.47
14V	146.423	38.10	1.39	8.71	33.59	14.61	43.50	-28.89
15H	150.051	48.90	1.40	8.40	33.60	25.10	43.50	-18.40
16H	150.070	52.70	1.40	8.40	33.60	28.90	43.50	-14.60
17V	155.720	42.40	1.45	8.17	33.62	18.39	43.50	-25.11
18V	190.248	51.60	1.73	9.41	33.51	29.22	43.50	-14.28
19V	200.031	61.60	1.80	9.60	33.40	39.60	43.50	-3.90
20H	200.052	59.30	1.80	9.60	33.40	37.30	43.50	-6.20
21H	228.887	48.10	2.00	11.35	33.40	28.05	46.40	-18.35
22V	232.124	40.40	2.00	11.54	33.40	20.54	46.40	-25.86
23V	246.380	32.90	2.00	12.31	33.40	13.81	46.40	-32.59
24H	250.058	41.30	2.00	12.50	33.40	22.40	46.40	-24.00
25V	250.066	36.60	2.00	12.50	33.40	17.70	46.40	-28.70
26V	260.320	34.60	2.04	12.58	33.36	15.87	46.40	-30.53
27V	265.248	32.30	2.06	12.62	33.34	13.65	46.40	-32.75
28V	276.545	38.90	2.11	12.75	33.31	20.45	46.40	-25.95
29V	280.022	42.40	2.14	12.85	33.32	24.07	46.40	-22.33
30H	286.105	43.60	2.19	13.02	33.35	25.46	46.40	-20.94
31V	300.049	52.80	2.30	13.40	33.40	35.10	46.40	-11.30
32V	302.584	35.30	2.32	13.46	33.39	17.69	46.40	-28.71
33H	314.690	38.20	2.39	13.75	33.34	21.00	46.40	-25.40
34H	336.785	38.70	2.53	14.24	33.25	22.22	46.40	-24.18
35H	362.384	39.90	2.63	14.78	33.20	24.11	46.40	-22.29

Test Location : Compatible Electronics Page : 2/2
Customer : Universal Surveillance Systems Date : 12/15/2009
Manufacturer : Universal Surveillance Systems Time : 13:18:53
Eut name : Power 4 System Lab : A
Model : USS-Power4-A Test Distance : 10
Serial # : N/A
Specification : FCC Class A
Distance correction factor (20 * log(test/spec) : 0.00
Test Mode : Test Type: Radiated Emissions Qual - Minimum Power
Test Range: 30 MHz to 1 GHz (Vertical and Horizontal)
Clocks: 20 MHz and 50 MHz - Entire System
Test Engineer: Kyle Fujimoto

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	Limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
36V	371.924	38.90	2.65	14.97	33.20	23.31	46.40	-23.09
37H	380.698	31.20	2.66	15.14	33.20	15.80	46.40	-30.60
38V	381.469	39.30	2.66	15.15	33.20	23.92	46.40	-22.48
39V	400.045	39.80	2.70	15.50	33.20	24.80	46.40	-21.60
40H	400.248	47.00	2.70	15.50	33.20	32.01	46.40	-14.39
41H	400.270	45.60	2.70	15.51	33.20	30.61	46.40	-15.79
42V	400.275	44.50	2.70	15.51	33.20	29.51	46.40	-16.89
43V	414.525	31.20	2.85	15.79	33.17	16.67	46.40	-29.73
44H	419.603	34.50	2.90	15.89	33.16	20.13	46.40	-26.27
45V	419.630	37.20	2.90	15.89	33.16	22.83	46.40	-23.57
46V	433.992	39.40	3.05	16.16	33.13	25.47	46.40	-20.93
47V	436.733	32.70	3.07	16.21	33.13	18.86	46.40	-27.54
48V	451.260	37.30	3.27	16.47	33.09	23.94	46.40	-22.46
49V	479.190	30.70	4.69	16.96	32.98	19.37	46.40	-27.03
50H	499.363	37.50	5.67	17.29	32.90	27.56	46.40	-18.84
51V	505.440	37.60	5.78	17.40	32.91	27.87	46.40	-18.53
52V	602.363	42.90	6.52	19.03	32.81	35.64	46.40	-10.76
53H	604.044	37.10	6.53	19.05	32.82	29.86	46.40	-16.54
54H	621.434	34.80	6.68	19.25	32.89	27.84	46.40	-18.56
55H	684.485	39.30	7.04	19.94	32.79	33.49	46.40	-12.91
56V	702.037	37.70	7.13	20.13	32.71	32.24	46.40	-14.16


12/16/2009 9:09:32
FCC Conducted Emissions
Universal Surveillance Systems Corp.
Power 4 System
Power 4 Booster Tx Pedestal AC Input
BlackLead LI-215 12090 9-28-09
FCC Class B - Maximum Power
FCC - Class B - Quasi-peak
FCC - Class B - Average
EMISSION LEVEL [dBuV] PEAK
Graph forPeakQuasi-PeakAverage
AMPLITUDE [dBuV]
FREQUENCY [MHz]
110
100
90
80
70
60
50
40
30
20
10
30
10
1
0.15

Universal Surveillance Systems Corporation
Power 4 System
Power 4 Booster Tx Pedestal AC Input
FCC Class B - Maximum Power - Black Lead
TEST ENGINEER : Kyle Fujimoto

---

47 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	6.288	60.68	50.00	10.68* **
2	6.220	60.68	50.00	10.68* **
3	6.627	59.00	50.00	9.00* **
4	3.059	53.98	46.00	7.98*
5	0.286	58.44	50.63	7.82*
6	3.175	53.59	46.00	7.59*
7	0.637	53.04	46.00	7.04*
8	3.107	52.38	46.00	6.38*
9	6.123	56.37	50.00	6.37* **
10	6.059	56.16	50.00	6.16* **
11	5.597	55.93	50.00	5.93*
12	5.774	55.55	50.00	5.55* **
13	6.559	55.10	50.00	5.10* **
14	5.715	54.74	50.00	4.74*
15	0.173	59.37	54.81	4.56*
16	0.402	52.31	47.81	4.50*
17	4.851	50.09	46.00	4.09*
18	0.170	58.97	54.94	4.03*
19	5.656	53.94	50.00	3.94*
20	5.538	53.43	50.00	3.43*
21	8.506	53.13	50.00	3.13*
22	6.736	53.11	50.00	3.11* **
23	6.809	52.31	50.00	2.31* **
24	0.518	48.29	46.00	2.29*
25	8.729	51.94	50.00	1.94*
26	2.885	47.67	46.00	1.67*
27	2.840	47.57	46.00	1.57*
28	8.148	51.30	50.00	1.30*
29	3.401	47.10	46.00	1.10*
30	4.799	46.98	46.00	0.98*
31	0.826	46.92	46.00	0.92*
32	3.346	46.80	46.00	0.80*
33	4.672	46.58	46.00	0.58*
34	4.456	46.56	46.00	0.56*
35	4.384	46.16	46.00	0.16*
36	5.252	49.91	50.00	-0.09*
37	0.406	47.51	47.72	-0.21*
38	5.142	49.00	50.00	-1.00*
39	3.294	44.99	46.00	-1.01*
40	5.197	48.41	50.00	-1.59*
41	9.403	48.09	50.00	-1.91*
42	8.065	47.20	50.00	-2.80*
43	3.243	43.19	46.00	-2.81*
44	0.168	51.97	55.07	-3.10*
45	2.665	42.86	46.00	-3.14*
46	4.722	42.78	46.00	-3.22*
47	4.339	42.56	46.00	-3.44*

---

*Please See the Average Readings on the Following Pages and on the Plot
**Please See the Quasi-Peak Readings on the Following Pages and on the Plot

Universal Surveillance Systems Corporation
Power 4 System
Power 4 Booster Tx Pedestal AC Input
FCC Class B - Maximum Power - Black Lead
TEST ENGINEER : Kyle Fujimoto

---

13 highest peaks above -50.00 dB of FCC - Class B - Quasi-peak limit line
Peak criteria : 0.00 dB, Curve : Quasi-peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	6.424	59.49	60.00	-0.51
2	6.356	59.48	60.00	-0.52
3	6.491	57.88	60.00	-2.12
4	6.288	57.60	60.00	-2.40
5	6.186	55.59	60.00	-4.41
6	6.593	53.74	60.00	-6.26
7	6.028	52.88	60.00	-7.12
8	5.964	51.48	60.00	-8.52
9	6.123	51.05	60.00	-8.95
10	5.774	47.74	60.00	-12.26
11	6.773	47.35	60.00	-12.65
12	5.838	44.85	60.00	-15.15
13	6.954	41.38	60.00	-18.62

Universal Surveillance Systems Corporation
Power 4 System
Power 4 Booster Tx Pedestal AC Input
FCC Class B - Maximum Power - Black Lead
TEST ENGINEER : Kyle Fujimoto

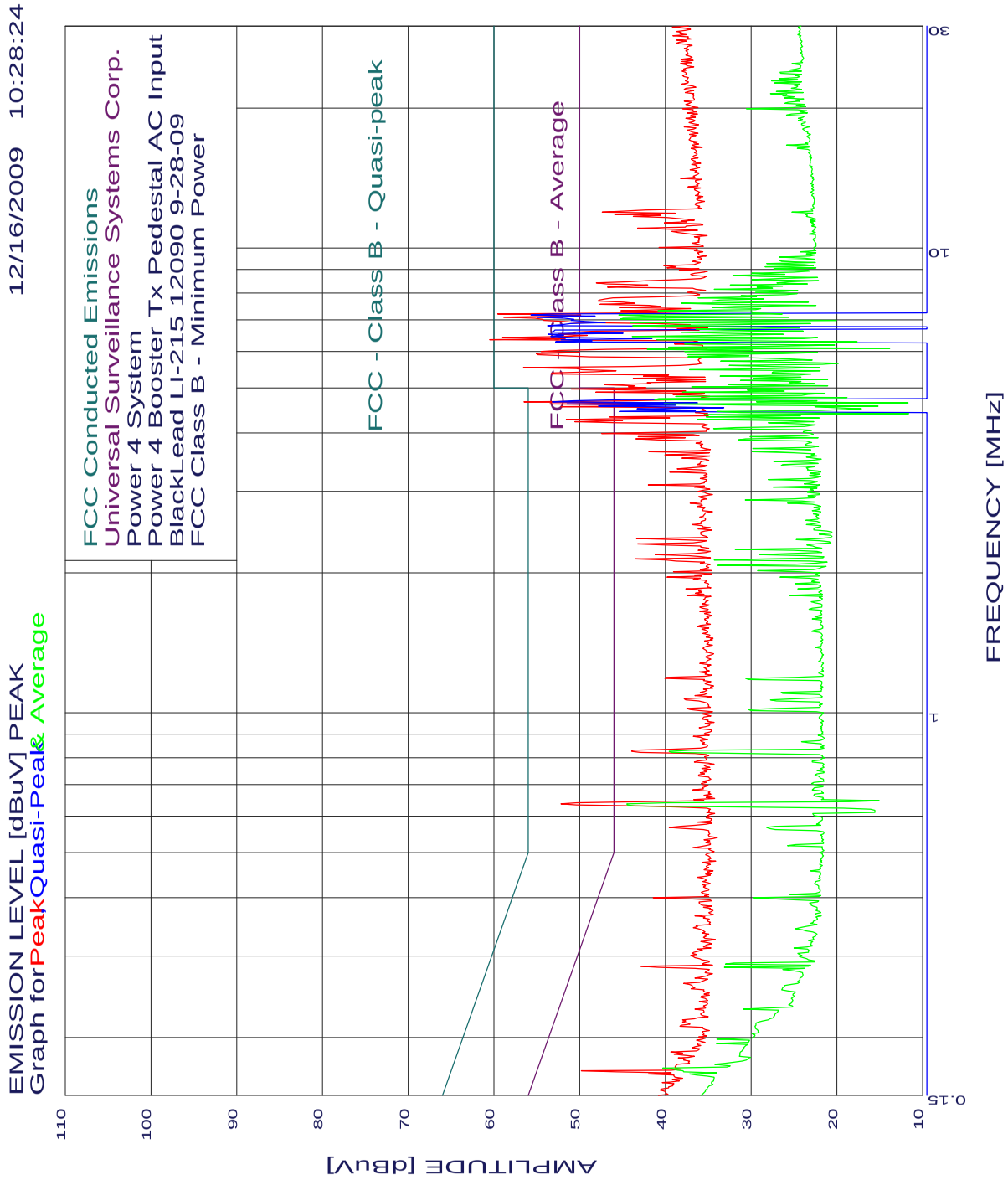
---

48 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 0.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.637	47.45	46.00	1.45*
2	0.831	42.56	46.00	-3.44
3	3.124	33.55	46.00	-12.45
4	3.059	33.33	46.00	-12.67
5	1.184	33.16	46.00	-12.84
6	3.175	33.02	46.00	-12.98
7	2.995	31.83	46.00	-14.17
8	0.290	36.30	50.54	-14.23
9	0.286	36.27	50.63	-14.35
10	3.226	31.59	46.00	-14.41
11	0.404	32.60	47.77	-15.17
12	3.294	30.82	46.00	-15.18
13	0.189	38.82	54.06	-15.24
14	0.352	33.62	48.91	-15.29
15	0.567	30.67	46.00	-15.33
16	4.722	30.53	46.00	-15.47
17	4.799	30.43	46.00	-15.57
18	1.016	30.43	46.00	-15.57
19	4.902	30.37	46.00	-15.63
20	2.826	30.14	46.00	-15.86
21	6.220	34.00	50.00	-16.00
22	5.964	33.90	50.00	-16.10
23	6.288	33.88	50.00	-16.12
24	4.954	29.69	46.00	-16.31
25	6.356	33.61	50.00	-16.39
26	4.624	29.52	46.00	-16.48
27	6.458	33.52	50.00	-16.48
28	0.208	36.66	53.27	-16.61
29	4.576	29.11	46.00	-16.89
30	6.593	32.98	50.00	-17.02
31	0.516	28.98	46.00	-17.02
32	5.197	32.95	50.00	-17.05
33	0.185	37.10	54.24	-17.14
34	4.851	28.80	46.00	-17.20
35	5.252	32.79	50.00	-17.21
36	5.901	32.74	50.00	-17.26
37	3.346	28.71	46.00	-17.29
38	0.187	36.82	54.15	-17.33
39	2.651	28.58	46.00	-17.42
40	0.174	37.25	54.77	-17.51
41	5.479	32.39	50.00	-17.61
42	5.538	32.33	50.00	-17.67
43	5.086	32.24	50.00	-17.76
44	6.059	32.21	50.00	-17.79
45	4.384	28.14	46.00	-17.86
46	1.072	28.07	46.00	-17.93
47	0.492	28.19	46.14	-17.95

---

*This is a Radio Station Verified by the Audio Detector of the QP Detector and not the EUT. This signal is still present even when the EUT is turned off.


12/16/2009 10:28:24
FCC Conducted Emissions
Universal Surveillance Systems Corp.
Power 4 System
Power 4 Booster Tx Pedestal AC Input
BlackLead LI-215 12090 9-28-09
FCC Class B - Minimum Power
FCC - Class B - Quasi-peak
FCC - Class B - Average
EMISSION LEVEL [dBuV] PEAK
Graph forPeakQuasi-PeakAverage
AMPLITUDE [dBuV]
FREQUENCY [MHz]
110
100
90
80
70
60
50
40
30
20
10
30
10
1
0.15

Universal Surveillance Systems Corporation
Power 4 System
Power 4 Booster Tx Pedestal AC Input
FCC Class B - Minimum Power - Black Lead
TEST ENGINEER : Kyle Fujimoto

---

47 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	6.356	60.48	50.00	10.48* **
2	4.672	56.48	46.00	10.48* **
3	7.217	59.54	50.00	9.54* **
4	6.424	58.99	50.00	8.99* **
5	7.100	58.83	50.00	8.83* **
6	4.624	53.47	46.00	7.47* **
7	5.538	56.53	50.00	6.53*
8	4.552	52.17	46.00	6.17* **
9	0.637	52.14	46.00	6.14*
10	4.272	51.55	46.00	5.55*
11	5.933	55.06	50.00	5.06*
12	4.980	50.99	46.00	4.99*
13	4.227	50.55	46.00	4.55*
14	5.996	54.46	50.00	4.46*
15	5.362	53.32	50.00	3.32*
16	6.525	52.50	50.00	2.50* **
17	4.902	48.09	46.00	2.09*
18	3.987	47.44	46.00	1.44*
19	4.339	46.46	46.00	0.46*
20	8.416	48.02	50.00	-1.98*
21	0.826	43.92	46.00	-2.08*
22	7.689	47.87	50.00	-2.13*
23	7.567	47.56	50.00	-2.44*
24	2.145	43.53	46.00	-2.47*
25	3.882	43.43	46.00	-2.57*
26	11.940	47.35	50.00	-2.65*
27	2.371	43.34	46.00	-2.66*
28	2.310	43.24	46.00	-2.76*
29	3.924	43.13	46.00	-2.87*
30	5.086	47.00	50.00	-3.00*
31	8.238	46.71	50.00	-3.29*
32	3.091	41.98	46.00	-4.02*
33	11.814	45.93	50.00	-4.07*
34	3.644	41.91	46.00	-4.09*
35	7.450	45.36	50.00	-4.64*
36	7.333	45.15	50.00	-4.85*
37	2.190	41.13	46.00	-4.87*
38	0.170	49.77	54.98	-5.21*
39	1.184	40.03	46.00	-5.97*
40	3.585	40.01	46.00	-5.99*
41	1.960	39.81	46.00	-6.19*
42	11.688	43.72	50.00	-6.28*
43	5.252	43.71	50.00	-6.29*
44	0.400	41.41	47.86	-6.45*
45	0.567	39.51	46.00	-6.49*
46	3.294	39.49	46.00	-6.51*
47	11.027	43.24	50.00	-6.76*

---

*Please See the Average Readings on the Following Pages and on the Plot
**Please See the Quasi-Peak Readings on the Following Pages and on the Plot

Universal Surveillance Systems Corporation
Power 4 System
Power 4 Booster Tx Pedestal AC Input
FCC Class B - Minimum Power - Black Lead
TEST ENGINEER : Kyle Fujimoto

---

14 highest peaks above -50.00 dB of FCC - Class B - Quasi-peak limit line
Peak criteria : 0.00 dB, Curve : Quasi-peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	4.672	53.19	56.00	-2.81
2	7.178	55.65	60.00	-4.35
3	4.624	51.45	56.00	-4.55
4	7.100	54.92	60.00	-5.08
5	6.809	53.72	60.00	-6.28
6	6.525	53.69	60.00	-6.31
7	6.458	53.35	60.00	-6.65
8	6.593	53.25	60.00	-6.75
9	6.288	52.81	60.00	-7.19
10	6.356	52.16	60.00	-7.84
11	4.576	47.75	56.00	-8.25
12	6.991	50.96	60.00	-9.04
13	4.456	45.35	56.00	-10.65
14	4.504	43.28	56.00	-12.72

Universal Surveillance Systems Corporation
Power 4 System
Power 4 Booster Tx Pedestal AC Input
FCC Class B - Minimum Power - Black Lead
TEST ENGINEER : Kyle Fujimoto

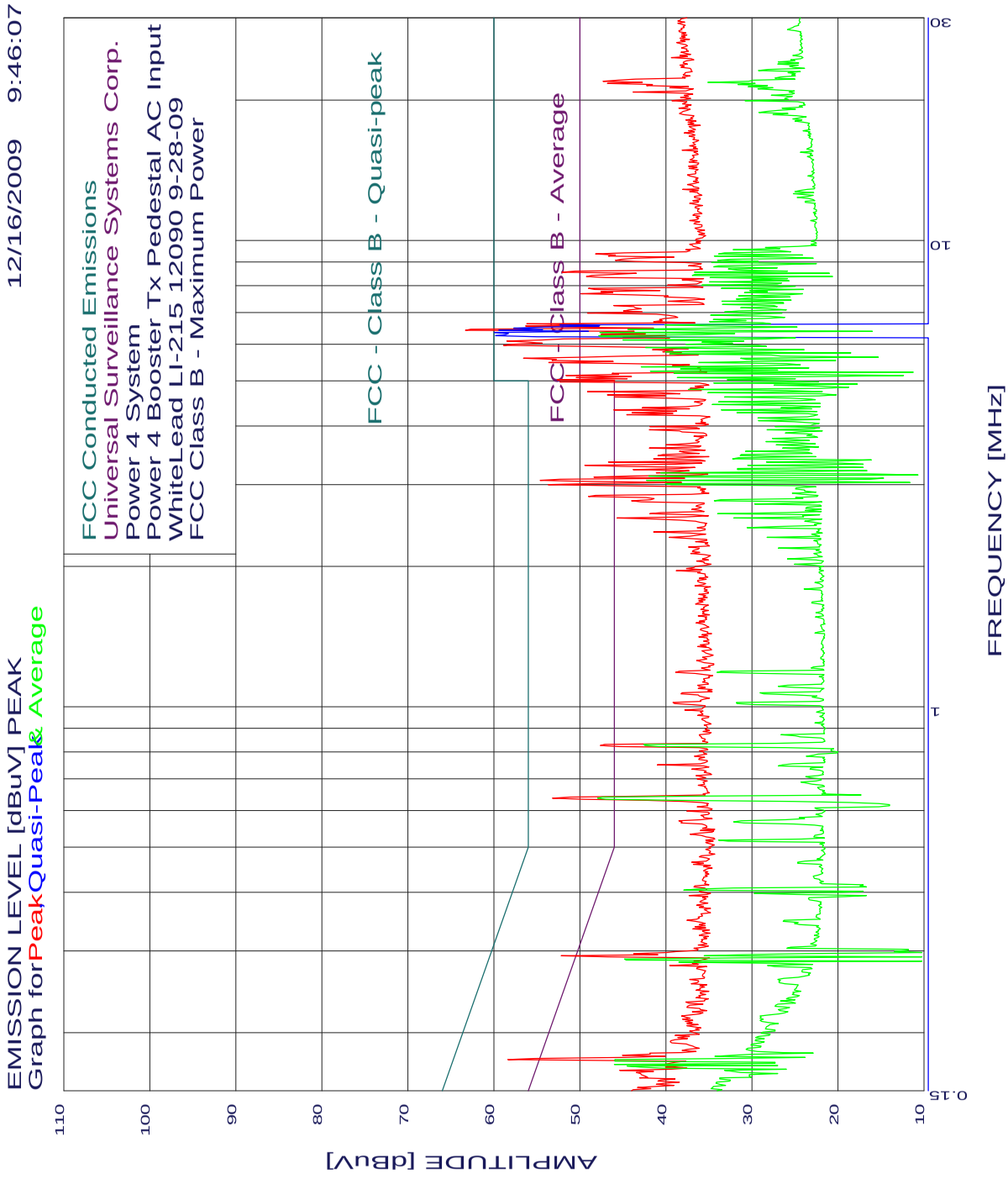
---

47 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 0.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.637	44.46	46.00	-1.54*
2	7.178	45.41	50.00	-4.59
3	7.027	45.29	50.00	-4.71
4	4.722	41.25	46.00	-4.75
5	4.624	40.18	46.00	-5.82
6	6.918	44.01	50.00	-5.99
7	6.458	43.85	50.00	-6.15
8	6.809	43.79	50.00	-6.21
9	0.826	39.53	46.00	-6.47
10	4.799	38.76	46.00	-7.24
11	6.059	42.12	50.00	-7.88
12	4.902	38.00	46.00	-8.00
13	6.356	40.94	50.00	-9.06
14	7.333	40.87	50.00	-9.13
15	4.272	36.26	46.00	-9.74
16	6.123	39.62	50.00	-10.38
17	4.384	35.43	46.00	-10.57
18	4.339	35.21	46.00	-10.79
19	4.092	34.33	46.00	-11.67
20	2.134	34.28	46.00	-11.72
21	6.593	38.11	50.00	-11.89
22	7.606	38.07	50.00	-11.93
23	4.456	33.98	46.00	-12.02
24	2.077	33.82	46.00	-12.18
25	6.220	37.74	50.00	-12.26
26	5.996	37.72	50.00	-12.28
27	5.901	37.36	50.00	-12.64
28	5.838	37.36	50.00	-12.64
29	5.479	37.14	50.00	-12.86
30	5.031	36.91	50.00	-13.09
31	6.700	36.42	50.00	-13.58
32	7.815	36.17	50.00	-13.83
33	2.250	31.84	46.00	-14.16
34	3.862	31.45	46.00	-14.55
35	0.172	40.25	54.86	-14.61
36	2.870	30.67	46.00	-15.33
37	1.184	30.60	46.00	-15.40
38	7.450	34.51	50.00	-15.49
39	7.689	34.44	50.00	-15.56
40	4.954	30.42	46.00	-15.58
41	8.148	34.31	50.00	-15.69
42	1.016	30.26	46.00	-15.74
43	3.924	30.12	46.00	-15.88
44	3.644	29.81	46.00	-16.19
45	3.702	29.78	46.00	-16.22
46	5.307	33.62	50.00	-16.38
47	5.715	33.52	50.00	-16.48

---

*This is a Radio Station Verified by the Audio Detector of the QP Detector and not the EUT. This signal is still present even when the EUT is turned off.


12/16/2009 9:46:07
FCC Conducted Emissions
Universal Surveillance Systems Corp.
Power 4 System
Power 4 Booster Tx Pedestal AC Input
WhiteLead LI-215 12090 9-28-09
FCC Class B - Maximum Power
FCC - Class B - Quasi-peak
FCC - Class B - Average
EMISSION LEVEL [dBuV] PEAK
Graph forPeakQuasi-PeakAverage
AMPLITUDE [dBuV]
FREQUENCY [MHz]
110
100
90
80
70
60
50
40
30
20
10
0.15
1
10
30

Universal Surveillance Systems Corporation
Power 4 System
Power 4 Booster Tx Pedestal AC Input
FCC Class B - Maximum Power - White Lead
TEST ENGINEER : Kyle Fujimoto

---

47 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	6.424	63.27	50.00	13.27* **
2	5.964	58.84	50.00	8.84*
3	3.059	54.57	46.00	8.57*
4	6.091	58.45	50.00	8.45*
5	2.995	53.66	46.00	7.66*
6	0.637	53.13	46.00	7.13*
7	5.597	56.52	50.00	6.52*
8	6.559	56.28	50.00	6.28* **
9	4.980	52.28	46.00	6.28*
10	6.627	56.18	50.00	6.18*
11	0.175	58.35	54.72	3.63*
12	5.479	53.61	50.00	3.61*
13	3.294	49.38	46.00	3.38*
14	4.748	49.06	46.00	3.06*
15	2.826	48.95	46.00	2.95*
16	5.031	52.58	50.00	2.58*
17	3.107	48.37	46.00	2.37*
18	8.551	52.01	50.00	2.01*
19	0.293	52.13	50.45	1.68*
20	0.826	47.61	46.00	1.61*
21	5.142	51.59	50.00	1.59*
22	4.672	46.76	46.00	0.76*
23	3.346	46.68	46.00	0.68*
24	5.086	50.38	50.00	0.38*
25	4.339	46.04	46.00	0.04*
26	4.624	45.96	46.00	-0.04*
27	7.689	49.85	50.00	-0.15*
28	2.540	45.64	46.00	-0.36*
29	8.372	49.20	50.00	-0.80*
30	6.991	49.11	50.00	-0.89*
31	7.898	48.97	50.00	-1.03*
32	4.227	44.53	46.00	-1.47*
33	9.352	48.16	50.00	-1.84*
34	2.766	43.95	46.00	-2.05*
35	4.272	43.94	46.00	-2.06*
36	3.226	43.78	46.00	-2.22*
37	6.288	47.56	50.00	-2.44*
38	7.773	47.56	50.00	-2.44*
39	6.356	47.47	50.00	-2.53*
40	21.959	47.30	50.00	-2.70*
41	21.724	46.78	50.00	-3.22*
42	4.384	42.74	46.00	-3.26*
43	7.255	46.03	50.00	-3.97*
44	3.924	41.92	46.00	-4.08*
45	3.585	41.90	46.00	-4.10*
46	9.065	45.84	50.00	-4.16*
47	2.596	41.84	46.00	-4.16*

---

*Please See the Average Readings on the Following Page and on the Plot
**Please See the Quasi-Peak Readings on the Following Pages and on the Plot

Universal Surveillance Systems Corporation
Power 4 System
Power 4 Booster Tx Pedestal AC Input
FCC Class B - Maximum Power - White Lead
TEST ENGINEER : Kyle Fujimoto

---

5 highest peaks above -50.00 dB of FCC - Class B - Quasi-peak limit line
Peak criteria : 0.00 dB, Curve : Quasi-peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	6.356	59.90	60.00	-0.10
2	6.254	59.81	60.00	-0.19
3	6.424	59.41	60.00	-0.59
4	6.491	57.66	60.00	-2.34
5	6.593	52.28	60.00	-7.72

Universal Surveillance Systems Corporation
Power 4 System
Power 4 Booster Tx Pedestal AC Input
FCC Class B - Maximum Power - White Lead
TEST ENGINEER : Kyle Fujimoto

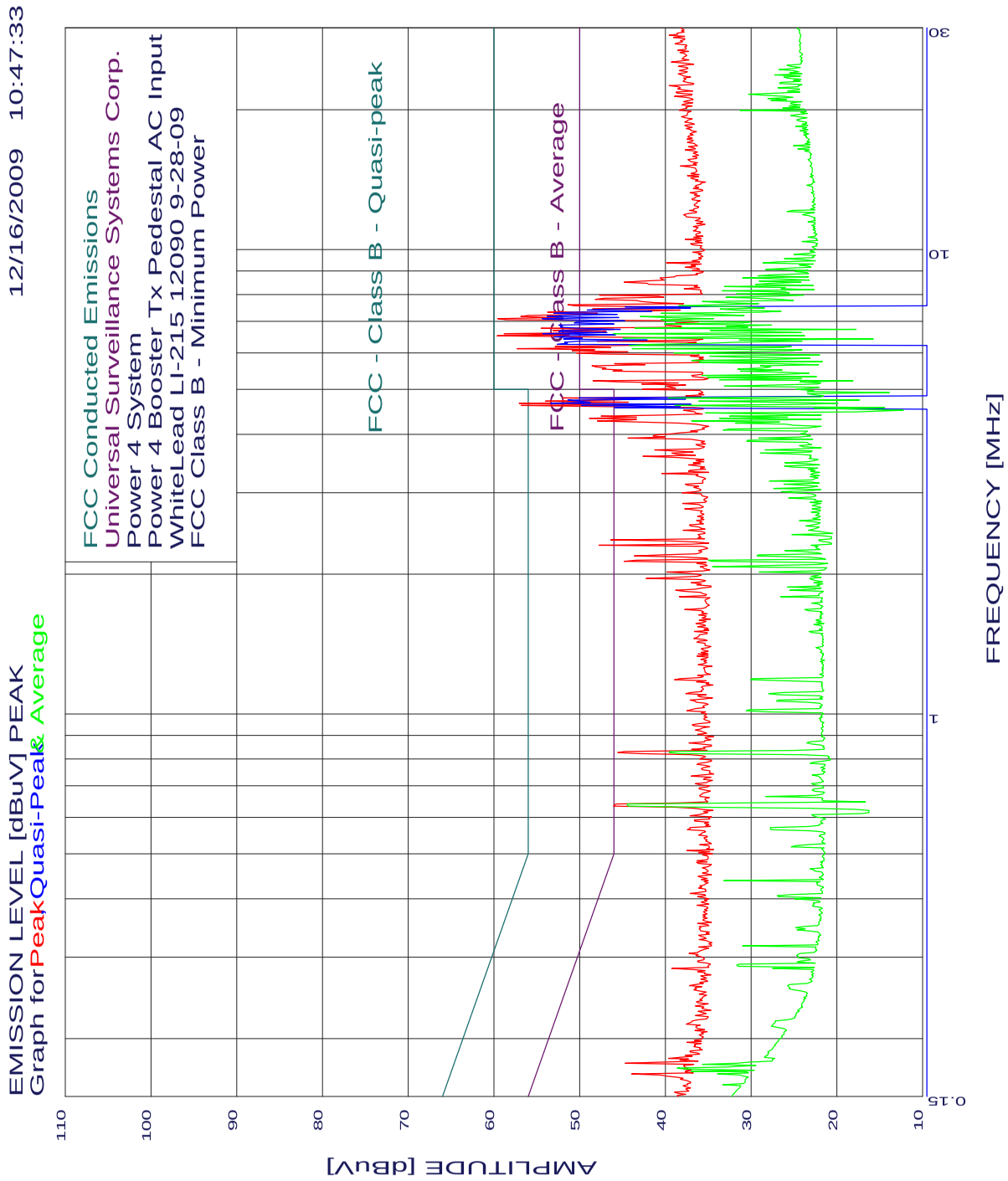
---

47 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 0.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.637	47.91	46.00	1.91*
2	6.254	47.76	50.00	-2.24
3	6.356	47.66	50.00	-2.34
4	0.831	42.56	46.00	-3.44
5	3.059	42.24	46.00	-3.76
6	3.124	41.98	46.00	-4.02
7	6.123	44.99	50.00	-5.01
8	3.175	40.56	46.00	-5.44
9	6.458	44.40	50.00	-5.60
10	0.288	44.76	50.58	-5.82
11	3.011	40.00	46.00	-6.00
12	5.362	42.83	50.00	-7.17
13	5.901	42.35	50.00	-7.65
14	5.252	41.76	50.00	-8.24
15	4.799	37.34	46.00	-8.66
16	0.175	45.88	54.72	-8.84
17	0.171	45.94	54.90	-8.96
18	0.404	37.88	47.77	-9.89
19	6.593	40.08	50.00	-9.92
20	5.774	40.06	50.00	-9.94
21	5.715	39.55	50.00	-10.45
22	0.170	44.44	54.98	-10.55
23	4.722	35.10	46.00	-10.90
24	5.197	39.05	50.00	-10.95
25	5.086	38.68	50.00	-11.32
26	4.456	34.62	46.00	-11.38
27	4.954	34.39	46.00	-11.61
28	2.766	34.36	46.00	-11.64
29	5.307	38.30	50.00	-11.70
30	1.184	34.02	46.00	-11.98
31	2.596	34.00	46.00	-12.00
32	0.518	33.86	46.00	-12.14
33	4.504	33.85	46.00	-12.15
34	0.283	38.47	50.72	-12.24
35	5.996	37.66	50.00	-12.34
36	4.339	33.50	46.00	-12.50
37	4.624	33.18	46.00	-12.82
38	8.416	36.90	50.00	-13.10
39	8.551	36.63	50.00	-13.37
40	3.401	32.20	46.00	-13.80
41	5.479	36.18	50.00	-13.82
42	0.567	32.11	46.00	-13.89
43	2.540	32.09	46.00	-13.91
44	8.023	35.81	50.00	-14.19
45	1.021	31.78	46.00	-14.22
46	6.059	35.77	50.00	-14.23
47	4.272	31.71	46.00	-14.29

---

*This is a Radio Station Verified by the Audio Detector of the QP Detector and not the EUT. This signal is still present even when the EUT is turned off.


12/16/2009 10:47:33
FCC Conducted Emissions
Universal Surveillance Systems Corp.
Power 4 System
Power 4 Booster Tx Pedestal AC Input
WhiteLead LI-215 12090 9-28-09
FCC Class B - Minimum Power
FCC - Class B - Quasi-peak
FCC - Class B - Average
EMISSION LEVEL [dBuV] PEAK
Graph forPeakQuasi-PeakAverage
AMPLITUDE [dBuV]
FREQUENCY [MHz]
110
100
90
80
70
60
50
40
30
20
10
30
10
1
0.15

Universal Surveillance Systems Corporation
Power 4 System
Power 4 Booster Tx Pedestal AC Input
FCC Class B - Minimum Power
TEST ENGINEER : Kyle Fujimoto

---

47 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	4.672	57.06	46.00	11.06* **
2	4.624	56.76	46.00	10.76* **
3	6.525	59.58	50.00	9.58* **
4	7.100	59.52	50.00	9.52* **
5	6.593	58.78	50.00	8.78* **
6	4.722	53.96	46.00	7.96* **
7	6.123	57.25	50.00	7.25*
8	7.178	56.82	50.00	6.82* **
9	4.799	51.97	46.00	5.97* **
10	6.773	54.49	50.00	4.49* **
11	7.333	53.73	50.00	3.73* **
12	6.700	53.09	50.00	3.09* **
13	6.186	52.86	50.00	2.86*
14	4.339	48.84	46.00	2.84*
15	4.272	47.94	46.00	1.94*
16	2.310	47.72	46.00	1.72*
17	4.384	47.44	46.00	1.44*
18	7.606	51.35	50.00	1.35*
19	6.059	50.85	50.00	0.85*
20	5.996	50.34	50.00	0.34* **
21	2.371	46.33	46.00	0.33*
22	0.634	46.02	46.00	0.02*
23	0.826	45.51	46.00	-0.49*
24	2.134	44.81	46.00	-1.19*
25	5.626	48.52	50.00	-1.48*
26	7.450	48.44	50.00	-1.56*
27	5.224	48.39	50.00	-1.61*
28	3.924	44.32	46.00	-1.68*
29	7.815	48.16	50.00	-1.84*
30	6.356	47.97	50.00	-2.03* **
31	7.981	47.67	50.00	-2.33*
32	2.190	43.62	46.00	-2.38*
33	3.585	42.60	46.00	-3.40*
34	1.960	42.20	46.00	-3.80*
35	5.479	46.11	50.00	-3.89*
36	5.686	45.92	50.00	-4.08*
37	3.966	41.42	46.00	-4.58*
38	3.702	41.20	46.00	-4.80*
39	8.506	44.81	50.00	-5.19*
40	3.294	40.38	46.00	-5.62*
41	2.023	39.81	46.00	-6.19*
42	3.644	39.20	46.00	-6.80*
43	1.184	38.92	46.00	-7.08*
44	1.849	38.77	46.00	-7.23*
45	5.142	42.69	50.00	-7.31*
46	5.005	42.68	50.00	-7.32*
47	1.790	38.36	46.00	-7.64*

---

*Please See the Average Readings on the Following Pages and on the Plot
** Please See the Quasi-Peak Readings on the Following Pages and on the Plot

Universal Surveillance Systems Corporation
Power 4 System
Power 4 Booster Tx Pedestal AC Input
FCC Class B - Minimum Power
TEST ENGINEER : Kyle Fujimoto

---

19 highest peaks above -50.00 dB of FCC - Class B - Quasi-peak limit line
Peak criteria : 0.00 dB, Curve : Quasi-peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	4.672	53.35	56.00	-2.65
2	4.748	51.33	56.00	-4.67
3	7.100	54.37	60.00	-5.63
4	6.593	54.29	60.00	-5.71
5	4.799	50.05	56.00	-5.95
6	4.624	49.79	56.00	-6.21
7	7.178	53.76	60.00	-6.24
8	6.491	52.99	60.00	-7.01
9	7.294	52.95	60.00	-7.05
10	6.254	52.60	60.00	-7.40
11	6.882	52.40	60.00	-7.60
12	6.664	52.38	60.00	-7.62
13	6.809	52.22	60.00	-7.78
14	6.424	51.85	60.00	-8.15
15	6.322	51.70	60.00	-8.30
16	6.954	50.58	60.00	-9.42
17	4.576	45.88	56.00	-10.12
18	7.411	49.12	60.00	-10.88
19	7.528	44.66	60.00	-15.34

Universal Surveillance Systems Corporation
Power 4 System
Power 4 Booster Tx Pedestal AC Input
FCC Class B - Minimum Power
TEST ENGINEER : Kyle Fujimoto

---

47 highest peaks above -50.00 dB of FCC - Class B - Average limit line
Peak criteria : 0.00 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.641	44.38	46.00	-1.62*
2	6.593	46.01	50.00	-3.99
3	6.458	44.90	50.00	-5.10
4	6.220	44.13	50.00	-5.87
5	6.123	43.84	50.00	-6.16
6	4.799	39.65	46.00	-6.35
7	6.773	43.54	50.00	-6.46
8	0.826	39.54	46.00	-6.46
9	7.178	42.93	50.00	-7.07
10	4.624	38.82	46.00	-7.18
11	4.272	36.90	46.00	-9.10
12	7.294	40.49	50.00	-9.51
13	7.063	40.46	50.00	-9.54
14	6.918	40.07	50.00	-9.93
15	4.722	36.07	46.00	-9.93
16	4.456	35.26	46.00	-10.74
17	5.996	38.98	50.00	-11.02
18	2.145	34.96	46.00	-11.04
19	2.077	34.50	46.00	-11.50
20	7.567	38.42	50.00	-11.58
21	4.339	33.68	46.00	-12.32
22	4.092	33.23	46.00	-12.77
23	5.774	36.92	50.00	-13.08
24	4.384	32.49	46.00	-13.51
25	0.438	33.15	47.11	-13.96
26	5.715	36.02	50.00	-13.98
27	4.227	31.75	46.00	-14.25
28	5.362	35.69	50.00	-14.31
29	7.731	35.67	50.00	-14.33
30	5.307	35.10	50.00	-14.90
31	5.901	34.79	50.00	-15.21
32	6.700	34.72	50.00	-15.28
33	1.016	30.51	46.00	-15.49
34	3.862	30.46	46.00	-15.54
35	1.184	30.06	46.00	-15.94
36	0.173	38.58	54.81	-16.23
37	5.252	33.66	50.00	-16.34
38	7.450	33.62	50.00	-16.38
39	8.148	33.37	50.00	-16.63
40	2.190	29.31	46.00	-16.69
41	8.327	33.09	50.00	-16.91
42	3.924	29.08	46.00	-16.92
43	5.086	33.07	50.00	-16.93
44	2.023	29.01	46.00	-16.99
45	7.898	32.91	50.00	-17.09
46	3.644	28.89	46.00	-17.11
47	6.845	32.82	50.00	-17.18

---

*This is a Radio Station Verified by the Audio Detector of the QP Detector and not the EUT. This signal is still present even when the EUT is turned off.