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Test Report Number:	**TRA71127, Rev. B**
Report Type:	**Full Compliance Immunity**
Reference Standard:	**EN 61000-6-1: 2007**
Date of Report:	**15 January 2008**
Product Name:	**IonCleanse Premier**
Model Number:	**IonCleanse Premier**
Serial Number:	**08000**
Manufacturer:	**A Major Difference**
Representative:	**Neill Moroney**
Approved By:	Vincent W. Bush

NVLAP LAB CODE 200737-0

Nemko ELA No. 215

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Revision	**Description of Revision**	**Date:**
Rev. -	Initial Release	17 December 2007
Rev. A	Changed name of manufacturer from Stargate International to “A Major Difference”	10 January 2008
Rev. B	Changed description of device from “body detoxification” to “vitality enhancement system.”	15 January 2008

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1.0 TEST SUMMARY

1.1 Product Description

The unit under test (UUT) was the IonCleanse Premier. The Serial Number tested was 08000. This product is manufactured by A Major Difference located in Aurora, Colorado. It is a vitality enhancement system. A more complete description of this product may be found in the Product Data Sheet, located in Appendix G of this report.

1.2 Immunity Test Standards Used

The standard applied to this product was EN 61000-6-1: 2007, which is the generic immunity standard for residential, commercial and light industrial environments. The normative references of this standard define the test methods used for the immunity testing. This information is summarized in Tables 1-1.

Table 1-1

Requirement	Specification	Test Method	Performance Criteria
EN 61000-6-1: 2007, Part 6-1: Generic Standard - Immunity for Residential, Commercial and Light Industrial Environments	Electrostatic Discharge	IEC 61000-4-2: 2001-04	(B) Self-Recovering
	Radiated RF Immunity	IEC 61000-4-3: 2006-02	(A) No Degradation
	Electrical Fast Transient/Burst	IEC 61000-4-4: 2004-07	(B) Self-Recovering
	Surge Immunity	IEC 61000-4-5: 2005-11	(B) Self-Recovering
	Conducted RF Immunity	IEC 61000-4-6: 2006-05	(A) No Degradation
	Power Frequency H-field Immunity	IEC 61000-4-8: 2001-03	Not applicable*
	Voltage Dips, Interrupts	IEC 61000-4-11: 2004-03	(B) Self-Recovering (C) User-intervention Allowed

*testing not performed as UUT had no electronics which would be sensitive to low frequency magnetic fields.

1.3 Test Results

The UUT **complied** with all the immunity requirements defined by EN 61000-6-1: 2007. Test results are summarized in Table 1-2.

1.4 Modifications Required for Compliance

Modifications were required for compliance with the radiated RF immunity requirement. These are documented in the EMI Test Log, found in Appendix H of this report.

Table 1-2

Specification	Test Method	Test Conditions	Compliance
Electrostatic Discharge	IEC 61000-4-2	± 4 kV Contact / HCP, VCP / ± 8 kV Air	Compliant
Radiated RF Immunity	IEC 61000-4-3	80 - 1000 MHz, 3 V/m, 80% 1 kHz AM 1.4 – 2.0 GHz, 3 V/m, 80% 1 kHz AM 2.0 – 2.7 GHz, 1 V/m, 80% 1 kHz AM	Compliant
EFT/Burst	IEC 61000-4-4	± 0.5 kV I/O, ± 1.0 kV AC mains	Compliant
Surge Immunity	IEC 61000-4-5	± 2 kV common mode, ± 1 kV differential mode, AC mains	Compliant
Conducted RF Immunity	IEC 61000-4-6	150 kHz to 80 MHz, 3 Vrms, 80% 1 kHz AM, power and I/O	Compliant
Power Frequency H-field Immunity	IEC 61000-4-8	3 A/m, 50/60 Hz, 3 axes	Not applicable
Voltage Dips and Interrupts	IEC 61000-4-11	100% reduction for 0.5 and 1.0 cycles 30% reduction for 25 cycles (50 Hz) 30% reduction for 30 cycles (60 Hz) 100% reduction for 250 cycles (50 Hz) 100% reduction for 300 cycles (60 Hz)	Compliant

2.0 SCOPE

2.1 Purpose

This report documents the test efforts performed on the IonCleanse Premier to verify compliance to the 2007 version of EN 61000-6-1, EMC, Part 6-1: Generic Standard – Immunity for Residential, Commercial and Light Industrial Environments. This was a formal qualification test and was conducted on the days of 26 through 29 November 2007.

2.2 Test Plan

Testing was performed in accordance with EN 61000-6-1: 2007. The Product Data Sheet defines the critical operational parameters for testing, as well as providing general product information. This is contained in Appendix G of this report.

2.3 Test Parameters

Critical parameters (i.e., parameters which are monitored during tesing) for this product are defined by the client. This information was defined by the client in Section 4.0 of the Product Data Sheet, contained in Appendix G of this report.

2.4 Definition of Performance Criterion for the UUT

In general, performance criteria for industrial products are defined as follows:

Level A: During testing, normal operation within specification limits.
Level B: During testing, temporary degradation or loss of function or performance which is self-recovering (i.e., no user intervention)
Level C: During testing, temporary degradation, or loss of function which requires operator intervention or system reset occurs.

Specific performance criteria, as applied to this product, are defined in Section 4.0 of the Product Data Sheet, contained in Appendix G of this report.

3.0 TEST ENVIRONMENT

3.1 Immunity Test Site

The immunity testing was performed at EMCI's test facility in Longmont, Colorado. The radiated field immunity testing was performed in a ferrite lined, shielded enclosure. The enclosure is 10' high x 12' wide x 20' long in size and meets the field uniformity requirements of IEC 61000-4-3. The size of the chamber allows 2-meter separation between the antenna and the UUT.

All other immunity testing was performed on a ground plane measuring 3.0 meters by 4.5 meters (13.5 m^2) and made of 0.125" thick aluminum. The ground plane extended beyond the UUT by 0.5 meters and all sides, was bonded to the facility ground and configured in accordance with the applicable standards.

3.2 Test Sample Description

The unit under test (UUT) was the IonCleanse Premier. It is manufactured by A Major Difference located in Aurora, Colorado. During testing the UUT was operational and continually monitored for correct performance.

4.0 IEC 61000-4-2, Electrostatic Discharge

4.1 Summary of Test Results

Electrostatic discharge (ESD) testing was performed on the UUT in accordance with the test methods specified by IEC 61000-4-2. Contact discharge was performed at levels of ± 2 kV and ± 4 kV at applicable (conductive) test points. Air discharge was performed for non-conductive surfaces of the product at levels of ±2 kV, ± 4 kV and ± 8 kV. Indirect discharge to the horizontal coupling plane (HCP) and the vertical coupling plane (VCP) were also performed to levels of ± 2 kV and ± 4 kV.

During all testing, the UUT exhibited no malfunctions and operated within specified tolerances and therefore, complies with the requirements of this test.

4.2 Test Setup

The UUT was set up per IEC 61000-4-2 and tested to the levels specified in EN 61000-6-1.

4.3 Special Configurations

N/A

4.4 Performance Criteria

Performance criterion Level B is defined as degradation in performance provided 1) the UUT self-recovers without user-intervention and 2) no data is lost.

4.5 Deviations from Test Procedures

N/a

4.6 Test Data

See APPENDIX A for data sheets, discharge points and test setup pictures.

4.7 Temperature and Humidity

Temperature, relative humidity and barometric pressure are located in the header table for the IEC 61000-4-2 test data sheet.

5.0 IEC 61000-4-3, Radiated RF Immunity

5.1 Summary of Test Results

Radiated RF immunity testing was performed on the UUT in accordance with the test methods specified by IEC 61000-4-3. The UUT was placed on a non-conductive table, 80 cm above the ferrite floor of the completely anechoic-lined chamber. The frequency range for this testing was 80 - 1000 MHz. The UUT was placed 2 meters from the radiating antenna; which was 1.5 meters above the floor of the chamber. Testing was performed in both horizontal and vertical antenna polarizations. The frequency was incremented in 1% steps, with a 3 second dwell time for each test frequency. The UUT was rotated on the table so that all four sides were illuminated in the 10 V/m field. The field was amplitude modulated with a 1 kHz sine wave to a depth of 80%. In addition, the UUT was tested for a 900 MHz field, pulse modulated at a frequency of 200 Hz with a 50% duty cycle. Performance of the unit was monitored remotely with the support PC, located outside the CALC.

During all testing, the UUT exhibited no malfunctions and operated within specified tolerances and therefore, complies with the requirements of this test.

5.2 Test Setup

The UUT was set up per IEC 61000-4-3 and tested to the levels specified in EN 61000-6-1.

5.3 Special Configurations

N/A

5.4 Performance Criteria

Performance criterion Level A is defined as no degradation in performance beyond manufacturer's specified tolerances.

5.5 Deviations from Test Procedures

N/a

5.6 Test Data

See APPENDIX B for data sheets and test setup pictures.

5.7 Temperature and Humidity

Temperature, relative humidity and barometric pressure are located in the header table for the IEC 61000-4-3 test data sheet.

6.0 IEC 61000-4-4, Electrical Fast Transient/Burst

6.1 Summary of Test Results

Electrical fast transient/burst immunity testing was performed on the UUT in accordance with the test methods specified by IEC 61000-4-4. The UUT AC power was tested via direct injection at a level of ± 2 kV. External I/O in excess of 3 meters was tested via capacitive coupling clamp to a level of ± 1.0 kV.

During all testing, the UUT exhibited no malfunctions and operated within specified tolerances and therefore, complies with the requirements of this test.

6.2 Test Setup

The UUT was set up per IEC 61000-4-4 and tested to the levels per EN 61000-6-1.

6.3 Special Configurations

N/A

6.4 Performance Criteria

Performance criterion Level B is defined as degradation in performance provided 1) the UUT self-recovers without user-intervention and 2) no data is lost.

6.5 Deviations from Test Procedures

N/a.

6.6 Test Data

See APPENDIX C for data sheet and test setup pictures.

6.7 Temperature and Humidity

Temperature, relative humidity and barometric pressure are located in the header table for the IEC 61000-4-4 test data sheet.

7.0 IEC 61000-4-5, Surge Immunity

7.1 Summary of Test Results

Surge immunity testing was performed on the UUT in accordance with the test methods specified by IEC 61000-4-5. The UUT AC power was tested via direct injection at levels of ±0.5 kV and ±1.0 kV for differential mode and at levels of ±0.5 kV, ±1.0 kV and ±2.0 kV for common mode. Surges were injected at 0 degrees, 90 degrees, 180 degrees and 270 degrees of the input ac waveform at a rate of one pulse per minute. Five pulses were injected for each test configuration.

During all testing, the UUT exhibited no malfunctions or degradations in performance and therefore complies with the requirements of the test.

7.2 Test Setup

The UUT was set up per IEC 61000-4-5 and tested to the levels specified in EN 61000-6-1.

7.3 Special Configurations

N/A

7.4 Performance Criteria

Performance criterion Level B is defined as degradation in performance provided 1) the UUT self-recovers without user-intervention and 2) no data is lost.

7.5 Deviations from Test Procedures

N/A

7.6 Test Data

See APPENDIX D for data sheets and test setup pictures.

7.7 Temperature and Humidity

Temperature, relative humidity and barometric pressure are located in the header table for the IEC 61000-4-5 test data sheet.

8.0 IEC 61000-4-6, Conducted RF Immunity

8.1 Summary of Test Results

Conducted RF immunity testing was performed on the UUT in accordance with the test methods specified by IEC 61000-4-6. The UUT was subjected to injected RF signals on its input AC power cable. Injection on the AC leads was performed via a coupling/decoupling network (CDN). Injection on the I/O of the product was performed with an EM clamp. The frequency range for this testing was 150 kHz to 80 MHz. The test frequency was stepped in 1% increments with a three second dwell time for each injection frequency. The injection level used for all testing was 10 Vrms with 1 kHz AM to a depth of 80%.

At no time did the UUT exhibit any malfunctions or degradations in performance; thus, the UUT passed all portions of this test.

8.2 Test Setup

The UUT was set up per IEC 61000-4-6 and tested to the levels specified in EN 61000-6-1.

8.3 Special Configurations

N/A

8.4 Performance Criteria

Performance criterion Level A is defined as no degradation in performance beyond manufacturer's specified tolerances.

8.5 Deviations from Test Procedures

N/A

8.6 Test Data

See APPENDIX E for data sheets and test setup pictures.

8.7 Temperature and Humidity

Temperature, relative humidity and barometric pressure are located in the header table for the IEC 61000-4-6 test data sheet.

10.0 IEC 61000-4-11, Voltage Dips and Interrupts

10.1 Summary of Test Results

Voltage dip and interrupt testing was performed on the UUT in accordance with IEC 61000-4-11. The UUT was subjected to the following voltage fluctuations on its AC power input:

100 % reduction for 0.5 cycles	dip
100 % reduction for 1.0 cycles	dip
30% reduction for 25 cycles (50 Hz)	dip
30% reduction for 25 cycles (60 Hz)	dip
100% reduction for 250 cycles (50 Hz)	interruption
100% reduction for 300 cycles (60 Hz)	interruption

These variations in AC line voltage had no effect on the UUT, which passed the requirements of this test.

10.2 Test Setup

The UUT was set up per IEC 61000-4-11 and tested to the levels specified in EN 61000-6-1.

10.3 Special Configurations

N/A

10.4 Performance Criteria

The performance criteria for this test are Levels B and C. Level B is defined as allowing degraded performance provided that the UUT self-recovers without user intervention and no data is lost. Level C is defined as allowing user intervention to regain functionality of the product provided that no permanent damage occurs.

10.5 Deviations from Test Procedures

N/A

10.6 Test Data

See APPENDIX F for data sheets and test setup pictures.

10.7 Temperature and Humidity

Temperature, relative humidity and barometric pressure are located in the header table for the IEC 61000-4-11 test data sheet.

APPENDIX A

Electrostatic Discharge Test Data

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Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007
Temperature:	22˚C Humidity: 30%	Pressure:	838mb
Input Voltage:	230VAC/50Hz		
Configuration of Unit:	Normal Operation Mode #1		
Test Engineer:	Bill Norton		

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Test Location	Voltage Level (kV)	Polarity +	Polarity -	Number of Pulses	Pulses Per Second	Comments	Criteria Met	Pass / Fail
Indirect Discharge Points								
VCP	2, 4	x	x	10	1	Front Side	A	Pass
VCP	2, 4	x	x	10	1	Left Side	A	Pass
VCP	2, 4	x	x	10	1	Right Side	A	Pass
VCP	2, 4	x	x	10	1	Back Side	A	Pass
HCP	2, 4	x	x	10	1	Edge of HCP at Front of UUT	A	Pass
Contact Discharge Points - **RED** Arrows.								
Figure A2	2, 4	x	x	10	1		A	Pass
Figure A3	2, 4	x	x	10	1	No Discharges	--	--
Figure A4	2, 4	x	x	10	1	No Discharges	--	--
Figure A5	2, 4	x	x	10	1	Discharges at +/-4kV Only	A	Pass
Figure A6	2, 4	x	x	10	1	Discharges at +/-4kV Only	A	Pass
Figure A7	2, 4	x	x	10	1	No Discharges	--	--
Air Discharge Points - **BLUE** Arrows.								
Figure A2	2, 4, 8	x	x	10	1		A	Pass
Figure A3	2, 4, 8	x	x	10	1	No Discharges	--	--
Figure A4	2, 4, 8	x	x	10	1	No Discharges	--	--
Figure A5	2, 4, 8	x	x	10	1	No Discharges	--	--
Figure A6	2, 4, 8	x	x	10	1	No Discharges	--	--
Figure A7	2, 4, 8	x	x	10	1	No Discharges	--	--

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Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

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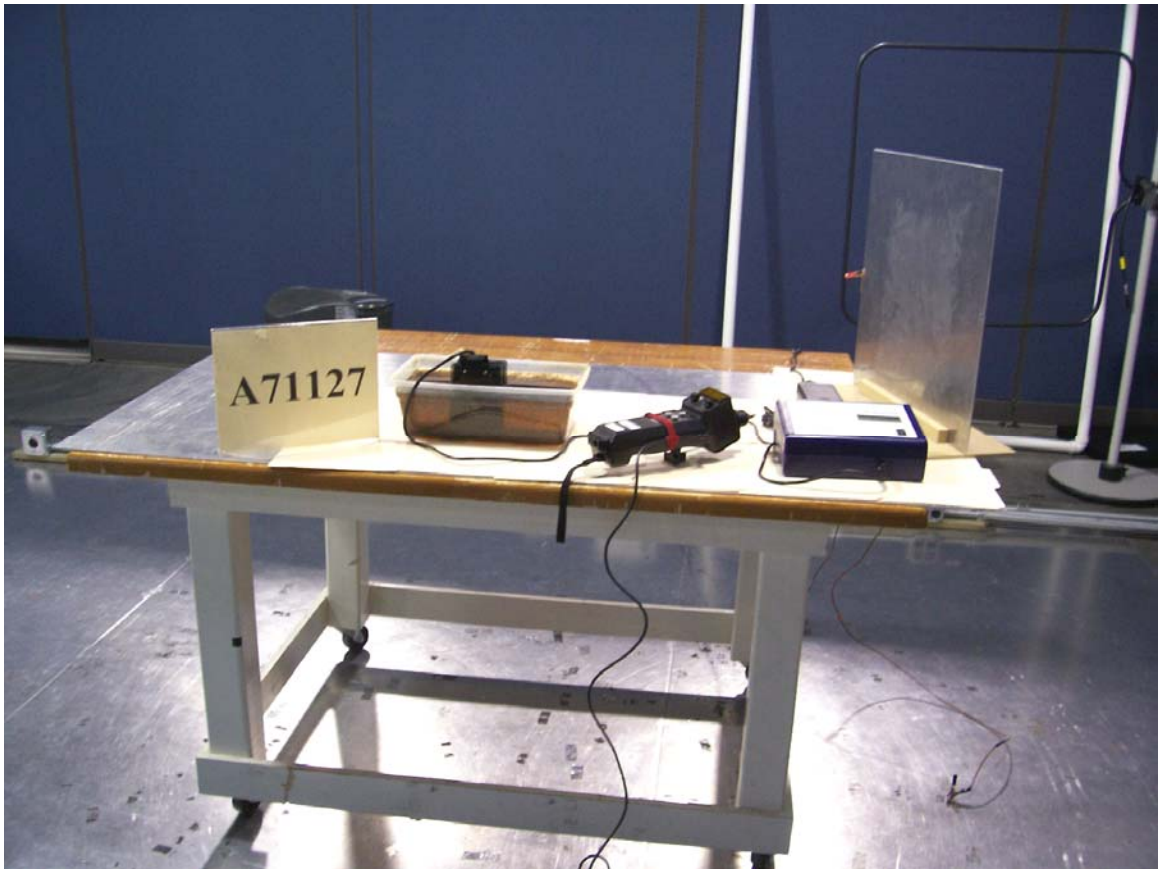

Figure A1. Electrostatic Discharge Test Setup.

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Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

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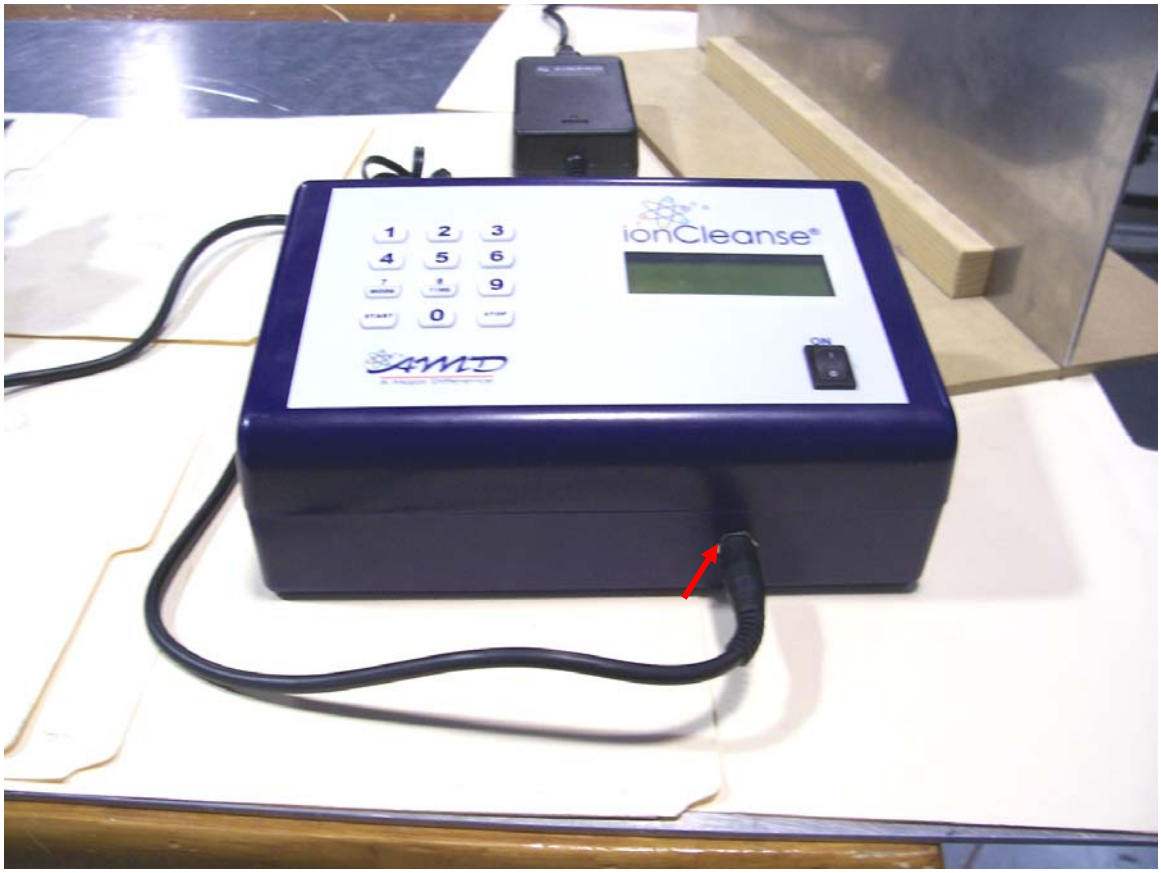

Figure A2. Electrostatic Discharge Test Points.

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Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

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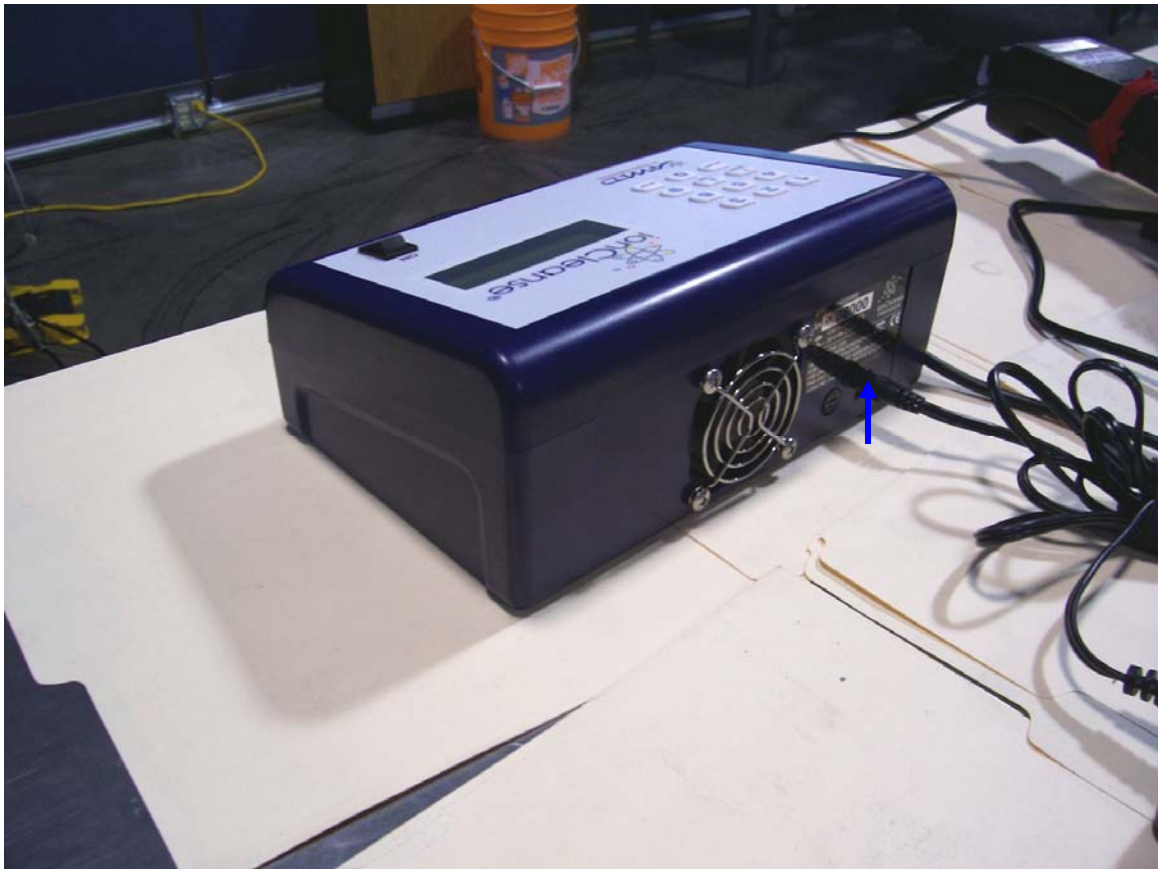

Figure A3. Electrostatic Discharge Test Points.

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Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

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Figure A4. Electrostatic Discharge Test Points.

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Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

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Figure A5. Electrostatic Discharge Test Points.

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Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

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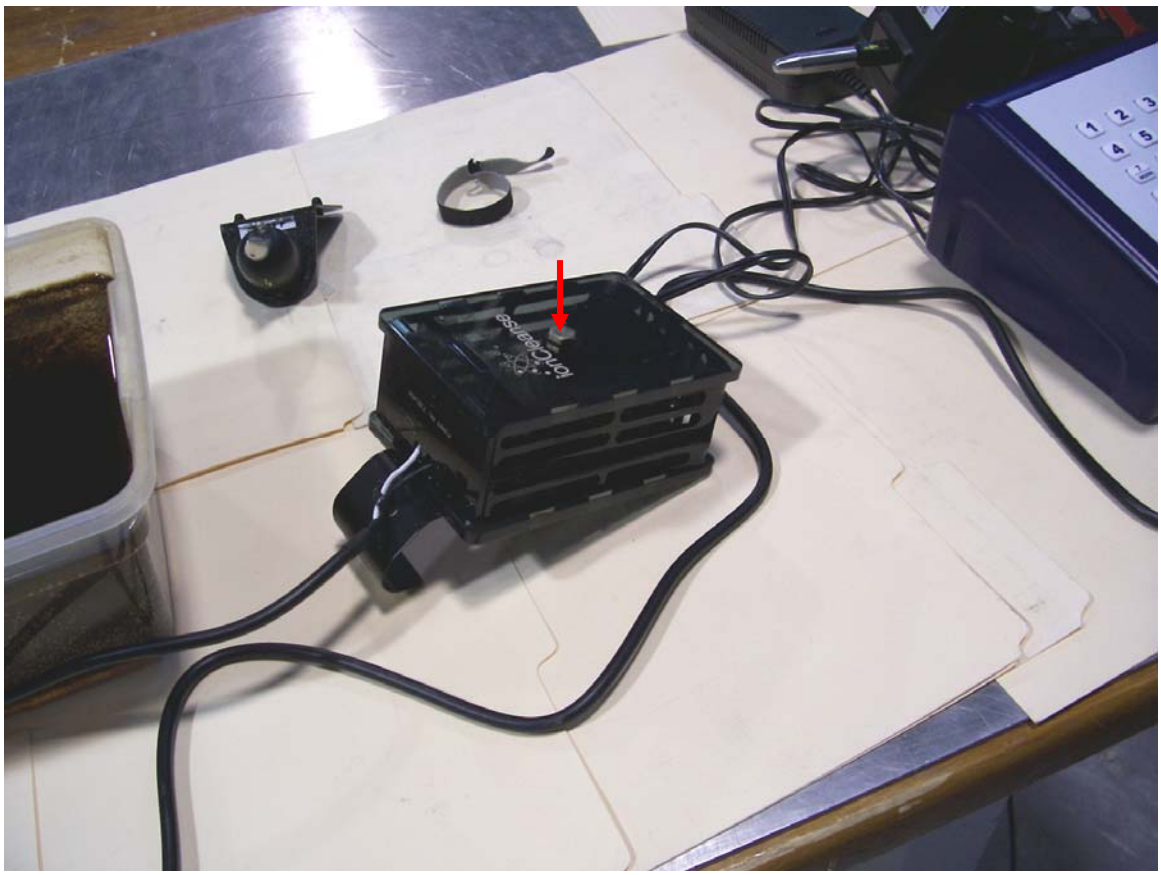

Figure A6. Electrostatic Discharge Test Points.

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Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

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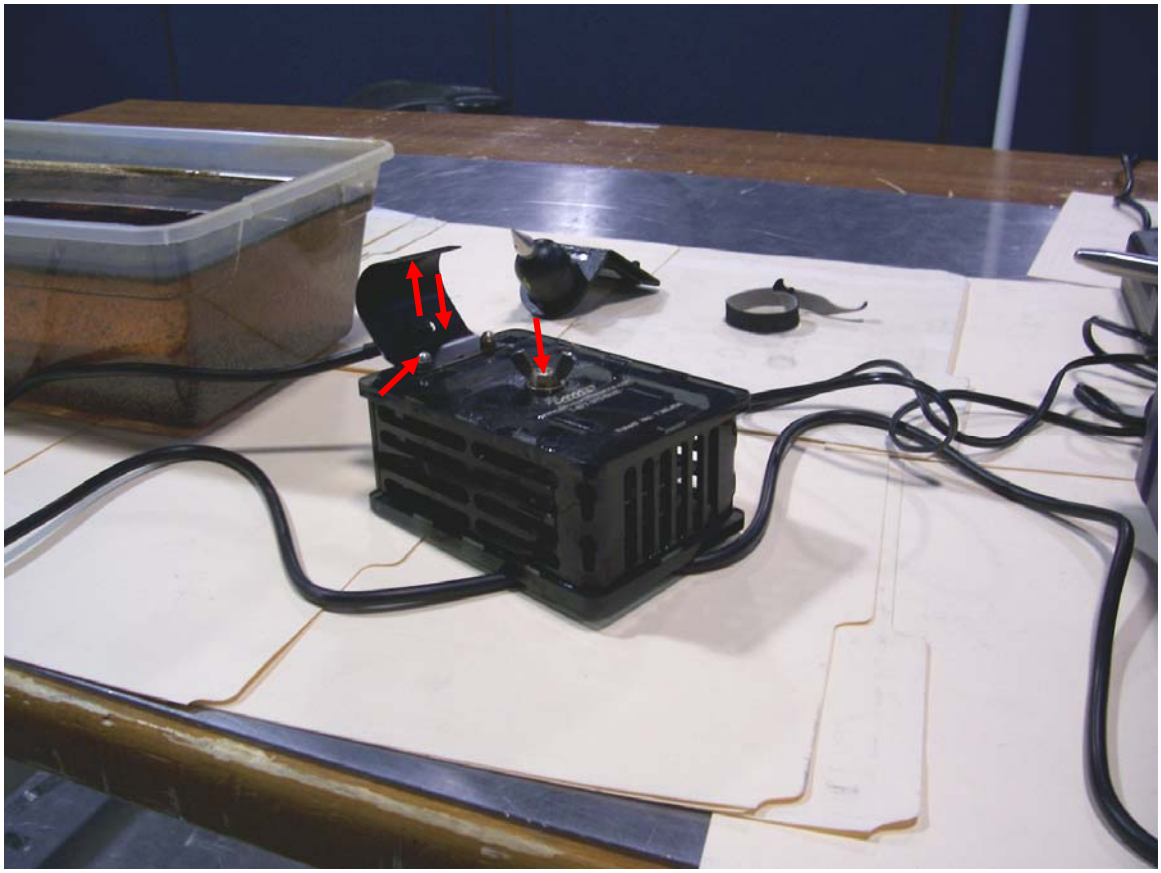

Figure A7. Electrostatic Discharge Test Points.

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Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1016	KeyTek	MZ-15/EC	0309248	Mini Zap ESD Gun	08/21/2007	08/21/2008
1208	Extech	115715	252868	Hygro-Thermometer	03/06/2007	03/06/2008
1214	California Instruments	1251P	10223	AC Power Source	NA	NA

APPENDIX B

Radiated RF Immunity Test Data

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Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	CALC
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 29, 2007
Temperature:	20˚C Humidity: 32%	Pressure:	834 mb
Input Voltage:	230VAC/50Hz		
Configuration of Unit:	Normal Operation Mode #1		
Test Engineer:	Tom Wittig		

A71127-4-3.doc FR0100

Frequency	Modulation				Field	Polarity	Dwell	Comments	Criteria	Pass /
(MHz)	Type	%	Freq	Form	(V/m)	(V or H)	(sec)		Met	Fail
80 - 1000	AM	80	1kHz	Sine	3	V	3	Front Side	A	Pass
900	AM	99	200Hz	Square	3	V	10		A	Pass
1400-2000	AM	80	1kHz	Sine	3	V	3		A	Pass
2000-2700	AM	80	1kHz	Sine	1	V	3		A	Pass
80 - 1000	AM	80	1kHz	Sine	3	H	3		A	Pass
900	AM	99	200Hz	Square	3	H	10		A	Pass
1400-2000	AM	80	1kHz	Sine	3	H	3		A	Pass
2000-2700	AM	80	1kHz	Sine	1	H	3		A	Pass
80 - 1000	AM	80	1kHz	Sine	3	V	3	Right Side	A	Pass
900	AM	99	200Hz	Square	3	V	10		A	Pass
1400-2000	AM	80	1kHz	Sine	3	V	3		A	Pass
2000-2700	AM	80	1kHz	Sine	1	V	3		A	Pass
80 - 1000	AM	80	1kHz	Sine	3	H	3		A	Pass
900	AM	99	200Hz	Square	3	H	10		A	Pass
1400-2000	AM	80	1kHz	Sine	3	H	3		A	Pass
2000-2700	AM	80	1kHz	Sine	1	H	3		A	Pass
80 - 1000	AM	80	1kHz	Sine	3	V	3	Back Side	A	Pass
900	AM	99	200Hz	Square	3	V	10		A	Pass
1400-2000	AM	80	1kHz	Sine	3	V	3		A	Pass
2000-2700	AM	80	1kHz	Sine	1	V	3		A	Pass
80 - 1000	AM	80	1kHz	Sine	3	H	3		A	Pass
900	AM	99	200Hz	Square	3	H	10		A	Pass
1400-2000	AM	80	1kHz	Sine	3	H	3		A	Pass
2000-2700	AM	80	1kHz	Sine	1	H	3		A	Pass
80 - 1000	AM	80	1kHz	Sine	3	V	3	Left Side	A	Pass
900	AM	99	200Hz	Square	3	V	10		A	Pass
1400-2000	AM	80	1kHz	Sine	3	V	3		A	Pass
2000-2700	AM	80	1kHz	Sine	1	V	3		A	Pass
80 - 1000	AM	80	1kHz	Sine	3	H	3		A	Pass
900	AM	99	200Hz	Square	3	H	10		A	Pass
1400-2000	AM	80	1kHz	Sine	3	H	3		A	Pass
2000-2700	AM	80	1kHz	Sine	1	H	3		A	Pass

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Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	CALC
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 29, 2007

A71127-4-3.doc FR0100

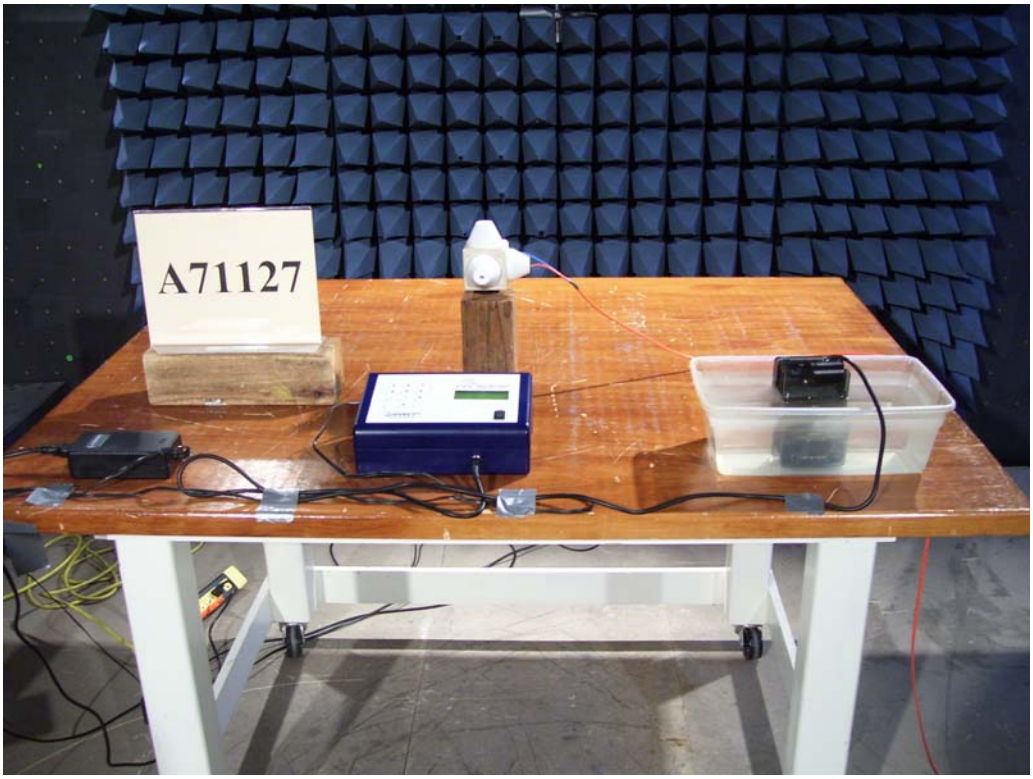

Figure B1. Radiated RF Immunity Test Setup – Front Side.

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Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	CALC
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 29, 2007

A71127-4-3.doc FR0100

Figure B2. Radiated RF Immunity Test Setup – Right Side.

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Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	CALC
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 29, 2007

A71127-4-3.doc FR0100

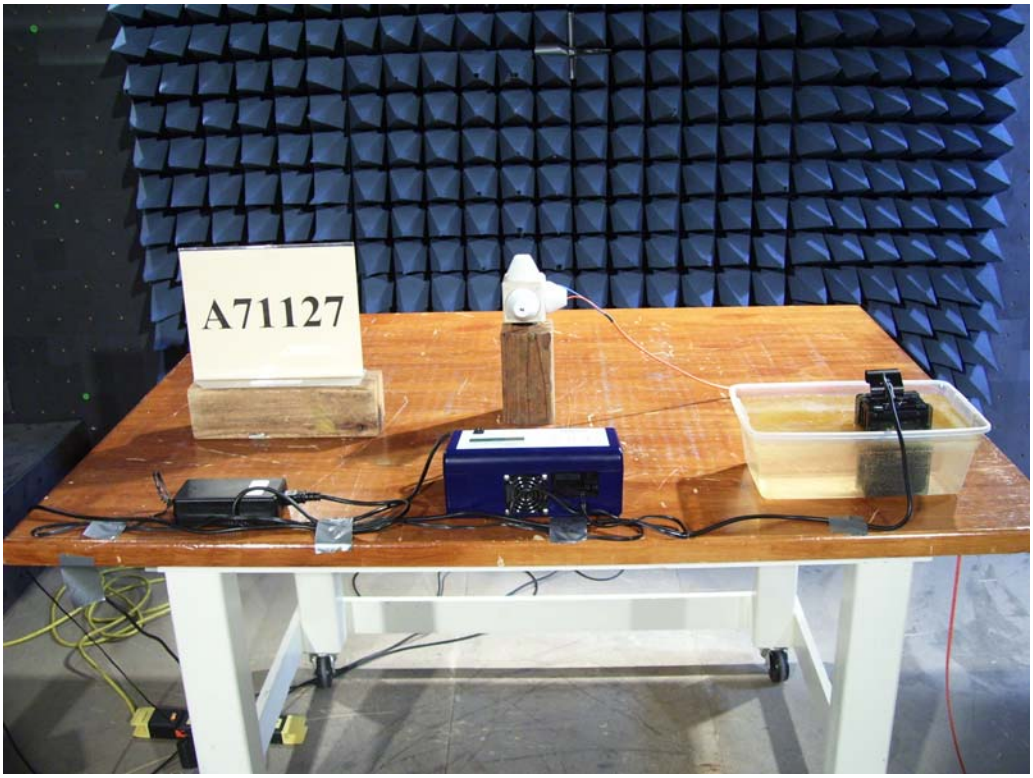

Figure B3. Radiated RF Immunity Test Setup – Back Side.

emc integrity incorporated

Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	CALC
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 29, 2007

A71127-4-3.doc FR0100

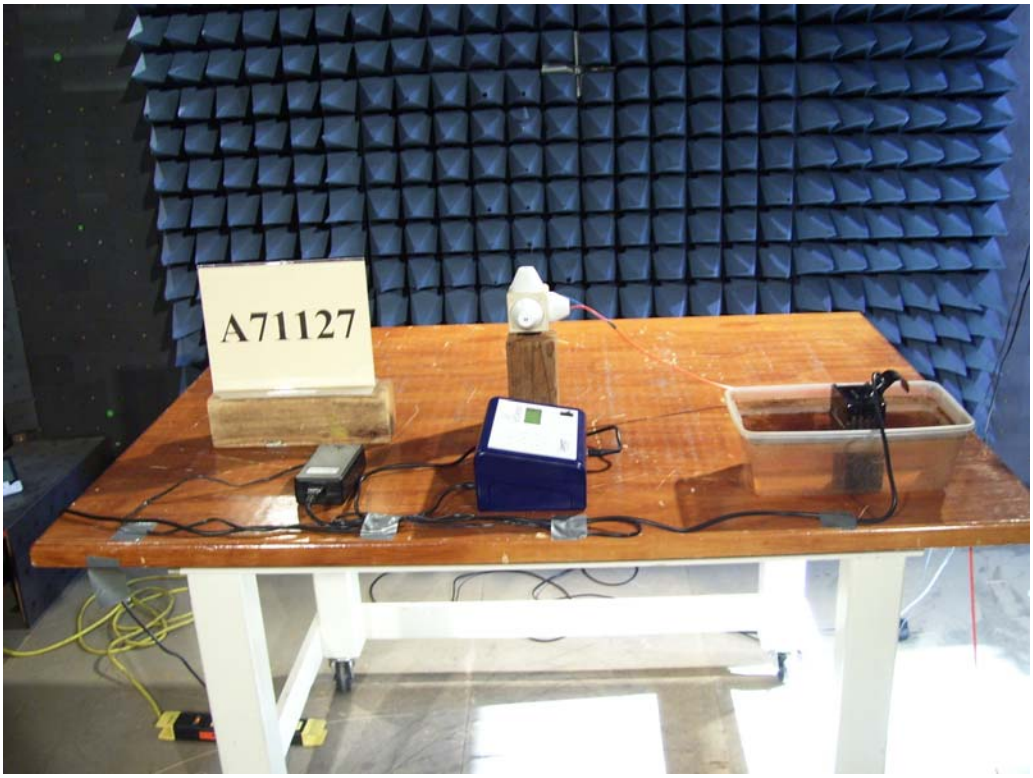

Figure B4. Radiated RF Immunity Test Setup – Left Side.

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Radiated RF Immunity per IEC / EN 61000-4-3

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	CALC
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 29, 2007

A71127-4-3.doc FR0100

Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1005	EMCO	3140	1012	Biconilog Antenna	NA	NA
1052	Hughes	1177HO1R000	057	Traveling Wave Tube Amp, 10 Watt, 2 - 4 GHz	NA	NA
1056	Marconi	2041	119332/001	Signal Generator 10kHz - 2.7GHz	01/18/2007	01/18/2008
1058	Ray Proof	RF Shield Room	6698	Completely Anechoic Lined Chamber	01/30/2007	01/30/2008
1060	Stanford Research Systems	DS345	28898	30 MHz Function Generator	12/11/2006	12/11/2007
1063	Varian	VZL6941 K-1	5713	TWT amplifier, 1-2 GHz, 20 Watts	NA	NA
1181	EMCI	RFS	NA	Release 02 July 2004	NA	NA
1192	Amplifier Research	FP4000	308963	RF Field Probe 10 KHz - 1GHz	01/24/2007	01/24/2008
1250	OPHIR	5127F	1034	RF Power Amplifier 20-1000MHz, 200 Watts	NA	NA
1193	Extech	445703	252025	Hygro-Thermometer	12/08/2006	12/08/2007
1069	Eaton	92341	43475-107	Antenna Mounting Adapter	NA	NA
1026	California Instruments	5001iX	55638	AC Power Source, 5kVA	NA	NA
1027	Eaton	91888-2	522	Horn Antenna	NA	NA
1028	Eaton	91889-2	521	Horn Antenna	NA	NA

APPENDIX C

Electrical Fast Transients/Burst Test Data

emc integrity incorporated

Electrical Fast Transient/Burst per IEC / EN 61000-4-4

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007
Temperature:	20˚C Humidity: 30%	Pressure:	838mb
Input Voltage:	230VAC/50Hz		
Configuration of Unit:	Normal Operation Mode #1		
Test Engineer:	Bill Norton		

A71127-4-4.doc FR0100

Voltage (kV)	Polarity +	Polarity -	Time (sec)	Injection Type	L 1	L 2	L 3	N	P E	Comments	Criteria Met	Pass / Fail
1.0	x		60	CDN	x					AC Mains	A	Pass
1.0		x	60	CDN	x						A	Pass
1.0	x		60	CDN				x			A	Pass
1.0		x	60	CDN				x			A	Pass
1.0	x		60	CDN					x		A	Pass
1.0		x	60	CDN					x		A	Pass
1.0	x		60	CDN	x			x	x		A	Pass
1.0		x	60	CDN	x			x	x		A	Pass

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Electrical Fast Transient/Burst per IEC / EN 61000-4-4

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

A71127-4-4.doc FR0100

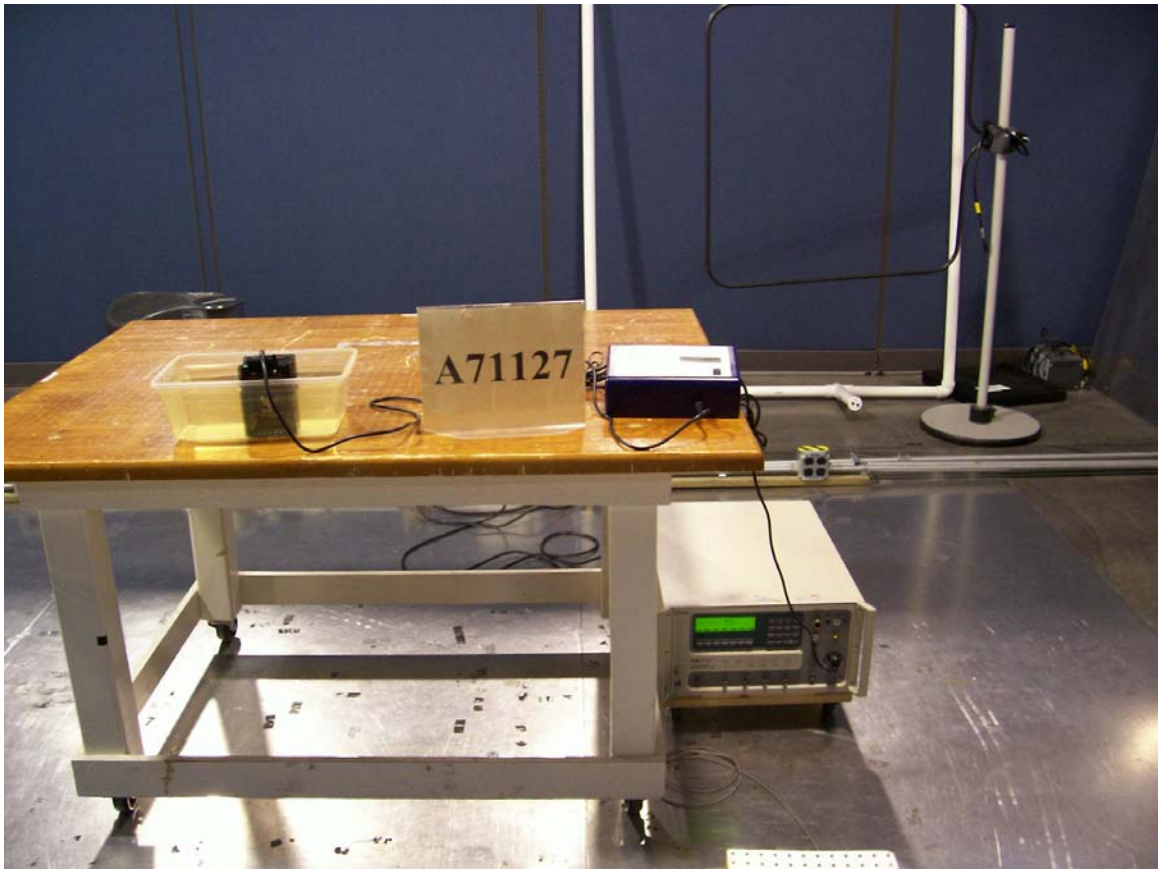

Figure C1. Electrical Fast Transient Test Setup – AC Mains.

emc integrity incorporated

Electrical Fast Transient/Burst per IEC / EN 61000-4-4

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

A71127-4-4.doc FR0100

Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1013	KeyTek	EMC Pro	0008347	Advanced EMC Immunity Tester	01/06/2007	01/06/2008
1184	KeyTek	CEWare32	NA	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1208	Extech	115715	252868	Hygro-Thermometer	03/06/2007	03/06/2008
1214	California Instruments	1251P	10223	AC Power Source	NA	NA

APPENDIX D

Surge Immunity Test Data

emc integrity incorporated

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007
Temperature:	21˚C Humidity: 30%	Pressure:	838mb
Input Voltage:	230VAC/50Hz		
Configuration of Unit:	Normal Operation Mode #1		
Test Engineer:	Bill Norton		

A71127-4-5.doc FR0100

Voltage (kV)	Polarity +	Polarity -	L 1	L 2	L 3	N	PE	Phase (deg)	Number of Pulses	Delay (sec)	Comments	Criteria Met	Pass / Fail
0.5	x		x			x		0	5	30	Differential Mode	A	Pass
0.5		x	x			x		0	5	30		A	Pass
0.5	x		x			x		90	5	30		A	Pass
0.5		x	x			x		90	5	30		A	Pass
0.5	x		x			x		180	5	30		A	Pass
0.5		x	x			x		180	5	30		A	Pass
0.5	x		x			x		270	5	30		A	Pass
0.5		x	x			x		270	5	30		A	Pass
0.5	x		x				x	0	5	30	Common Mode Line	A	Pass
0.5		x	x				x	0	5	30		A	Pass
0.5	x		x				x	90	5	30		A	Pass
0.5		x	x				x	90	5	30		A	Pass
0.5	x		x				x	180	5	30		A	Pass
0.5		x	x				x	180	5	30		A	Pass
0.5	x		x				x	270	5	30		A	Pass
0.5		x	x				x	270	5	30		A	Pass
0.5	x					x	x	0	5	30	Common Mode Neutral	A	Pass
0.5		x				x	x	0	5	30		A	Pass
0.5	x					x	x	90	5	30		A	Pass
0.5		x				x	x	90	5	30		A	Pass
0.5	x					x	x	180	5	30		A	Pass
0.5		x				x	x	180	5	30		A	Pass
0.5	x					x	x	270	5	30		A	Pass
0.5		x				x	x	270	5	30		A	Pass
1.0	x		x			x		0	5	60	Differential Mode	A	Pass
1.0		x	x			x		0	5	60		A	Pass
1.0	x		x			x		90	5	60		A	Pass
1.0		x	x			x		90	5	60		A	Pass
1.0	x		x			x		180	5	60		A	Pass
1.0		x	x			x		180	5	60		A	Pass
1.0	x		x			x		270	5	60		A	Pass
1.0		x	x			x		270	5	60		A	Pass
1.0	x		x				x	0	5	45	Common Mode Line	A	Pass
1.0		x	x				x	0	5	45		A	Pass

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Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007
Temperature:	21˚C Humidity: 30%	Pressure:	838mb
Input Voltage:	230VAC/50Hz		
Configuration of Unit:	Normal Operation Mode #1		
Test Engineer:	Bill Norton		

A71127-4-5.doc FR0100

Voltage (kV)	Polarity +	Polarity -	L 1	L 2	L 3	N	P E	Phase (deg)	Number of Pulses	Delay (sec)	Comments	Criteria Met	Pass / Fail
1.0	x		x				x	90	5	45		A	Pass
1.0		x	x				x	90	5	45		A	Pass
1.0	x		x				x	180	5	45		A	Pass
1.0		x	x				x	180	5	45		A	Pass
1.0	x		x				x	270	5	45		A	Pass
1.0		x	x				x	270	5	45		A	Pass
1.0	x					x	x	0	5	45	Common Mode Neutral	A	Pass
1.0		x				x	x	0	5	45		A	Pass
1.0	x					x	x	90	5	45		A	Pass
1.0		x				x	x	90	5	45		A	Pass
1.0	x					x	x	180	5	45		A	Pass
1.0		x				x	x	180	5	45		A	Pass
1.0	x					x	x	270	5	45		A	Pass
1.0		x				x	x	270	5	45		A	Pass
2.0	x		x				x	0	5	60	Common Mode Line	A	Pass
2.0		x	x				x	0	5	60		A	Pass
2.0	x		x				x	90	5	60		A	Pass
2.0		x	x				x	90	5	60		A	Pass
2.0	x		x				x	180	5	60		A	Pass
2.0		x	x				x	180	5	60		A	Pass
2.0	x		x				x	270	5	60		A	Pass
2.0		x	x				x	270	5	60		A	Pass
2.0	x					x	x	0	5	60	Common Mode Neutral	A	Pass
2.0		x				x	x	0	5	60		A	Pass
2.0	x					x	x	90	5	60		A	Pass
2.0		x				x	x	90	5	60		A	Pass
2.0	x					x	x	180	5	60		A	Pass
2.0		x				x	x	180	5	60		A	Pass
2.0	x					x	x	270	5	60		A	Pass
2.0		x				x	x	270	5	60		A	Pass

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Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

A71127-4-5.doc FR0100

Figure D1. Surge Immunity Test Setup – AC Mains.

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Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	

A71127-4-5.doc FR0100

Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1013	KeyTek	EMC Pro	0008347	Advanced EMC Immunity Tester	01/06/2007	01/06/2008
1184	KeyTek	CEWare32	NA	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1208	Extech	115715	252868	Hygro-Thermometer	03/06/2007	03/06/2008
1214	California Instruments	1251P	10223	AC Power Source	NA	NA

APPENDIX E

Conducted RF Immunity Test Data

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Conducted RF Immunity per IEC / EN 61000-4-6

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007
Temperature:	19˚C Humidity: 30%	Pressure:	838mb
Input Voltage:	230VAC/50Hz		
Configuration of Unit:	Normal Operation Mode #1		
Test Engineer:	Bill Norton		

A71127-4-6.doc FR0100

Frequency (MHz)	Modulation			Level (Vrms)	Dwell (sec)	Comments	Criteria Met	Pass / Fail
	Type	%	Freq					
0.150 – 80.0	AM	80	1 kHz	3	3	AC Mains using M3 CDN	A	Pass

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Conducted RF Immunity per IEC / EN 61000-4-6

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

A71127-4-6.doc FR0100

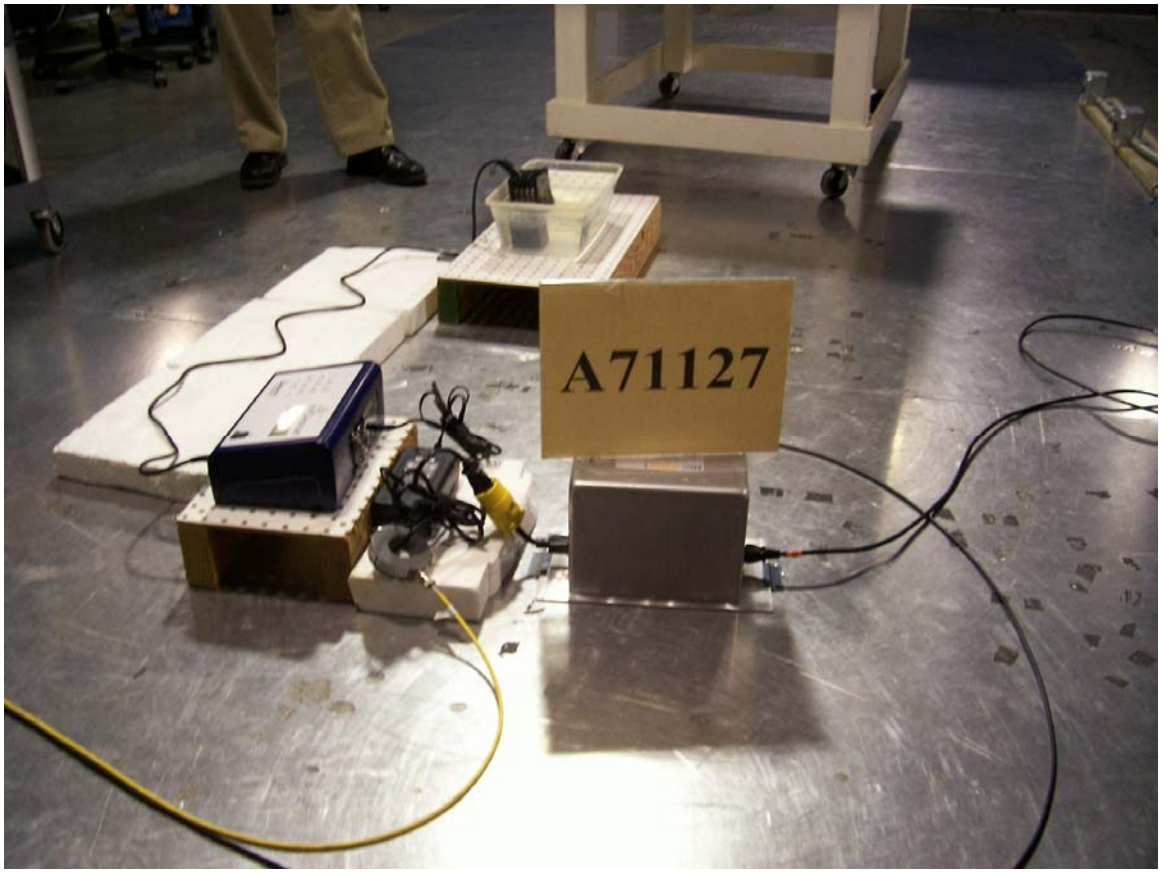

Figure E1. Conducted RF Immunity Test Setup.

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Conducted RF Immunity per IEC / EN 61000-4-6

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

A71127-4-6.doc FR0100

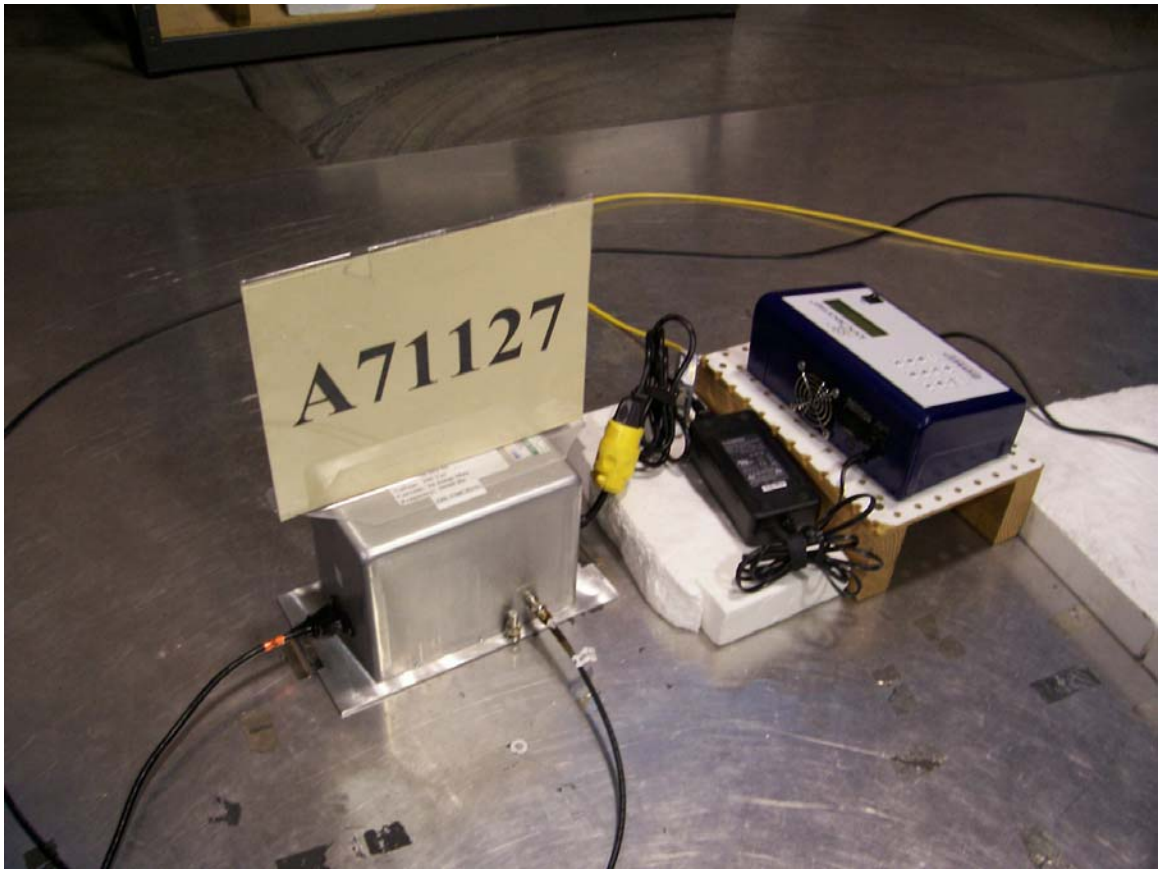

Figure E2. Conducted RF Immunity Test Setup – AC Mains.

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Conducted RF Immunity per IEC / EN 61000-4-6

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

A71127-4-6.doc FR0100

Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1023	Amplifier Research	75A250	28844	75 Watt Amplifier (10 kHz - 250 MHz)	NA	NA
1080	Fischer Custom	F-33-1	592	Current Probe (10 kHz - 230 MHz)	08/27/2007	08/27/2008
1181	EMCI	RFS	NA	Release 02 July 2004	NA	NA
1208	Extech	115715	252868	Hygro-Thermometer	03/06/2007	03/06/2008
1214	California Instruments	1251P	10223	AC Power Source	NA	NA
1225	EMCI	EMCI-CDN-M3-16	EMCI010	M3 CDN, 16A, 250 VAC	09/10/2007	09/10/2008
1258	Hewlett Packard	8648C	3537A01572	Signal Generator, 100kHz to 3.2GHz	05/14/2007	05/14/2008
1259	Hewlett Packard	8594E	3440A01325	Spectrum Analyzer with Tracking Generator, 9kHz to	04/27/2007	04/27/2008

APPENDIX F

Voltage Dip and Interrupts Test Data

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Voltage Dips and Interrupts per IEC / EN 61000-4-11

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007
Temperature:	20˚C Humidity: 30%	Pressure:	838mb
Input Voltage:	230VAC/50Hz		
Configuration of Unit:	Normal Operation Mode #1		
Test Engineer:	Bill Norton		

A71127-4-11.doc FR0100

% Nominal	No. of Cycles	Phase Angle (deg) 0	90	180	270	Time between dropouts (sec)	Number of tests	Comments	Criteria Met	Pass / Fail
230VAC/50 Hz										
0%	0.5	x				10	3		A	Pass
0%	0.5		x			10	3		A	Pass
0%	0.5			x		10	3		A	Pass
0%	0.5				x	10	3		A	Pass
0%	1.0	x				10	3		A	Pass
0%	1.0		x			10	3		A	Pass
0%	1.0			x		10	3		A	Pass
0%	1.0				x	10	3		A	Pass
70%	25	x				10	3		A	Pass
70%	25		x			10	3		A	Pass
70%	25			x		10	3		A	Pass
70%	25				x	10	3		A	Pass
0%	250	x				10	3	EUT had to be restarted	C	Pass
0%	250			x		10	3	after every test.	C	Pass
230VAC/60Hz										
70%	30	x				10	3		A	Pass
70%	30		x			10	3		A	Pass
70%	30			x		10	3		A	Pass
70%	30				x	10	3		A	Pass
0%	300	x				10	3	EUT had to be restarted	C	Pass
0%	300			x		10	3	after every test.	C	Pass

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Voltage Dips and Interrupts per IEC / EN 61000-4-11

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

A71127-4-11.doc FR0100

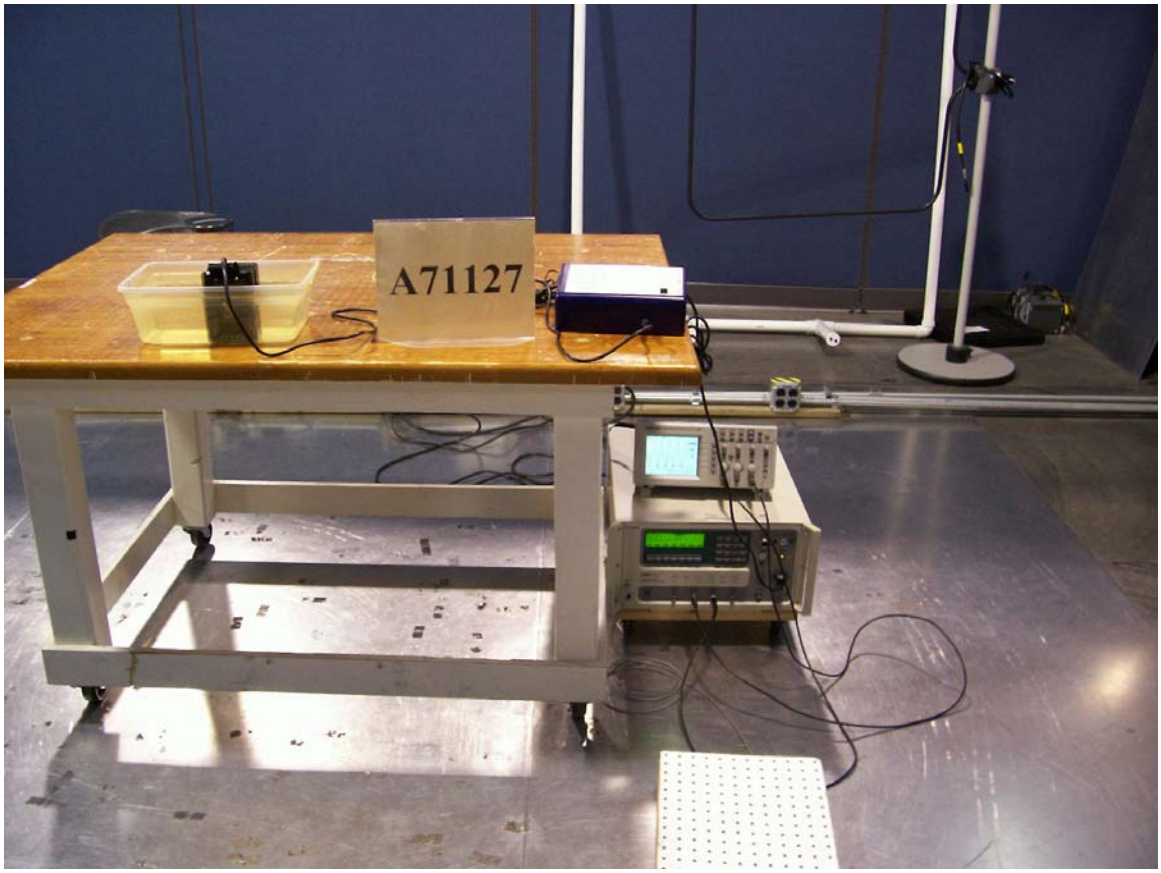

Figure F1. Voltage Dips and Interruptions Test Setup.

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Voltage Dips and Interrupts per IEC / EN 61000-4-11

Manufacturer:	A Major Difference	Project Number:	A71127
Customer Representative:	Neill Moroney	Test Area:	GP 1
Model:	IonCleanse Premier	S/N:	08000
Standard Referenced:	EN 61000 -6-1 : 2007	Date:	November 26, 2007

A71127-4-11.doc FR0100

Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1013	KeyTek	EMC Pro	0008347	Advanced EMC Immunity Tester	01/06/2007	01/06/2008
1182	Tektronics	TDS1002	C043193	60 MHz Digital Oscilloscope	08/02/2007	08/02/2008
1184	KeyTek	CEWare32	NA	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1208	Extech	115715	252868	Hygro-Thermometer	03/06/2007	03/06/2008
1214	California Instruments	1251P	10223	AC Power Source	NA	NA

APPENDIX G

Product Data Sheet

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www.emcintegrity.com
1736 Vista View Drive | Longmont, CO 80504 | tel: 303.776.7249 | fax: 303.776.7314 | info@emcintegrity.com

1.0 Client Information

Client Information	
Manufacturer Name	A Major Difference
Address	10235 S. Progress Way, Units 7 & 8
City	Parker
State	Colorado
Zip Code	80134
Client Representative	Neill Moroney
Title	
Phone	303-840-8206
Fax	303-840-8320
Email	rwalker@stargeteinternational.com

2.0 Product Information - General

Product Information	
Product Name (as it should appear on test report)	IonCleanse Premier
Model Number	IonCleanse Premier
Functional description of product	Vitality Enhancement System
Product type (IT, Medical, Scientific, Industrial, etc.)	Household
Is the product an intentional radiator	No
Product Dimensions	12 x 8 x 4
Product Weight	< 10 lbs
Will fork lift be required	No
Applicable Standards, if known	Generic (61000-6-1 / EN55011Grp 1 Class A)
Describe all environment(s) where product will be used	Household/non medical practitioners
Does product consist of multiple components? (If yes, please describe each system component)	Yes – Power Supply (external), Main Box and Array
Cycle time > 3 seconds? (If yes, How long?)	No
Highest internally generated frequency	4 MHz
Product Set-up Time	< 15 minutes
Boot up time in the event of an unintentional power down	< 5 minutes

Identify all I/O Connections as well as maximum associated cable lengths below

Model No.	Description	Shielded?	Length	Quantity
	Array Cable		**2 ft (approx)**	**1**

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1736 Vista View Drive | Longmont, CO 80504 | tel: 303.776.7249 | fax: 303.776.7314 | info@emcintegrity.com

3.0 Power

Power Requirements	
Input Voltage Rating as it appears on unit, power supply, or power brick	External Brick (SinPro model MPU50-107) 100-240 Vac, 47-63 Hz
Input Current (specify @ 230 Vac/50 Hz)	1.35 A
Single or Multi-Phase (If multi-phase, specify delta or wye)	Single Phase
Is input power connector two-prong (Hot & Neutral) or 3-prong (H, N, Ground)	3 Prong grounded
Does UUT have more than 1 power cord? (If yes, explain.)	No

4.0 Unit Under Test (UUT) – Detailed Information

UUT Hardware	
Condition	New – Production Line
Configuration During Test	Mode 1 for 60 minutes, with salinity level set to approx. 2.0 Amps
Input Power	230 Vac

UUT Components			
Name	**Model No.**	**Serial No.**	**Description**
P/S	MPU50-107	---	External Sinpro AC/DC Converter.
Main Box	IonCleanse Premier	08000	Main control box for IonCleanse Premier
Array	---	---	Array to be immersed in water solution

I/O Cabling
See Section 2.0 for details

UUT Software/Firmware		
Name	**Version/Revision**	**Functionality**
--	5A05	Custom software to control parameters (Time, sample rate, etc) of product

UUT Operating Conditions	
List all frequencies the product generates/uses	4 MHz
How will product be exercised during test?	Mode 1
How will product be monitored during test?	Display
What are the product's critical parameters?	No change in display
Specify tolerance of all critical parameters.	No Tolerance

emc integrity incorporated
www.emcintegrity.com
1736 Vista View Drive | Longmont, CO 80504 | tel: 303.776.7249 | fax: 303.776.7314 | info@emcintegrity.com

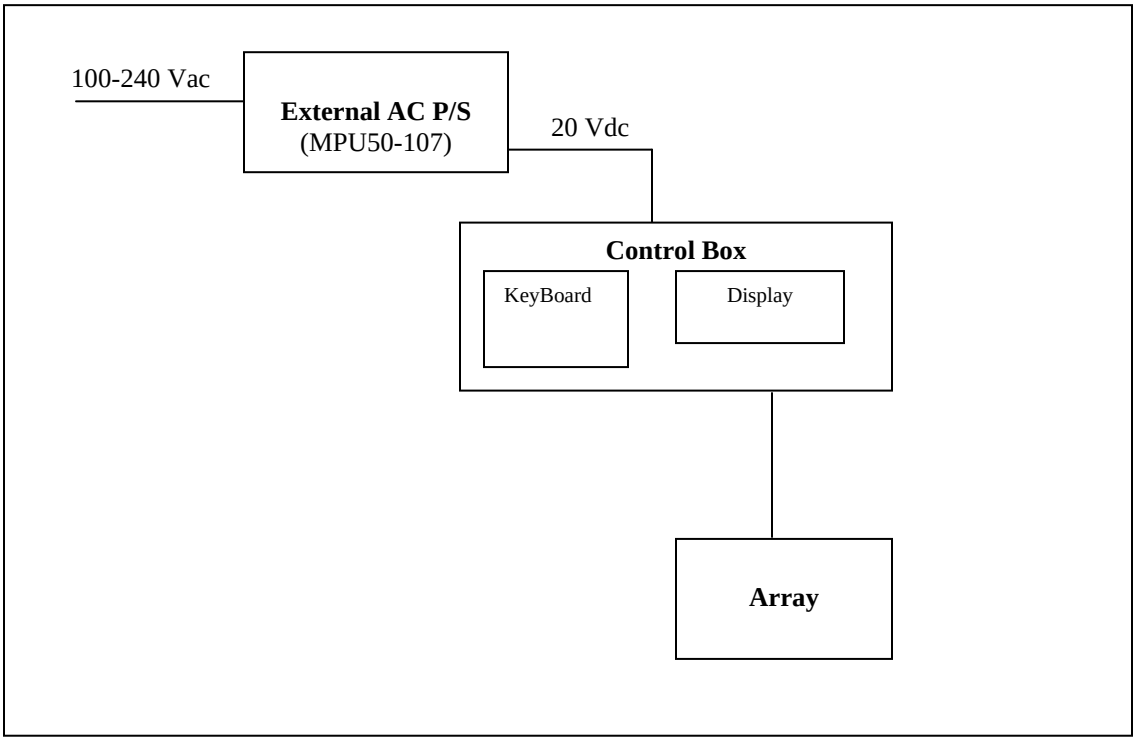
5.0 Support Equipment (SE) – Detailed Information

Support Equipment (SE)			
Name	**Model No.**	**Serial No.**	**Description**
N/A	**N/A**	**N/A**	**N/A**

SE I/O Cabling				
Model No.	**Description**	**Shielded?**	**Length**	**Quantity**
N/A	**N/A**	**N/A**	**N/A**	**N/A**

SE Software/Firmware		
Name	**Version/Revision**	**Functionality**
N/A	**N/A**	**N/A**

6.0 Block Diagram



(**Must be completed prior to testing**).

APPENDIX H

EMI Test Log

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EMI Test Log

Manufacturer:	A Major Difference	Project Number:	A71127
Model:	IonCleanse	S/N:	08000
Customer Representative:	Neill Moroney		
Standard Referenced:	EN61000-6-1 & EN55011/FCC Part 15		

FR0105

Test	Test Code	Date	Event	Time (hrs)	Result	Initials
RE	1152	November 14, 2007	Test #1, 30-1000 MHz, 8 rads, 4 heights, 3 second dwell Normal operation – mode 3			
			Mode 3, saw spermatic broadband noise spikes occurred due to units relay switching from negative to positive modes			
			Test #2, 30-1000 MHz, 8 rads, 4 heights, 3 second dwell Normal operation – mode 1	2.0	Pass	TW
CE	2151		Test#3: 150kHz – 30MHz, 230VAC/50Hz	1.0	Pass	KJ
	2341		Test#4: 150kHz – 30MHz, 115VAC/50Hz	1.0	Pass	KJ
4-3	5008	November 21, 2007	Performed RI from 80-1000MHz @ 3V/m (230VAC/50Hz)	8.0	--	BN
			Front Side V-Pole At 465MHz EUT operational state changes to High Temp Overheat State, EUT requires reboot.			
			Disconnected the Array and retested on Front Side V-pole at 465MHz and EUT still goes into an error.			
			Modification required for compliance – Original software (Revision 5A04) was designed to set alarm state for 1 single instance of temperature reading above 180°F. Product modified to incorporate software Revision 5A05 to require product to maintain temperature reading above 180°F for 150 consecutive seconds before proceeding to alarm state.			
			Performed RI from 80-1000MHz @ 3V/m (230VAC/50Hz)			
			On Front Side and Right Side at about 85-88MHz EUT resets itself.			
			On Right Side H-Pole EUT is being retuned at 86MHz from + to -			
			With the keypad ribbon cable disconnected EUT does not have any errors.			
			Modification required for compliance: Added a Ferrite to the keypad ribbon cable and Ran EUT up to 100MHz and it passed up to that point. H-Pole Right Side.			
			Removed ferrite and reran Right Side H-pole at 85 MHz EUT resets itself. (X2)			
			Put ferrite back on keypad ribbon cable reran Right Side H-pole, ran up to 100MHz and EUT did not have an errors.			
			Completed RI on the Right Side H-pole.			
4-6	4612	November 26, 2007	Performed CI @ 3Vrms (230VAC/50Hz).	2.0	Pass	BN
4-4	4401		Performed EFT (230VAC/50Hz).	1.0	Pass	BN
4-11	4101		Performed PQF (230VAC/50/60Hz).	1.0	Pass	BN
4-11	4190		Performed PQF (230VAC/50/60Hz).	0.0	Pass	BN
			At 0% at 250 Cycles 50Hz and 0% at 300 Cycles 60Hz: EUT had to be restarted after every test.			
4-5	4515		Performed Surge (230VAC/50Hz)	5.0	Pass	BN
4-2	4223		Performed ESD (230VAC/50Hz)	3.0	Pass	BN
			Figure A3, Figure A4, Figure A5, Figure A6 and Figure A7: No Air Discharges			

EMI Test Log

Manufacturer:	A Major Difference	Project Number:	A71127
Model:	IonCleanse	S/N:	08000
Customer Representative:	Neill Moroney		
Standard Referenced:	EN61000-6-1 & EN55011/FCC Part 15		

FR0105

Test	Test Code	Date	Event	Time (hrs)	Result	Initials
			Figure A3: Figure A4 and Figure A5: No Contact Discharges.			
			Figure A6 and Figure A7: Contact Discharges at +/-4kV Only.			
4-3	4344	November 29, 2007	Performed RF Immunity, 80-1000 MHz	4.0	Pass	TW
4-3	4391		Performed RF Immunity, 1400-2000 MHz	1.0	Pass	TW
4-3	4391		Performed RF Immunity, 2000-2700 MHz	1.0	Pass	TW
3-2	3302		Performed Flicker	2.0	Pass	TW

APPENDIX I

Laboratory Accreditation

Nemko Laboratory Authorization

Authorization: ELA 215

EMC Laboratory: **EMC Integrity, Inc.**
1736 Vista View Drive
Longmont, Colorado 80504
USA

Scope of Authorization: **All CENELEC standards [ENs] for EMC that are listed on the accompanying page, and all of the corresponding CISPR, IEC and ISO EMC standards that are listed on the accompanying page.**

Nemko has assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA -10. During the visit by the Nemko representative it was found that the Laboratory is capable of performing tests within the Scope of the Authorisation.

Accordingly, Nemko will normally accept test results from the laboratory on a partial or complete basis for certification of the products.

In order to maintain the Authorisation, the information given in the pertinent NLA-10 must be carefully followed. Nemko is to be promptly notified about any changes in the situation at the Laboratory, which may affect the basis for this Authorisation. The Authorisation may be withdrawn at any time if the conditions are no longer considered to be fulfilled.

The Authorisation is valid through December 31, 2008.

Dallas, Texas, USA.

For and on behalf of Nemko AS:

T.B. Ketterling,

Nemko ELA Co-ordinator

Region: North America

Nemko

Nemko Laboratory Authorization

Authorization: ELA 215

SCOPE OF AUTHORIZATION

Capability to perform a basic test implies also that any product (family) standard calling up this basic test is also within the scope if mentioned below or not.

Generic & Product –Family Standards		
EN 55011 :1998+A1 :1999 +A2 :2002 CISPR 11:1997 (Modified) + A1:1999 + A2:2002 CISPR 11 Ed. 4.1	EN 55014-1:2000 + A1:2001 + A2:2002 CISPR 14-1:2000 + A1:2001 + A2:2002 CISPR 14-1 Ed. 5.0 EN 55014-2:1997 + A1:2001 CISPR 14-2:1997 + A1:2001 CISPR 14-2 Ed. 1.1	EN 55022: 1998+ A1:2000, +A2:2003 CISPR 22: 2003+ A1:2004 EN55022:2006 CISPR 22:2005 (Modified) CISPR 22 Ed. 5.2
EN 55024: 1998 +A1:2001, +A2:2003 CISPR 24: 1997 +A1:2001, +A2:2002 CISPR 24 Ed. 1.0	EN 61000-6-1 :2007 IEC 61000-6-1 Ed. 2.0 EN 61000-6-1: 2001	EN 61000-6-2:2005 IEC 61000-6-2 Ed. 2.0
EN 61000-6-3 :2007 IEC 61000-6-3 Ed. 2.0 EN 61000-6-3: 2001 + A1 :2004	IEC 61000-6-2 Ed. 2.0 EN 61000-6-2: 2005 IEC 61000-6-2: 2005 EN 61000-6-2: 2001	EN 61326:1997 +A1:1998 + A2:2001 +A3:2003 IEC 61326:1997 + A1:1998 + A2:2000 IEC 61326:2002-02
EN 60601-1-2:2001 IEC 60601-1-2:2001 EN 60601-1-2:2006 IEC 60601-1-2 Ed. 2.1	EN 55103-1:1996 EN 55103-2 :1996	EN 300 386 V.1.3.1 EN 300 386 V.1.3.3
EN 61000-3-3: 1995, +A1:2001 +A2:2005 IEC 61000-3-3: 1994, +A1:2001 +A2:2005	EN 61000-3-2: 2000 +A2 :2005 IEC 61000-3-2: 2000 (Modified) +A1:2001 +A2:2004	BLANK
Basic Standards		
EN 61000-4-2:1995, +A1:1998, +A2:2000 IEC 61000-4-2:1995, +A1:1998, +A2:2000 IEC 61000-4-2 Ed. 1.2	EN 61000-4-3:2002, +A1:2002 IEC 61000-4-3:2002, +A1:2002 EN 61000-4-3 :2006 +A1 :2006 +A2 :2006 IEC 61000-4-3 Ed. 3.0	EN 61000-4-4:1995, +A1:2002, +A2:2002 IEC 61000-4-4:1995, +A1:2000, +A2:2001 EN 61000-4-4:2004 IEC 61000-4-4 Ed. 2.0
EN 61000-4-5:1995, +A1:2001 IEC 61000-4-5:1995, +A1:2000 EN 61000-4-5 :2006 IEC 61000-4-5 Ed. 2.0	EN 61000-4-6:1996, +A1:2001 IEC 61000-4-6:1996, +A1:2000 EN 61000-4-6 : 2006 IEC 61000-4-6 Ed. 2.2	EN 61000-4-8:1994,+A1:2001 IEC 61000-4-8:1994, +A1:2001 IEC 61000-4-8 Ed. 1.1
EN 61000-4-11:2004 IEC 61000-4-11 Ed. 2.0 EN 61000-4-11:1994, +A1:2000 IEC 61000-4-11:1994, +A1:2000	BLANK	BLANK

Dallas, Texas December 7, 2006.

T.B. Ketterling, Nemko ELA Co-ordinator

2(2) NLA 3 ED3

NVLAP® National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

EMC Integrity, Inc.
1736 Vista View Drive
Longmont, CO 80504
Mr. Vincent W. Greb
Phone: 303-776-7249 Fax: 303-776-7314
E-Mail: vinceg@emcintegrity.com
URL: http://www.emcintegrity.com

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS **NVLAP LAB CODE 200737-0**

NVLAP Code	*Designation / Description*
Emissions Test Methods:	
12/100063c	IEC 61000-6-3 (1996), EN 61000-6-3 (2001), A1 (2004): Electromagnetic Compatibility (EMC) - Part 6: Generic standards - Section 3: Emission standard for residential, commercial, and light-industrial environments.
12/CIS11f	AS/NZS CISPR 11 (2002): Industrial, scientific and medical (ISM) radio frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement
12/CIS11g	IEC/CISPR 11, Ed. 4.1 (2004-06): Industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurements
12/CIS11h	AS/NZS CISPR 11 (2004): Industrial, scientific and medical (ISM) radio frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement
12/CIS11i	IEC/CISPR 11, Ed. 4.1 (2004-06) + A1(2004): Industrial, scientific and medical (ISM) radio frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement

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12/CIS11j	EN 55011 (1998) + A1(1999), A2(2002): Industrial, scientific and medical (ISM) radio frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement
12/CIS11k	IEC/CISPR 11 (2003), EN 55011 (1998), A2(2002): Limits and Methods of Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific, and Medical Radio-Frequency Equipment
12/CIS14b1	AS/NZS CISPR 14-1 (2003): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
12/CIS14x	IEC/CISPR 14-1, Ed. 4 (2003): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
12/CIS22	IEC/CISPR 22 (1997) & EN 55022 (1998) + A1(2000): Limits and methods of measurement of radio disturbance characteristics of information technology equipment
12/CIS22a	IEC/CISPR 22 (1993) and EN 55022 (1994): Limits and methods of measurement of radio disturbance characteristics of information technology equipment, Amendment 1 (1995) and Amendment 2 (1996)
12/CIS22a4	IEC/CISPR 22 (1993) & EN 55022 (1994)+A1(1995), A2(1997): Limits and methods of measurement of radio disturbance characteristics of information technology equipment
12/CIS22b	CNS 13438 (1997): Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment
12/CIS22c	IEC/CISPR 22, Fourth Edition (2003-04) & EN 55022 (1998): Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
12/CIS22c1	IEC/CISPR 22, Edition 5 (2005) and EN 55022 (1998): Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement

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NVLAP Code	*Designation / Description*
12/CIS22c3	IEC/CISPR 22, Edition 5 (2005) + A1(2005): Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
12/CIS22c4	EN 55022 (1998) + A1(2000) + A2(2003): Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement
12/EM02d	IEC 61000-3-2, Edition 2.2 (2004-11): Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current <= 16 A per phase)
12/EM03b	IEC 61000-3-3, Edition 1.1(2002-03) & EN 61000-3-3, A1(2001): EMC - Part 3-3: Limits - Limitations of voltage changes, voltage flucuations and flicker, in public low-voltage supply-systems, for equipment with rated current <=16 A per phase and not subject to conditional connections
12/EM03g	IEC 61000-3-3, Edition 1.1 (2003) +A2 (2005): EMC Part 3-3: Limits - Limitations of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connections
12/F18	FCC OST/MP-5 (1986): FCC Methods of Measurement of Radio Noise Emissions for ISM Equipment (cited in FCC Method 47 CFR Part 18 - Industrial, Scientific, and Medical Equipment)
12/FCC15b	ANSI C63.4 (2003) with FCC Method 47 CFR Part 15, Subpart B: Unintentional Radiators
12/KN22	KN22 with RRL Notice No. 2005-82 (Sept. 29, 2005): RRL Notice No. 2005-82: Technical Requirements for Electromagnetic Interference Annex 8 (KN-22), RRL Notice No. 2005-131: Conformity Assessment Procedures for Electromagnetic Interference
12/T51	AS/NZS CISPR 22 (2002) and AS/NZS 3548 (1997): Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment
12/VCCIa	VCCI: Agreement of Voluntary Control Council for Interference by Information Technology Equipment - Technical Requirements: V-3/2005.04

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NVLAP Code	*Designation / Description*
Immunity Test Methods:	
12/610006h	IEC 61000-6-1, 2nd edition (2005-03): Electromagnetic compatibility (EMC) - Part 6: Generic standards - Section 1: Immunity for residential, commercial and light-industrial environments
12/610006i	IEC 61000-6-2, Edition 2.0 (2005-01): Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
12/I01b	IEC 61000-4-2 (2001); EN 61000-4-2 (2001), A2 (2001): Electrostatic Discharge Immunity Test
12/I01c	EN 61000-4-2 +A1(1998) +A2(2001): Electrostatic Discharge Immunity Test
12/I02b	IEC/EN 61000-4-3, Ed. 2.1 (2002), A1 (2002); EN 61000-4-3: Radiated, radio-frequency, electromagnetic field immunity test
12/I02e	EN 61000-4-3 (2002) + A1(2002) + IS1(2004): Radiated, radio-frequency, electromagnetic field immunity test
12/I02f	EN 61000-4-3 (2002) + A1(2002): Radiated, radio-frequency, electromagnetic field immunity test
12/I03c	IEC 61000-4-4, Ed. 2.0 (2004-07): Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
12/I04b	IEC 61000-4-5 (2001), A1(2000); EN 61000-4-5(2001), A1(2000): Surge Immunity Test
12/I05d	IEC 61000-4-6, Ed. 2.1 (2004); EN 61000-4-6: Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
12/I05e	EN 61000-4-6 (1996) + A1 (2001) + IS1(2004): Immunity to Conducted Disturbances, Induced by Radio Frequency Fields

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NVLAP Code	*Designation / Description*
12/I06b	IEC 61000-4-8 (2001), A1(2000); EN 61000-4-8 (2001),A1(2000): Power Frequency Magnetic Field Immunity Test
12/I06c	EN 61000-4-8 (1993) + A1 (2001): Power Frequency Magnetic Field Immunity Test
12/I07c	IEC 61000-4-11, Ed. 2 (2004-03) & EN 61000-4-11: Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests
12/I07e	EN 61000-4-11 (1994), A1 (2001): Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests
12/I07f	EN 61000-4-11 (2004): Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests
12/KN11a	KN 61000-4-11 with RRL Notice No. 2005-130 (Dec 27, 2005): Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests
12/KN24	KN24 (December 2005) with RRL Notice No. 2005-83: Information Technology Equipment - immunity charateristics - limits and methods of measurements
12/KN2a	KN 61000-4-2 with RRL Notice No. 2005-130 (Dec. 27, 2005): Electrostatic Discharge Immunity Test
12/KN3a	KN 61000-4-3 with RRL Notice No. 2005-130 (Dec. 27, 2005): Radiated, radio-frequency, electromagnetic field immunity test
12/KN4a	KN 61000-4-4 with RRL Notice No. 2005-130 (Dec. 27, 2005): Electromagnetic compatibility (EMC): Testing and measurement techniques - Electrical Fast Transient/Burst Immun
12/KN5a	KN 61000-4-5 with RRL Notice No. 2005-130 (Dec. 27, 2005): Surge Immunity Test
12/KN6a	KN 61000-4-6 with RRL Notice No. 2005-130 (Dec. 27, 2005): Electromagnetic compatibility (EMC): Testing and measurement techniques - Immunity to conducted disturbances,

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NVLAP Code	*Designation / Description*
12/KN8a	KN 61000-4-8 with RRL Notice No. 2005-130 (Dec. 27, 2005): Power Frequency Magnetic Field Immunity Test

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United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200737-0

EMC Integrity, Inc.

Longmont, CO

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated 18 June 2005).

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DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

Sally S. Bruce

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NVLAP-01C (REV. 2006-09-13)

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