Test Report of
Full Compliance Immunity Testing Performed on ExpressVote Hdw v2.1.2

Issue Date: 18 April 2018

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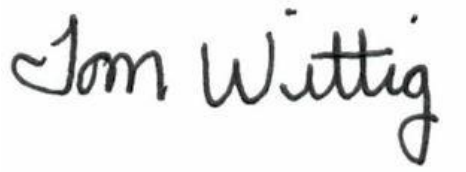
Certificate Number: 0214.43

SIGNATURES

Prepared by:  Date: 04/18/2018

Preparer, Tom Wittig

Reviewed & Approved by:  Date: 04/19/2018

Technical Reviewer, John Radman

REVISIONS

Revision	Reason for Revision	Date
NR	Initial Release	18 April 2018

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ADMINISTRATIVE DATA

A. PURPOSE OF TESTS

This report documents the test efforts performed on the 06 thru 13 March 2018 to verify compliance to the EAC 2005 VVSG. This was a formal qualification test and was conducted on the days of 07 thru 20 March 2018.

Table 1. Standartds Table

Requirements	Specification	Test Method	VVSG Reference
VVSG 1.0 2005 Voluntary Voting System Guidelines	Electrostatic Discharge	IEC 61000-4-2, (2008-12) Ed.2.0	V1, 4.1.2.8 V1, 4.1.7.1 V1, 2.1.4 (b) V2, 4.8
	Radiated RF Immunity	IEC 61000-4-3:, (1996)	V1, 4.1.2.10 V1, 4.1.7.1 V1, 2.1.4 (b) V2, 4.8
	Electrical Fast Transient/Burst	IEC 61000-4-4, (2004-07) Ed. 2.0,	V1, 4.1.2.6 V1, 4.1.7.1 V1, 2.1.4 (b) V2, 4.8
	Surge Immunity	IEC 61000-4-5, (1995-02)	V1, 4.1.2.7 V1, 4.1.7.1 V1, 2.1.4 (b) V2, 4.8
	Conducted RF Immunity	IEC 61000-4-6,(1996-04)	V1, 4.1.2.11 V1, 4.1.7.1 V1, 2.1.4 (b) V2, 4.8
	Power Frequency H-field Immunity	IEC 61000-4-8, (1993-06)	V1,4.1.2.12 V1, 4.1.7.1 V1, 2.1.4 (b) V2, 4.8
	Voltage Dips, Interrupts	IEC 61000-4-11, (1994-06)	V1, 4.1.2.5 V1, 4.1.7.1 V1, 2.1.4 (b) V2, 4.8

The UUTs complied with all the generic immunity requirements defined by VVSG 1.0 2005. Test results are summarized in Table 2

Table 2. Generic Immunity Requirements

Specification	Test Method	Test Conditions	Result
Electrostatic Discharge	IEC 61000-4-2	Vote scanning and counting equipment for paper-based systems, and all DRE equipment, shall be able to withstand ±15 kV air discharge and ±8 kV contact discharge without damage or loss of data. The test levels stated in IEC 61000-4-2, Edition 2.0, contact discharge, are the test method and shall be applied at the specified test level only, 8 kV. Air discharge shall be used where contact discharge cannot be applied and all test levels shall be used (2, 4, 8, 15 kV). (RFI 2010-01).	Compliant
Radiated RF Immunity	IEC 61000-4-3	A field of 10 V/m modulated by a 1 kHz 80% AM modulation over the frequency range of 80 MHz to 1000 MHz, without disruption of normal operation or loss of data.	Compliant
EFT/Burst	IEC 61000-4-4	±2kV AC & DC external power lines. ±1kV on Input / Output lines (signal, data, control lines) longer than 3 meters(signal, data, control lines) longer than 3 meters Repetition Rate for all transient pulses will be 100 kHz	Compliant
Surge Immunity	IEC 61000-4-5	±2 kV AC line to line ±2 kV AC line to earth + or - 0.5 kV DC line to line >10m + or - 0.5 kV DC line to earth >10m ±1 kV I/O sig/control >30m	Compliant
Conducted RF Immunity	IEC 61000-4-6	10V rms over the frequency range 150 KHz to 80 MHz with an 80% amplitude modulation with a 1 KHz sine wave AC & DC power 10V sig/control >3 m over the frequency range 150 KHz to 80 MHz with an 80% amplitude modulation with a 1 KHz sine wave	Compliant

Power Frequency H-field Immunity	IEC 61000-4-8	AC magnetic 30 A/m at 60 Hz	Compliant
Voltage Dips and Interrupts	IEC 61000-4-11	Voltage dip of 30% of nominal @10 ms; Voltage dip of 60% of nominal @100 ms & 1 sec Voltage dip of >95% interrupt @5 sec Surges of ±15% line variations of nominal line voltage Electric power increases of 7.5% and reductions of 12.5% of nominal specified power for a period of up to four hours at each level.	Compliant

B. DESCRIPTION OF TEST ITEM

These products are: Precinct Tabulators and a ballot marking devices designed for use in commercial and office environments. The products were continually exercised during testing, as documented in the "configuration" field of the test data sheets.

C. MANUFACTURER

E**lection Systems & Software**
11208 John Galt Blvd
Omaha, NE
68137

D. REFERENCES

1. Customer's Product Data Sheet – 07 March 2018
2. ISO 17025:2005

ADMINISTRATIVE DATA

E. QUANTITY OF ITEMS TESTED

Quantity	Test Item Description	Part Number	Serial Number
1	ExpressVote/Kiosk	AUO_G150XTN06.0	EV0217390509
1	Kiosk	Kiosk	K0117373359
1	ExpressVote/Kiosk	AUO_G150XTN06.4	EV0217390517
1	Kiosk	Kiosk	K0115421526
1	ExpressVote/Kiosk	AUO_G150XTN06.8	EV0217390587
1	Kiosk	Kiosk	K0115421501

F. SECURITY CLASSIFICATION

Unclassified

G. TESTS CONDUCTED BY

National Technical Systems
NTS Longmont
1736 Vista View Drive
Longmont, Colorado 80504

H. DISPOSITION OF TEST ITEMS

Returned to:

Election Systems & Software
11208 John Galt Blvd
Omaha, NE
68137

I. TEST ENVIRONMENT

The radiated field immunity testing was performed in a ferrite lined, shielded enclosure. The enclosure is 20' high x 40' wide x 70' 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.

From 80 MHz to 1 GHz, field uniformity deviation for NTS's ferrite lined, shielded chamber is a maximum of 7.4 dB for three frequencies for vertical polarization (1.1% of all test frequencies) and 7.3 dB for two frequencies for horizontal polarization (0.8% of all test frequencies). This is allowed by IEC 61000-4-3, as follows:

"**In the frequency range up to 1 GHz, a tolerance greater than+ 6 dB, up to +10 dB, but not less than -0 dB is allowed for a maximum of 3% of the test frequencies, provided that the actual tolerance is stated in the test report**." (*Ref. IEC 61000-4-3, Ed. 3.2 (2010), Section 6.2*)

All other immunity testing was performed on a ground plane measuring 3 meters by 4.5 meters (13.5 square meters) and made of 0.125" thick aluminum. The ground plane was connected to facility ground via the safety ground of the AC wire and extended beyond the UUT by greater than 0.5 meters, as required by the test standards.

Measurement Uncertainty

The measurement uncertainty for NTS Longmont's emissions test facility complies with the requirements defined in CISPR 16. The complete calculations of NTS's measurement uncertainty is contained in an NTS memo, which is available upon request. However, a summary of NTS's measurement uncertainty is given in Table 3.

Table 3. Measurement Uncertainty		
Test	**Measurement Uncertainty**	**Reference**
Electrostatic Discharge	Contact Voltage: 1.9% Risetime: 60 ps Peak Current: 2.8% 30 ns Current: 3.8% 60 ns Current: 9% Indicated Voltage: 1.9%	Accredited Calibration Data Sheet
Radiated RF Immunity	V-pole: 1.2 dB H-pole: 0.7 dB	Worksheets located at **H:\Calibration\Measurement Uncertainty**
Electrical Fast Transient	Voltage: 0.01 kV Risetime: 0.45 nsec Pulse Width: 1.08 nsec	
Surge Immunity	O.C. Voltage: 0.01 kV Risetime: 0.1 usec Pulse Width: 1.76 usec S. C. Current: 0.91 A Risetime: 0.08 usec Pulse Width: 0.15 usec	
Conducted RF Immunity	0.24 dB	
Power Frequency H-field Immunity	0.87 dB	
Voltage Dips & Interruptions	Voltage: 10.38 Volts Duration: 0.23 msec	

ADMINISTRATIVE DATA

J. TEST APPARATUS

The instrumentation used in the performance of these tests is periodically calibrated and standardized within manufacturer's rated accuracies and are traceable to the National Institute of Standards and Technology. The calibration procedures and practices are in accordance with ISO 17025:2005. Certification of calibration is on file subject to inspection by authorized personnel.

K. SOURCE INSPECTION

NTS QA

L. PURCHASE ORDER NUMBER
PO# 2018-003

TEST SUMMARY

The test program may be chronologically summarized as follows:

Paragraph	Test Title	Specification	Test Dates	Results
1.0	Electrostatic Discharge	IEC 61000-4-2	07 thru 20 March 2018	Pass
2.0	Radiated RF Immunity	IEC 61000-4-3	07 thru 20 March 2018	Pass
3.0	Electrical Fast Transient/Burst	IEC 61000-4-4	07 thru 20 March 2018	Pass
4.0	Surge Immunity	IEC 61000-4-5	07 thru 20 March 2018	Pass
5.0	Conducted RF Immunity	IEC 61000-4-6	07 thru 20 March 2018	Pass
6.0	Power Frequency H-field Immunity	IEC 61000-4-8	07 thru 20 March 2018	Pass
7.0	Voltage Dips and Interrupts	IEC 61000-4-11	07 thru 20 March 2018	Pass

FACTUAL DATA

1.0 ELETROSTATIC DISCHARGE TEST – IEC 61000-4-2

References and Requirements

IEC 61000-4-2
VVSG 1.0 2005

Serial Numbers (S/N's)

AUO_G150XTN06.0	EV0217390509
Kiosk	K0117373359
AUO_G150XTN06.4	EV0217390517
Kiosk	K0115421526
AUO_G150XTN06.8	EV0217390587
Kiosk	K0115421501

1.1 Test Requirements

1.1.1 Three (3) test sample shall be subjected to Electrostatic Discharge Test in accordance with the referenced documents.

1.2 Test Procedure

The UUT was set up per IEC 61000-4-2 and tested to the levels specified by VVSG 1.0 2005.

1.2.1 **Special Configurations:** N/A

1.2.3 **Performance Criteria:** Level B

The UUT shall continue to operate as intended *after* the test.

1.3 Test Results

1.3.1 Electrostatic discharge (ESD) testing was performed in accordance with the test methods specified by IEC 61000-4-2. Contact discharge was performed at levels of ± 8 kV at applicable (conductive) test points. Air discharge was performed for non-conductive surfaces of the product at levels of ±2 kV, ± 4 kV, ± 8 kV and ± 15 kV. Indirect discharge testing to the horizontal coupling plane (HCP) and vertical coupling plane (VCP) was also performed to levels of ± 8 kV.

Note: In the event that no discharge occurs when ESD testing is performed on a product, the data sheet will state "no [contact or air] discharge points found".

The UUT exhibited no malfunctions and operate within specified tolerances and therefore, complies with the requirements of this test.

1.3.1 The Electrostatic Discharge Test Data is presented in Appendix A.

2.0 RADIATED RF IMMUNITY IEC 61000-4-3

References and Requirements

IEC 61000-4-3
VVSG 1.0 2005

Serial Numbers (S/N's)

AUO_G150XTN06.0	EV0217390509
Kiosk	K0117373359
AUO_G150XTN06.4	EV0217390517
Kiosk	K0115421526
AUO_G150XTN06.8	EV0217390587
Kiosk	K0115421501

2.1 Test Requirements

2.1.1 Three (3) test sample shall be subjected to the Radiated RF Immunity Test accordance with the referenced document.

2.2 Test Procedure

The UUT was set up per IEC 61000-4-3 and tested to the levels specified by VVSG 1.0 2005.

2.2.1 **Special Configurations**: N/A

2.2.2 **Performance Criteria:** Level A

The UUT shall continue to operate as intended (i.e., within specified limits) during and after the test.

2.3 Test Results

Radiated RF immunity testing was performed on the UUT in accordance with IEC 61000-4-3. The UUT was placed on the floor of the completely anechoic-lined chamber (CALC). The UUT was at a distance of 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 over the frequency range from 80 MHz to 1 GHz at 10 V/m. The UUT was rotated so that all four sides were illuminated in the field. The frequency was stepped in 1% increments and a dwell time of 3 seconds was used at each test frequency. The radiated field was amplitude modulated with a 1 kHz sine wave to a depth of 80%. Performance of the unit was monitored remotely (via Video Camera)

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

2.3.1 The visual inspections, pre-test/post tests revealed no anomalies.

2.3.2 The Radiated RF Immunity Test Data is presented in Appendix B.

3.0 ELECTRICAL FAST TRANSIENT/BURST TEST IEC 61000-4-4

References and Requirements

IEC 61000-4-4
VVSG 1.0 2005

Serial Numbers (S/N's)

AUO_G150XTN06.0	EV0217390509
Kiosk	K0117373359
AUO_G150XTN06.4	EV0217390517
Kiosk	K0115421526
AUO_G150XTN06.8	EV0217390587
Kiosk	K0115421501

3.1 Test Requirements

3.1.1 Three (3) test sample shall be subjected to the Electrical Fast Transient/Burst Test in accordance with the referenced document.

3.2 Test Procedure

The UUT was set up per IEC 61000-4-4 and tested to the levels specified by VVSG 1.0 2005.

3.2.1 **Special Configurations:** N/A

3.2.2 **Performance Criteria:** Level B

The UUT shall continue to operate as intended *after* the test.

3.3 Test Results

Electrical fast transient/burst testing was performed on the UUT in accordance with IEC 61000-4-4. The AC power was tested via direct injection to ± 2 kV. During all testing, the UUT exhibited no malfunctions and operate within specified tolerances and therefore, complies with the requirements of this test. Note that testing was performed for single phase power.

3.3.1 The visual inspections, pre-test/post tests revealed no anomalies.

3.3.2 The Electrical Fast Transient/Burst Test Data is presented in Appendix C.

4.0 SURGE IMMUNITY TEST

References and Requirements

IEC 61000-4-5
VVSG 1.0 2005

Serial Numbers (S/N's)

AUO_G150XTN06.0	EV0217390509
Kiosk	K0117373359
AUO_G150XTN06.4	EV0217390517
Kiosk	K0115421526
AUO_G150XTN06.8	EV0217390587
Kiosk	K0115421501

4.1 Test Requirements

4.1.1 Three (3) test sample shall be subjected to the Surge Immunity Test in accordance with the referenced document.

4.2 Test Procedure

The UUT was set up per IEC 61000-4-5 and tested to the levels specified by VVSG 1.0 2005.

4.2.1 **Special Configurations:** N/A

4.2.2 **Performance Criteria:** Level B

The UUT shall continue to operate as intended *after* the test.

4.3 Test Results

Surge immunity testing was performed on the UUT in accordance with IEC 61000-4-5. The AC power of the UUT 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.

The UUT exhibited no malfunctions or degradations in performance and therefore, passed all requirements of the test.

4.3.1 The visual inspections, pre-test/post tests revealed no anomalies.

4.3.2 The Surge Immunity Test Data is presented in Appendix D.

5.0 CONDUCTED RF IMMUNITY TEST

References and Requirements

IEC 61000-4-6
VVSG 1.0 2005

Serial Numbers (S/N's)

AUO_G150XTN06.0	EV0217390509
Kiosk	K0117373359
AUO_G150XTN06.4	EV0217390517
Kiosk	K0115421526
AUO_G150XTN06.8	EV0217390587
Kiosk	K0115421501

5.1 Test Requirements

5.1.1 Three (3) test sample shall be subjected to the Conducted RF Immunity Test in accordance with the referenced document.

5.2 Test Procedure

The UUT was set up per IEC 61000-4-6 and tested to the levels specified by VVSG 1.0 2005.

5.2.1 **Special Configurations:** N/A

5.2.2 **Performance Criteria: Level A**

The UUT shall continue to operate as intended (i.e., within specified limits) during and after the test.

5.3 Test Results

Conducted RF immunity testing was performed on the UUT in accordance with 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). All I/O cabling greater than 3 meters in length was tested via EM clamp. The test frequency was stepped in 1% increments with a 3 second dwell time for each injection frequency. The injection level for all testing was 10 Vrms with 1 kHz sine wave 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.

5.3.1 The visual inspections revealed no anomalies.

5.3.2 The Conducted RF Immunity Test Data is presented in Appendix E.

6.0 POWER FREQUENCY H-FIELD IMMUNITY TEST

References and Requirements

IEC 61000-4-8
VVSG 1.0 2005

Serial Numbers (S/N's)

AUO_G150XTN06.0	EV0217390509
Kiosk	K0117373359
AUO_G150XTN06.4	EV0217390517
Kiosk	K0115421526
AUO_G150XTN06.8	EV0217390587
Kiosk	K0115421501

6.1 Test Requirements

6.1.1 Three (3) test sample shall be subjected to the Power Frequency H-Field Immunity Test in accordance with the referenced document.

6.2 Test Procedure

The UUT was set up per IEC 61000-4-11 and tested to the levels specified by VVSG 1.0 2005.

6.2.1 **Special Configurations:** N/A

6.2.2 **Performance Criteria**

The UUT shall continue to operate as intended (i.e., within specified limits) during and after the test.

6.3 Test Results

Power frequency H-field immunity testing was performed on the UUT in accordance with the test methods specified by IEC 61000-4-8. The UUT was exposed to a 30 A/m field at both 50 and 60 Hz. All three axes (x, y, and z) were immersed in the field for a period of 60 seconds for each configuration. An H-Field Loop, 2m x 1.5m was used for this test and the proximity method was used.

These magnetic fields had no effect on the UUT, which passed the requirements of this test.

6.3.1 The visual inspections, pre-test/post tests revealed no anomalies.

6.3.2 The Power Frequency H-Field Immunity Test Data is presented in Appendix F.

7.0 VOLTAGE DIPS AND INTERRUPTS TEST

References and Requirements

IEC 61000-4-11

Serial Numbers (S/N's)

AUO_G150XTN06.0	EV0217390509
Kiosk	K0117373359
AUO_G150XTN06.4	EV0217390517
Kiosk	K0115421526
AUO_G150XTN06.8	EV0217390587
Kiosk	K0115421501

7.1 Test Requirements

7.1.1 Three (3) test sample shall be subjected to the Voltage Dips and Interrupts Test in accordance with the referenced document.

7.2 Test Procedure

The UUT was set up per IEC 61000-4-11 and tested to the levels specified by VVSG 1.0 2005.

7.2.1 **Special Configurations:** N/A

7.2.2 **Performance Criteria: Level B/C**

Level B: The UUT shall continue to operate as intended *after* the test.
Level C: Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by operation of the controls.

7.3 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:

Voltage dip of 30% of nominal @10 ms;
Voltage dip of 60% of nominal @100 ms & 1 sec
Voltage dip of >95% interrupt @5 sec
Surges of ±15% line variations of nominal line voltage

Electric power increases of 7.5% and reductions of 12.5% of nominal specified power for a period of up to four hours at each level.

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

7.3.1 The visual inspections, pre-test/post tests revealed no anomalies.

7.3.2 The Voltage Dips and Interrupts Test Data are presented in Appendix G.

APPENDIX A
Electrostatic Discharge Test Data

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 20, 2018
Temperature:	20˚C Humidity: 34%	Pressure:	836 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

PR075829-4-2.doc FR0100

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	8	x	x	10	1		A	Pass
Figure A3	8	x	x	10	1		A	Pass
Figure A4	8	x	x	10	1		A	Pass
Figure A5	8	x	x	10	1		A	Pass
Figure A6	8	x	x	10	1		A	Pass
Figure A7	8	x	x	---	---	No contact discharges found	---	---
Figure A8	8	x	x	---	---	No contact discharges found	---	---
Air Discharge Points - **BLUE** Arrows.								
Figure A2	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A3	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A4	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A5	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A6	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A7	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A8	2, 4, 8, 15	x	x	10	1		A	Pass

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 20, 2018

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Figure A1. Electrostatic Discharge Test Setup

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 20, 2018

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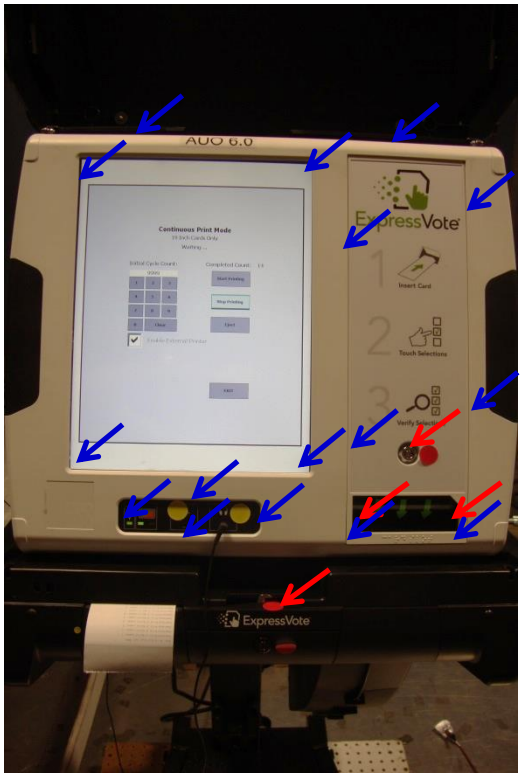

Figure A2. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 20, 2018

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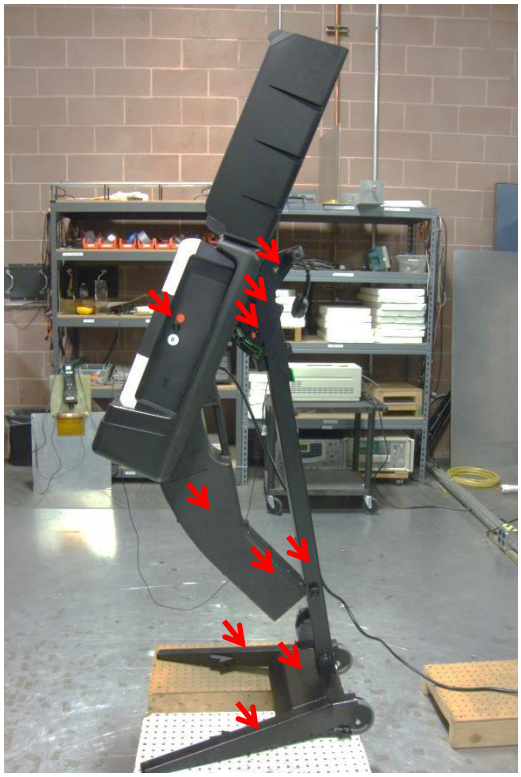

Figure A3. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 20, 2018

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Figure A4. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 20, 2018

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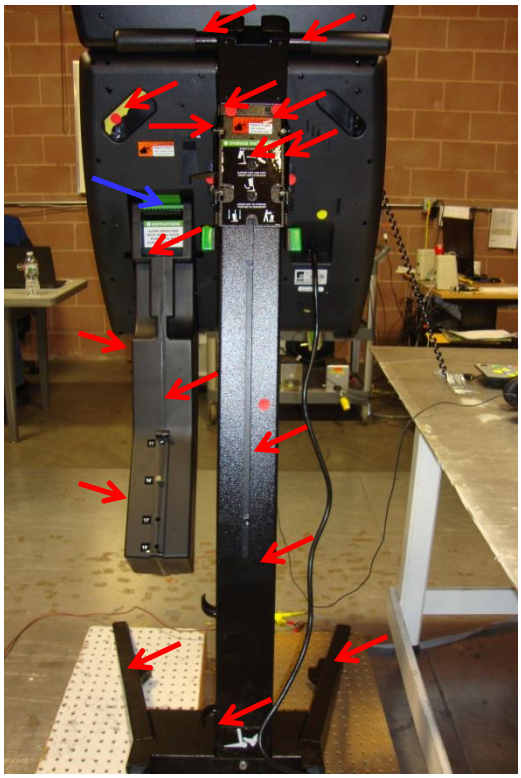

Figure A5. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 20, 2018

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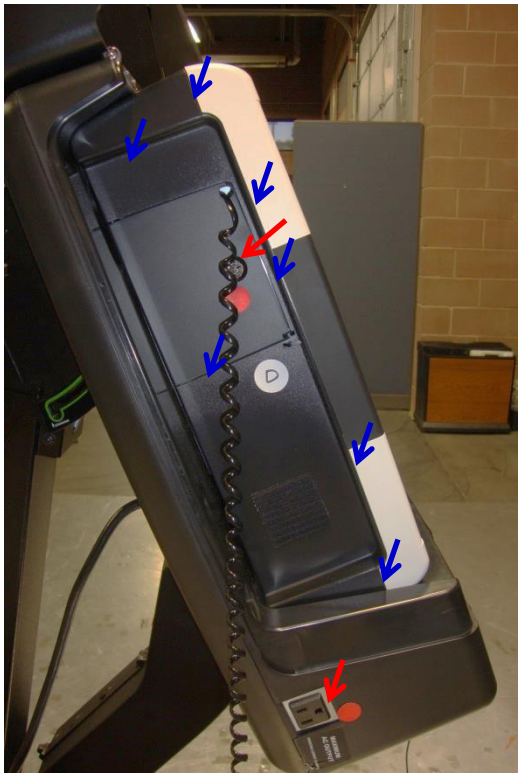

Figure A6. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 20, 2018

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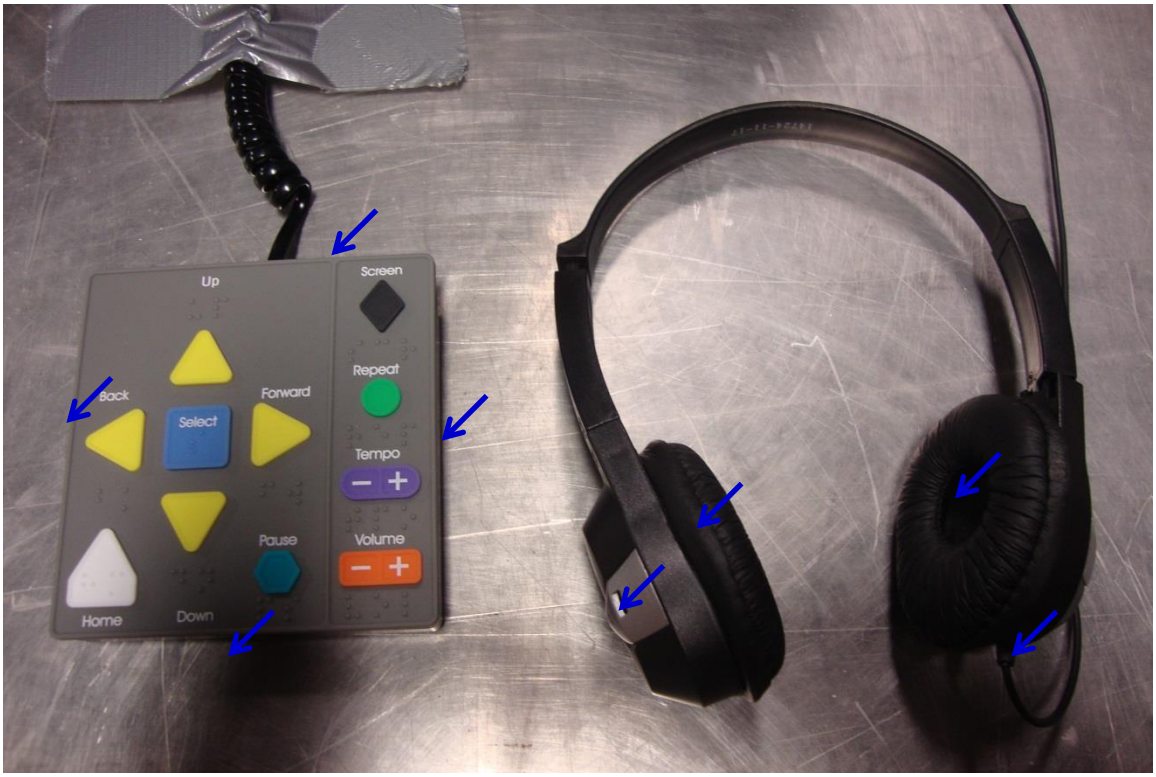

Figure A7. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 20, 2018

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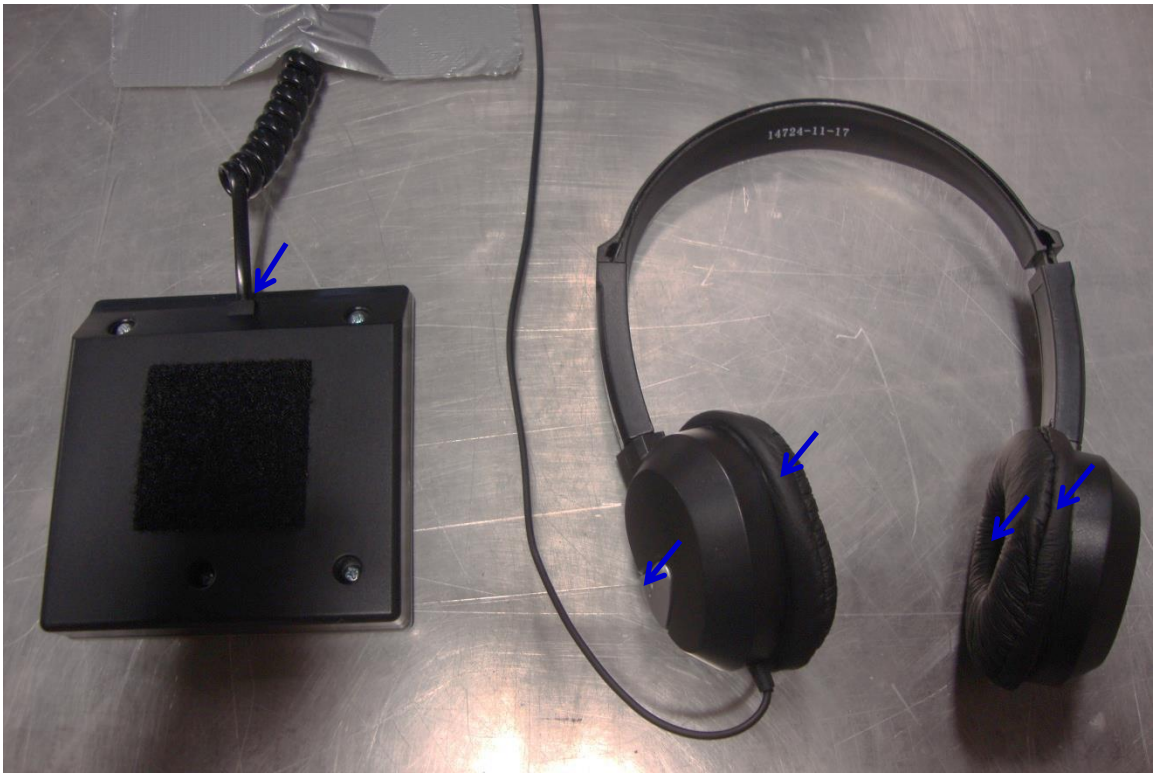

Figure A8. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 20, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1249	KeyTek	MZ-15/EC	0609258	ESD Gun with TPC-2A SN:0609259	06/14/2017	06/14/2018
1333	EMC Partner	ESD3000	395	ESD Test System, including ESD3000DN1-1540 30kV Ad	06/29/2017	06/29/2018
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018
Temperature:	20˚C Humidity: 33%	Pressure:	836 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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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	8	x	x	10	1	Front Side	A	Pass
VCP	8	x	x	10	1	Left Side	A	Pass
VCP	8	x	x	10	1	Right Side	A	Pass
VCP	8	x	x	10	1	Back Side	A	Pass
HCP	8	x	x	10	1	Edge of HCP at Front of UUT	A	Pass
Contact Discharge Points - **RED** Arrows.								
Figure A2	8	x	x	10	1		A	Pass
Figure A3	8	x	x	10	1		A	Pass
Figure A4	8	x	x	10	1		A	Pass
Figure A5	8	x	x	10	1		A	Pass
Figure A6	8	x	x	10	1		A	Pass
Figure A7	8	x	x	---	---	No contact discharges found	---	---
Figure A8	8	x	x	---	---	No contact discharges found	---	---
Air Discharge Points - **BLUE** Arrows.								
Figure A2	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A3	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A4	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A5	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A6	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A7	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A8	2, 4, 8, 15	x	x	10	1		A	Pass

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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Figure A1. Electrostatic Discharge Test Setup

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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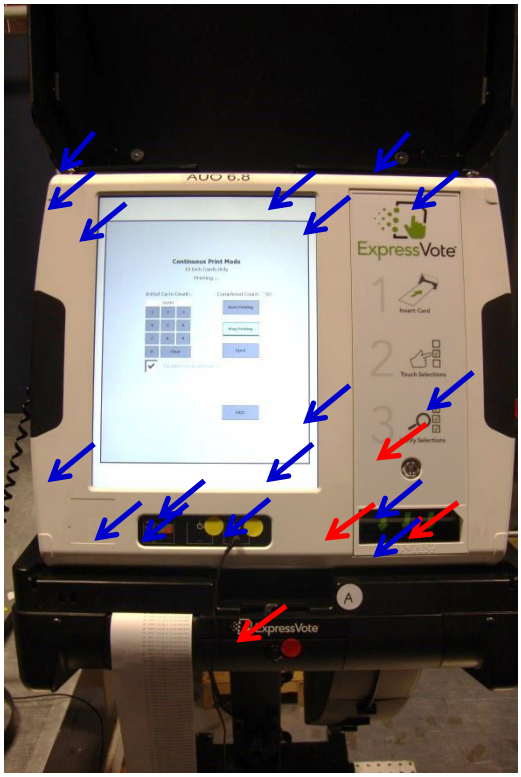

Figure A2. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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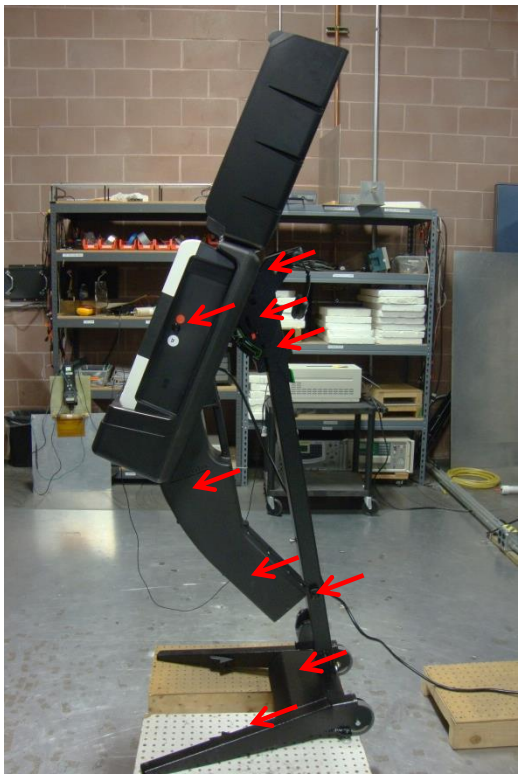

Figure A3. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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Figure A4. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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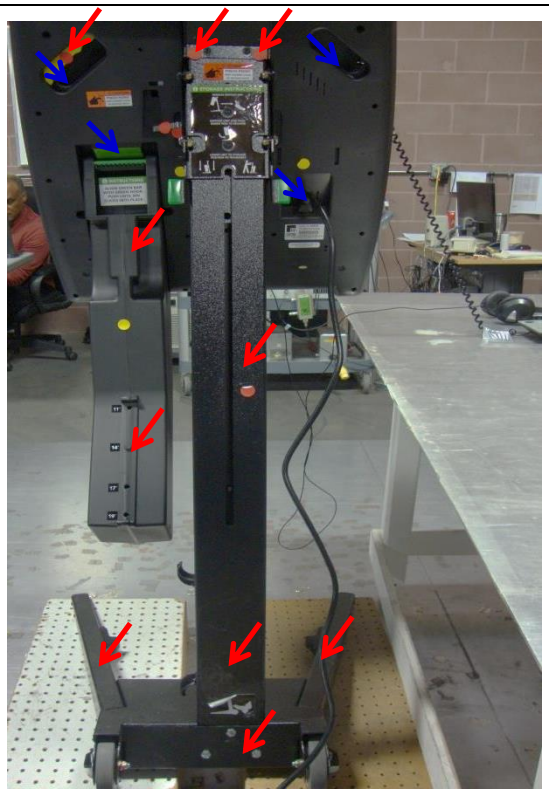

Figure A5. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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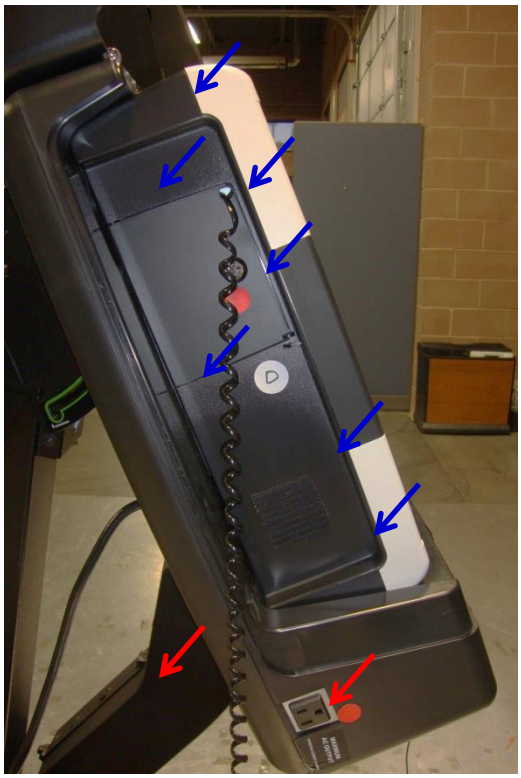

Figure A6. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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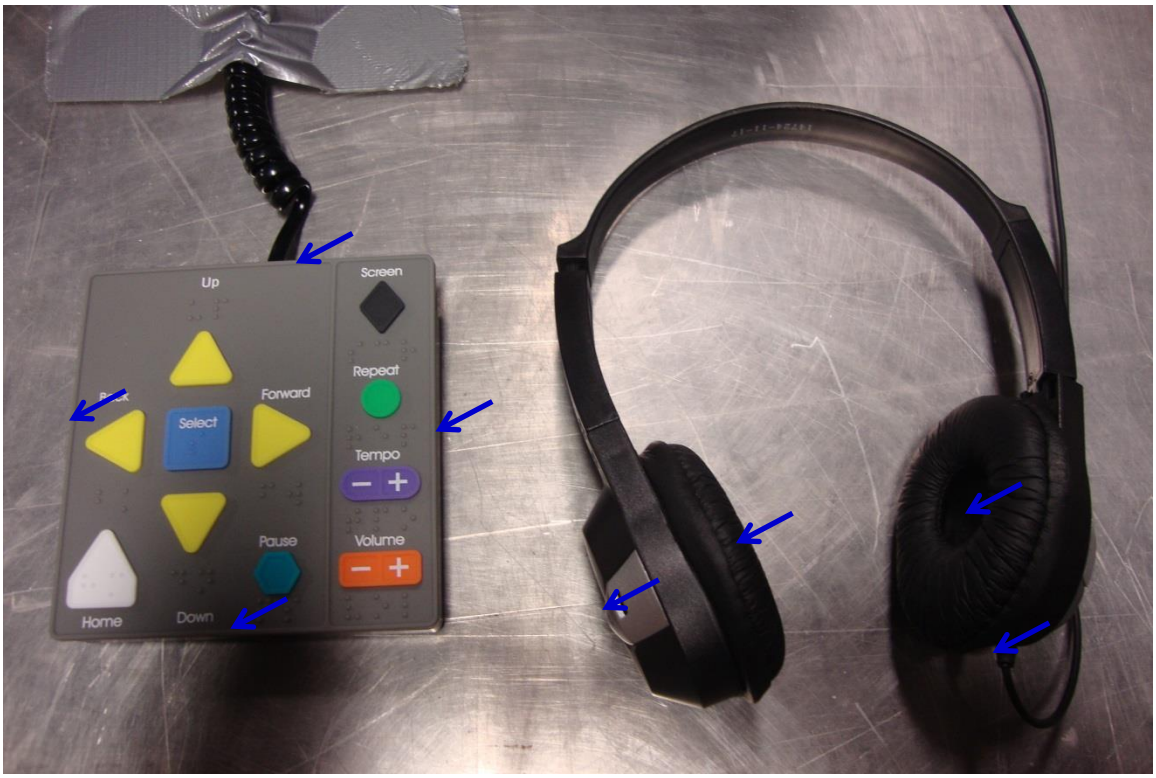

Figure A7. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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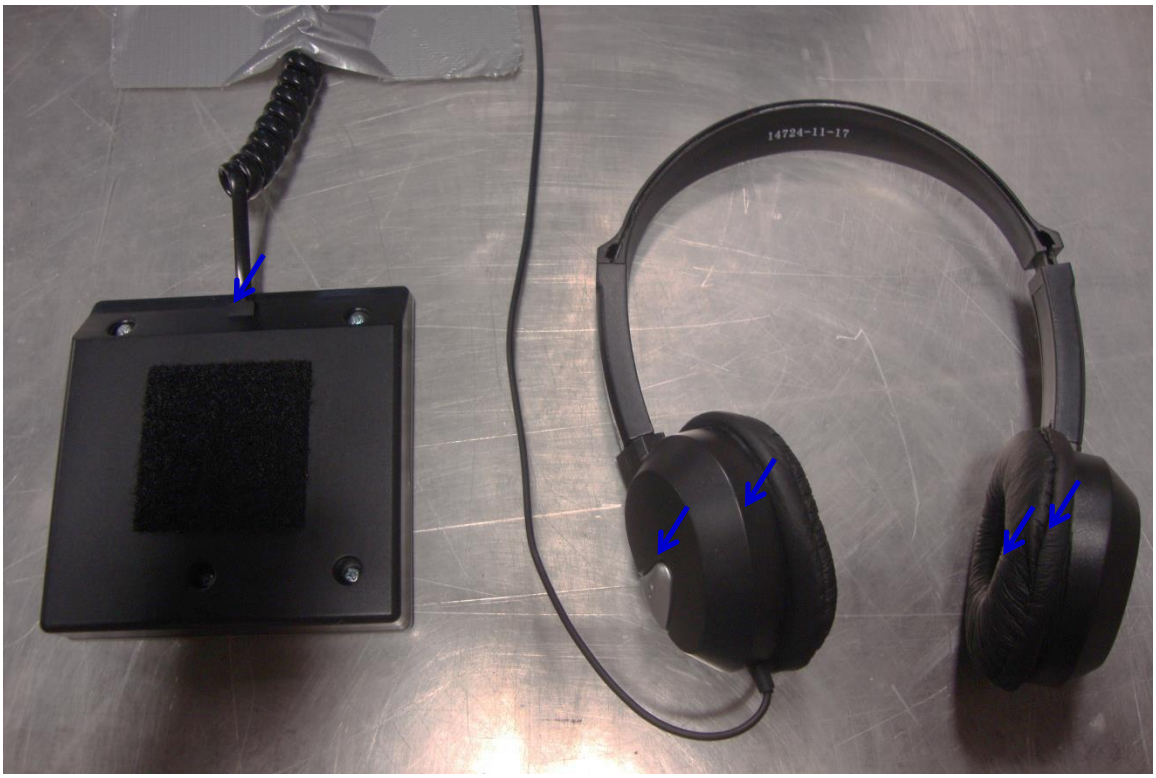

Figure A8. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1249	KeyTek	MZ-15/EC	0609258	ESD Gun with TPC-2A SN:0609259	06/14/2017	06/14/2018
1333	EMC Partner	ESD3000	395	ESD Test System, including ESD3000DN1-1540 30kV Ad	06/29/2017	06/29/2018
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instuments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018
Temperature:	21˚C Humidity: 33%	Pressure:	835 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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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	8	x	x	10	1	Front Side	A	Pass
VCP	8	x	x	10	1	Left Side	A	Pass
VCP	8	x	x	10	1	Right Side	A	Pass
VCP	8	x	x	10	1	Back Side	A	Pass
HCP	8	x	x	10	1	Edge of HCP at Front of UUT	A	Pass
Contact Discharge Points - **RED** Arrows.								
Figure A2	8	x	x	10	1		A	Pass
Figure A3	8	x	x	10	1		A	Pass
Figure A4	8	x	x	10	1		A	Pass
Figure A5	8	x	x	10	1		A	Pass
Figure A6	8	x	x	10	1		A	Pass
Figure A7	8	x	x	10	1		A	Pass
Figure A8	8	x	x	---	---	No contact discharges found	---	---
Figure A9	8	x	x	---	---	No contact discharges found	---	---
Air Discharge Points - **BLUE** Arrows.								
Figure A2	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A3	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A4	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A5	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A6	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A7	2, 4, 8, 15	x	x	10	1		A	Pass
Figure A8	2, 4, 8, 15	x	x	10	1		A	Pass

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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Figure A1. Electrostatic Discharge Test Setup

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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Figure A2. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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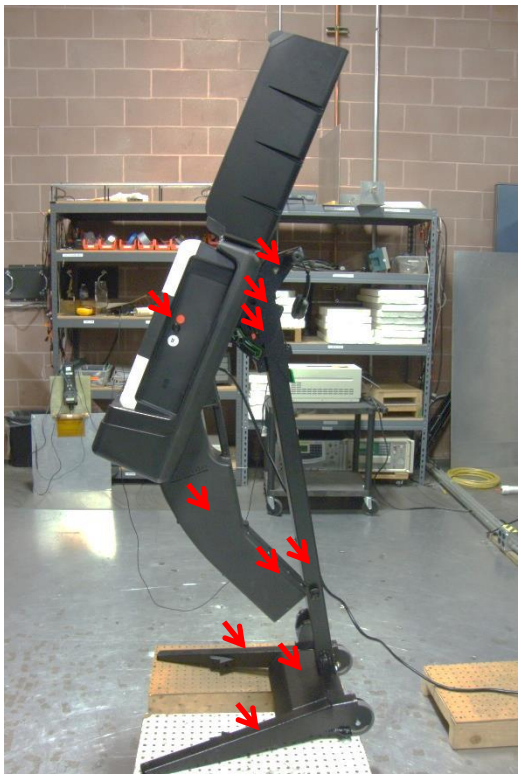

Figure A3. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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Figure A4. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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Figure A5. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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Figure A6. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

PR075829-4-2.doc FR0100

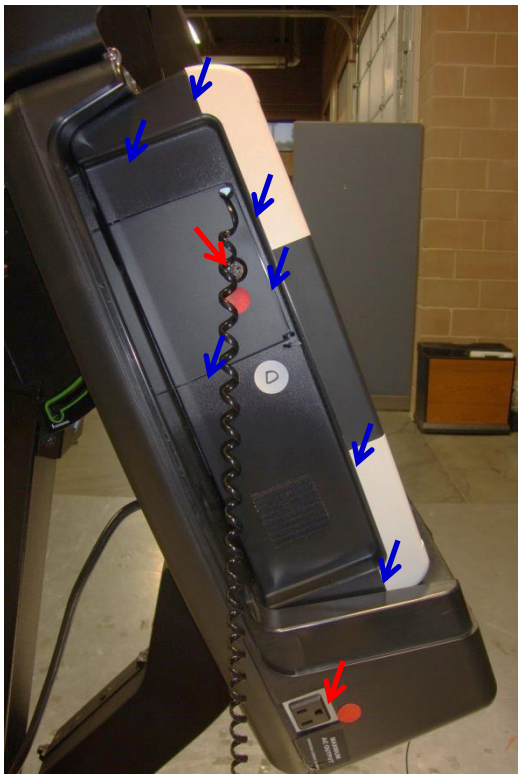

Figure A7. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

PR075829-4-2.doc FR0100

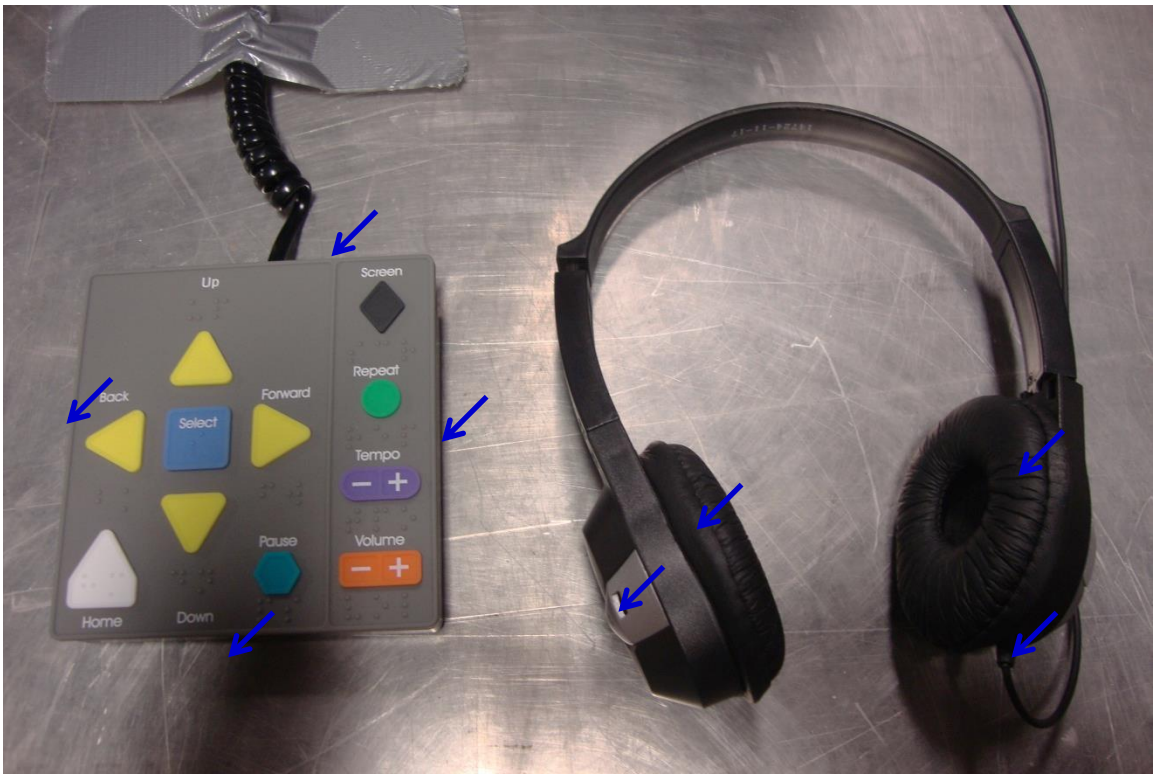

Figure A8. Electrostatic Discharge Test Points

Electrostatic Discharge per IEC / EN 61000-4-2

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 19, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1249	KeyTek	MZ-15/EC	0609258	ESD Gun with TPC-2A SN:0609259	06/14/2017	06/14/2018
1333	EMC Partner	ESD3000	395	ESD Test System, including ESD3000DN1-1540 30kV Ad	06/29/2017	06/29/2018
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instuments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018

APPENDIX B
Radiated RF Immunity Test Data

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509, K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	Wednesday, March 07, 2018
Temperature:	19.3˚C Humidity: 33%	Pressure:	840mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	Steve Cristanelli		

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Frequency (MHz)	Modulation				Step Size (%)	Field (V/m)	Polarity (V or H)	Dwell (sec)	Comments	Criteria Met	Pass / Fail
	Type	%	Freq	Form							
80 - 220	AM	80	1kHz	Sine	1	10	V	3	**Front**	A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	V	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	H	3		A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	H	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	V	3	**Right**	A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	V	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	H	3		A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	H	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	V	3	**Back**	A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	V	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	H	3		A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	H	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	V	3	**Left**	A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	V	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	H	3		A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	H	3		A	Pass

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509, K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	Wednesday, March 07, 2018

PR075829-4-3.doc FR0100

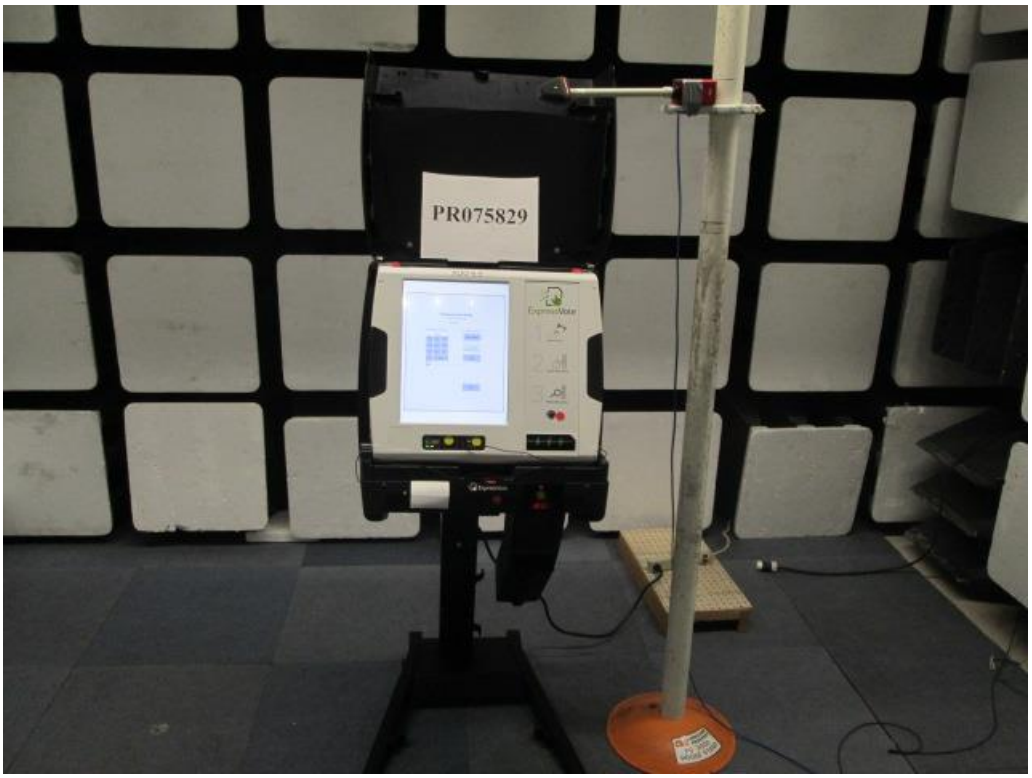

Figure B1. Radiated RF Immunity Test Setup – Front Side.

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509, K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	Wednesday, March 07, 2018

PR075829-4-3.doc FR0100

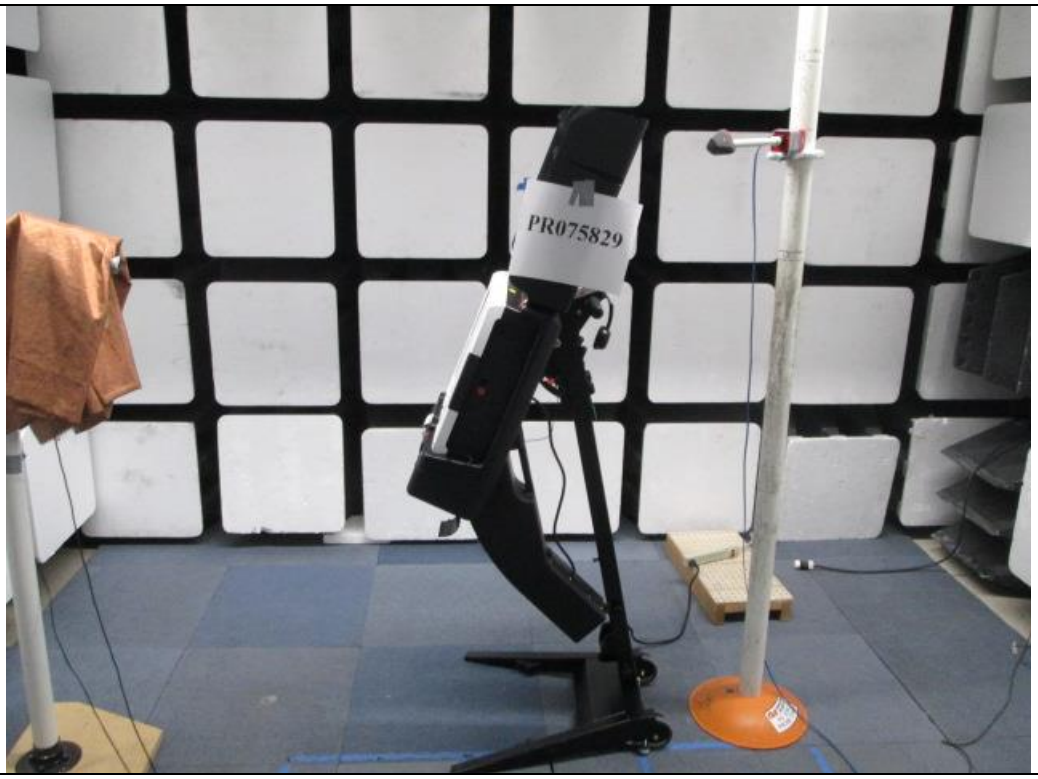

Figure B2. Radiated RF Immunity Test Setup – Right Side.

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509, K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	Wednesday, March 07, 2018

PR075829-4-3.doc FR0100

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

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509, K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	Wednesday, March 07, 2018

PR075829-4-3.doc FR0100

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

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509, K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	Wednesday, March 07, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1066	Eaton	96000	2113	Double Ridge Horn Antenna 200MHz-2GHz	06/20/2016	06/20/2018
1181	EMCI	RFS	V2.5.8	Initial Release 02 July 2004	NA	NA
1267	Werlatone	C6021-10	41833	Directional Coupler, 10 kHz to 1 GHz, 500W, 40dB	10/11/2017	10/11/2018
1285	ETS-Lindgren	HI-6053	00082800	Isotropic Field Probe 10 MHz-40 GHz	04/13/2017	04/13/2018
1323	Rohde&Schwarz	SMT03	100204	Signal Generator, 5 kHz to 3 GHz	02/05/2018	02/05/2019
1454	Giga-tronics	GT-8888A	8888A0338	10 MHz to 8 GHz, +20 dBm, 25 Vdc Power Meter	04/08/2017	04/08/2018
1478	Ophir	5127F	1100	RF Amplifier, 200 Watt, 20 - 1000 MHz	NA	NA
1539	Extech Instruments	445715	Z316007	Hygro-Thermometer	05/09/2017	05/09/2018
1722	ETS -Lindgren	3142B	1624	Antenna	NA	NA
1761	Braden Shielding Systems	RF Shield Room	N/A	GP0	03/17/2017	03/17/2018

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	Wednesday, March 07, 2018
Temperature:	23.7˚C Humidity: 31%	Pressure:	840mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	Steve Cristanelli		

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Frequency (MHz)	Modulation				Step Size (%)	Field (V/m)	Polarity (V or H)	Dwell (sec)	Comments	Criteria Met	Pass / Fail
	Type	%	Freq	Form							
80 - 220	AM	80	1kHz	Sine	1	10	V	3	**Front**	A	Pass
220- 1000	AM	80	1kHz	Sine	1	10	V	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	H	3		A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	H	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	V	3	**Right**	A	Pass
220- 1000	AM	80	1kHz	Sine	1	10	V	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	H	3		A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	H	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	V	3	**Back**	A	Pass
220- 1000	AM	80	1kHz	Sine	1	10	V	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	H	3		A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	H	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	V	3	**Left**	A	Pass
220- 1000	AM	80	1kHz	Sine	1	10	V	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	H	3		A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	H	3		A	Pass

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517, K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	Wednesday, March 07, 2018

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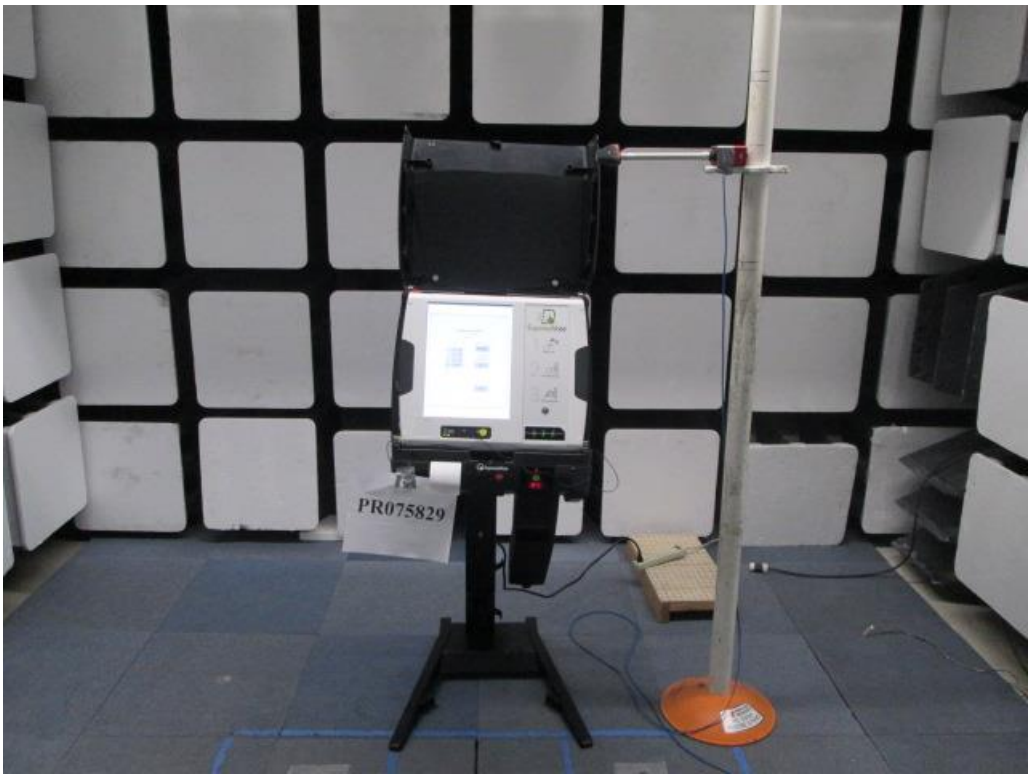

Figure B1. Radiated RF Immunity Test Setup – Front Side.

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517, K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	Wednesday, March 07, 2018

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

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517, K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	Wednesday, March 07, 2018

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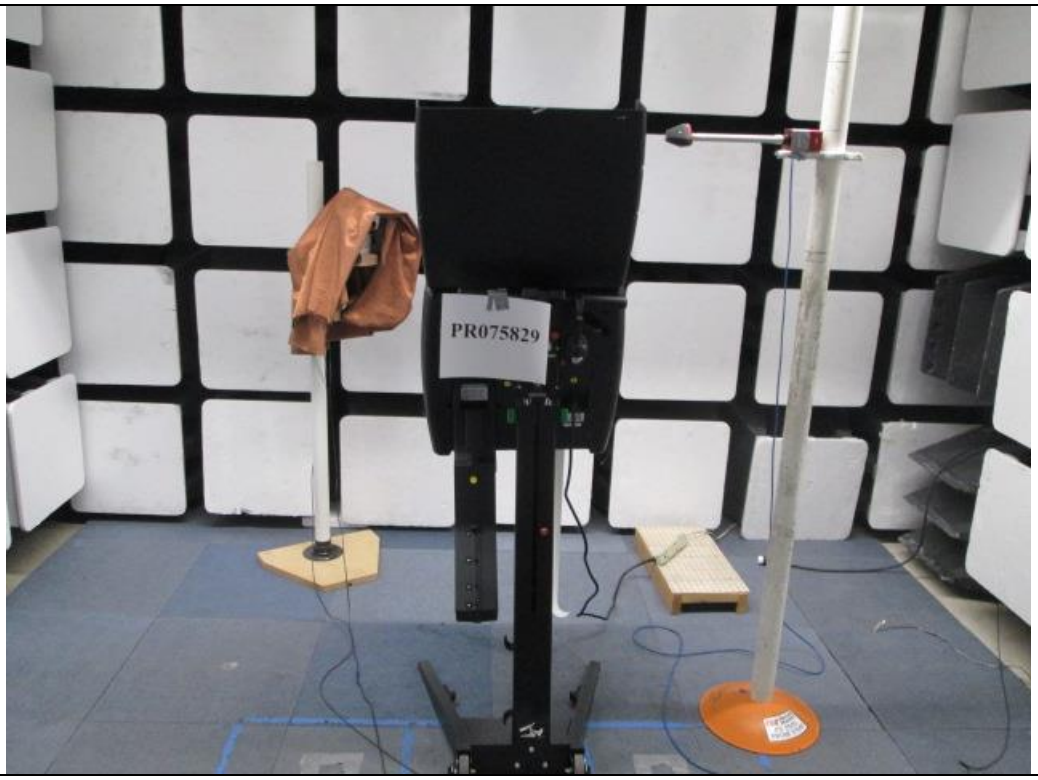

Figure B3. Radiated RF Immunity Test Setup – Back Side.

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517, K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	Wednesday, March 07, 2018

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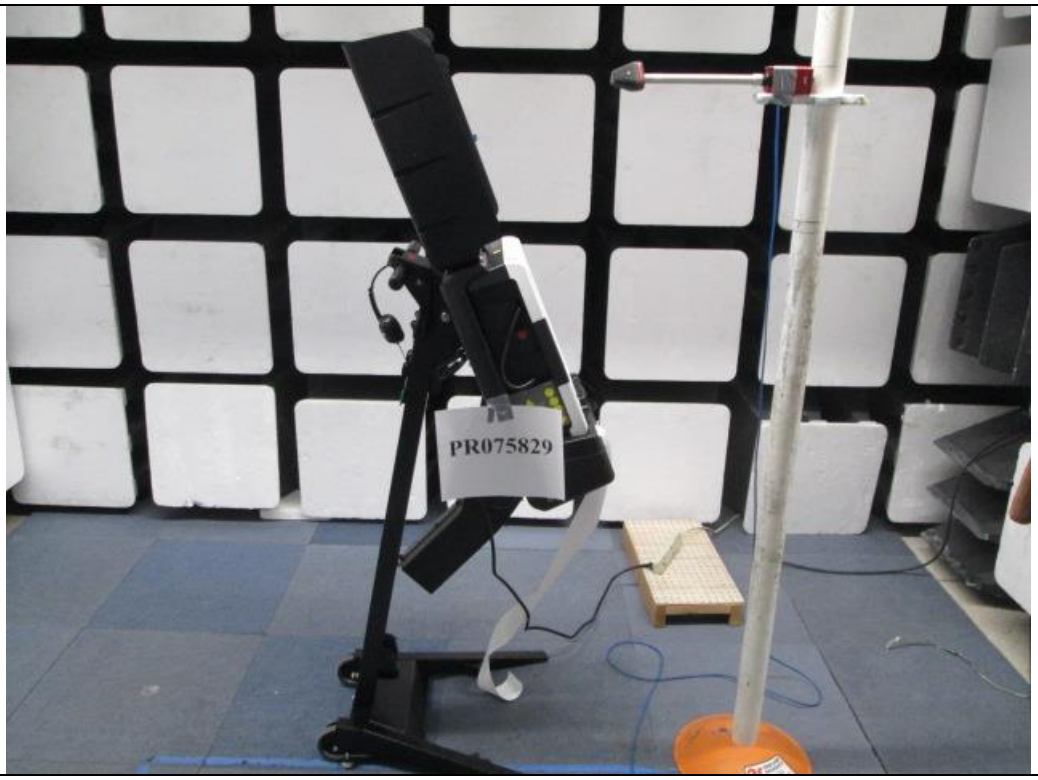

Figure B4. Radiated RF Immunity Test Setup – Left Side.

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517, K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	Wednesday, March 07, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1066	Eaton	96000	2113	Double Ridge Horn Antenna 200MHz-2GHz	06/20/2016	06/20/2018
1181	EMCI	RFS	V2.5.8	Initial Release 02 July 2004	NA	NA
1267	Werlatone	C6021-10	41833	Directional Coupler, 10 kHz to 1 GHz, 500W, 40dB	10/11/2017	10/11/2018
1285	ETS-Lindgren	HI-6053	00082800	Isotropic Field Probe 10 MHz-40 GHz	04/13/2017	04/13/2018
1323	Rohde&Schwarz	SMT03	100204	Signal Generator, 5 kHz to 3 GHz	02/05/2018	02/05/2019
1454	Giga-tronics	GT-8888A	8888A0338	10 MHz to 8 GHz, +20 dBm, 25 Vdc Power Meter	04/08/2017	04/08/2018
1478	Ophir	5127F	1100	RF Amplifier, 200 Watt, 20 - 1000 MHz	NA	NA
1539	Extech Instruments	445715	Z316007	Hygro-Thermometer	05/09/2017	05/09/2018
1722	ETS -Lindgren	3142B	1624	Antenna	NA	NA
1761	Braden Shielding Systems	RF Shield Room	N/A	GP0	03/17/2017	03/17/2018

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	Thursday, March 08, 2018
Temperature:	21.6˚C Humidity: 32%	Pressure:	835mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	Steve Cristanelli		

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Frequency (MHz)	Modulation				Step Size (%)	Field (V/m)	Polarity (V or H)	Dwell (sec)	Comments	Criteria Met	Pass / Fail
	Type	%	Freq	Form							
80 - 220	AM	80	1kHz	Sine	1	10	V	3	**Front**	A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	V	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	H	3		A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	H	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	V	3	**Right**	A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	V	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	H	3		A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	H	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	V	3	**Back**	A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	V	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	H	3		A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	H	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	V	3	**Left**	A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	V	3		A	Pass
80 - 220	AM	80	1kHz	Sine	1	10	H	3		A	Pass
220 - 1000	AM	80	1kHz	Sine	1	10	H	3		A	Pass

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	Thursday, March 08, 2018

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

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	Thursday, March 08, 2018

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

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	Thursday, March 08, 2018

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

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	Thursday, March 08, 2018

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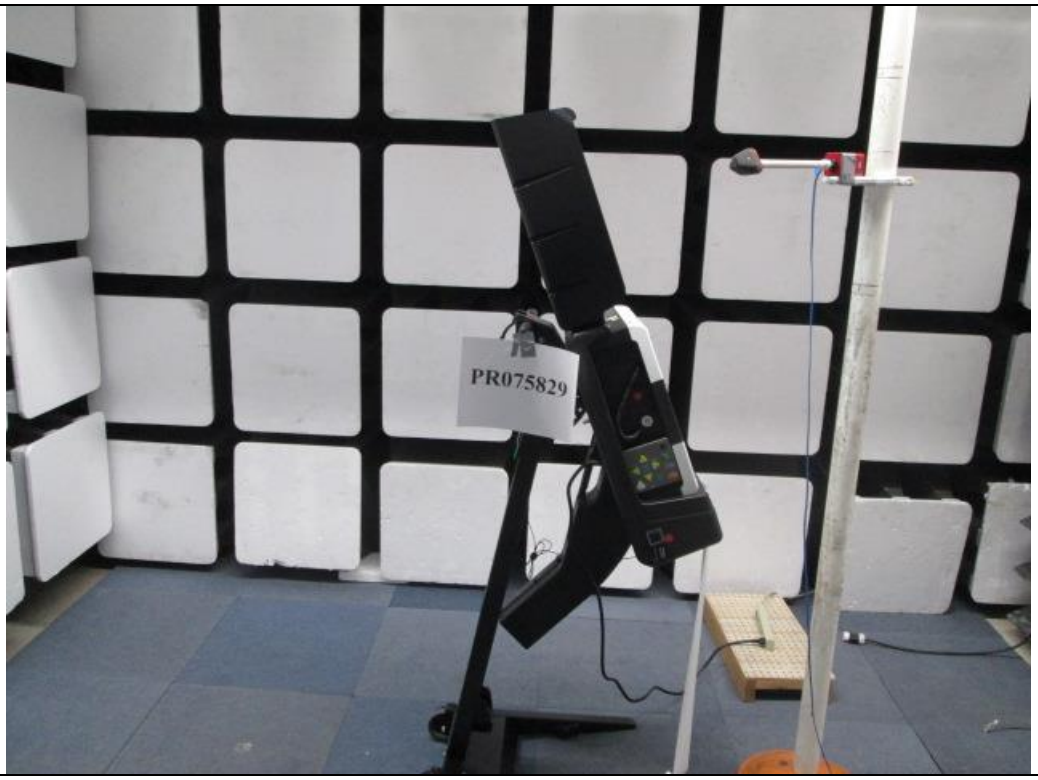

Figure B4. Radiated RF Immunity Test Setup – Left Side.

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP0
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	Thursday, March 08, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1066	Eaton	96000	2113	Double Ridge Horn Antenna 200MHz-2GHz	06/20/2016	06/20/2018
1181	EMCI	RFS	V2.5.8	Initial Release 02 July 2004	NA	NA
1267	Werlatone	C6021-10	41833	Directional Coupler, 10 kHz to 1 GHz, 500W, 40dB	10/11/2017	10/11/2018
1285	ETS-Lindgren	HI-6053	00082800	Isotropic Field Probe 10 MHz-40 GHz	04/13/2017	04/13/2018
1323	Rohde&Schwarz	SMT03	100204	Signal Generator, 5 kHz to 3 GHz	02/05/2018	02/05/2019
1454	Giga-tronics	GT-8888A	8888A0338	10 MHz to 8 GHz, +20 dBm, 25 Vdc Power Meter	04/08/2017	04/08/2018
1478	Ophir	5127F	1100	RF Amplifier, 200 Watt, 20 - 1000 MHz	NA	NA
1539	Extech Instruments	445715	Z316007	Hygro-Thermometer	05/09/2017	05/09/2018
1722	ETS -Lindgren	3142B	1624	Antenna	NA	NA
1761	Braden Shielding Systems	RF Shield Room	N/A	GP0	03/17/2017	03/17/2018

APPENDIX C
Electrical Fast Transients/Burst Test Data

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018
Temperature:	19˚C Humidity: 32%	Pressure:	835 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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Voltage (kV)	Polarity +	Polarity -	Time (sec)	Injection Type	L 1	L 2	L 3	N	P E	Rep Freq.	Comments	Criteria Met	Pass / Fail
2.0	x		60	CDN	x					100kHz	AC Mains	A	Pass
2.0		x	60	CDN	x					100kHz		A	Pass
2.0	x		60	CDN		x				100kHz		A	Pass
2.0		x	60	CDN		x				100kHz		A	Pass
2.0	x		60	CDN					x	100kHz		A	Pass
2.0		x	60	CDN					x	100kHz		A	Pass
2.0	x		60	CDN	x	x			x	100kHz		A	Pass
2.0		x	60	CDN	x	x			x	100kHz		A	Pass

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

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Figure C1. Electrical Fast Transient Test Setup

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

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Figure C2. Electrical Fast Transient Test Setup – AC Mains ~ 90cm from EFT generator

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1184	KeyTek	CEWare	4.0	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1283	KeyTek	EMCPro Plus	0601237	Advanced EMC Immunity Tester	05/18/2017	05/18/2018
1296	California Instruments Corporation	5001IX208-150/300	S59159	5k VA AC Power Source	03/23/2017	03/23/2018
1372	Tektronix	TDS2002B	C103489	Oscilloscope, 60 MHz, 2-channel	01/26/2018	01/26/2019
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018
Temperature:	20˚C Humidity: 32%	Pressure:	835 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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Voltage (kV)	Polarity +	Polarity -	Time (sec)	Injection Type	L 1	L 2	L 3	N	P E	Rep Freq.	Comments	Criteria Met	Pass / Fail
2.0	x		60	CDN	x					100kHz	AC Mains	A	Pass
2.0		x	60	CDN	x					100kHz		A	Pass
2.0	x		60	CDN		x				100kHz		A	Pass
2.0		x	60	CDN		x				100kHz		A	Pass
2.0	x		60	CDN					x	100kHz		A	Pass
2.0		x	60	CDN					x	100kHz		A	Pass
2.0	x		60	CDN	x	x			x	100kHz		A	Pass
2.0		x	60	CDN	x	x			x	100kHz		A	Pass

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

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Figure C1. Electrical Fast Transient Test Setup

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

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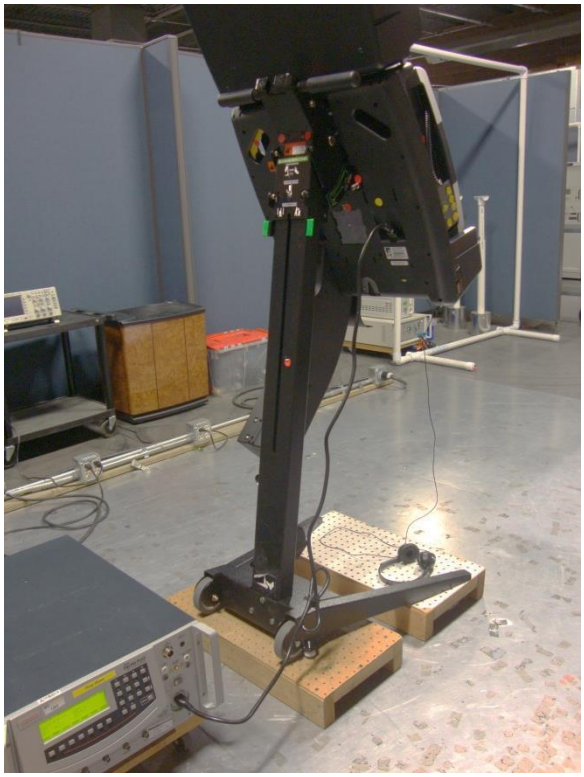

Figure C2. Electrical Fast Transient Test Setup – AC Mains ~ 90cm from EFT generator

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1184	KeyTek	CEWare	4.0	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1283	KeyTek	EMCPro Plus	0601237	Advanced EMC Immunity Tester	05/18/2017	05/18/2018
1296	California Instruments Corporation	5001IX208-150/300	S59159	5k VA AC Power Source	03/23/2017	03/23/2018
1372	Tektronix	TDS2002B	C103489	Oscilloscope, 60 MHz, 2-channel	01/26/2018	01/26/2019
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 13, 2018
Temperature:	21˚C Humidity: 31%	Pressure:	844 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

PR075829-4-4.doc FR0100

Voltage (kV)	Polarity +	Polarity -	Time (sec)	Injection Type	L 1	L 2	L 3	N	P E	Rep Freq.	Comments	Criteria Met	Pass / Fail
2.0	x		60	CDN	x					100kHz	AC Mains	A	Pass
2.0		x	60	CDN	x					100kHz		A	Pass
2.0	x		60	CDN		x				100kHz		A	Pass
2.0		x	60	CDN		x				100kHz		A	Pass
2.0	x		60	CDN					x	100kHz		A	Pass
2.0		x	60	CDN					x	100kHz		A	Pass
2.0	x		60	CDN	x	x			x	100kHz		A	Pass
2.0		x	60	CDN	x	x			x	100kHz		A	Pass

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 13, 2018

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Figure C1. Electrical Fast Transient Test Setup

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 13, 2018

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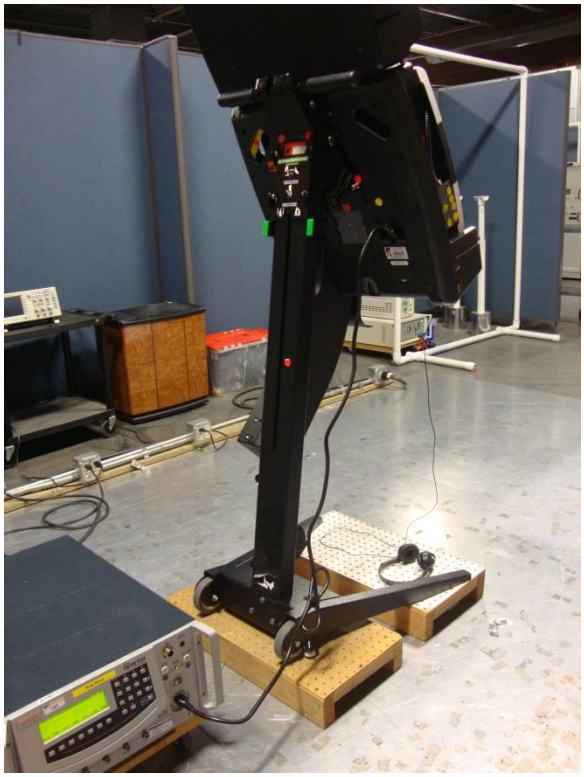

Figure C2. Electrical Fast Transient Test Setup - AC Mains ~ 90cm from EFT generator

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 13, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1184	KeyTek	CEWare	4.0	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1283	KeyTek	EMCPro Plus	0601237	Advanced EMC Immunity Tester	05/18/2017	05/18/2018
1296	California Instruments Corporation	5001IX208-150/300	S59159	5k VA AC Power Source	03/23/2017	03/23/2018
1372	Tektronix	TDS2002B	C103489	Oscilloscope, 60 MHz, 2-channel	01/26/2018	01/26/2019
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018

APPENDIX D

Surge Immunity Test Data

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 15, 2018
Temperature:	23˚C Humidity: 31%	Pressure:	825 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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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	45	Differential Mode	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
1.0	x		x				x	0	5	45	Common Mode Line	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

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 15, 2018
Temperature:	23˚C Humidity: 31%	Pressure:	825 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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Voltage (kV)	Polarity +	Polarity -	L 1	L 2	L 3	N	PE	Phase (deg)	Number of Pulses	Delay (sec)	Comments	Criteria Met	Pass / Fail
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	Differential Mode	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 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

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 15, 2018

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Figure D1. Surge Immunity Test Setup – AC Mains

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 15, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1184	KeyTek	CEWare	4.0	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1283	KeyTek	EMCPro Plus	0601237	Advanced EMC Immunity Tester	05/18/2017	05/18/2018
1296	California Instruments Corporation	5001IX208-150/300	S59159	5k VA AC Power Source	03/23/2017	03/23/2018
1372	Tektronix	TDS2002B	C103489	Oscilloscope, 60 MHz, 2-channel	01/26/2018	01/26/2019
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 14, 2018
Temperature:	20˚C Humidity: 31%	Pressure:	836 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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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	45	Differential Mode	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
1.0	x		x				x	0	5	45	Common Mode Line	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

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 14, 2018
Temperature:	20˚C Humidity: 31%	Pressure:	836 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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Voltage (kV)	Polarity +	Polarity -	L 1	L 2	L 3	N	PE	Phase (deg)	Number of Pulses	Delay (sec)	Comments	Criteria Met	Pass / Fail
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	Differential Mode	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 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

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 14, 2018

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Figure D1. Surge Immunity Test Setup – AC Mains

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 14, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1184	KeyTek	CEWare	4.0	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1283	KeyTek	EMCPro Plus	0601237	Advanced EMC Immunity Tester	05/18/2017	05/18/2018
1296	California Instruments Corporation	5001IX208-150/300	S59159	5k VA AC Power Source	03/23/2017	03/23/2018
1372	Tektronix	TDS2002B	C103489	Oscilloscope, 60 MHz, 2-channel	01/26/2018	01/26/2019
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 12, 2018
Temperature:	22˚C Humidity: 32%	Pressure:	842 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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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	45	Differential Mode	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
1.0	x		x				x	0	5	45	Common Mode Line	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

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 12, 2018
Temperature:	22˚C Humidity: 32%	Pressure:	842 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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Voltage (kV)	Polarity +	Polarity -	L 1	L 2	L 3	N	PE	Phase (deg)	Number of Pulses	Delay (sec)	Comments	Criteria Met	Pass / Fail
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	Differential Mode	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 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

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 12, 2018

PR075829-4-5.doc FR0100

Figure D1. Surge Immunity Test Setup – AC Mains

Surge Immunity per IEC / EN 61000-4-5

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 12, 2018

PR075829-4-5.doc FR0100

Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1184	KeyTek	CEWare	4.0	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1283	KeyTek	EMCPro Plus	0601237	Advanced EMC Immunity Tester	05/18/2017	05/18/2018
1296	California Instruments Corporation	5001IX208-150/300	S59159	5k VA AC Power Source	03/23/2017	03/23/2018
1372	Tektronix	TDS2002B	C103489	Oscilloscope, 60 MHz, 2-channel	01/26/2018	01/26/2019
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018

APPENDIX E
Conducted RF Immunity Test Data

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018
Temperature:	20˚C Humidity: 32%	Pressure:	835 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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Frequency (MHz)	Modulation			Level (Vrms)	Dwell (sec)	Comments	Criteria Met	Pass / Fail
	Type	%	Freq					
0.150 – 80.0	AM	80	1 kHz	10	3	AC Mains using M3 CDN	A	Pass
Spot freq.	AM	80	1 kHz	10	10	See section 4.0 of PDS	A	Pass

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509, K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

PR075829-4-6.doc FR0100

Figure E1. Conducted RF Immunity Test Setup

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509, K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

PR075829-4-6.doc FR0100

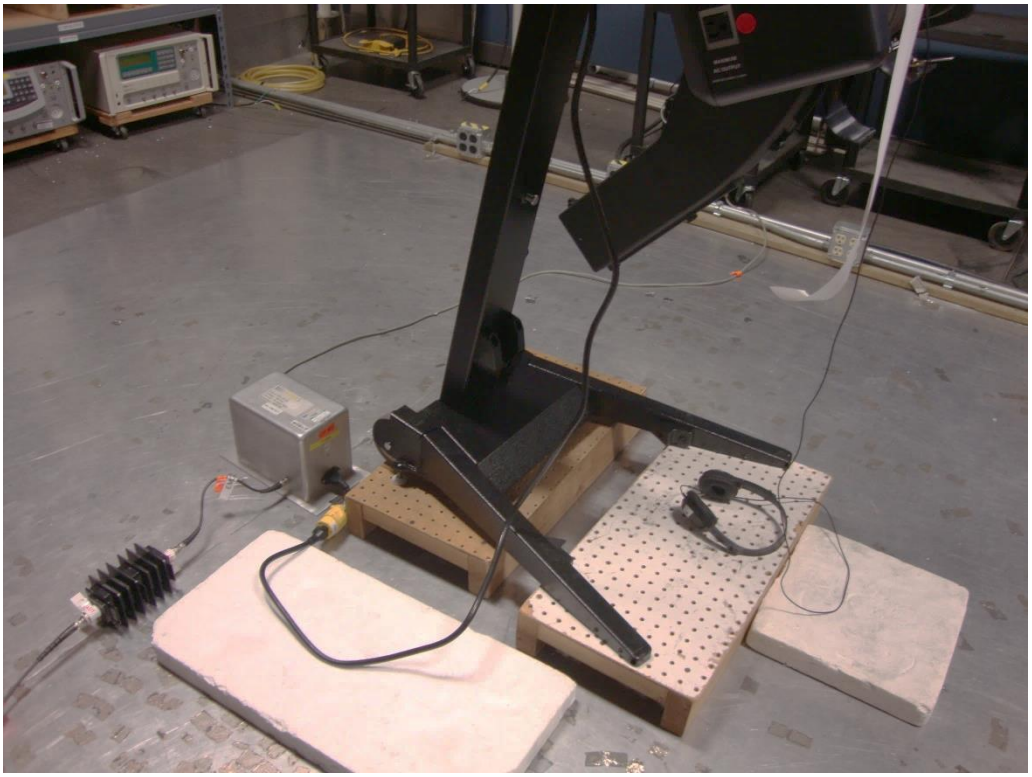

Figure E2. Conducted RF Immunity Test Setup – AC Mains ~ 90cm from CDN

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509, K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1055	Marconi	2024	112113/027	Signal Generator (10 kHz - 2.4 GHz)	05/09/2017	05/09/2018
1226	EMCI	EMCI-CDN-M3-16	EMCI011	M3 CDN, 16A, 250 VAC	11/07/2017	11/07/2018
1274	IFI	M100	L594-0108	100W Power Amplifier, 0.01 MHz to 220 MHz	NA	NA
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1526	Aeroflex/Weinschel	40-6-34	RX850	Hi power attenuator 6dB	10/11/2017	10/11/2018
1533	Werlatone	C9475	102544	100 Watt Dual Directional Coupler, 10 kHz to 250 M	10/12/2017	10/12/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018
1575	Rigol Technologies, Inc	DSA815-TG	DSA8A162150400	9 kHz to 1.5 GHz Spectrum Analyzer w/ tracking gen	08/09/2017	08/09/2018
1594	EMCI	CI	V2.5.0	Conducted Immunity Software	NA	NA

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018
Temperature:	19˚C Humidity: 32%	Pressure:	835 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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Frequency (MHz)	Modulation			Level (Vrms)	Dwell (sec)	Comments	Criteria Met	Pass / Fail
	Type	%	Freq					
0.150 – 80.0	AM	80	1 kHz	10	3	AC Mains using M3 CDN	A	Pass
Spot freq.	AM	80	1 kHz	10	10	See section 4.0 of PDS	A	Pass

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

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Figure E1. Conducted RF Immunity Test Setup

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

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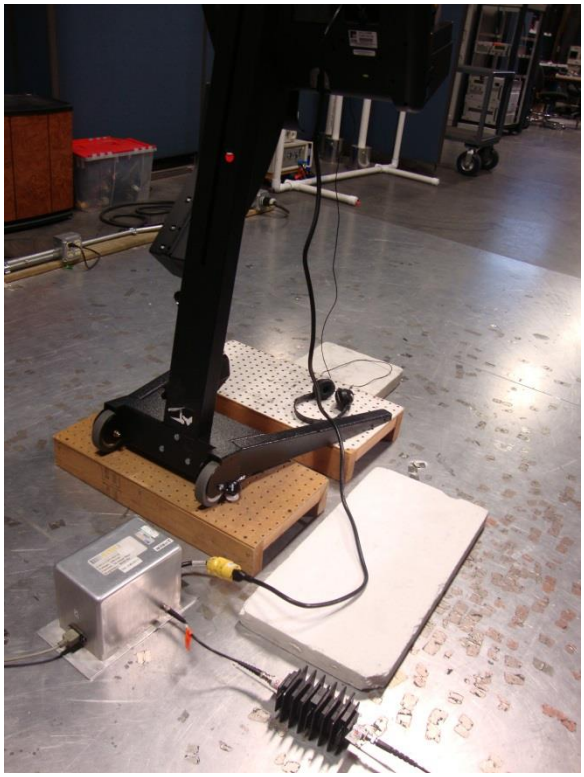

Figure E2. Conducted RF Immunity Test Setup – AC Mains ~ 90cm from EFT generator

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1055	Marconi	2024	112113/027	Signal Generator (10 kHz - 2.4 GHz)	05/09/2017	05/09/2018
1226	EMCI	EMCI-CDN-M3-16	EMCI011	M3 CDN, 16A, 250 VAC	11/07/2017	11/07/2018
1274	IFI	M100	L594-0108	100W Power Amplifier, 0.01 MHz to 220 MHz	NA	NA
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1526	Aeroflex/Weinschel	40-6-34	RX850	Hi power attenuator 6dB	10/11/2017	10/11/2018
1533	Werlatone	C9475	102544	100 Watt Dual Directional Coupler, 10 kHz to 250 M	10/12/2017	10/12/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018
1575	Rigol Technologies, Inc	DSA815-TG	DSA8A162150400	9 kHz to 1.5 GHz Spectrum Analyzer w/ tracking gen	08/09/2017	08/09/2018
1594	EMCI	CI	V2.5.0	Conducted Immunity Software	NA	NA

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 13, 2018
Temperature:	21˚C Humidity: 31%	Pressure:	844 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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Frequency (MHz)	Modulation			Level (Vrms)	Dwell (sec)	Comments	Criteria Met	Pass / Fail
	Type	%	Freq					
0.150 – 80.0	AM	80	1 kHz	10	3	AC Mains using M3 CDN	A	Pass
Spot freq.	AM	80	1 kHz	10	10	See section 4.0 of PDS	A	Pass

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 13, 2018

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Figure E1. Conducted RF Immunity Test Setup

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 13, 2018

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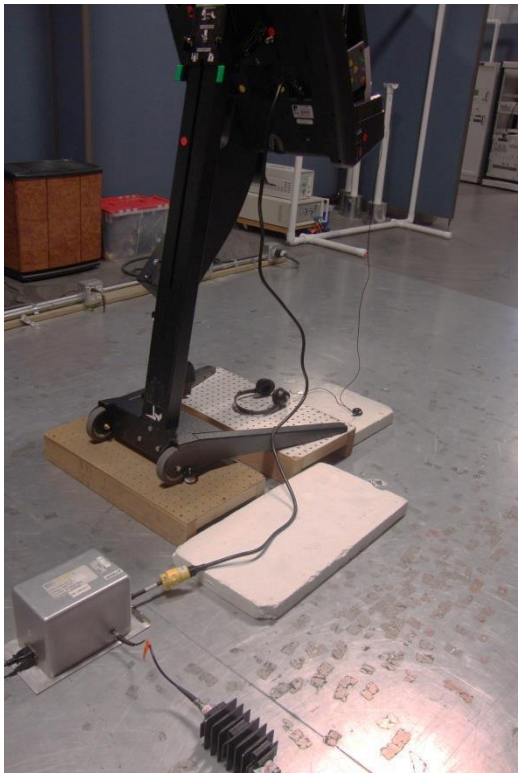

Figure E2. Conducted RF Immunity Test Setup – AC Mains ~ 90cm from CDN

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 13, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1055	Marconi	2024	112113/027	Signal Generator (10 kHz - 2.4 GHz)	05/09/2017	05/09/2018
1226	EMCI	EMCI-CDN-M3-16	EMCI011	M3 CDN, 16A, 250 VAC	11/07/2017	11/07/2018
1274	IFI	M100	L594-0108	100W Power Amplifier, 0.01 MHz to 220 MHz	NA	NA
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1526	Aeroflex/Weinschel	40-6-34	RX850	Hi power attenuator 6dB	10/11/2017	10/11/2018
1533	Werlatone	C9475	102544	100 Watt Dual Directional Coupler, 10 kHz to 250 M	10/12/2017	10/12/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018
1575	Rigol Technologies, Inc	DSA815-TG	DSA8A162150400	9 kHz to 1.5 GHz Spectrum Analyzer w/ tracking gen	08/09/2017	08/09/2018
1594	EMCI	CI	V2.5.0	Conducted Immunity Software	NA	NA

APPENDIX F
Power Frequency H-field Immunity
Test Data

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 15, 2018
Temperature:	23˚C Humidity: 31%	Pressure:	825 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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Frequency (Hz) 50	Frequency (Hz) 60	Field Strength (A/m)	EUT Axis Location	Dwell Time (sec)	Comments	Criteria Met	Pass / Fail
x		30	X	60		30	Pass
	x	30	X	60		30	Pass
x		30	Y	60		30	Pass
	x	30	Y	60		30	Pass
x		30	Z	60		30	Pass
	x	30	Z	60		30	Pass

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 15, 2018

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Figure F1. Power Frequency H-field Immunity Test Setup

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 15, 2018

PR075829-4-8.doc FR0100

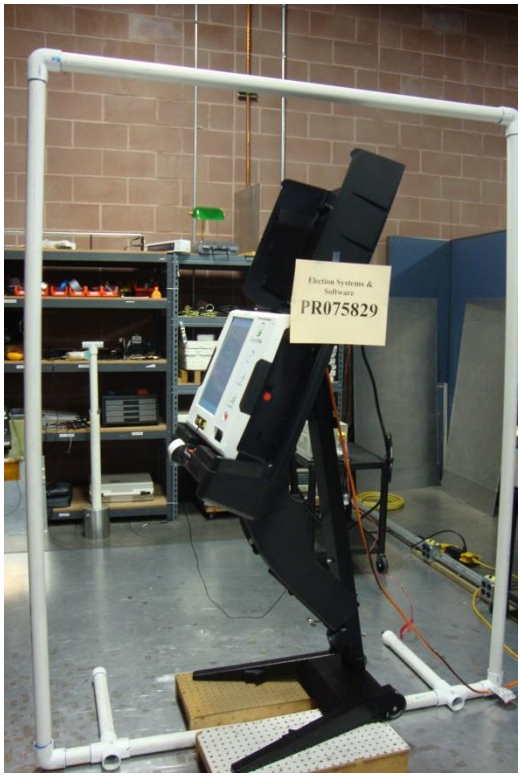

Figure F2. Power Frequency H-field Immunity Test Setup

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 15, 2018

PR075829-4-8.doc FR0100

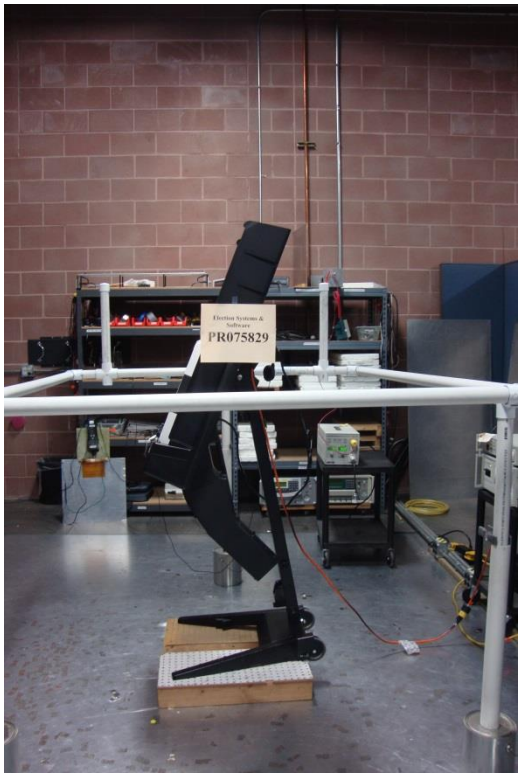

Figure F3. Power Frequency H-field Immunity Test Setup

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 15, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1262	EMCI	EMCI-4-8-2m-1.5m	0001	HField Loop, 2m x 1.5m	08/28/2017	08/28/2018
1296	California Instruments Corporation	5001IX208-150/300	S59159	5k VA AC Power Source	03/23/2017	03/23/2018
1372	Tektronix	TDS2002B	C103489	Oscilloscope, 60 MHz, 2-channel	01/26/2018	01/26/2019
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instuments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018
1549	California Instruments/Ametek	1251P	1423A05348	AC power supply	NA	NA

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 16, 2018
Temperature:	20˚C Humidity: 31%	Pressure:	825 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

PR075829-4-8.doc FR0100

Frequency (Hz) 50	Frequency (Hz) 60	Field Strength (A/m)	EUT Axis Location	Dwell Time (sec)	Comments	Criteria Met	Pass / Fail
x		30	X	60		30	Pass
	x	30	X	60		30	Pass
x		30	Y	60		30	Pass
	x	30	Y	60		30	Pass
x		30	Z	60		30	Pass
	x	30	Z	60		30	Pass

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 16, 2018

PR075829-4-8.doc FR0100

Figure F1. Power Frequency H-field Immunity Test Setup

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 16, 2018

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Figure F2. Power Frequency H-field Immunity Test Setup

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 16, 2018

PR075829-4-8.doc FR0100

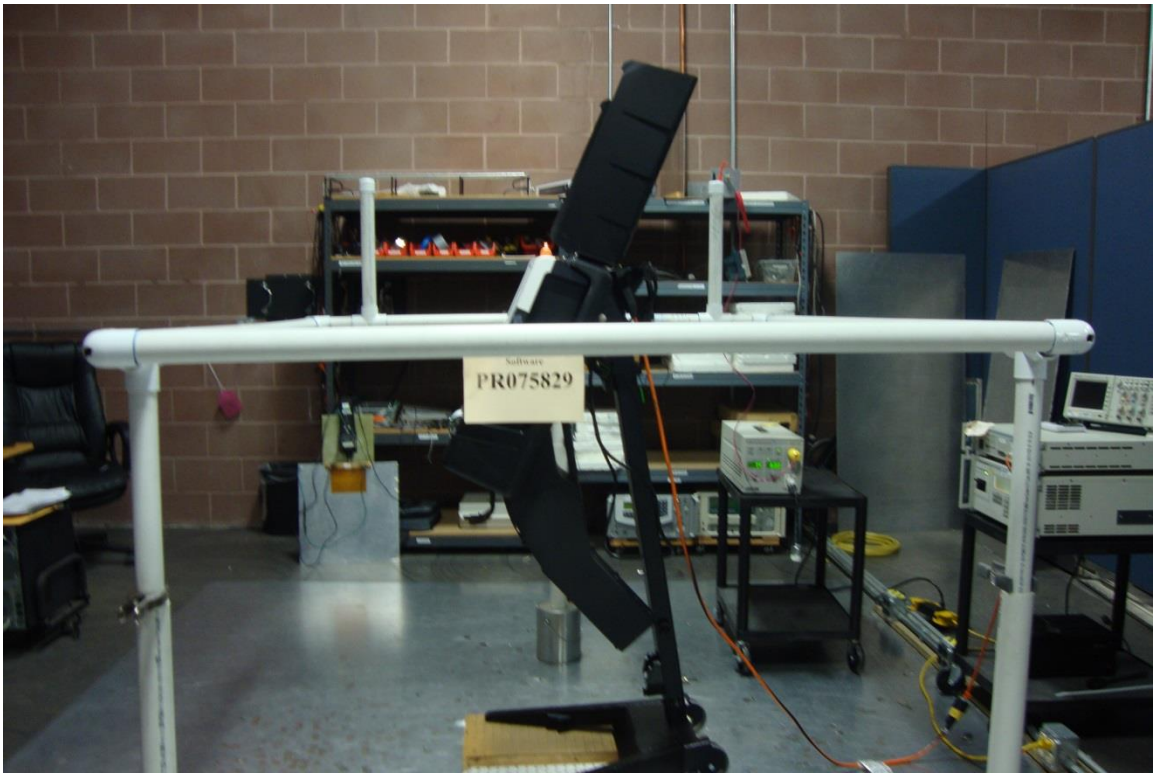

Figure F3. Power Frequency H-field Immunity Test Setup

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	qw	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 16, 2018

PR075829-4-8.doc FR0100

Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1262	EMCI	EMCI-4-8-2m-1.5m	0001	HField Loop, 2m x 1.5m	08/28/2017	08/28/2018
1296	California Instruments Corporation	5001IX208-150/300	S59159	5k VA AC Power Source	03/23/2017	03/23/2018
1372	Tektronix	TDS2002B	C103489	Oscilloscope, 60 MHz, 2-channel	01/26/2018	01/26/2019
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instuments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018
1549	California Instruments/Ametek	1251P	1423A05348	AC power supply	NA	NA

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 16, 2018
Temperature:	21˚C Humidity: 32%	Pressure:	825 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

PR075829-4-8.doc FR0100

Frequency (Hz) 50	Frequency (Hz) 60	Field Strength (A/m)	EUT Axis Location	Dwell Time (sec)	Comments	Criteria Met	Pass / Fail
x		30	X	60		30	Pass
	x	30	X	60		30	Pass
x		30	Y	60		30	Pass
	x	30	Y	60		30	Pass
x		30	Z	60		30	Pass
	x	30	Z	60		30	Pass

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 16, 2018

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Figure F1. Power Frequency H-field Immunity Test Setup

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 16, 2018

PR075829-4-8.doc FR0100

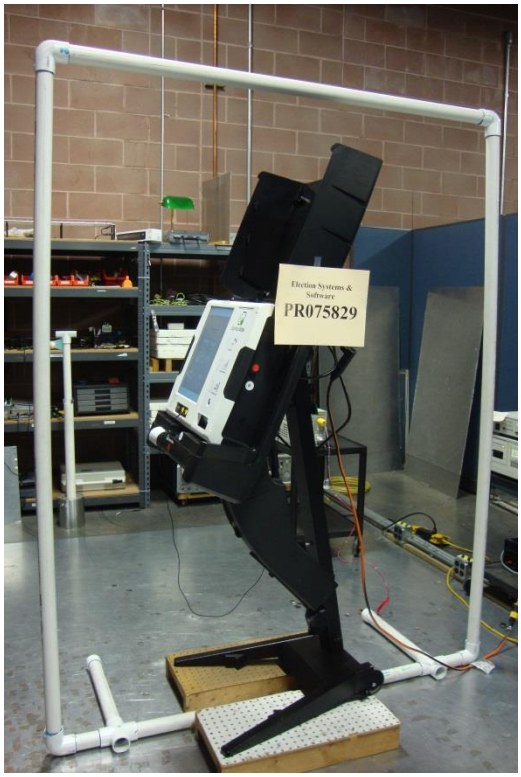

Figure F2. Power Frequency H-field Immunity Test Setup

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 16, 2018

PR075829-4-8.doc FR0100

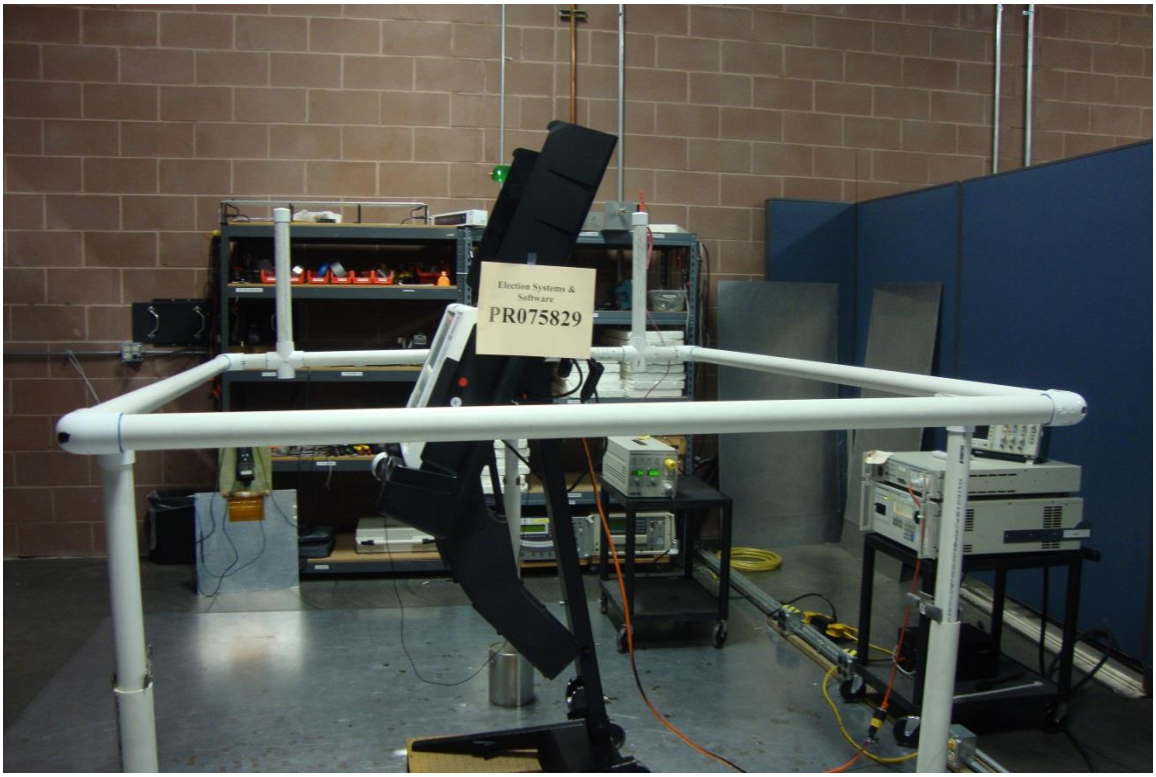

Figure F3. Power Frequency H-field Immunity Test Setup

Power Frequency H-field Immunity per IEC / EN 61000-4-8

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 16, 2018

PR075829-4-8.doc FR0100

Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1262	EMCI	EMCI-4-8-2m-1.5m	0001	HField Loop, 2m x 1.5m	08/28/2017	08/28/2018
1296	California Instruments Corporation	5001IX208-150/300	S59159	5k VA AC Power Source	03/23/2017	03/23/2018
1372	Tektronix	TDS2002B	C103489	Oscilloscope, 60 MHz, 2-channel	01/26/2018	01/26/2019
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instuments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018
1549	California Instruments/Ametek	1251P	1423A05348	AC power supply	NA	NA

APPENDIX G
Voltage Dip and Interrupts Test Data

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018
Temperature:	23˚C Humidity: 32%	Pressure:	835 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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% Nominal	No. of Cycles	Phase Angle (deg) 0	90	180	270	Time between dropouts (sec)	Number of tests	Comments	Criteria Met	Pass / Fail
70%	0.6	x				10	3		A	Pass
70%	0.6		x			10	3		A	Pass
70%	0.6			x		10	3		A	Pass
70%	0.6				x	10	3		A	Pass
40%	6	x				10	3		A	Pass
40%	6		x			10	3		A	Pass
40%	6			x		10	3		A	Pass
40%	6				x	10	3		A	Pass
40%	60	x				10	3		A	Pass
40%	60		x			10	3		A	Pass
40%	60			x		10	3		A	Pass
40%	60				x	10	3		A	Pass
0%	300	x				10	3	Went to battery back-up	A	Pass
0%	300			x		10	3	Went to battery back-up	A	Pass
Electric Power Disturbance Testing										
129Vac Line Voltage Variations (+7.5% of nominal 120V) 3 hour duration									A	Pass
105Vac Line Voltage Variations (-12.5% of nominal 120V) 3 hour duration									A	Pass
+ 15% of line variations of nominal (138Vac) 30 min.									A	Pass
-15% of line variations of nominal voltage (102Vac) 30 min.									A	Pass

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

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Figure G1. Voltage Dips and Interruptions Test Setup

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

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Figure G2. Electric Power Disturbance Testing Test Setup

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.0 with Kiosk	S/N:	EV0217390509 K0117373359
Standard Referenced:	EAC 2005 VVSG	Date:	March 8, 2018

PR075829-4-11.doc FR0100

Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1184	KeyTek	CEWare	4.0	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1283	KeyTek	EMCPro Plus	0601237	Advanced EMC Immunity Tester	05/18/2017	05/18/2018
1296	California Instruments Corporation	5001IX208-150/300	S59159	5k VA AC Power Source	03/23/2017	03/23/2018
1372	Tektronix	TDS2002B	C103489	Oscilloscope, 60 MHz, 2-channel	01/26/2018	01/26/2019
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 14, 2018
Temperature:	20˚C Humidity: 31%	Pressure:	836 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

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% Nominal	No. of Cycles	Phase Angle (deg) 0	90	180	270	Time between dropouts (sec)	Number of tests	Comments	Criteria Met	Pass / Fail
0%	0.6	x				10	3		A	Pass
0%	0.6		x			10	3		A	Pass
0%	0.6			x		10	3		A	Pass
0%	0.6				x	10	3		A	Pass
40%	6	x				10	3		A	Pass
40%	6		x			10	3		A	Pass
40%	6			x		10	3		A	Pass
40%	6				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
70%	30				x	10	3		A	Pass
0%	300	x				10	3	Went to battery back-up	A	Pass
0%	300			x		10	3	Went to battery back-up	A	Pass
Electric Power Disturbance Testing										
129Vac Line Voltage Variations (+7.5% of nominal 120V) 3 hour duration									A	Pass
105Vac Line Voltage Variations (-12.5% of nominal 120V) 3 hour duration									A	Pass
+ 15% of line variations of nominal (138Vac) 30 min.									A	Pass
-15% of line variations of nominal voltage (102Vac) 30 min.									A	Pass

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 14, 2018

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Figure G1. Voltage Dips and Interruptions Test Setup

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 14, 2018

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Figure G2. Electric Power Disturbance Testing Test Setup

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.4 with Kiosk	S/N:	EV0217390517 K0115421526
Standard Referenced:	EAC 2005 VVSG	Date:	March 14, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1184	KeyTek	CEWare	4.0	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1283	KeyTek	EMCPro Plus	0601237	Advanced EMC Immunity Tester	05/18/2017	05/18/2018
1296	California Instruments Corporation	5001IX208-150/300	S59159	5k VA AC Power Source	03/23/2017	03/23/2018
1372	Tektronix	TDS2002B	C103489	Oscilloscope, 60 MHz, 2-channel	01/26/2018	01/26/2019
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 12, 2018
Temperature:	22˚C Humidity: 32%	Pressure:	842 mb
Input Voltage:	120Vac/60Hz		
Configuration of Unit:	ExpressVote w/ Kiosk, Counting Ballots		
Test Engineer:	T. Wittig		

PR075829-4-11.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
70%	0.6	x				10	3		A	Pass
70%	0.6		x			10	3		A	Pass
70%	0.6			x		10	3		A	Pass
70%	0.6				x	10	3		A	Pass
40%	6	x				10	3		A	Pass
40%	6		x			10	3		A	Pass
40%	6			x		10	3		A	Pass
40%	6				x	10	3		A	Pass
40%	60	x				10	3		A	Pass
40%	60		x			10	3		A	Pass
40%	60			x		10	3		A	Pass
40%	60				x	10	3		A	Pass
0%	300	x				10	3	Went to battery back-up	A	Pass
0%	300			x		10	3	Went to battery back-up	A	Pass
Electric Power Disturbance Testing										
129Vac Line Voltage Variations (+7.5% of nominal 120V) 3 hour duration									A	Pass
105Vac Line Voltage Variations (-12.5% of nominal 120V) 3 hour duration									A	Pass
+ 15% of line variations of nominal (138Vac) 30 min.									A	Pass
-15% of line variations of nominal voltage (102Vac) 30 min.									**A**	**Pass**

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 12, 2018

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Figure G1. Voltage Dips and Interruptions Test Setup

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 12, 2018

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Figure G2. Electric Power Disturbance Testing Test Setup

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

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Customer Representative:	Michael Walker	Test Area:	GP #2
Model:	AUO_G150XTN06.8 with Kiosk	S/N:	EV0217390587 K0115421501
Standard Referenced:	EAC 2005 VVSG	Date:	March 12, 2018

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Test Equipment List

ID Number	Manufacturer	Model #	Serial #	Description	Cal Date	Cal Due
1184	KeyTek	CEWare	4.0	KeyTek EMCPro Control Software for EFT, Surge, H-F	NA	NA
1283	KeyTek	EMCPro Plus	0601237	Advanced EMC Immunity Tester	05/18/2017	05/18/2018
1296	California Instruments Corporation	5001IX208-150/300	S59159	5k VA AC Power Source	03/23/2017	03/23/2018
1372	Tektronix	TDS2002B	C103489	Oscilloscope, 60 MHz, 2-channel	01/26/2018	01/26/2019
1491	Fluke	87/5 Multimeter	23350033	True RMS Multimeter	04/17/2017	04/17/2018
1537	Extech Instruments	445715	Z315813	Hygro-Thermometer	04/17/2017	04/17/2018

APPENDIX H
Product Data Sheet

1.0 Client Information

Client Information	
Manufacturer Name	Election Systems & Software
Address	11208 John Galt Blvd
City	Omaha
State	NE
Zip Code	68137
Client Representative	Michael Walker
Title	
Phone	
Fax	
Email	michael.walker@provandv.com

2.0 Product Information - General

Product Information	
Product Name (**as it should appear on test report**)	ExpressVote Hdw v2.1.2
Model Number (of UUT to be tested)	ExpressVote Tabulator w/ Kiosk
Functional description of product (what is it, what does it do, etc.)	Precinct Tabulator
List all modes of operation	Ballot Marking Device, Tabulator, Admin
Can modes be operated simultaneously? If so, explain.	No
What mode(s) will be used for testing?	Admin
Product type (IT, Medical, Scientific, Industrial, etc.)	Industrial
Is the product an intentional radiator	No
Product Dimensions	ExpressVote/Kiosk: 29.5”L x 23.75”W x 70.5”H
Product Weight	ExpressVote/Kiosk: 76lb
Will fork lift be required	No
Applicable Standards, if known	Per VVSG 1.0: • FCC Class B radiated and conducted emissions per ANSI C63.4. • IEC 61000-4-2 • IEC 61000-4-3 • IEC 61000-4-4 • IEC 61000-4-5 • IEC 61000-4-6 • IEC 61000-4-8 • IEC 61000-4-11
Describe all environment(s) where product will be used (residential, commercial, industrial, etc.)	Commercial, Office
Does product consist of multiple components? (If yes, please describe each system component)	ExpressVote Tabulator, ExpressVote Kiosk

Cycle time > 3 seconds? (If yes, how long?)	11 seconds + voting time
Highest internally generated frequency	48MHz
Product Set-up Time	< 10 min
Boot up time in the event of an unintentional power down	3 min

Identify **ALL** I/O connections on the unit(s) under test, as well as **MAXIMUM** associated cable lengths below

Model No.	Description	I/O Type		Length (m)	Patient Connect? (See Note)	QTY
		UUT-UUT	UUT - SE			

Note: "Patient Connect" column applies only to medical devices.

3.0 Power

Power Requirements	
Does/can product connect to AC mains? (If so, can the UUT function when connected to AC?)	Yes
Input Voltage Rating as it appears on unit, power supply, or power brick	100-240VAC
Input Current (specify @ 230 Vac/50 Hz)	2.2A Max
Single or Multi-Phase (If multi-phase, specify delta or wye)	Single
Is input power connector two-prong (Hot & Neutral) or 3-prong (H, N, Ground)	3 prong
Does UUT have more than 1 power cord? (If yes, explain.)	No

4.0 Unit Under Test (UUT) – Detailed Information

UUT Hardware	
Condition	New
Configuration During Test	ExpressVote w/ Kiosk, Counting Ballots
Input Power	120VAC

UUT Components			
Name	**Model No.**	**Serial No.**	**Description**
ExpressVote/Kiosk	AUO_G150XTN06.0	EV0217390509	ExpressVote mounted on kiosk
Kiosk	Kiosk	K0117373359	Kiosk with scanner and report printer

I/O Cabling
See Section 2.0 for details

UUT Software/Firmware		
Name	**Version/Revision**	**Functionality**

UUT Operating Conditions

List all frequencies generated/used by the product.	Controller 14.7456MHz Clock Generator 25MHz USB Hub 24MHz RTC 32.768MHz USB 48MHz Serial Port 1.8432MHz
How will product be exercised during test?	Admin Print mode
How will product be monitored during test?	Check for continual operation
What are the product's critical parameters?	See test plan
Specify tolerance of all critical parameters.	See test plan

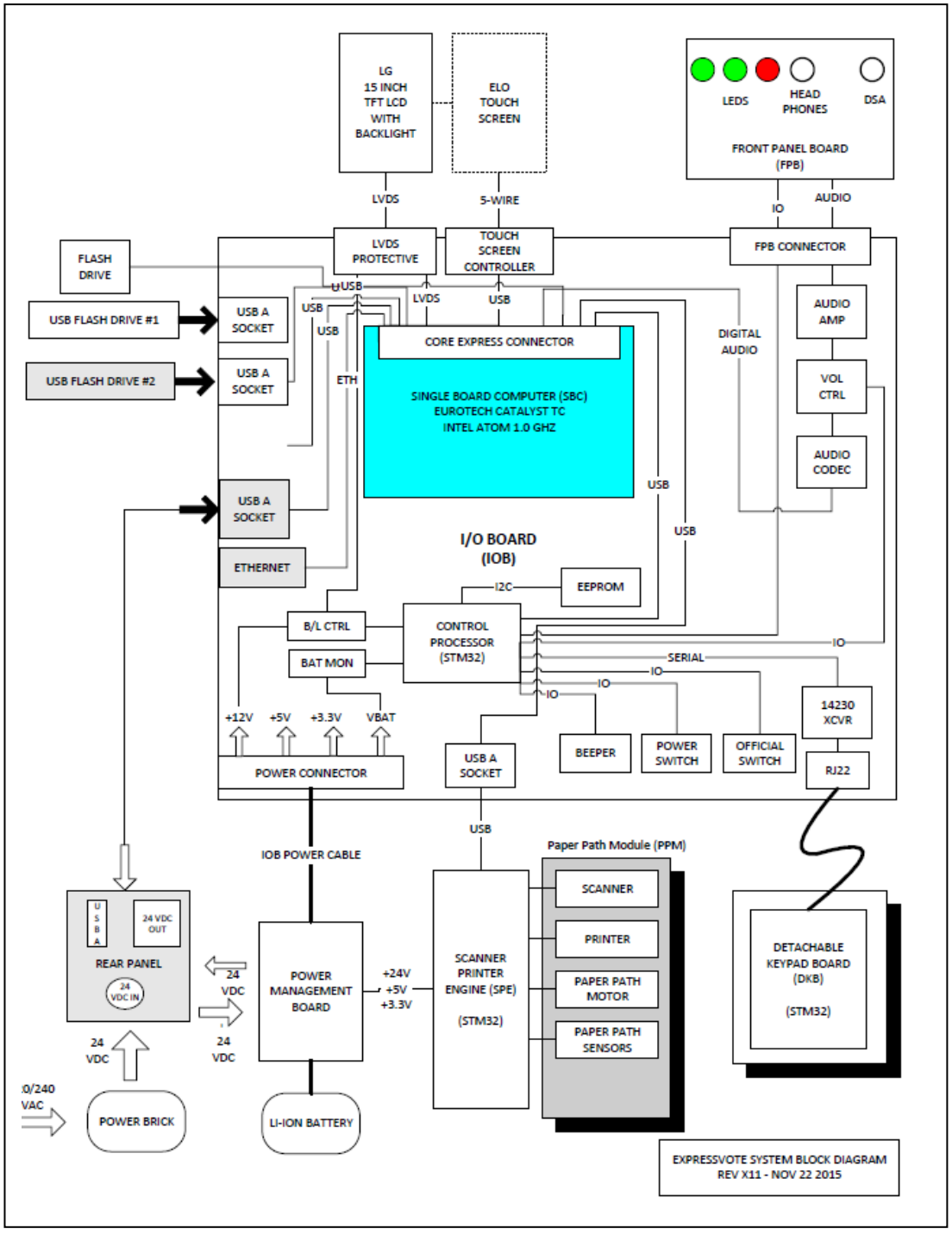
5.0 Support Equipment (SE) – Detailed Information

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



Important note: The product data sheet is a critical piece of documentation which is used as the basis for any test reports that EMCI will generate; it must be completed *prior* to testing. It should be reviewed carefully by the client. If incorrect information is provided resulting in revisions to test reports, the client will be subject to report revision fees.

1.0 Client Information

Client Information	
Manufacturer Name	Election Systems & Software
Address	11208 John Galt Blvd
City	Omaha
State	NE
Zip Code	68137
Client Representative	Michael Walker
Title	
Phone	
Fax	
Email	michael.walker@provandv.com

2.0 Product Information - General

Product Information	
Product Name (**as it should appear on test report**)	ExpressVote Hdw v2.1.2
Model Number (of UUT to be tested)	ExpressVote Tabulator w/ Kiosk
Functional description of product (what is it, what does it do, etc.)	Precinct Tabulator
List all modes of operation	Ballot Marking Device, Tabulator, Admin
Can modes be operated simultaneously? If so, explain.	No
What mode(s) will be used for testing?	Admin
Product type (IT, Medical, Scientific, Industrial, etc.)	Industrial
Is the product an intentional radiator	No
Product Dimensions	ExpressVote/Kiosk: 29.5”L x 23.75”W x 70.5”H
Product Weight	ExpressVote/Kiosk: 76lb
Will fork lift be required	No
Applicable Standards, if known	Per VVSG 1.0: • FCC Class B radiated and conducted emissions per ANSI C63.4. • IEC 61000-4-2 • IEC 61000-4-3 • IEC 61000-4-4 • IEC 61000-4-5 • IEC 61000-4-6 • IEC 61000-4-8 • IEC 61000-4-11
Describe all environment(s) where product will be used (residential, commercial, industrial, etc.)	Commercial, Office
Does product consist of multiple components? (If yes, please describe each system component)	ExpressVote Tabulator, ExpressVote Kiosk
Cycle time > 3 seconds? (If yes, how long?)	11 seconds + voting time
Highest internally generated frequency	48MHz
Product Set-up Time	< 10 min
Boot up time in the event of an unintentional power down	3 min
Identify **ALL** I/O connections on the unit(s) under test, as well as **MAXIMUM** associated cable lengths below	

Model No.	Description	I/O Type		Length (m)	Patient Connect? (See Note)	QTY
		UUT-UUT	UUT - SE			
Note: "Patient Connect" column applies only to medical devices.						

3.0 Power

Power Requirements	
Does/can product connect to AC mains? (If so, can the UUT function when connected to AC?)	Yes
Input Voltage Rating as it appears on unit, power supply, or power brick	100-240VAC
Input Current (specify @ 230 Vac/50 Hz)	2.2A Max
Single or Multi-Phase (If multi-phase, specify delta or wye)	Single
Is input power connector two-prong (Hot & Neutral) or 3-prong (H, N, Ground)	3 prong
Does UUT have more than 1 power cord? (If yes, explain.)	No

4.0 Unit Under Test (UUT) – Detailed Information

UUT Hardware	
Condition	New
Configuration During Test	ExpressVote w/ Kiosk, Counting Ballots
Input Power	120VAC

UUT Components			
Name	**Model No.**	**Serial No.**	**Description**
ExpressVote/Kiosk	AUO_G150XTN06.4	EV0217390517	ExpressVote mounted on kiosk
Kiosk	Kiosk	K0115421526	Kiosk with scanner and report printer

I/O Cabling
See Section 2.0 for details

UUT Software/Firmware		
Name	**Version/Revision**	**Functionality**

UUT Operating Conditions	
List all frequencies generated/used by the product.	Controller 14.7456MHz Clock Generator 25MHz USB Hub 24MHz RTC 32.768MHz USB 48MHz Serial Port 1.8432MHz
How will product be exercised during test?	Admin Print mode
How will product be monitored during test?	Check for continual operation
What are the product's critical parameters?	See test plan
Specify tolerance of all critical parameters.	See test plan

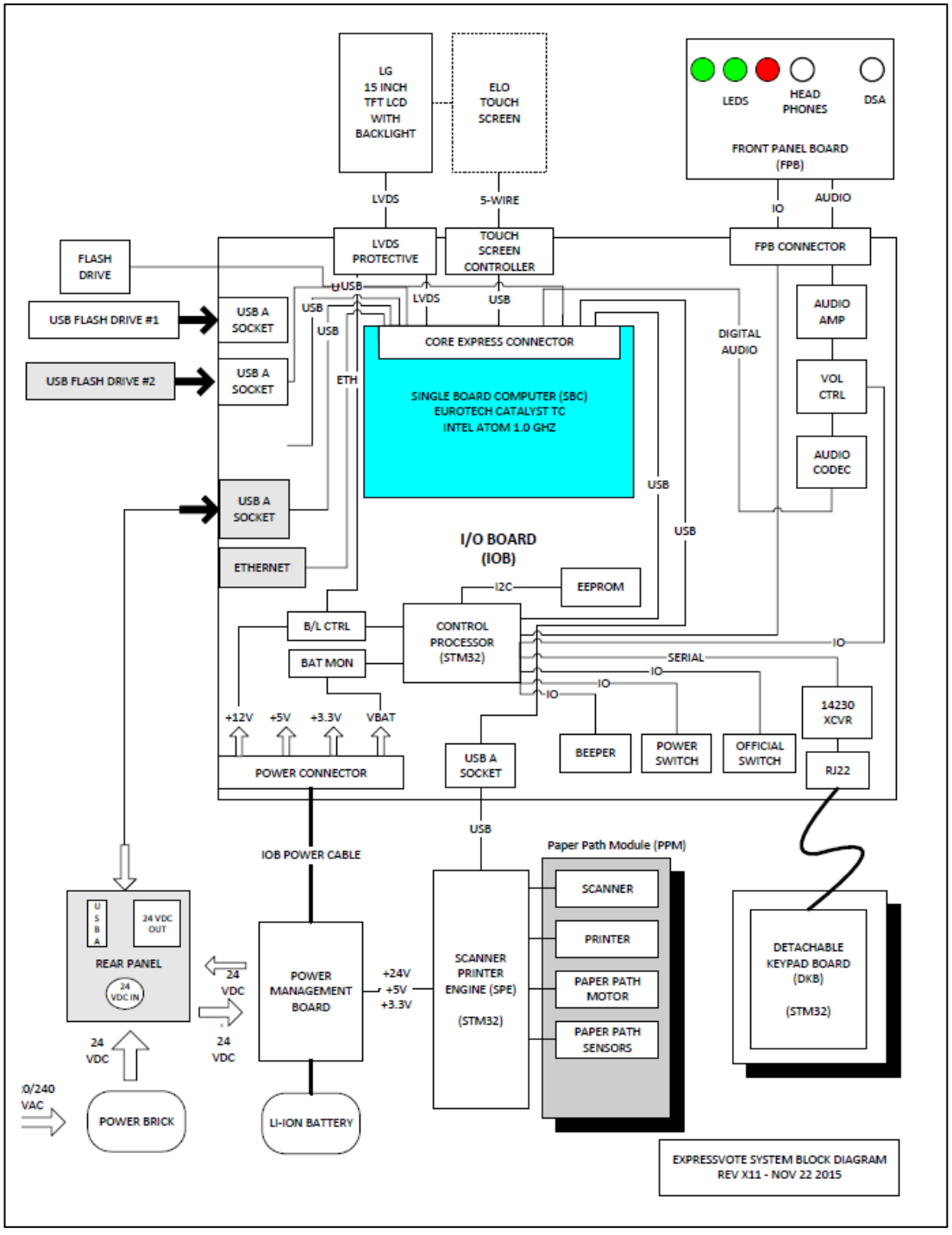
5.0 Support Equipment (SE) – Detailed Information

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



Important note: The product data sheet is a critical piece of documentation which is used as the basis for any test reports that EMCI will generate; it must be completed *prior* to testing. It should be reviewed carefully by the client. If incorrect information is provided resulting in revisions to test reports, the client will be subject to report revision fees.

1.0 Client Information

Client Information	
Manufacturer Name	Election Systems & Software
Address	11208 John Galt Blvd
City	Omaha
State	NE
Zip Code	68137
Client Representative	Michael Walker
Title	
Phone	
Fax	
Email	michael.walker@provandv.com

2.0 Product Information - General

Product Information	
Product Name (**as it should appear on test report**)	ExpressVote Hdw v2.1.2
Model Number (of UUT to be tested)	ExpressVote Tabulator w/ Kiosk
Functional description of product (what is it, what does it do, etc.)	Precinct Tabulator
List all modes of operation	Ballot Marking Device, Tabulator, Admin
Can modes be operated simultaneously? If so, explain.	No
What mode(s) will be used for testing?	Admin
Product type (IT, Medical, Scientific, Industrial, etc.)	Industrial
Is the product an intentional radiator	No
Product Dimensions	ExpressVote/Kiosk: 29.5”L x 23.75”W x 70.5”H
Product Weight	ExpressVote/Kiosk: 76lb
Will fork lift be required	No
Applicable Standards, if known	Per VVSG 1.0: • FCC Class B radiated and conducted emissions per ANSI C63.4. • IEC 61000-4-2 • IEC 61000-4-3 • IEC 61000-4-4 • IEC 61000-4-5 • IEC 61000-4-6 • IEC 61000-4-8 • IEC 61000-4-11

Describe all environment(s) where product will be used (residential, commercial, industrial, etc.)	Commercial, Office
Does product consist of multiple components? (If yes, please describe each system component)	ExpressVote Tabulator, ExpressVote Kiosk
Cycle time > 3 seconds? (If yes, how long?)	11 seconds + voting time
Highest internally generated frequency	48MHz
Product Set-up Time	< 10 min
Boot up time in the event of an unintentional power down	3 min

Identify **ALL** I/O connections on the unit(s) under test, as well as **MAXIMUM** associated cable lengths below

Model No.	Description	I/O Type		Length (m)	Patient Connect? (See Note)	QTY
		UUT-UUT	UUT - SE			

Note: "Patient Connect" column applies only to medical devices.

3.0 Power

Power Requirements	
Does/can product connect to AC mains? (If so, can the UUT function when connected to AC?)	Yes
Input Voltage Rating as it appears on unit, power supply, or power brick	100-240VAC
Input Current (specify @ 230 Vac/50 Hz)	2.2A Max
Single or Multi-Phase (If multi-phase, specify delta or wye)	Single
Is input power connector two-prong (Hot & Neutral) or 3-prong (H, N, Ground)	3 prong
Does UUT have more than 1 power cord? (If yes, explain.)	No

4.0 Unit Under Test (UUT) – Detailed Information

UUT Hardware	
Condition	New
Configuration During Test	ExpressVote w/ Kiosk, Counting Ballots
Input Power	120VAC

UUT Components			
Name	**Model No.**	**Serial No.**	**Description**
ExpressVote/Kiosk	AUO_G150XTN06.8	EV0217390587	ExpressVote mounted on kiosk
Kiosk	Kiosk	K0115421501	Kiosk with scanner and report printer

I/O Cabling
See Section 2.0 for details

UUT Software/Firmware		
Name	**Version/Revision**	**Functionality**

UUT Operating Conditions

List all frequencies generated/used by the product.	Controller 14.7456MHz Clock Generator 25MHz USB Hub 24MHz RTC 32.768MHz USB 48MHz Serial Port 1.8432MHz
How will product be exercised during test?	Admin Print mode
How will product be monitored during test?	Check for continual operation
What are the product's critical parameters?	See test plan
Specify tolerance of all critical parameters.	See test plan

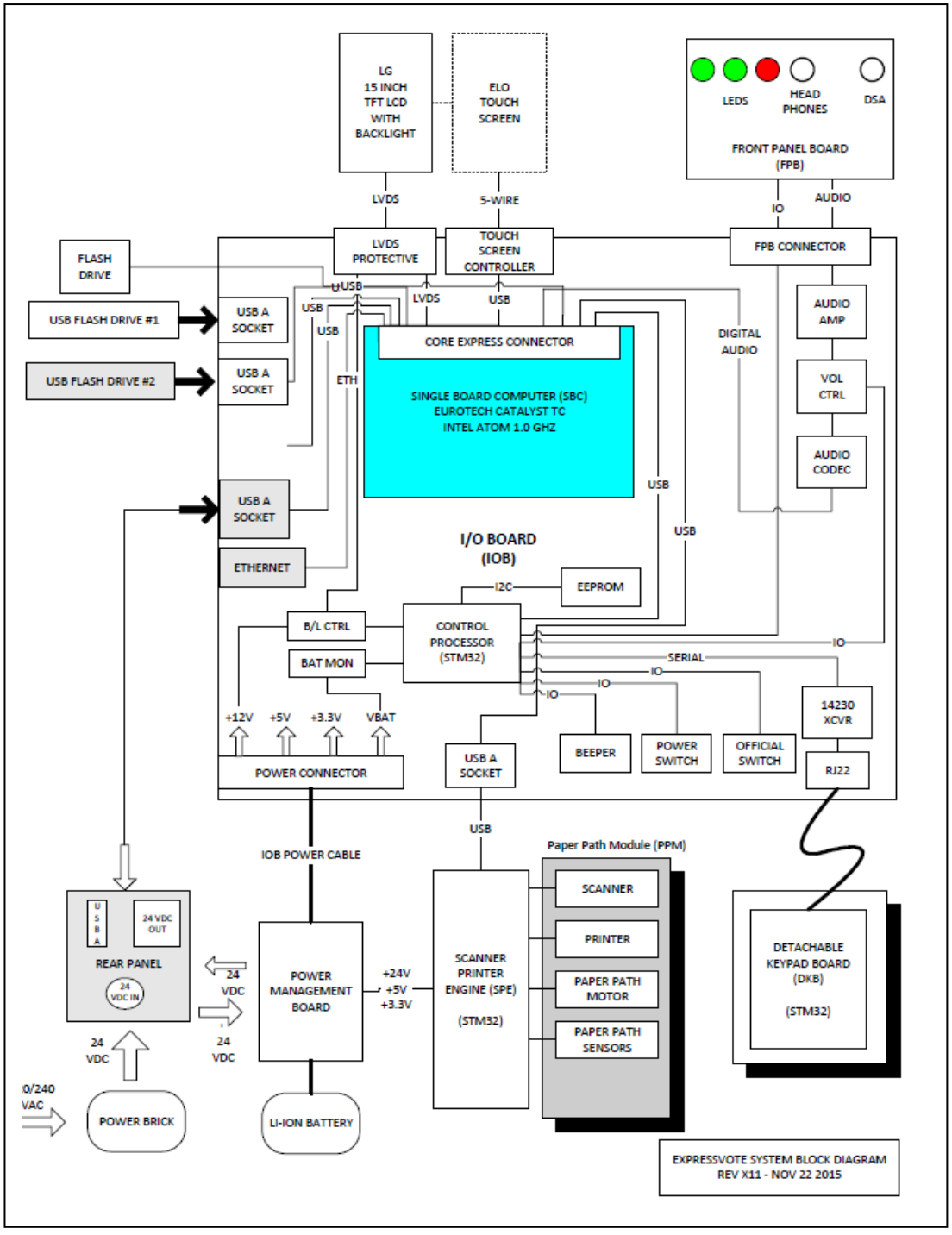
5.0 Support Equipment (SE) – Detailed Information

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



Important note: The product data sheet is a critical piece of documentation which is used as the basis for any test reports that EMCI will generate; it must be completed *prior* to testing. It should be reviewed carefully by the client. If incorrect information is provided resulting in revisions to test reports, the client will be subject to report revision fees.

APPENDIX I
EMI Test Log

EMI\ENV Test Log

Manufacturer:	Election Systems & Software	Project Number:	PR075829
Model:	EUT 1: AUO_G150XTN06.0	S/N:	1: EV0217390509
	Kiosk		1: K0117373359
	EUT 2: AUO_G150XTN06.4		2: EV0217390517
	Kiosk		2: K0115421526
	EUT 3: AUO_G150XTN06.8		3: EV0217390587
	Kiosk		3: K0115421501
Customer Representative:	Michael Walker		
Standard Referenced:	FCC Part 15, Class B, EAC 2005 VVSG		

FR0105

10m Emissions

Test	Test Code	Date	Event	OT	Time (hrs)	Result	Initials
---	6003	March 6, 2018 0800-0830	Initial Product setup time EUT 1		0.5	Complete	MT
RE	1346	0830-1030	Test #1: Radiated Emissions, 30 MHz - 1 GHz, 8 Rads, 4 Heights, 3 sec. dwell, ref. level = 80 dBuV, 10 meter distance (4.1.2.9) 120 VAC / 60 Hz EUT 1		2.0	Pass	MT
RE	1353	1030-1130	Test #2: Radiated Emissions, 1 GHz - 18 GHz, 16 Rads, 3 Heights, 3 sec. dwell, ref. level = 107 dBuV, 3 meter distance (4.1.2.9) 120 VAC / 60 Hz EUT 1		1.0	Pass	MT
CE	2342	1130-1200	Test #3: Conducted Emissions, 150 kHz - 30 MHz (4.1.2.9) 120 VAC / 60 Hz EUT 1		0.5	---	MT
		1200-1230	Lunch		---	---	MT
CE		1230-1300	Continue: Test #3: Conducted Emissions, 150 kHz - 30 MHz (4.1.2.9) 120 VAC / 60 Hz EUT 1		0.5	Pass	MT
---		1300-1330	Initial Product setup time EUT 2		0.5	Complete	MT
CE		1330-1430	Test #4: Conducted Emissions, 150 kHz - 30 MHz (4.1.2.9) 120 VAC / 60 Hz EUT 2		1.0	Pass	MT
RE		1430-1530	Test #5: Radiated Emissions, 1 GHz - 18 GHz, 16 Rads, 3 Heights, 3 sec. dwell, ref. level = 107 dBuV, 3 meter distance (4.1.2.9) 120 VAC / 60 Hz EUT 2		1.0	Pass	MT
---		1530-1630	Client Running Post Test Verification		1.0	Complete	MT

10m Emissions

Test	Test Code	Date	Event	OT	Time (hrs)	Result	Initials
RE		March 7, 2018 0800-0930	Test #6: Radiated Emissions, 30 MHz - 1 GHz, 8 Rads, 4 Heights, 3 sec. dwell, ref. level = 80 dBuV, 10 meter distance (4.1.2.9) 120 VAC / 60 Hz EUT 2		1.5	Pass	MT
---		0930-1000	Initial Product setup time EUT 3		0.5	Complete	MT
RE		1000-1100	Test #7: Radiated Emissions, 30 MHz - 1 GHz, 8 Rads, 4 Heights, 3 sec. dwell, ref. level = 80 dBuV, 10 meter distance (4.1.2.9) 120 VAC / 60 Hz EUT 3 EUT Stopped Running (Ballot Jammed), Will Rerun Scan		1.0	---	MT
RE		1100-1200	Test #8: Radiated Emissions, 30 MHz - 1 GHz, 8 Rads, 4 Heights, 3 sec. dwell, ref. level = 80 dBuV, 10 meter distance (4.1.2.9) 120 VAC / 60 Hz EUT 3 EUT Jammed Again, Client is Cleaning EUT will rerun scan, EUT Jammed again, Client is Replacing Transport (Same Model and Make) will rerun scan		1.0	---	MT
		1200-1230	Lunch		---	---	MT
---		1230-1330	Fixing EUT		1.0	Complete	MT
RE		1330-1500	Test #9: Radiated Emissions, 30 MHz - 1 GHz, 8 Rads, 4 Heights, 3 sec. dwell, ref. level = 80 dBuV, 10 meter distance (4.1.2.9) 120 VAC / 60 Hz EUT 3 With Replaced Transport		1.5	Pass	MT
RE		1500-1600	Test #10: Radiated Emissions, 1 GHz - 18 GHz, 16 Rads, 3 Heights, 3 sec. dwell, ref. level = 107 dBuV, 3 meter distance (4.1.2.9) 120 VAC / 60 Hz EUT 3		1.0	Pass	MT
			Done For The Day, Client will need to reschedule more time for Conducted Emissions		---	---	MT
CE		March 13, 2018 1300-1400	Test #11: Conducted Emissions, 150 kHz - 30 MHz (4.1.2.9) 120 VAC / 60 Hz EUT 3		1.0	Pass	MT

Ground Planes / CALC

Test	Test Code	Date	Event	OT	Time (hrs)	Result	Initials
4-3	43918	Wednesday, March 07, 2018 0800 - 1200	Radiated RF Immunity – EUT1 (4.1.2.10) 10V/m, 80 - 1000 MHz, 1% Step, 80% AM, 1kHz sine, 3s dwell 120 VAC / 60 Hz		4	Pass	SC
---	---	1200 -- 1230	lunch		---	---	SC
---	---	1230 - 1330	continue		1	---	SC

Ground Planes / CALC

Test	Test Code	Date	Event	OT	Time (hrs)	Result	Initials
---	---	1330 - 1630	Radiated RF Immunity – EUT2 (4.1.2.10) 10V/m, 80 - 1000 MHz, 1% Step, 80% AM, 1kHz sine, 3s dwell 120 VAC / 60 Hz		3	Pass	SC
---	---	Thursday, March 08, 2018 0800 - 1000	continue		2	---	SC
---	---	1000 - 1200	Radiated RF Immunity – EUT3 (4.1.2.10) 10V/m, 80 - 1000 MHz, 1% Step, 80% AM, 1kHz sine, 3s dwell 120 VAC / 60 Hz		2	Pass	SC
---	---	1200 - 1230	lunch		---	---	SC
---	---	1230 - 1530	continue		3	---	SC
4-6	4626	March 8, 2018 0800-1000	Setup for Conducted RF Immunity (4.1.2.11) 10Vrms, 0.15 - 80 MHz, 1% Step, 80% AM, 1kHz sine, 3s dwell 120 VAC / 60 Hz AC mains on EUT #1		2.0	Pass	TW
4-6	4626	1000-1130	Setup for Conducted RF Immunity (4.1.2.11) 10Vrms, 0.15 - 80 MHz, 1% Step, 80% AM, 1kHz sine, 3s dwell 120 VAC / 60 Hz AC mains on EUT #2		2.0	Pass	TW
4-4	4413	1130-1200	Electrical Fast Transient / Burst (4.1.2.6) Mains: +/- 2kV 120 VAC / 60 Hz AC mains on EUT #2		0.5	Pass	TW
4-4	---	1230-1330	Electrical Fast Transient / Burst (4.1.2.6) Mains: +/- 2kV 120 VAC / 60 Hz AC mains on EUT #1		0.5	Pass	TW
4-11	41918	1300-1600	Voltage Dips and Interruptions (Inc./Red. of Nom. Voltage) (4.1.2.5) Electric power increases of 7.5% and reductions of 12.5% of nominal specified power. (See Protocol) 120 VAC / 60 Hz Electric power increases of 7.5% EUT #1		3.0	Pass	TW
4-11	---	March 9, 2018 0802-1102	Voltage Dips and Interruptions (Inc./Red. of Nom. Voltage) (4.1.2.5) Electric power increases of 7.5% and reductions of 12.5% of nominal specified power. (See Protocol) 120 VAC / 60 Hz Electric power reductions of 12.5% EUT #1		3.0	Pass	TW
4-11	--	1104-1206	Line variation test, +/- 15% on EUT #1		1.0	Pass	TW
4-11	---	1208-1230	Voltage Dips and Interruptions (4.1.2.5) 70% nom, 0.6 cycles / 40% nom, 6 cycles & 1 sec. / 0% nom, 300 cycles 120 VAC / 60 Hz EUT #1, EUT went into battery back-up during testing		0.5	Pass	TW

Ground Planes / CALC

Test	Test Code	Date	Event	OT	Time (hrs)	Result	Initials
			Note: Client started setup EUT #2, unit would not power on at120Vac, only battery, client will be troubleshooting EUT #2, Client swapped out power supply , moved on to EUT #3				
4-11	---	1230-1330	Voltage Dips and Interruptions (Inc./Red. of Nom. Voltage) (4.1.2.5) Electric power increases of 7.5% and reductions of 12.5% of nominal specified power. (See Protocol) 120 VAC / 60 Hz Electric power increases of 7.5% EUT #3		3.0	Pass	TW
		1600	Done for the day		---	---	TW
4-11	---	March 12, 2018 0800-1100	Voltage Dips and Interruptions (Inc./Red. of Nom. Voltage) (4.1.2.5) Electric power increases of 7.5% and reductions of 12.5% of nominal specified power. (See Protocol) 120 VAC / 60 Hz Electric power reductions of 12.5% EUT #3		3.0	Pass	TW
4-5	45918	1130-1630	Surge Immunity (4.1.2.7) Mains: +/- 2kV CM, +/- 2kV DM, (0, 90, 180, 270) 120 VAC / 60 Hz, EUT #3		5.0	Pass	TW
4-11	---	March 13, 2018 0800-0830	Voltage Dips and Interruptions (4.1.2.5) 70% nom, 0.6 cycles / 40% nom, 6 cycles & 1 sec. / 0% nom, 300 cycles 120 VAC / 60 Hz, EUT #3 EUT went into battery back-up during testing		0.5	Pass	TW
4-4	---	0830-0900	Electrical Fast Transient / Burst (4.1.2.6) Mains: +/- 2kV 120 VAC / 60 Hz, EUT #3		0.5	Pass	TW
4-11	---	0900-1000	Line variation test, +/- 15% on EUT #3		1.0	Pass	TW
4-6	---	1000-1200	Conducted RF Immunity (4.1.2.11) 10Vrms, 0.15 - 80 MHz, 1% Step, 80% AM, 1kHz sine, 3s dwell 120 VAC / 60 Hz on EUT #3		2.0	Pass	TW
4-11	---	1300-1600	Voltage Dips and Interruptions (Inc./Red. of Nom. Voltage) (4.1.2.5) Electric power increases of 7.5% and reductions of 12.5% of nominal specified power. (See Protocol) 120 VAC / 60 Hz Electric power increases of 7.5% EUT #2		3.0	--	TW
4-5	---	March 14, 2018 0800-1300	Surge Immunity (4.1.2.7) Mains: +/- 2kV CM, +/- 2kV DM, (0, 90, 180, 270) 120 VAC / 60 Hz, EUT #2		5.0	Pass	TW
4-11	---	1300-1330	Voltage Dips and Interruptions (4.1.2.5) 70% nom, 0.6 cycles / 40% nom, 6 cycles & 1 sec. / 0% nom, 300 cycles 120 VAC / 60 Hz on EUT #2		0.5	Pass	TW
4-11	---	1330-1430	Line variation test, +/- 15% on EUT #2		1.0	Pass	TW
		1600	Done for the day		---	---	TW
4-5	---	March 15, 2018 0800-1300	Surge Immunity (4.1.2.7) Mains: +/- 2kV CM, +/- 2kV DM, (0, 90, 180, 270) 120 VAC / 60 Hz, EUT #1		5.0	Pass	TW

Ground Planes / CALC

Test	Test Code	Date	Event	OT	Time (hrs)	Result	Initials
4-11	---	1300-1600	Voltage Dips and Interruptions (Inc./Red. of Nom. Voltage) (4.1.2.5) Electric power increases of 7.5% and reductions of 12.5% of nominal specified power. (See Protocol) 120 VAC / 60 Hz Electric power reductions of 12.5% EUT #2		3.0	Pass	TW
		1600	Done for the day		---	---	TW
4-4	4833	March 16, 2018 0900-1000	Power Frequency H-Field Immunity (4.1.2.12) 30A/m, 50 / 60 Hz, 3 axes 120 VAC / 60 Hz EUT #1, #2 and #3 were tested		3.0	Pass	TW
4-2	42512	March 19, 2018 0800-1200	Electrostatic Discharge (4.1.2.8) +/- 8kV Contact, +/-2, 4, 8, 15kV Air 120 VAC / 60 Hz EUT #3		4.0	Pass	TW
			Performed ESD pre-test prior to testing Bleed-off cables are 936k ohms and 935k ohms		---	---	TW
4-2	---	1230	Electrostatic Discharge (4.1.2.8) +/- 8kV Contact, +/-2, 4, 8, 15kV Air 120 VAC / 60 Hz EUT #2		4.0	Pass	TW
4-2	---	March 20, 2018 0900	Electrostatic Discharge (4.1.2.8) +/- 8kV Contact, +/-2, 4, 8, 15kV Air 120 VAC / 60 Hz, EUT #1		4.0	Pass	TW
			Performed ESD pre-test prior to testing Bleed-off cables are 935k ohms and 934k ohms		---	---	TW
---	---	1200	ESD on 3 EUT's are completed		---	---	Pass

APPENDIX J
Laboratory Accreditations

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

NATIONAL TECHNICAL SYSTEMS (NTS) - LONGMONT
1736 Vista View Drive
Longmont, CO 80504-5242
Mr. Eric Loucks Phone: 303 776 7249

ELECTRICAL

Valid To: February 28, 2018 Certificate Number: 0214.43

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following Electromagnetic Compatibility/Interference (EMC/EMI), Lightning, Transient, Surge, and Product Safety tests:

Test Technology:	Test Method(s)[1,2]:
Emissions	
Radiated and Conducted	CFR 47 FCC, Parts 15B (using ANSI C63.4: 2014), 15C (using ANSI C63.10:2013), and 18 (using MP-5:1986); CISPR 32, Ed. 1 (2012-01); EN 55032:2012/AC:2013; AS/NZS CISPR 22 (2002); AS/NZS 3548 (1997); AS/NZS CISPR 14-1 (2003); IEC/CISPR 14-1, Ed. 4 (2003); IEC 61000-3-12, Ed. 2.0 (2011); EN 61000-3-12 (2011); IEC 61000-6-1, Ed. 2 (2005-03); IEC 61000-6-2, Ed. 2.0 (2005-01); IEC 61000-6-3 (1996); EN 61000-6-3 (2001) + A1 (2004); EN 61000-6-4 (2007); KN 32:2015 (Annex 11); KN 22; KN 11
Harmonics	IEC 61000-3-2, Ed. 2.2 (2004-11); IEC 61000-3-2, Ed. 3.0 (2005) + A1 (2008) + A2 (2009); IEC 61000-3-2, Ed. 4.0 (2014-05)
Flicker	IEC 61000-3-3, Ed. 1.1 (2002-03); EN 61000-3-3 + Al (2001); IEC 61000-3-3, Ed. 1.1 (2003) + A2 (2005); IEC 61000-3-3, Ed. 3.0 (2013-05)
Immunity	
Electrostatic Discharge (ESD)	IEC 61000-4-2 (2001); EN 61000-4-2 (2001) + A2 (2001); EN 61000-4-2 + Al (1998) + A2 (2001); IEC 61000-4-2, Ed. 2.0 (2008-12); EN 61000-4-2 (2009-05); KN 61000-4-2; KN 61000-4-2 (2008-5); KN 61000-4-2 (Annex 1-1)
Radiated	IEC/EN 61000-4-3, Ed. 2.1 (2002) + A1 (2002); EN 61000-4-3; IEC 61000-4-3 (1995) + Al (1998) + A2 (2000); EN 61000-4-3 (2002) + Al (2002); IEC 61000-4-3, Ed. 3.0 (2006-02) + Al (2007) + A2 (2010); EN 61000-4-3 (2006) + Al (2008) + A2 (2010); KN 61000-4-3; KN 61000-4-3 (2008-5); KN 61000-4-3 (Annex 1-2)

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Test Technology:	Test Method(s)[1,2]:
Immunity (cont'd)	
Electrical Fast Transient/Burst	IEC 61000-4-4, Ed. 2.0 (2004-07); EN 61000-4-4 (2004); EN 61000-4-4:2012; IEC 61000-4-4 (2012-04); KN 61000-4-4; KN 61000-4-4 (2008-5); KN 61000-4-4 (Annex 1-3)
Surge	IEC 61000-4-5, Ed. 2.0 (2005-11); EN 61000-4-5; IEC 61000-4-5, Ed. 3.0 (May 2014); BS EN 61000-4-5 (2006); EN 61000-4-5: 2014; KN 61000-4-5; KN 61000-4-5 (2008-5); KN 61000-4-5 (Annex 1-4); IEEE C62.41.1 (2002); IEEE C62.41.2 (2002); IEEE C62.25 (2002)
Conducted	IEC 61000-4-6, Ed. 2.1 (2004); EN 61000-4-6; EN 61000-4-6 (1996) + A1 (2001); IEC 61000-4-6, Ed. 2.2 (2006-05); IEC 61000-4-6, Ed. 3.0 (2008); IEC 61000-4-6, Ed. 4. 0 (2013); EN 61000-4-6 (2009); EN 61000-4-6 (2014); KN 61000-4-6; KN 61000-4-6 (2008-5); KN 61000-4-6 (Annex 1-5)
Power Frequency Magnetic Field	IEC 61000-4-8 (2001) + A1 (2000); EN 61000-4-8 (2001) + A1 (2000); EN 61000-4-8 (1993) + A1 (2001); IEC 61000-4-8 (2009); EN 61000-4-8:2010; KN 61000-4-8; KN 61000-4-8 (2008-5); KN 61000-4-8 (Annex 1-6)
Voltage Dips, Short Interruptions, and Voltage Variations	IEC 61000-4-11, Ed. 2 (2004-03); EN 61000-4-11; EN 61000-4-11 (1994) + Al (2001); EN 61000-4-11 (2004); KN 61000-4-11; KN 61000-4-11 (2008-5); KN 61000-4-11 (Annex 1-7)
Product Safety	
Medical Electrical Equipment	IEC 60601-1-2, Ed. 3.0 (2007); KN 60601-1-2 (2008-5); IEC 60601-1-2, Ed. 4, (2014-02); EN 60601-1-2 (2007); EN 60601-1-2 (2015)
Generic/Product Family Standards and Industry Standards	
Generic Standards	EN 61326-1: 2013; KN 35: 2015
Information Technology Equipment	IEC/CISPR 22 (1997); EN 55022 (1998) + A1 (2000); IEC/CISPR 22 (1993); EN 55022 (1994); IEC/CISPR 22 (1993); EN 55022 (1994) + A1 (1995) + A2 (1997); CNS 13438 (1997); IEC/CISPR 22, Ed. 4 (2003-04); EN 55022 (1998); IEC/CISPR 22, Ed. 5 (2005); EN 55022 (1998); IEC/CISPR 22, Ed. 5 (2005) + A1 (2005); EN 55022 (1998) + A1 (2000) + A2 (2003);

Test Technology:	Test Method(s)[1,2]:
Generic/Product Family Standards and Industry Standards (cont'd)	
Information Technology Equipment (cont'd)	CNS 13438 (2006) (up to 6GHz); IEC/CISPR 22, Edition 5.2 (2006-03); EN 55022 (2006); EN 55022 (2006) + A1 (2007); EN 55022:2010; IEC/CISPR 22 (2008-09); AS/NZS CISPR 22 (2009); TCVN 7189:2009 (CISPR 22:2006); VCCI V-3 (2009.04, 2011.04, 2013.04, 2014.04, 2015.04) (up to 6 GHz); VCCI-CISPR 32:2016; CISPR 24 Ed 2.0 (2010-08); EN 55024 (2010); KN 24
Industrial, Scientific, and Medical (ISM) Equipment	AS/NZS CISPR 11 (2002); IEC/CISPR 11, Ed. 4.1 (2004-06); AS/NZS CISPR 11 (2004); IEC/CISPR 11, Ed. 4.1 (2004-06) + A1 (2004); EN 55011 (1998) + A1 (1999) + A2 (2002); IEC/CISPR 11 (2003); EN 55011 (1998) + A2(2002); EN 55011 (2009) + A1 (2010); IEC/CISPR 11 Ed. 5 (2009-05); CISPR 11 Ed. 5.1 (2010)
Measure	IEC 61326-1 Ed. 2.0 (2012)
Military/Defense	MIL-STD-461F Method CE101 (30 Hz to 10 kHz); MIL-STD-461F Method CE102 (10 kHz to 10 MHz); MIL-STD-461F Method CE106 (10 kHz to 40 GHz); MIL-STD-461F Method CS101 (30 Hz to 150 kHz); MIL-STD-461F Method CS106; MIL-STD-461F Method CS114 (10 kHz to 200 MHz); MIL-STD-461F Method CS116 (10 kHz to 100 MHz); MIL-STD-461F Method RE101 (30 Hz to 100 kHz); MIL-STD-461F Method RE102 (10 kHz to 18 GHz); MIL-STD-461F Method RE103 (10 kHz to 40 GHz); MIL-STD-461F Method RS101 (30 Hz to 100 kHz); MIL-STD-461F Method RS103 (2 MHz to 40 GHz)

[1] When the date, revision or edition of a test method standard is not identified on the scope of accreditation, the laboratory is required to be using the current version within one year of the date of publication, per part C., Section 1 of A2LA *R101 - General Requirements- Accreditation of ISO-IEC 17025 Laboratories*. If a specifier/regulator imposes a different transition period, this will supersede the A2LA one-year implementation period.

[2] The laboratory is only accredited for testing activities outlined within the test methods listed above. Reference to any other activity within these standards, such as risk management or risk assessment, does not fall within the laboratory's accredited capabilities.

On the following types of products:

Telecommunication Equipment, Network Equipment, Industrial and Commercial Equipment, Electronic (Digital) Equipment, Medical, Aerospace, Military. Information Technology Equipment, Multimedia Equipment, Scientific Equipment

Testing Activities Performed in Support of FCC Declaration of Conformity and Certification in Accordance with 47 Code of Federal Regulations and FCC KDB 974614, Appendix A, Table A.1[3]

Rule Subpart/Technology	Test Method	Maximum Frequency (MHz)
Unintentional Radiators		
Part 15B	ANSI C63.4:2014	40000
Industrial, Scientific, and Medical Equipment		
Part 18	FCC MP-5 (February 1986)	40000
Intentional Radiators		
Part 15C	ANSI C63.10:2013	40000

[3]Accreditation does not imply acceptance to the FCC equipment authorization program. Please see the FCC website (https://apps.fcc.gov/oetcf/eas/) for a listing of FCC approved laboratories.

Accredited Laboratory

A2LA has accredited

NATIONAL TECHNICAL SYSTEMS (NTS) - LONGMONT

Longmont, CO

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 28th day of October 2016.

President and CEO
For the Accreditation Council
Certificate Number 0214.43
Valid to February 28, 2018
Revised June 5, 2017

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

END OF REPORT