FCC 15.209
TEST REPORT

for

20 kHz MMS System

Model: UXT-MMS-NCU

Prepared for

AMERICAN SECURITY SPOL. S R.O.
K VILKAM 1633
107 00 PRAGUE 10 - DUBEC, CZECH REPUBLIC

Prepared by:_____

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Approved by:_____

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DATE: AUGUST 19, 2013

	REPORT BODY	APPENDICES					TOTAL
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GENERAL REPORT SUMMARY

Compatible Electronics Inc. generates this emissions 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:	20 kHz MMS System Model: UXT-MMS-NCU S/N: N/A
Product Description:	See Expository Statement
Modifications:	The EUT was not modified during the testing.
Customer:	American Security spol. s r.o. K Vilkam 1633 107 00 Prague 10 - Dubec, Czech Republic
Test Date(s):	June 24, 25, and 27, 2014
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.
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.

1. PURPOSE

This document is a qualification test report based on the emissions tests performed on the 20 kHz MMS System, Model: UXT-MMS-NCU. 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 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).

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

American Security spol. s r.o.

Clint Meyer	Technical Manager

Compatible Electronics Inc.

Kyle Fujimoto	Test Engineer
James Ross	Test Engineer

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 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 20 kHz MMS System, Model: UXT-MMS-NCU (EUT) was configured as follows:

CONTROLLER BOX		
Port Name	**Connected To**	**Comments**
15V AC	Power Supply	Connected to Tronic Power Supply in stand alone mode. Connected to Tronic Power Supply and Accessory Controller in Sync Mode.
PREV	Not Connected	This port is not functional and will have no function, thus port was not terminated.
NEXT	Not Connected	This port is not functional and will have no function, thus port was not terminated.
TX1	Pedestal #1	TX1 transmits to Pedestal #1 in both modes.
TX2	Pedestal #2	TX2 transmits to Pedestal #2 in both modes.
RX1	Accessory Receiver PCB #1	The EUT receives from RX PCB #1 in both modes.
RX2	Accessory Receiver PCB #2	The EUT receives from RX PCB #2 in both modes.
Relay 1	Unterminated	1-meter unterminated cable connected in both modes.
Relay 2	Unterminated	1-meter unterminated cable connected in both modes.
EXT IN	Unterminated	1-meter unterminated cable connected in both modes.
SYNC IN	Accessory Controller	The Accessory Controller provides a signal for the Controller in Sync mode. Unterminated in Stand Alone mode.
SYNC OUT	Accessory Controller	The Accessory Controller provides a signal for the Controller in Sync mode. Unterminated in Stand Alone mode.
PC Port	E-comm	Accessory used to conenct the EUT to a laptop via a router so that the power on the EUT can be controlled..

Description of Test Configuration – Emissions (continued)

The EUT was tested in both stand alone and sync configurations.

The controller box was connected to an E-comm vits its PC port.

The E-comm was also connected to a router and AC Adapter via its ethernet and power ports, respectively.

The entire system was continuously transmitting and receiving at 20 kHz. The EUT was tested in both its 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: The 15V AC port of the EUT controller is connected to the 15V AC port of the accessory controller also in sync mode so that the accessory controller has power.

Note #3: The EUT's SYNC IN and SYNC OUT ports were not terminated for the stand alone configuration.

Note #4: The laptop was used to control the power of the EUT via the router and E-comm connected to the PC port of the EUT.

Note #5: For Conducted Emissions and Radiated Emissions below 30 MHz, the EUT was tested with both pedestals transmitting and also with one pedestal transmitting and the other receiving.

Note #6: For Radiated Emissions above 30 MHz, the EUT was tested with both pedestals transmitting only. This is because the receiver does not have any frequencies generated higher than 1.705 MHz.

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 29-meter unshielded cable connecting the E-comm to the router. The cable has an RJ-45 connector at each end.

Cable 2 This is a 1-meter unshielded cable connecting the E-comm to the controller (EUT). The cable has an RJ-11 connector at each end.

Cable 3 This is a 6-meter unshielded cable connecting the controller (EUT) to pedestal #1. The cable has an RJ-45 connector at each end. The cable was bundled to a length of 2-meters.

Cable 4 This is a 6-meter unshielded cable connecting the controller (EUT) to pedestal #2. The cable has an RJ-45 connector at each end. The cable was bundled to a length of 2-meters.

Cable 5 This is a 6-meter unshielded cable connecting the controller (EUT) to Rx PCB #1. The cable has an RJ-45 connector at each end.

Cable 6 This is a 6-meter unshielded cable connecting the controller (EUT) to Rx PCB #2. The cable has an RJ-45 connector at each end.

Cable 7 **(Sync Mode Only)**
This is a 6-meter unshielded cable connecting the controller's SYNC IN port (EUT) to an accessory controller. The cable has an RJ-45 connector at each end.

Cable 8 **(Sync Mode Only)**
This is a 6-meter unshielded cable connecting the controller's SYNC OUT port (EUT) to an accessory controller. The cable has an RJ-45 connector at each end.

Cable 9 This is a 1.25-meter unshielded, unterminated cable connecting the controller's Relay #1 port (EUT). The cable has a 2-pin terminal block connector at the controller end. The cable was bundled to a length of 40-centimeters.

Cable 10 This is a 1.25-meter unshielded, unterminated cable connecting the controller's Relay #2 port (EUT). The cable has a 2-pin terminal block connector at the controller end. The cable was bundled to a length of 40-centimeters.

Cable 11 This is a 1.25-meter unshielded, unterminated cable connecting the controller's EXT IN (EUT). The cable has a 2-pin terminal block connector at the controller end. The cable was bundled to a length of 40-centimeters.

Cable 12 **(Sync Mode Only)**
This is a 6-meter unshielded cable connecting the controller's 15V AC port (EUT) to the 15V AC port of the accessory controller. The cable has a 2-pin terminal block at each end.

Cable 13 This is a 2-meter unshielded cable connecting the controller (EUT) to the power supply. The cable has a 2-pin terminal block at each end. The cable was bundled to a length of 1-meter.

Cable Construction and Termination (Continued)

Cable 14 This is a 2-meter unshielded cable connecting the E-comm to the power supply. The cable has a 1/8 inch power connector at the E-comm end and is hard wired into the power supply.

Cable 15 This is a 2-meter unshielded cable connecting the router to the power supply. The cable has a 1/8 inch power connector at the router end and is hard wired into the power supply.

Cable 16 This is a 6-meter unshielded cable connecting the router to the laptop. The cable has an RJ-45 connector at each end.

Note: For the Rx and Tx mode Tx #1 goes to a termination board and the Rx now goes to pedestal #1.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
20 kHz MMS SYSTEM (EUT)	AMERICAN SECURITY SPOL. S R.O.	UXT-MMS-NCU	N/A	UXT-MMS-NCU
E-COMM	AMERICAN SECURITY SPOL. S R.O.	D-ECOM	N/A	N/A
E-COMM POWER SUPPLY	STUNTRONICS	3A-066WPI2	N/A	N/A
CONTROLLER POWER SUPPLY	TRONIC	1300645	N/A	N/A
ROUTER POWER SUPPLY	MAXTELLA	MOC005005WA1A	N/A	N/A
ROUTER	D-LINK	DI-604	B25I159011999	N/A
PEDESTAL #1 (EUT)	AMERICAN SECURITY SPOL. S R.O.	MS-NDS	N/A	N/A
PEDESTAL #2 (EUT)	AMERICAN SECURITY SPOL. S R.O.	MS-NDS	N/A	N/A
RECEIVER BOARD PCB #1	AMERICAN SECURITY SPOL. S R.O.	MS-RX	273289	N/A
RECEIVER BOARD PCB #2	AMERICAN SECURITY SPOL. S R.O.	MS-RX	N/A	N/A
TRANSMIT BOARD PCB #1	AMERICAN SECURITY SPOL. S R.O.	MS-TX	273632	N/A
LAPTOP	LENOVO	Y510P	N/A	N/A
ACCESSORY CONTROLLER	AMERICAN SECURITY SPOL. S R.O.	UXT-MMS-NCU	N/A	UXT-MMS-NCU

5.2 Emissions 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 20, 2014	1 Year
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	2648A14530	May 20, 2014	1 Year
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01363	May 20, 2014	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					
Compatible Electronics Radiated Test	Compatible Electronics	2011	N/A	N/A	N/A
CombiLog Antenna	Com-Power	AC-220	61027	May 20, 2014	1 Year
Loop Antenna	Com-Power	AL-130	17089	January 29, 2013	2 Year
Preamplifier	Com-Power	PA-103	1582	December 30, 2013	1 Year
Turntable	Com-Power	TT-100	N/A	N/A	N/A
Antenna-Mast	Com-Power	AM-100	N/A	N/A	N/A
RF CONDUCTED EMISSIONS TEST EQUIPMENT					
ShieldRoom Test	Compatible Electronics	11CD	N/A	N/A	N/A
LISN	Com-Power	LI-215	12082	June 12, 2014	1 Year
LISN	Com-Power	LI-215	12090	June 12, 2014	1 Year
Transient Limiter	Com-Power	252A910	1	October 8, 2013	1 Year
VARIATION OF THE INPUT POWER TEST EQUIPMENT					
Variable Auto Transformer	Staco Energy Products	3PN1010	N/A	N/A	N/A
Multimeter	Wavetek	DM25XT	40209875	May 20, 2014	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 emissions test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 0.8 meter non-conductive surface 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 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:

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

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 1000 MHz	120 kHz	Combilog 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.

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.

7.3 Variation of the Input Power

The variation of the input power test was performed using the EMI Receiver. The EUT input power was varied between 85% and 115% of the nominal rated supply voltage. The carrier frequency was monitored for any change in amplitude.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.31(e).

7.4 RF Emissions Test Results

Table 1.0 CONDUCTED EMISSION RESULTS
20 kHz MMS System, Model: UXT-MMS-NCU

Frequency MHz	**Corrected Reading* dBuV**	**Specification Limit dBuV**	**Delta (Cor. Reading – Spec. Limit) dB**
1.184 (White Lead) Maximum Power Sync Mode 2 Transmitters	42.78	50.00	-3.22
9.256 (Black Lead) Maximum Power Stand Alone 2 Transmitters	46.72	50.00	-3.28
8.023 (White Lead) Minimum Power Stand Alone 2 Transmitters	46.70	50.00	-3.30
9.506 (White Lead) Minimum Power Stand Alone 2 Transmitters	46.63	50.00	-3.37
9.112 (Black Lead) Maximum Power Stand Alone 2 Transmitters	46.52	50.00	-3.48
8.777 (White Lead) Maximum Power Sync Mode Transmit and Receive	46.51	50.00	-3.49

Notes:
* The complete emissions data is given in Appendix E of this report.

7.4 RF Emissions Test Results

Table 2.0 RADIATED EMISSION RESULTS
20 kHz MMS System, Model: UXT-MMS-NCU

Frequency MHz	**Corrected Reading* dBuV**	**Specification Limit dBuV**	**Delta (Cor. Reading – Spec. Limit) dB**
50.108 (Vertical) Minimum Power Sync Mode	36.00	39.08	-3.08
150.086 (Vertical)) Minimum Power Sync Mode	40.10	43.52	-3.42
150.064 (Vertical) Maximum Power Sync Mode	40.01 (QP)	43.52	-3.51
600.080 (Horizontal) Maximum Power Stand Alone	42.90	46.44	-3.54
600.058 (Horizontal) Minimum Power Sync Mode	42.60 (QP)	46.44	-3.84
600.029 (Vertical) Maximum Power Stand Alone	42.20	46.44	-4.24

Notes:
* The complete emissions data is given in Appendix E of this report.

8. CONCLUSIONS

The 20 kHz MMS System, Model: UXT-MMS-NCU, 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.

APPENDIX A

LABORATORY ACCREDITATIONS AND RECOGNITIONS

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 fulfilment 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 15.205, 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 MODEL COVERED UNDER THIS REPORT

ADDITIONAL MODEL COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST	20 kHz MMS System Model: UXT-MMS-NCU S/N: N/A

There were no additional Model covered under this report.

APPENDIX D

DIAGRAMS, CHARTS AND PHOTOS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

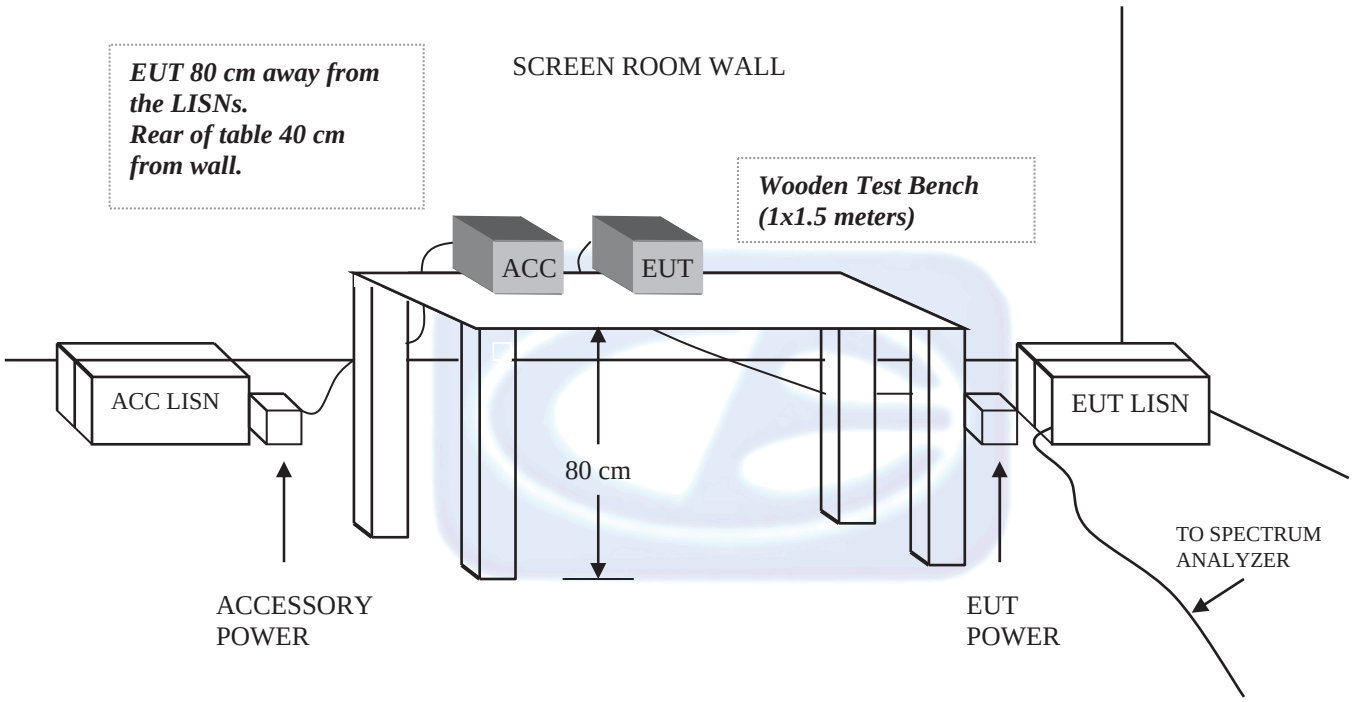
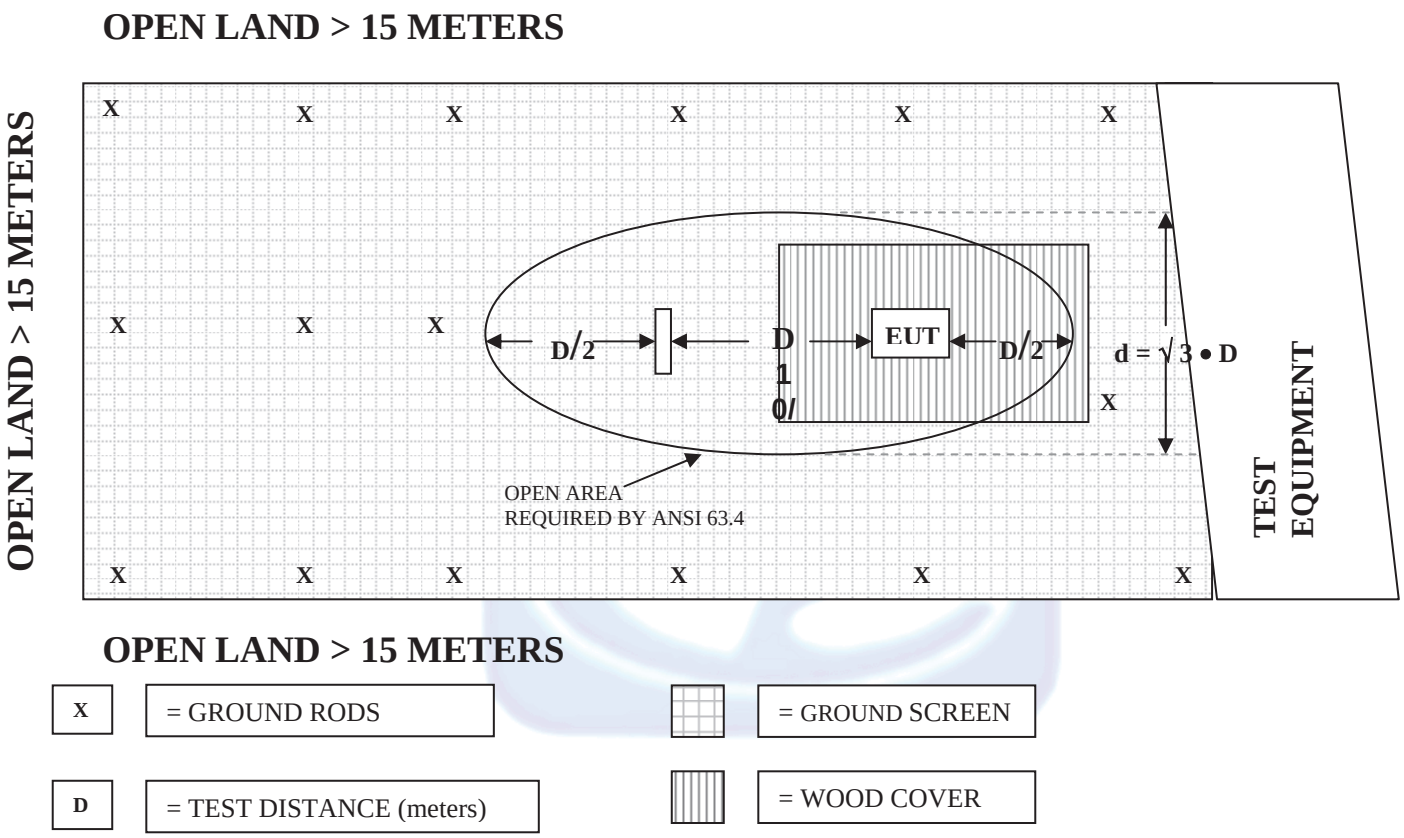


FIGURE 2: PLOT MAP AND LAYOUT OF THE RADIATED TEST SITE



COM-POWER AC-220

COMBILOG ANTENNA

S/N: 61027

CALIBRATION DATE: MAY 20, 2014

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	21.50	200	14.50
35	22.00	250	16.80
40	22.60	300	18.60
45	21.20	350	16.30
50	18.70	400	20.70
60	18.40	450	21.00
70	13.70	500	22.70
80	10.30	550	21.70
90	12.50	600	22.80
100	12.90	650	23.20
120	15.70	700	24.20
125	15.80	750	25.50
140	14.50	800	25.90
150	14.40	850	26.60
160	14.50	900	26.70
175	15.30	950	27.90
180	14.70	1000	28.30

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 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

FRONT VIEW

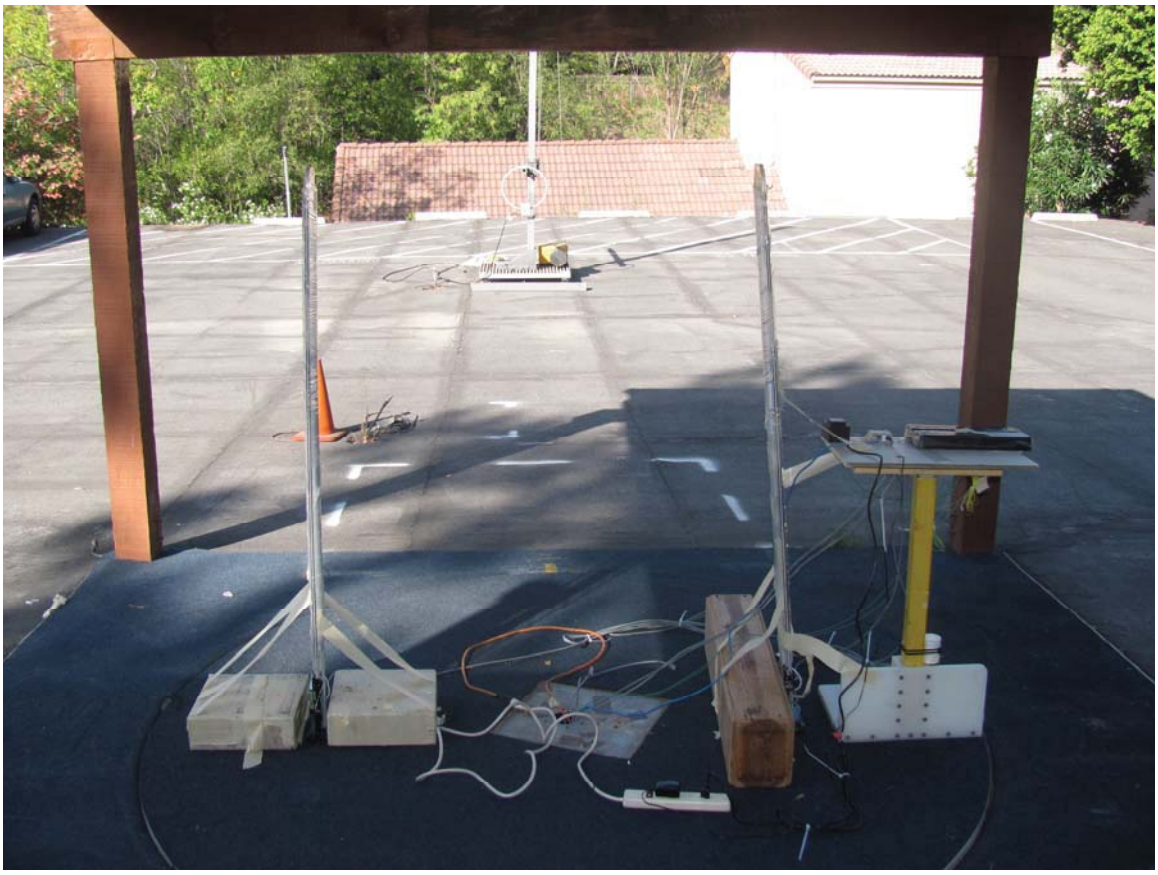
AMERICAN SECURITY SPOL. S R.O.
20 kHz MMS System
Model: UXT-MMS-NCU
FCC 15.209 – RADIATED EMISSIONS – BELOW 30 MHz – STAND ALONE MODE – TWO TX

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

AMERICAN SECURITY SPOL. S R.O.
20 kHz MMS System
Model: UXT-MMS-NCU
FCC 15.209 – RADIATED EMISSIONS – BELOW 30 MHz – STAND ALONE MODE – TWO TX

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



FRONT VIEW

AMERICAN SECURITY SPOL. S R.O.
20 kHz MMS System
Model: UXT-MMS-NCU
FCC 15.209 – RADIATED EMISSIONS – BELOW 30 MHz – STAND ALONE MODE – TX AND RX

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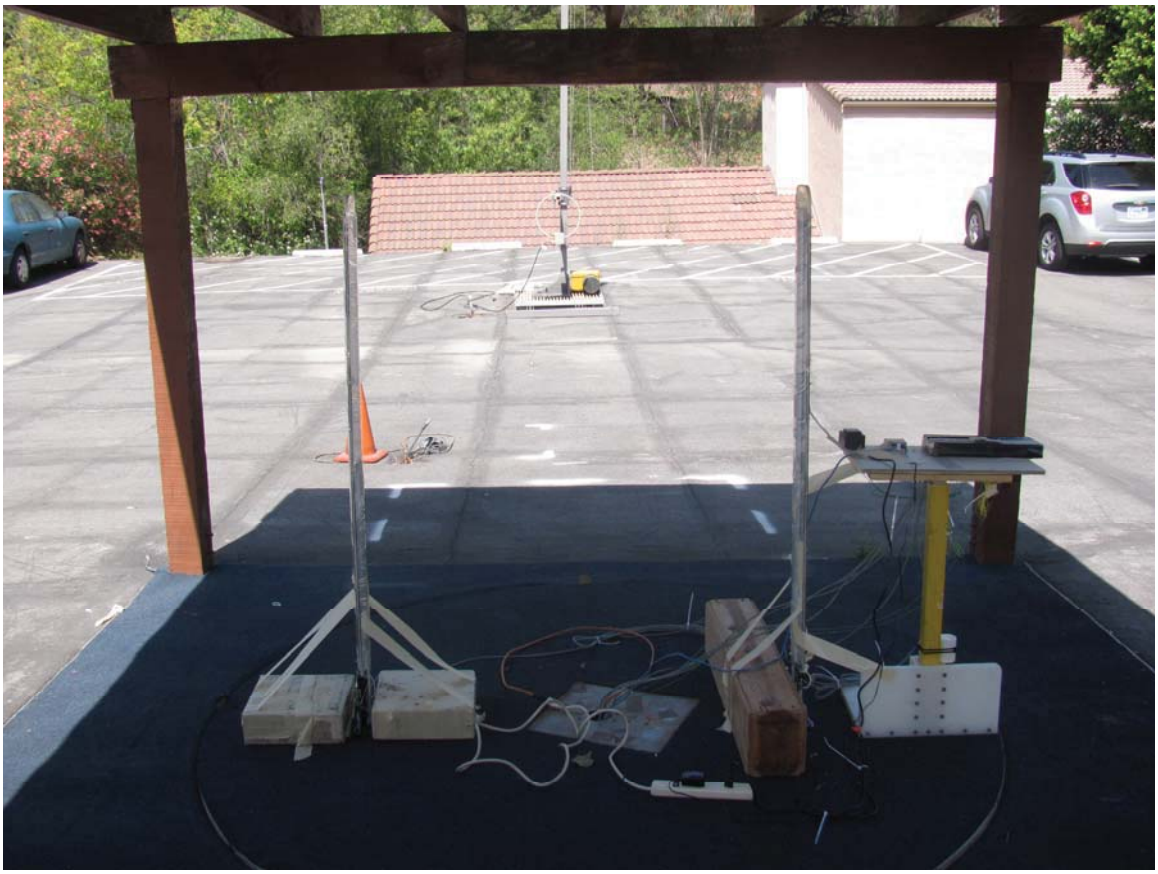

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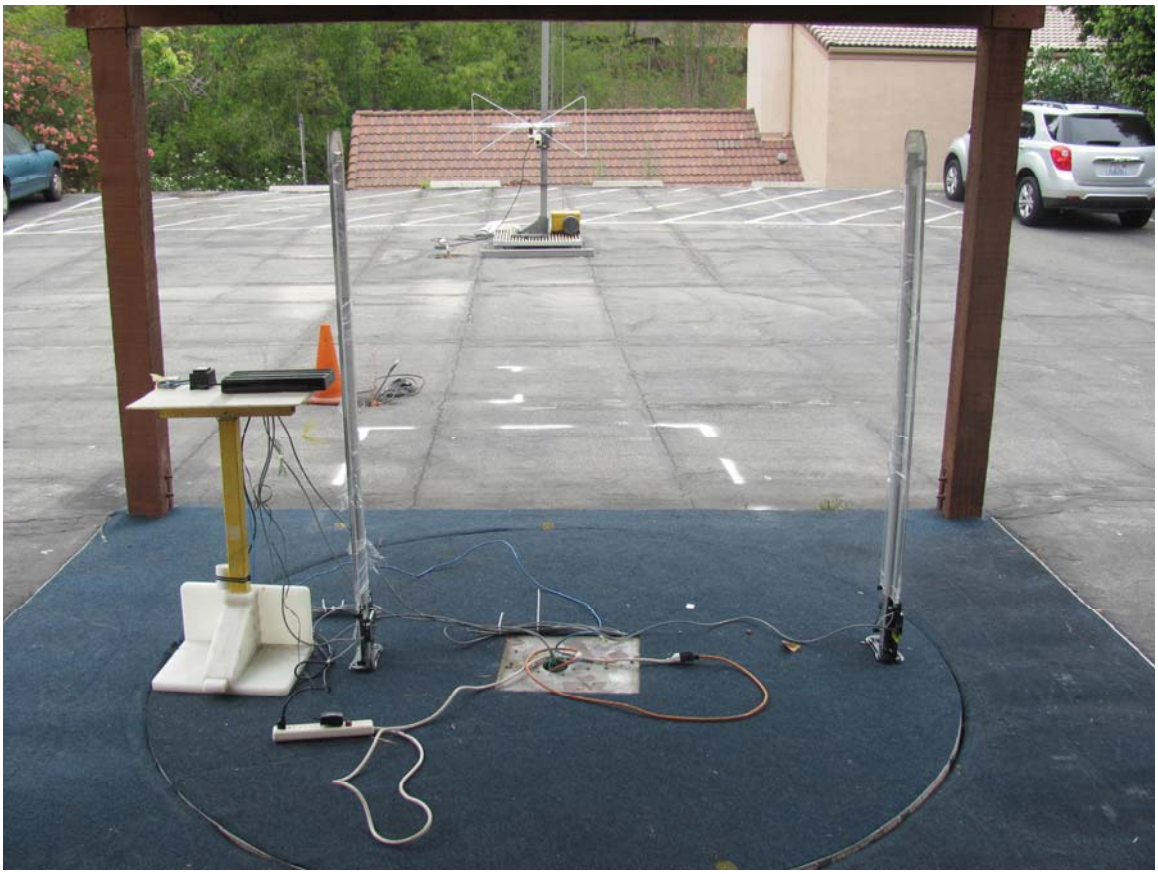

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AMERICAN SECURITY SPOL. S R.O.
20 kHz MMS System
Model: UXT-MMS-NCU
FCC SUBPART B – RADIATED EMISSIONS – ABOVE 30 MHz – STAND ALONE MODE

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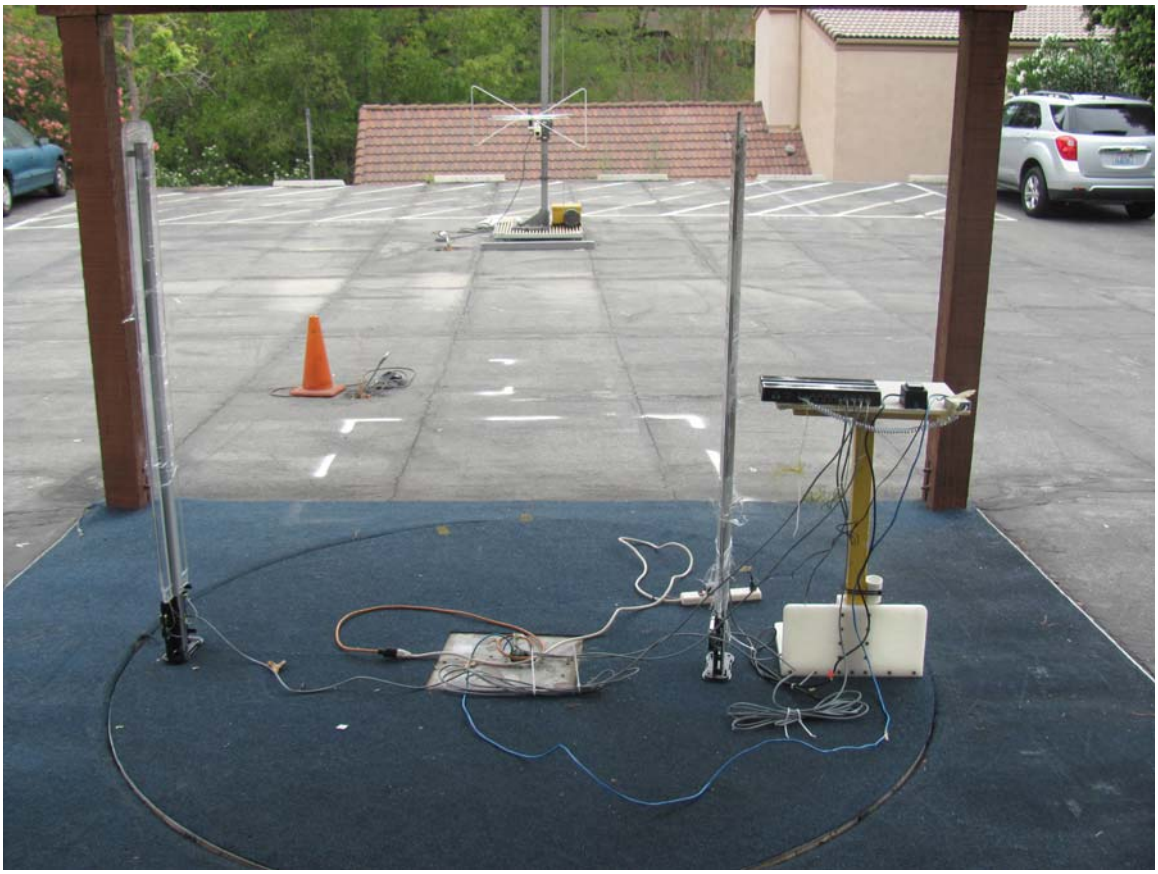

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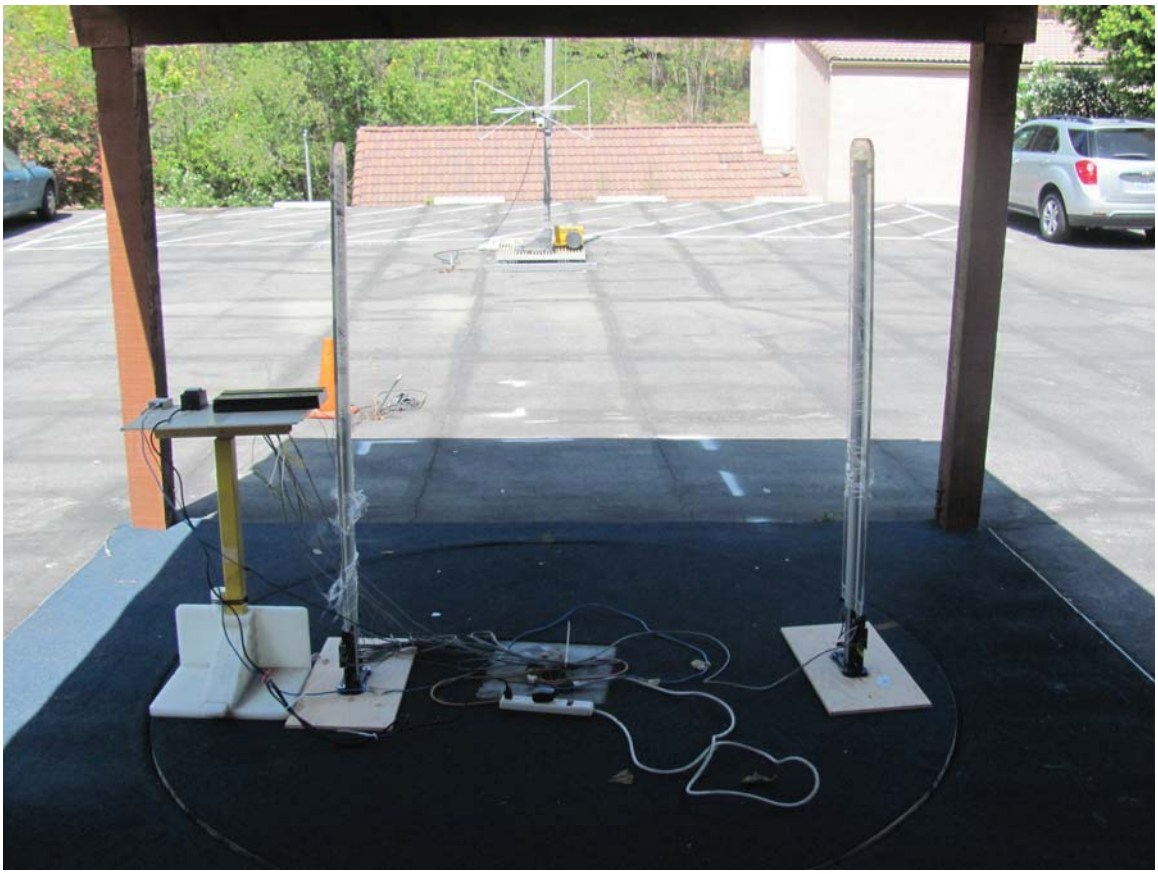

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FCC 15.207 and FCC SUBPART B – CONDUCTED EMISSIONS – STAND ALONE MODE – 2 TX

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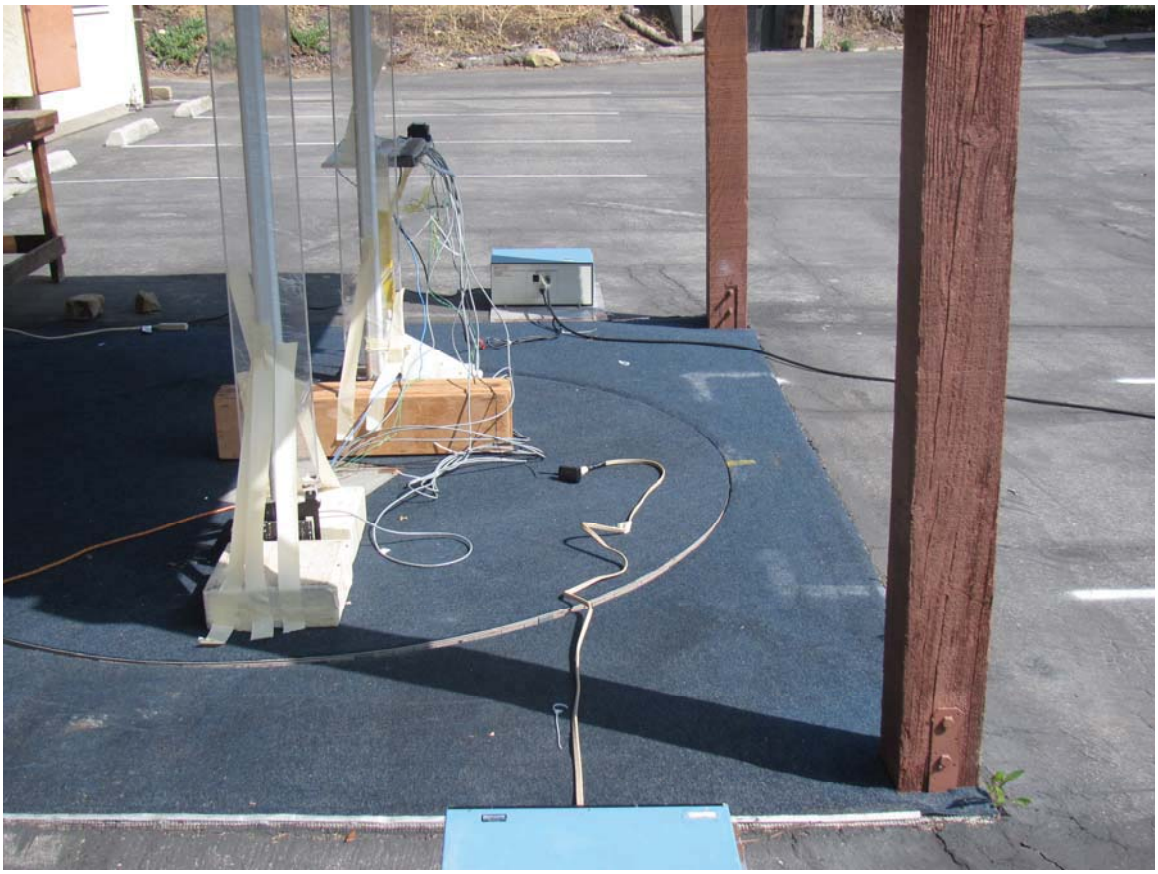

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