FCC PART 15 SUBPART B & C
TEST REPORT

for

DEMETER TRANSMITTER

Model: D-S1

Prepared for

VAZA ELEKTRONIK AB
1807 E. MULBERRY STREET
FORT COLLINS, COLORADO 80524

Prepared by:_____

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DATE: JULY 23, 2005

	REPORT BODY	APPENDICES					TOTAL
		A	***B***	***C***	***D***	***E***	
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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 in any form unless done so in full with the written permission of Compatible Electronics.

This report must not be used to claim product endorsement by NVLAP, NIST, or any other agency of the U.S. Government or other governments.

Device Tested: Demeter Transmitter
Model: D-S1
S/N: None

Product Description: This a 916MHz range transmitter system used for the purpose of monitoring temperature.

Modifications: The EUT was not modified during the testing.

Manufacturer: VAZA Elektronik AB
1807 E. Mulberry Street
Fort Collins, Colorado 80524

Test Dates: November 14, 2006

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

Test Procedure: ANSI C63.4: 2003

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz - 30 MHz.	The EUT is battery operated; therefore this test was not performed.
2	Radiated RF Emissions, 9 kHz - 9165 MHz.	Complies with the limits of CFR Title 47 Part 15 Subpart B (Class B devices) and Subpart C sections 15.205, 15.209 and 15.249.

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on Demeter Transmitter Model: D-S1. 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 Code of Federal Regulations Title 47, Part 15 Subpart B and Subpart C sections 15.205, 15.209 and 15.249.

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, Lake Forest (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

VAZA Elektronik AB

Vahid Zarie	President

Compatible Electronics Inc.

Joey Madlangbayan	Test Engineer
Scott McCutchan	Lab Manager – Lake Forest (Silverado) Division

2.4 Date Test Sample was Received

The test sample was received on November 14, 2006.

2.5 Disposition of the Test Sample

The test sample remains at Compatible Electronics as of November 30, 2006.

2.6 Abbreviations and Acronyms

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

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network
NVLAP	National Voluntary Laboratory Accreditation Program
CFR	Code of Federal Regulations
PCB	Printed Circuit Board
TX	Transmit
RX	Receive

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	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 Demeter Transmitter Model: D-S1 (EUT) was setup in a tabletop configuration. The EUT was continuously transmitting a data stream throughout all tests.

The antenna consists of a short wire soldered to the PCB board assembly.

It was determined that the emissions were at their highest level when the EUT was setup in the above configuration. The cables were moved to maximize the emissions. The final radiated data was taken in the above configuration. The cables were routed as shown in the photographs in Appendix D. Please see Appendix E for the test data.

4.1.1 Photograph Test Configuration - EMI

4.1.2 Cable Construction and Termination

Cable 1

This is a 1 meter unshielded cable connecting the temperature probe transducer to the EUT. It is hardwired at both ends of the cable.

5 LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

#	EQUIPMENT TYPE	MANU-FACTURER	MODEL	SERIAL NUMBER	FCC ID
1	DEMETER TRANSMITTER (EUT)	VAZA ELEKTRONIK AB	D-S1	DNA00330	UMGDEM

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Analyzer Spectrum – RF Section	Hewlett Packard	8566B	2747A04757	2/15/06	2/15/07
Analyzer Spectrum – Display Section	Hewlett Packard	85662A	2648A15455	2/15/06	2/15/07
Analyzer Spectrum - Quasi-Peak Adapter	Hewlett Packard	85650A	3303A01688	2/15/06	2/15/07
Antenna, Active Loop	Com Power	AL-130	4000	7/28/05	7/28/07
Antenna ,Horn	Com-Power	AH-118	1319	6/05/06	6/05/08
Antenna, Biconical	Com Power	AB-900	15228	3/18/06	3/18/07
Antenna, Log Periodic	Com Power	AL-100	16016	1/19/06	1/19/07
Transient Limiter	Com Power	Hz-560	N/A	4/4/06	4/4/07
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-115	241043	6/02/06	6/03/07
LISN Accessory Side	Com Power	LI-215	12073	6/02/06	6/03/07
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	1/3/06	1/3/07
Preamplifier	Com Power	PA-122	181923	3/7/06	3/7/07
Printer Test Station	Hewlett Packard	DeskJet 697C	US9341D07G	N.C.R.	N/A

5.3 EMI Measurement and Control Software Information

SOFTWARE TITLE	MANUFACTURER	VERSION
Compatible Electronics Data Capture Program	Compatible Electronics	3.1
Compatible Electronics Emissions Program	Compatible Electronics	2.3 (SR21)

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

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

6.2 EUT Mounting, Bonding and Grounding

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

The EUT was not grounded.

6.3 Facility Environmental Characteristics

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

7. TEST PROCEDURES

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

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The 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 measurement 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 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: 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 test software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.

Test Results:

The EUT is a battery operated unit; therefore this test was not applicable.

7.1.2 Radiated Emissions Test

The spectrum analyzer was used as a measuring meter. 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. A quasi-peak or average measurement was taken only for those readings, which are marked accordingly on the data sheets. The following antennas and measurement bandwidths were used as specified in the following table.

FREQUENCY RANGE (MHz)	TRANSDUCER	EFFECTIVE MEASUREMENT BANDWIDTH
0.09 to 30	Active Loop Antenna	9 kHz
30 to 299.999	Biconical Antenna	120 kHz
300 to 1000	Log Periodic Antenna	120 kHz
1000 to 91650	Horn Antenna	1 MHz

The final data was taken with a frequency span of 1 MHz, but the frequency span was reduced during the preliminary investigations as deemed necessary to distinguish between emissions from the EUT and any ambients.

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. 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). To ensure accurate results, the gunsight method was used when measuring with the horn antenna and the Active Loop antenna was rotated in its vertical and horizontal axis.

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

Test Results:

The EUT complies with the limits of CFR 22 Title 47 Part 15 Subpart B (Class B devices) and Subpart C sections 15.205, 15.209 and 15.249.

8. TEST PROCEDURE DEVIATIONS

The test procedure was not deviated from during the testing.

9. CONCLUSIONS

The Demeter Transmitter Model: D-S1 meets all of the **Class B** specification limits defined in the Code of Federal Regulations Title 47, Part 15 Subpart B and Subpart C sections 15.107, 15.205, 15.209 and 15.249.

APPENDIX A

LABORATORY ACCREDITATIONS AND RECOGNITIONS

LABORATORY ACCREDITATIONS AND RECOGNITIONS

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

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 equivalent. Please follow the link to the NIST site for each of our facilities NVLAP certificate and scope of accreditation.

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

World Wide Market Access with Nemko

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.

Industry Canada Industrie Canada

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

No modifications were made to the EUT during the test.

APPENDIX C

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

There were no additional models covered under this report.

USED FOR THE PRIMARY TEST	DEMETER TRANSMITTER Model: D-S1 S/N: NONE

APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

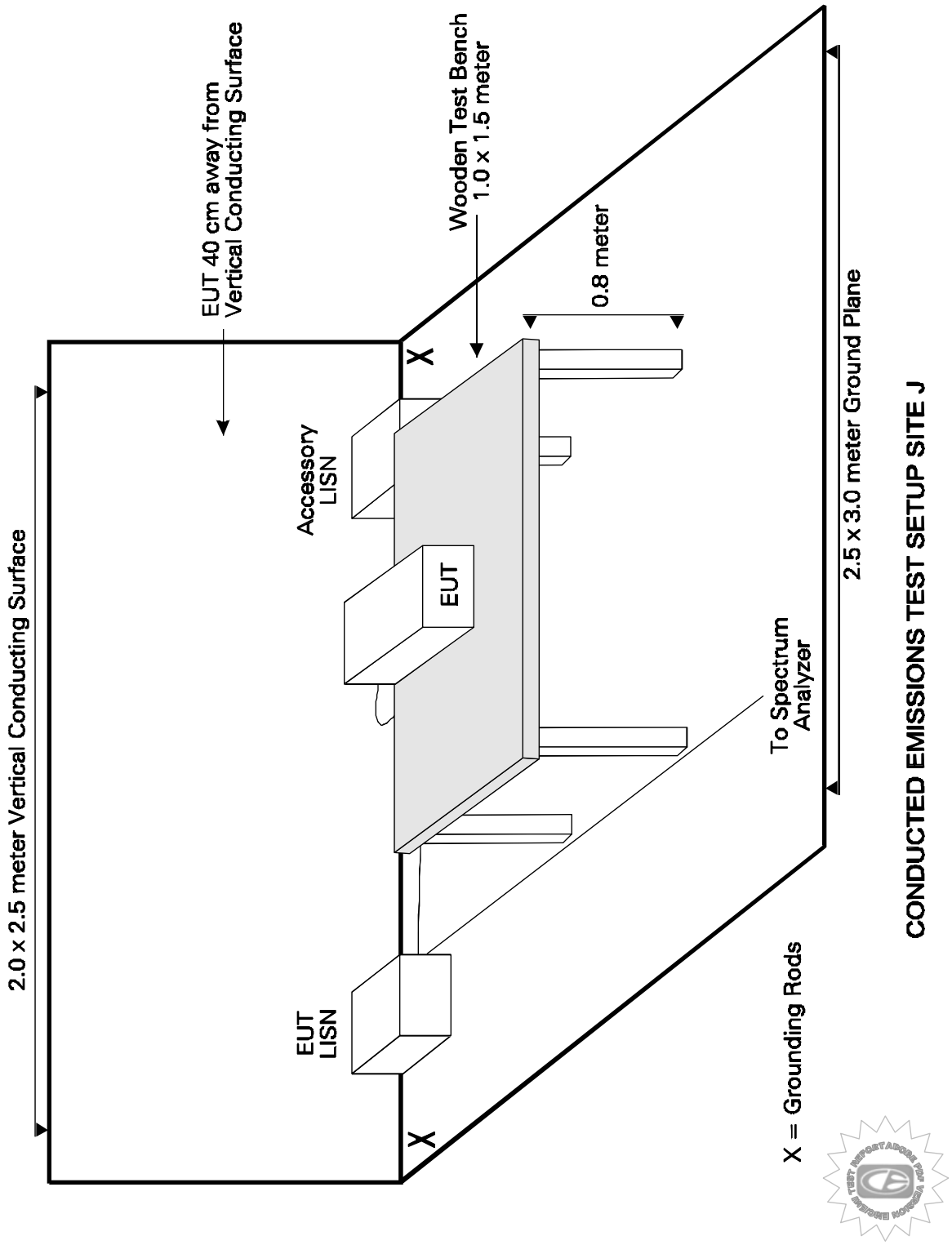
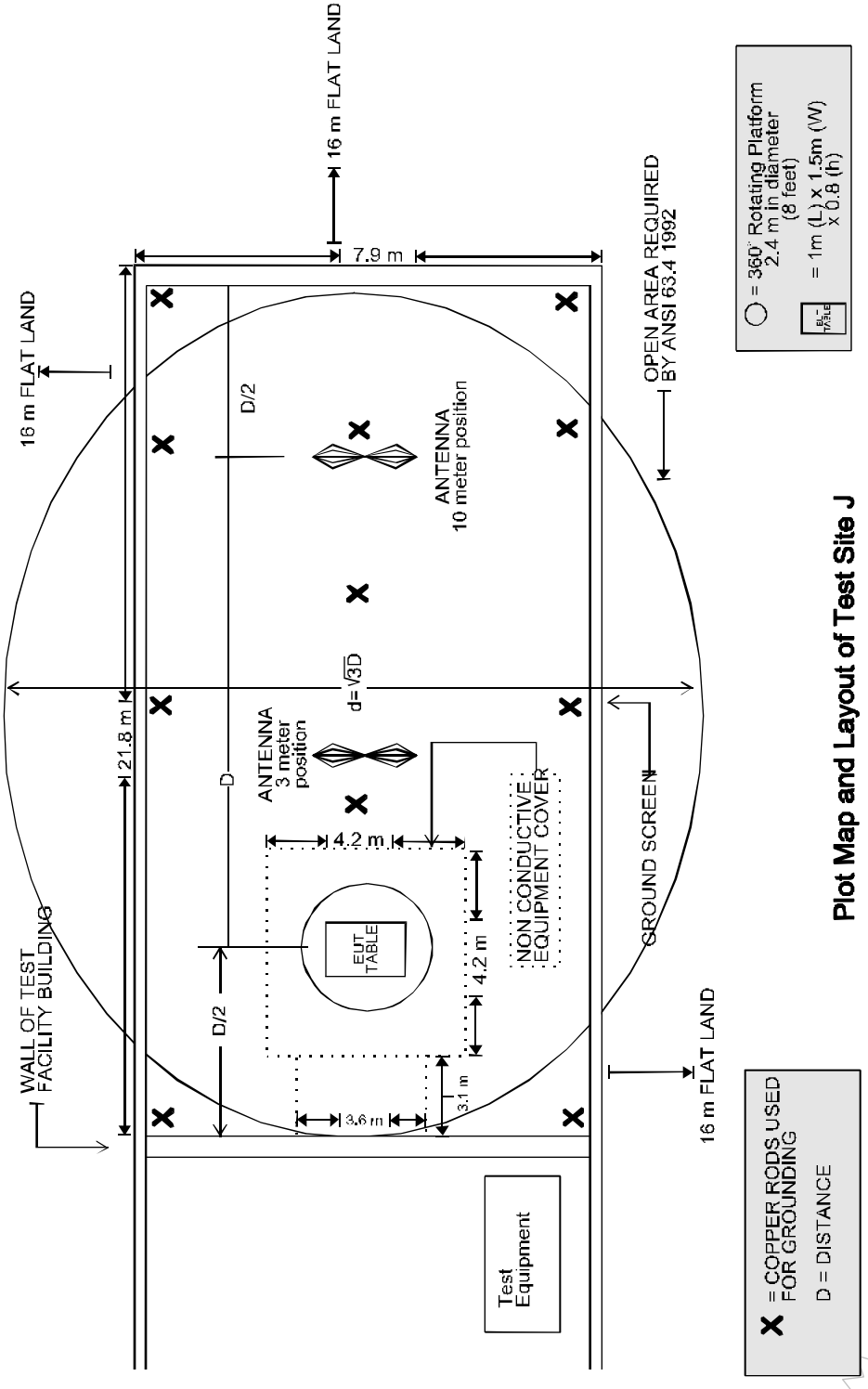


FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE



Plot Map and Layout of Test Site J

COM-POWER AL-130

ACTIVE LOOP ANTENNA (E-FIELD)

S/N: 17107

CALIBRATION DATE: JULY 28, 2005

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
0.009	12.0	0.8	11.6
0.01	11.6	0.9	11.5
0.02	11.0	1.0	11.7
0.03	12.4	2.0	12.2
0.4	12.1	3.0	11.9
0.05	10.8	4.0	11.8
0.06	11.4	5.0	12.4
0.07	11.2	6.0	12.5
0.08	11.1	7.0	12.1
0.09	11.3	8.0	12.3
0.1	11.3	9.0	12.6
0.2	8.7	10.0	12.2
0.3	11.4	15.0	9.5
0.4	11.2	20.0	8.9
0.5	11.2	25.0	10.6
0.6	11.7	30.0	3.4
0.7	11.6		

COM-POWER AB-900

LAB J - BICONICAL ANTENNA

S/N: 15228

CALIBRATION DATE: MARCH 18, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30.0	10.8	120.0	12.9
35.0	10.4	125.0	13.3
40.0	12.2	140.0	12.3
45.0	13.0	150.0	12.0
50.0	12.8	160.0	13.0
60.0	10.7	175.0	15.2
70.0	8.4	180.0	16.4
80.0	6.3	200.0	17.6
90.0	8.3	250.0	15.5
100.0	10.4	300.0	19.2

COM-POWER AL-100

LAB J - LOG PERIODIC ANTENNA

S/N: 16016

CALIBRATION DATE: JANUARY 19, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	13.5	350	12.1
400	14.7	450	15.5
500	17.4	550	17.5
600	17.6	650	18.1
700	21.3	750	20.5
800	21.3	850	22.0
900	23.8	950	25.7
1000	25.0	-	-

COM-POWER AH-118

LAB J - HORN ANTENNA

S/N: 1319

CALIBRATION DATE: JUNE 05, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
1000	22.8	10000	35.9
1500	24.2	10500	37.7
2000	26.8	11000	37.0
2500	26.1	11500	39.9
3000	28.1	12000	38.1
3500	27.7	12500	38.4
4000	28.2	13000	37.5
4500	29.4	13500	39. 0
5000	30.4	14000	40.3
5500	31.2	14500	40.0
6000	30.7	15000	39.6
6500	32.4	15500	38.1
7000	33.8	16000	37.3
7500	35.1	16500	38.4
8000	35.4	17000	39.4
8500	35.1	17500	41.4
9000	37.1	18000	43.1
9500	35.6		

COM-POWER PA-103

LAB J - PREAMPLIFIER

S/N: 1541

CALIBRATION DATE: JANUARY 3, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	32.6	300	32.5
40	32.7	350	32.2
50	32.6	400	32.0
60	32.6	450	31.8
70	32.7	500	31.8
80	32.6	550	31.8
90	32.6	600	31.5
100	32.7	650	31.7
125	32.5	700	31.6
150	32.6	750	31.1
175	32.6	800	31.5
200	32.6	850	30.9
225	32.6	900	30.9
250	32.4	950	30.9
275	32.5	1000	31.0

COM-POWER PA-122

LAB J – HI-FREQUENCY PREAMPLIFIER

S/N: 181923

CALIBRATION DATE: MARCH 7, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
500	36.5	10500	34.3
1000	35.8	11000	34.0
1500	34.7	11500	33.4
2000	34.1	12000	33.0
2500	33.7	12500	33.0
3000	33.6	13000	33.2
3500	33.4	13500	33.5
4000	33.5	14000	33.7
4500	33.7	14500	34.5
5000	33.8	15000	35.3
5500	33.8	15500	36.1
6000	34.8	16000	35.7
6500	35.3	16500	34.4
7000	35.5	17000	33.5
7500	35.1	17500	33.1
8000	34.1	18000	33.2
8500	33.7	19000	33.2
9000	33.4	20000	32.9
9500	33.7	21000	33.7
10000	34.1	22000	35.0

FRONT VIEW

VAZA ELEKTRONIK AB
DEMETER TRANSMITTER
Model: D-S1
FCC SUBPART B & C - RADIATED EMISSIONS - 11-14-06

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

VAZA ELEKTRONIK AB
DEMETER TRANSMITTER
Model: D-S1
FCC SUBPART B & C - RADIATED EMISSIONS - 11-14-06

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

Test Location : Compatible Electronics **Page** : 1/1
Customer : Vahid Zarie **Date** : 11/14/2006
Manufacturer : VAZA Elecktronik AB **Time** : 02:51:03 PM
Eut name : wireless temperature monitor **Lab** : J
Model : Demter **Test Distance** : 3.00 Meters
Serial # :
Specification : FCC Pt. 15 - Class B
Distance correction factor (20 * log(test/spec)) : 0.00
Test Mode : test range 9kHz to 9150MHz tested by: J. Madlangbayan
TX mode, 8MHz clkbus temp:16degC RH:75%

Pol	Freq MHz	Reading dBuV	Cable loss dB	Antenna factor dB	Amplifier gain dB	Corr'd rdg = R dBuV/m	Limit = L dBuV/m	Delta R-L dB
1H	64.030	36.30	1.04	9.73	32.64	14.43	40.00	-25.57
2H	72.030	39.90	1.12	7.95	32.68	16.29	40.00	-23.71
3H	80.030	38.90	1.20	6.31	32.60	13.81	40.00	-26.19
4H	112.030	35.30	1.45	11.96	32.60	16.11	43.50	-27.39
5H	128.030	33.20	1.61	13.09	32.51	15.39	43.50	-28.11
6H	136.030	33.20	1.65	12.55	32.55	14.85	43.50	-28.65
7H	152.030	33.30	1.71	12.21	32.61	14.61	43.50	-28.89
8H	344.030	31.50	2.67	12.26	32.23	14.19	46.00	-31.81
9H	352.030	33.70	2.71	12.21	32.19	16.43	46.00	-29.57

no spurious emissions found

RADIATED EMISSIONS (FCC SECTION 15.249 AND 15.205)

COMPANY	VAZA Elektronik AB	DATE	11/14/2006
EUT	Demeter Transmitter	DUTY CYCLE	N/A %
MODEL	D-S1	PEAK TO AVG	N/A dB
S/N	DNA00330	TEST DIST.	3 Meters
TEST ENGINEER	Joey Madlangbayan	LAB	J

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
915.0000	37.9	QP	H	1.0	0			24.4	4.9	0.0		0.0	**67.2**	**-26.8**	**94.0**	
915.0000	41.6	QP	V	1.0	0			24.4	4.9	0.0		0.0	**70.9**	**-23.1**	**94.0**	

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.249 AND 15.205)

COMPANY	VAZA Elektronik AB	DATE	11/14/2006
EUT	Demeter Transmitter	DUTY CYCLE	N/A %
MODEL	D-S1	PEAK TO AVG	N/A dB
S/N	DNA00330	TEST DIST.	3 Meters
TEST ENGINEER	Joey Madlangbayan	LAB	J

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
1830.0000	49.5	A	H	2.5	270			25.9	1.6	34.4		0.0	**42.6**	**-11.4**	**54.0**	
1830.0000	52.0	A	V	2.0	180			25.9	1.6	34.4		0.0	**45.1**	**-8.9**	**54.0**	

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.249 AND 15.205)

COMPANY	VAZA Elektronik AB	DATE	11/14/2006
EUT	Demeter Transmitter	DUTY CYCLE	N/A %
MODEL	D-S1	PEAK TO AVG	N/A dB
S/N	DNA00330	TEST DIST.	3 Meters
TEST ENGINEER	Joey Madlangbayan	LAB	J

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
2745.0000	46.8	A	H	2.0	90			25.9	1.6	34.4		0.0	**39.9**	**-14.1**	**54.0**	
2745.0000	45.6	A	V	3.0	90			25.9	1.6	34.4		0.0	**38.7**	**-15.3**	**54.0**	

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** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.249 AND 15.205)

COMPANY	VAZA Elektronik AB	DATE	11/14/2006
EUT	Demeter Transmitter	DUTY CYCLE	N/A %
MODEL	D-S1	PEAK TO AVG	N/A dB
S/N	DNA00330	TEST DIST.	3 Meters
TEST ENGINEER	Joey Madlangbayan	LAB	J

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
3660.0000	43.7	A	H	4.0	180			27.9	2.5	33.4		0.0	**40.6**	**-13.4**	**54.0**	
3660.0000	42.7	A	V	2.0	180			27.9	2.5	33.4		0.0	**39.6**	**-14.4**	**54.0**	

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** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.249 AND 15.205)

COMPANY	VAZA Elektronik AB	DATE	11/14/2006
EUT	Demeter Transmitter	DUTY CYCLE	N/A %
MODEL	D-S1	PEAK TO AVG	N/A dB
S/N	DNA00330	TEST DIST.	3 Meters
TEST ENGINEER	Joey Madlangbayan	LAB	J

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
4575.0000		A	H					29.6	2.5	33.7					**54.0**	**no emission found**
4575.0000		A	V					29.6	2.5	33.7					**54.0**	**no emission found**

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.249 AND 15.205)

COMPANY	VAZA Elektronik AB	DATE	11/14/2006
EUT	Demeter Transmitter	DUTY CYCLE	N/A %
MODEL	D-S1	PEAK TO AVG	N/A dB
S/N	DNA00330	TEST DIST.	3 Meters
TEST ENGINEER	Joey Madlangbayan	LAB	J

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
5490.0000		A	H					31.2	2.8	33.8					**54.0**	**no emission found**
5490.0000		A	V					31.2	2.8	33.8					**54.0**	**no emission found**

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.249 AND 15.205)

COMPANY	VAZA Elektronik AB	DATE	11/14/2006
EUT	Demeter Transmitter	DUTY CYCLE	N/A %
MODEL	D-S1	PEAK TO AVG	N/A dB
S/N	DNA00330	TEST DIST.	3 Meters
TEST ENGINEER	Joey Madlangbayan	LAB	J

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
6405.0000		A	H					32.1	3.1	35.2					**54.0**	**no emission found**
6405.0000		A	V					32.1	3.1	35.2					**54.0**	**no emission found**

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.249 AND 15.205)

COMPANY	VAZA Elektronik AB	DATE	11/14/2006
EUT	Demeter Transmitter	DUTY CYCLE	N/A %
MODEL	D-S1	PEAK TO AVG	N/A dB
S/N	DNA00330	TEST DIST.	3 Meters
TEST ENGINEER	Joey Madlangbayan	LAB	J

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
7320.0000		A	H					34.6	3.5	35.2					**54.0**	**no emission found**
7320.0000		A	V					34.6	3.5	35.2					**54.0**	**no emission found**

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.249 AND 15.205)

COMPANY	VAZA Elektronik AB	DATE	11/14/2006
EUT	Demeter Transmitter	DUTY CYCLE	N/A %
MODEL	D-S1	PEAK TO AVG	N/A dB
S/N	DNA00330	TEST DIST.	3 Meters
TEST ENGINEER	Joey Madlangbayan	LAB	J

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
8235.0000		A	H					35.3	3.5	33.9					**54.0**	**no emission found**
8235.0000		A	V					35.3	3.5	33.9					**54.0**	**no emission found**

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC SECTION 15.249 AND 15.205)

COMPANY	VAZA Elektronik AB	DATE	11/14/2006
EUT	Demeter Transmitter	DUTY CYCLE	N/A %
MODEL	D-S1	PEAK TO AVG	N/A dB
S/N	DNA00330	TEST DIST.	3 Meters
TEST ENGINEER	Joey Madlangbayan	LAB	J

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi-Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
9150.0000		A	H					36.7	4.3	33.5					**54.0**	**no emission found**
9150.0000		A	V					36.7	4.3	33.5					**54.0**	**no emission found**

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
** DELTA = SPEC LIMIT - CORRECTED READING