FCC PART 15, SUBPART B and C TEST REPORT

for

INTELLISWITCH MODEL: 34000002-001-RA FCC ID: TPZ-3400000-001

Prepared for

VUE TECHNOLOGY, INC. 95 ENTERPRISE SUITE 320 ALISO VIEJO, CALIFORNIA 92656

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DATE: OCTOBER 30, 2005

	REPORT	APPENDICES				TOTAL	
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1	Conducted Emissions Test Setup
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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 or any other agency of the U.S. Government.

Device Tested: IntelliSwitch

Model Number: 34000002-001-RA

S/N: None

Product Description: Please see Operational Description.

Modifications: The EUT was not modified during the testing.

Manufacturer: Vue Technology, Inc.

95 Enterprise Suite 320

Aliso Viejo, California 92656

Test Dates: July 19, 20, 22 and 28, 2005

Test Specifications: EMI requirements

CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.207, 15.209 and 15.247

Test Procedure: ANSI C63.4: 2003





SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz – 30 MHz	Complies with the Class B limits of CFR Title 47, Part 15 Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, section 15.207
2	Spurious Radiated RF Emissions, 30 MHz – 1000 MHz	Complies with the Class B limits of CFR Title 47, Part 15 Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, section 15.205 and 15.209.
3	Spurious Radiated RF Emissions, 10 kHz – 30 MHz and 1000 MHz – 10000 MHz	Complies with the Class B limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, section 15.247(d)
4	Fundamental and Emissions produced by the intentional radiator in non-restricted bands, 10 kHz – 10 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247(d)
5	Emissions produced by the intentional radiator in restricted bands, 10 kHz – 10 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209(a), and section 15.247 (d)
6	20 dB Bandwidth	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (a)(1)
7	Peak Power Output	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247(b)(2).
8	RF Conducted Antenna Test	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (d)
9	Channel Hopping Separation	This test was not performed because the EUT does not generate the RF signal and the signal source is from an already FCC approved device.
10	Average Time of Occupancy	This test was not performed because the EUT does not generate the RF signal and the signal source is from an already FCC approved device.
11	Number of Hopping Channels	This test was not performed because the EUT does not generate the RF signal and the signal source is from an already FCC approved device.





1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the IntelliSwitch Model Number: 34000002-001-RA. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 2003. 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; and Subpart C, sections 15.205, 15.207, 15.209 and 15.247.

Note: For the unintentional radiator portion of the test, the EUT was within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B.





2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 19121 El Toro Road, Silverado, California 92676.

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

Vue Technology, Inc.

Steve Trivelpiece Director of Hardware Steve Raynesford Hardware Engineer

Compatible Electronics, Inc.

Joey Madlangbayan Test Engineer Scott McCutchen Lab Manager

2.4 Date Test Sample was Received

The test sample was received on July 19, 2005.

2.5 Disposition of the Test Sample

The sample has remains at Compatible Electronics as of October 28, 2005.

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 Equipment Under Tes
P/N Part Number

S/N Serial Number
HP Hewlett Packard

ITE Information Technology Equipment

CML Corrected Meter Limit

LISN Line Impedance Stabilization Network

RFID Radio Frequency Identification





3. APPLICABLE DOCUMENTS

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

SPEC	TITLE
FCC Title 47, Part 15	FCC Rules - Radio frequency devices (including digital devices) –
Subpart C	Intentional Radiators
ANSI C63.4 2003	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz
FCC Title 47, Part 15 Subpart B	FCC Rules - Radio frequency devices (including digital devices) – Unintentional Radiators
FCC Public Notice – DA 00-705	Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems





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 EUT was setup in a tabletop configuration while continuously radiating an RF signal coming from an RFID reader device. Meanwhile the EUT was sending and receiving data to a remotely located laptop & traffic analyzer system. The RFID reader device, antenna rack, termination resistors, laptop and traffic analyzer system were all connected to the EUT via RF coax, auxiliary power, GPI/O and Ethernet ports respectively.

- Operation of the EUT during the testing

For the intentional radiator portion of the test – The EUT was directly connected to the spectrum analyzer and in its normal operating mode. A software program was used to control the channel of the RFID Reader or to commit the RFID Reader to channel hopping mode, depending on the nature of the specific test.

For the unintentional radiator and conducted emission portion of the test – The EUT was placed on the OATS table and was operating in its normal mode of operation while receiving a continuous signal from the RFID reader transmitted signal.

For the restricted band emission portion of the test – The EUT was placed on the OATS table and was operating in its normal mode of operation with the RFID reader continuously transmitting its signal.

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





4.1.1 Cable Construction and Termination

Cable 1

This is a 30 meter foil shielded RS232 cable connected from the EUT to the accessory room not terminated. It has a DB9 connector at both ends.

Cable 2

This is a 1 meter unshielded cable connecting one of the EUT auxiliary power ports to another. It has a 1/8 inch barrel connector at both ends.

Cable 3

This is a 1 meter unshielded cable connecting one of the EUT auxiliary power ports to a 100 ohm resistive load. It has a 1/8 inch barrel connector at both ends.

<u>Cable 4</u> This is a 2.5 meter braid shielded coax cable connecting the EUT to the Reader unit. The shield of the cable is grounded to the chassis of the Reader unit via the connectors.

- <u>Cables 5-20</u> These are 1 meter braid shielded coax cables connecting the EUT to a series of antenna elements on the display rack. The shield of the cables are grounded to the chassis via the connectors.
- <u>Cable 21-23</u> These are 30 meter unshielded twisted pair ethernet cables connecting the EUT to the traffic generator/ performance analyzer.

Cable 24

This is a 2 meter unshielded cable coiled to a length of 1 meter connecting the EUT GPIO port to a 10 ohm resistive load. It has an RJ9 connector at the EUT end and hardwired to the resistor.

Cable 25

This is a 2 meter unshielded cable connecting the EUT to an AC Adapter. There is a 1/8 inch barrel connector along with a molded ferrite at the EUT end and it is hardwired into the AC adapter.





5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

#	EQUIPMENT TYPE	MANUFACTURER	MODEL	SERIAL NUMBER	FCC ID
1	INTELLISWITCH (EUT)	VUE TECHNOLOGY, INC.	34000002-001- RA	NONE	TPZ-34000002-001
2	DVD DISPLAY RACK ANTENNA SYSTEM	VUE TECHNOLOGY, INC.	NONE	NONE	N/A
3	AC ADAPTER	AULT	PW122	NONE	N/A

ACCESSORY EQUIPMENT REMOTELY LOCATED

3	READER UNIT	SYMBOL	RD11320- 16114121US XR-400	NONE	H9PRD11320
4	TRAFFIC GENERATOR/ PERFORMANCE ANALYZER	IXIA	400T	035131V	N/A
5	MONITOR	SAMSUNG	710N	MJ17HCJY31395 5W	N/A
6	KEYBOARD	KEYTRONIC	K280W	W0304197679	N/A
7	MOUSE	MICROSOFT	PN: X08- 71118+	5915393-5	N/A





EMI Test Equipment 5.2

EQUIPMENT TYPE	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
EQUIPMENT TYPE	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Analyzer Spectrum – RF Section	Hewlett Packard	8566B	2637A03816	2/2/05	2/2/06
Analyzer Spectrum – Display Section	Hewlett Packard	85662A	2648A13730	2/2/05	2/2/06
Analyzer Spectrum - Quasi-Peak Adapter	Hewlett Packard	85650A	2430A00530	2/2/05	2/2/06
Antenna. Active Loop	Com Power	AL-130	17089	9/3/04	9/3/05
Antenna. Horn	Com-Power	AH-118	1319	5/14/04	5/14/06
Antenna. Biconical	Com Power	AB-100	14022	3/11/05	3/11/06
Antenna. Log Periodic	Com Power	AL-100	16016	4/4/05	4/4/06
Transient Limiter	Com Power	Hz-560	N/A	4/7/05	4/7/06
Computer Test Station	Hewlett Packard	Pavilion 4530	US91925466	N.C.R.	N/A
Generator Comb - Radiated	Com Power	CG-520	25164	N.C.R.	N/A
Hygrometer	Abbeon	HTAB169B	N/A	N.C.R.	N/A
Keyboard Test Station	Hewlett Packard	5183-7399	B91617825	N.C.R.	N/A
LISN EUT Side	Com Power	LI-215	12079	8/2/04	8/2/05
LISN Accessory Side	Com Power	LI-215	12073	8/2/04	8/2/05
Mast Antenna	Com Power	AM-400	N/A	N.C.R.	N/A
Monitor Test Station	Sony	CPD-100ES	7862A008	N.C.R.	N/A
Mouse Test Station	Hewlett Packard	M-S34	LZC911S8069	N.C.R.	N/A
Preamplifier	Com Power	PA-103	1541	1/22/05	1/22/06
Preamplifier	Com Power	PA-122	2120	3/3/05	3/3/06
Printer Test Station	Hewlett Packard	DeskJet 697C	US9341D07G	N.C.R.	N/A
AC Power Supply/Analyser	Agilent Technologies	6813B	US38390530	5/26/05	/5/26/06



5.4 EMI/EMC Measurement and Control Software Information

LAB(S)	SOFTWARE TITLE	MANUFACTURER	VERSION
Н & Ј	Compatible Electronics Data Capture Program	Compatible Electronics	3.1
Н& Ј	Compatible Electronics Emissions Program	Compatible Electronics	2.3 (SR21)







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 grounded via the coax cables.



7. CHARACTERISTICS OF THE TRANSMITTER

7.1 Transmitter Power

Transmit power is herein defined as the power delivered to a 50 ohm load at the RF output of the EUT.

Power	Channel	Accuracy	
26.8 dBm	LOW	+2/-2 dB	
26.7 dBm	MIDDLE	+2/-2 dB	
26.3 dBm	HIGH	+2/-2 dB	

7.2 Channel Number and Frequencies

This test was not performed because the EUT does not generate the RF signal and the signal source is from a device already FCC approved device.

7.3 Antenna Gain

The antenna gain is 4.1 dBi.





8. TEST PROCEDURES

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

8.1 RF Emissions

8.1.1 Conducted Emissions Test

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Section 15.207 for conducted emissions.

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. A quasi-peak and/or average reading was taken only where indicated in the data sheets. A 10 dB attenuation pad 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 connected to a EMI filter which 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: 2003. 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.





8.1.2 Radiated Emissions (Spurious and Harmonics) Test

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Sections 15.209 and 15.247 for radiated emissions.

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 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.

A quasi-peak and/or average reading was taken only for those readings which are marked accordingly on the data sheets.

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
10 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 10 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: 2003. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT by the Radiated Emission Manual Test software. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results.



Radiated Emissions (Spurious and Harmonics) Test (con't)

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







8.3 20 dB Bandwidth

The 20 dB Bandwidth was measured using the spectrum analyzer. The bandwidth was measured using a direct connection from the RF out on the EUT. The resolution and video bandwidths were $\geq 1\%$ of the 20 dB bandwidth.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (a)(1)(i). The 20 dB bandwidth is less than the separation between channels. Please see the data sheets located in Appendix E.

8.4 Peak Output Power

The Peak Output Power was measured using the spectrum analyzer. The EUT was directly connected to the spectrum analyzer. The Peak Output Power was then measured.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (b)(1). The maximum peak output power is less than 1 watt. Please see the results in section 7.1 of this test report.

8.5 RF Antenna Conducted Test

The RF antenna conducted test was performed using the spectrum analyzer. The RF antenna conducted test measured using a direct connection from the RF out on the EUT into the input of the Spectrum Analyzer. The resolution bandwidth was 100 kHz, and the video bandwidth was 100 kHz. The spans were wide enough to include all the harmonics and emissions that were produced by the intentional radiator.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (c). The RF power that is produced by the intentional radiator is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power. Please see the radiated emission data sheets located in Appendix E.





8.6 RF Band Edges

The RF band edges were taken at the edges of the spectrum (902 MHz when the EUT was on the low channel and 928 MHz when the EUT was on the high channel) using the spectrum analyzer. The 100 kHz bandwidth outside the frequency band was at least 20 dB below from the spectrum analyzer to the spec limit.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (c). The RF power at the band edges at 902 MHz and 928 MHz meet the limits of section 15.209. Please see the data sheets located in Appendix E.

8.7 Carrier Frequency Separation

The Channel Hopping Separation Test was measured using the spectrum analyzer. The EUT was operating in its normal operating mode. The resolution bandwidth was 100 kHz, and the video bandwidth 100 kHz. The frequency span was wide enough to include the peaks of two adjacent channels.

Test Results:

This test was not performed because the EUT does not generate the RF signal and the signal source is from an already FCC approved device.

8.8 Number of Hopping Frequencies

The Channel Hopping Separation Test was measured using the spectrum analyzer. The EUT was operating in its normal operating mode. The resolution bandwidth was 1 MHz, and the video bandwidth 1 MHz. The frequency span was wide enough to include all of the peaks in the frequency band of operation.

Test Results:

This test was not performed because the EUT does not generate the RF signal and the signal source is from an already FCC approved device.





8.8 Average Time of Occupancy Test

The Average Time of Occupancy Test was measured using the spectrum analyzer. The EUT was operating in normal operating mode. The frequency span was taken to 0 Hz with a sweep time of 500 msec to determine the time for each transmission. The EUT was tested in channel hopping mode.

The dwell time for one frequency was 64 msec. In a 10 second period, the number of frequency transmissions that appear are 4. Therefore, if you multiply the dwell time for one frequency transmission with the number of transmissions in a 10 second period, you should have the time of occupancy in a 10 second period.

Test Results:

This test was not performed because the EUT does not generate the RF signal and the signal source is from an already FCC approved device.





9. TEST PROCEDURE DEVIATIONS

The test procedures were not deviated from during the tests.

10. CONCLUSIONS

The IntelliSwitch Model Number: 34000002-001-RA meets all of the specification limits defined in FCC Title 47, Part 15, Subpart C, sections 15.205, 15.207, 15.209 and 15.247.

Note: For the unintentional radiator portion of the test, the EUT was within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B.





APPENDIX A

LABORATORY ACCREDITATIONS & RECOGNITIONS





LABORATORY ACCREDITATIONS AND RECOGNITIONS

For US, Canada, Australia/New Zealand, Taiwan and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025 an ISO 9002 equivilent. Please follow the link to the NIST site for each of our facilities NVLAP certificate and scope of accreditation.

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

Silverado/Lake Forest Division: http://ts.nist.gov/ts/htdocs/210/214/scopes/2005270.htm

Brea Division: http://ts.nist.gov/ts/htdocs/210/214/scopes/2005280.htm
Agoura Division: http://ts.nist.gov/ts/htdocs/210/214/scopes/2000630.htm



Compatible Electronics has been accredited by ANSI and appointed by the FCC to serve as a Telecommunications Certification Body (TCB). Compatible Electronics ANSI TCB listing can be found at: http://www.ansi.org/public/ca/ansi.cp.html



Compatible Electronics has been nominated as a Conformity Assessment Body (CAB) for EMC under the US/EU Mutual Recognition Agreement (MRA). Compatible Electronics NIST US/EU CAB listing can be found at: http://ts.nist.gov/ts/htdocs/210/gsig/emc-cabs-mar02.pdf



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). Compatible Electronics NIST US/APEC CAB listing can be found at: http://ts.nist.gov/ts/htdocs/210/gsig/apec/bsmi-cabs-may02.pdf



Compatible Electronics has been validated by NEMKO against ISO/IEC 17025 under the NEMKO EMC Laboratory Authorization (ELA) program to all EN standards required by the European Union (EU) EMC Directive 89/336/EEC. Please follow the link to the Compatible Electronics' web site for each of our facilities NEMKO ELA certificate and scope of accreditation. http://www.celectronics.com/certs.htm

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

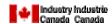


Compatible Electronics VCCI listing can be found at: http://www.vcci.or.jp/vcci e/member/tekigo/setsubi index id.html

Just type "Compatible Electronics" into the Keyword search box.

Compatible Electronics FCC listing can be found at: https://gullfoss2.fcc.gov/prod/oet/index ie.html

Just type "Compatible Electronics" into the Test Firms search box.



Compatible Electronics IC listing can be found at: http://spectrum.ic.gc.ca/~cert/labs/oats lab c e.html





APPENDIX B

MODIFICATIONS TO THE EUT





MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.247 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

IntelliSwitch

Model Number: 34000002-001-RA

S/N: None

There were no additional models covered under this report.







APPENDIX D

DIAGRAMS, CHARTS AND PHOTOS





FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

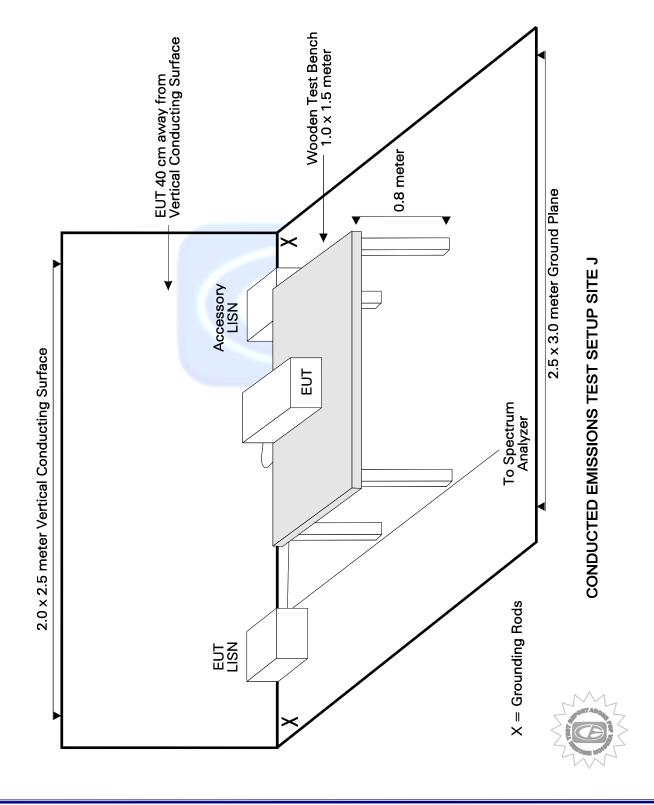
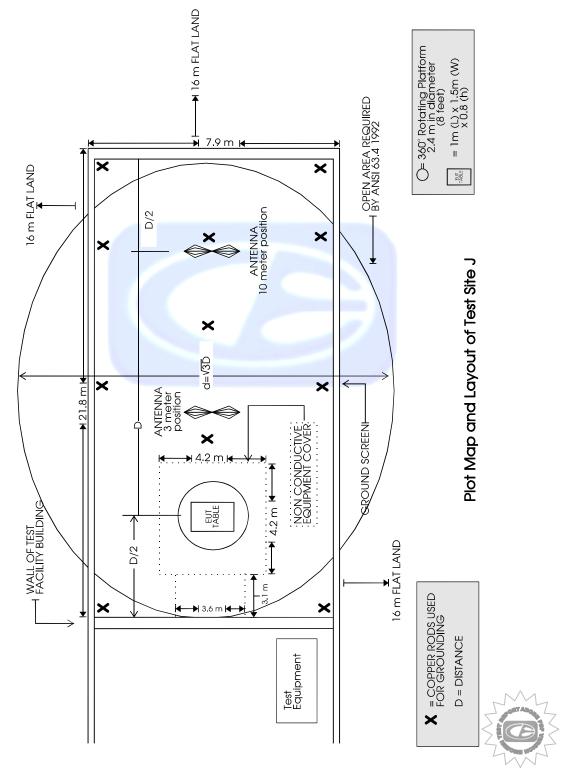




FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE





COM-POWER AL-130

LAB H – LOOP ANTENNA (E-FIELD)

S/N: 17089

CALIBRATION DATE: SEPTEMBER 3, 2004

EDECLIENCY			
FREQUENCY	FACTOR	FREQUENCY	FACTOR
(MHz)	(dB)	(MHz)	(dB)
0.009	10.7	1.0	10.5
0.01	10.6	2.0	10.9
0.02	9.7	3.0	10.7
0.03	11.3	4.0	10.5
0.04	11.0	5.0	11.1
0.05	9.5	6.0	11.3
0.06	10.2	7.0	10.8
0.07	10.0	8.0	10.8
0.08	9.7	9.0	11.2
0.09	9.8	10.0	10.8
0.1	9.8	12.0	10.4
0.2	7.4	14.0	10.1
0.3	9.9	15.0	9.9
0.4	9.9	16.0	10.0
0.5	10.0	18.0	10.1
0.6	10.5	20.0	10.2
0.7	10.1	25.0	8.5
0.8	10.1	30.0	8.9
0.9	10.5	-	- \



COM-POWER AB-100

LAB J - BICONICAL ANTENNA

S/N: 14022

CALIBRATION DATE: MARCH 11, 2005

FREQUENCY	FACTOR	FREQUENCY	FACTOR
(MHz)	(dB)	(MHz)	(dB)
30.0	9.9	120.0	10.7
35.0	13.0	125.0	10.4
40.0	13.0	140.0	11.9
45.0	11.6	150.0	12.4
50.0	11.4	160.0	12.8
60.0	10.9	175.0	13.6
70.0	9.5	180.0	12.7
80.0	9.2	200.0	14.4
90.0	8.0	250.0	17.5
100.0	10.7	300.0	19.2





COM-POWER AL-100

LAB J - LOG PERIODIC ANTENNA

S/N: 16016

CALIBRATION DATE: APRIL 4, 2005

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	13.3	350	15.1
400	18.1	450	16.0
500	16.9	550	15.7
600	18.7	650	17.9
700	18.8	750	18.9
800	20.8	850	19.9
900	20.5	950	22.6
1000	24.1	-	-





COM-POWER AL-118

LAB J - HORN ANTENNA

S/N: 01319

CALIBRATION DATE: MAY 14, 2004

FREQUENCY	FACTOR	FREQUENCY	FACTOR
(MHz)	(dB)	(MHz)	(dB)
1000	24.74	10000	39.63
1500	25.39	10500	40.07
2000	27.90	11000	40.60
2500	28.44	11500	41.90
3000	30.01	12000	41.09
3500	30.61	12500	41.49
4000	30.72	13000	40.68
4500	31.22	13500	41.05
5000	33.03	14000	42.03
6000	33.84	14500	45.60
6500	34.70	15000	40.35
7000	36.51	15500	40.19
7500	37.61	16000	39.83
8000	37.63	16500	40.65
8500	38.12	17000	44.76
9000	38.33	17500	47.21
9500	39.54	18000	42.59



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COM-POWER PA-103

LAB J - PREAMPLIFIER

S/N: 1541

CALIBRATION DATE: JANUARY 22, 2005

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	30.9	300	30.6
40	31.1	350	30.6
50	31.4	400	30.6
60	31.5	450	30.7
70	30.9	500	30.3
80	30.5	550	30.4
90	29.3	600	30.2
100	26.8	650	30.1
125	28.7	700	29.5
150	30.3	750	30.1
175	30.7	800	29.8
200	31.0	850	29.3
225	30.8	900	29.4
250	31.0	950	29.8
275	30.9	1000	29.3





COM-POWER PA-122

LAB J – HI-FREQUENCY PREAMPLIFIER

S/N: 25196

CALIBRATION DATE: MARCH 3, 2005

FREQUENCY (MHz)	FACTOR	FREQUENCY (MHz)	FACTOR
	(dB)		(dB)
1000	33.2	6000	27.7
1100	32.1	6500	28.1
1200	32.0	7000	28.4
1300	31.9	7500	28.4
1400	31.8	8000	28.2
1500	31.7	8500	28.2
1600	31.5	9000	28.7
1700	31.2	9500	27.9
1800	31.0	10000	27.3
1900	30.8	11000	27.2
2000	30.8	12000	29.3
2500	30.1	13000	28.7
3000	29.9	14000	28.8
3500	29.4	15000	29.1
4000	28.7	16000	27.6
4500	28.3	17000	25.7
5000	27.9	18000	24.3
5500	27.4		





FRONT VIEW

VUE TECHNOLOGY, INC.
INTELLISWITCH
MODEL NUMBER: 34000002-001-RA
FCC SUBPART B AND C - RADIATED EMISSIONS – 07-20-05





REAR VIEW

VUE TECHNOLOGY, INC.
INTELLISWITCH
MODEL NUMBER: 34000002-001-RA
FCC SUBPART B AND C - RADIATED EMISSIONS – 07-20-05



FRONT VIEW

VUE TECHNOLOGY, INC.
INTELLISWITCH
MODEL NUMBER: 34000002-001-RA
FCC SUBPART B & C - CONDUCTED EMISSIONS - 07-22-05





REAR VIEW

VUE TECHNOLOGY, INC.
INTELLISWITCH
MODEL NUMBER: 34000002-001-RA
FCC SUBPART B & C - CONDUCTED EMISSIONS - 07-22-05