



Report #: 6R74703

## ElectroMagnetic Compatibility Test Report

- FCC 47 CFR Part 15, Subpart B (Verification)
- ICES-003 Issue 4 February 2004
- EN 55022: 1998 + amendment A1: 2000 + amendment A2: 2003
- EN 61000-3-3: 1995 + Amendment A1: 2001
- EN 61000-3-2: 2000

Reviewed by:

Signature  
Daniel Hynes, EMC Specialist

November 1, 2006  
Date

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Nemko Canada Inc.,  
303 River Road, R.R. 5, Ottawa, Ontario, Canada, K1V 1H2

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## Declaratory Statements

**Product:** H/S Kiosk "C" and H/S Kiosk "V"

**Model #:** 103544

**Model Variants #:** 103430



**Trademark:**

**Serial #:** None

**Applicant:**

Nanoptix Inc.  
699 Champlain Street  
Dieppe, New Brunswick, Canada  
E1A1P6

**Manufacturer:**

Nanoptix Inc.  
699 Champlain Street  
Dieppe, New Brunswick, Canada  
E1A1P6

**Factory:**

Nanoptix Inc.  
699 Champlain Street  
Dieppe, New Brunswick, Canada  
E1A1P6

**Product Background Information**

The test was performed for the following reasons.

- New Product
- Engineering Changes
- Configuration Change
- Product Audit
- Other

**Test Procedure:** ANSI C63.4-2003/CISPR22

**Test Location:** 303 River Road, R.R. 5, Ottawa, Ontario, Canada, K1V 1H2

**Limits of Responsibility**

The results included in this test report apply only to the equipment listed within this report as being the Equipment Under Test (EUT). Equipment listed as support equipment is not considered to be part of the EUT. In some instances, the EUT may consist of multiple devices in a single enclosure, and will be so indicated in the report.

## Measurement Uncertainty

Measurement	Test Specification	Ulab
Conducted disturbance	9kHz – 150kHz	4.0dB
	150kHz – 30MHz	3.6dB
Radiated disturbance	30MHz – 200MHz <i>Horizontal polarization</i>	4.7dB
	200MHz – 1000MHz <i>Horizontal polarization</i>	4.7dB
	30MHz – 200MHz <i>Vertical polarization</i>	4.9dB
	200MHz – 1000MHz <i>Vertical polarization</i>	4.9dB

### Accuracy of Measurement

Measurement uncertainty was calculated using the methods described in CISPR 16-4 *Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC measurements* and Nemko Canada Inc. procedure EMC/MUC/001 *Uncertainty in EMC Measurements*.

## Lab Environmental Conditions

Ambient Temperature: 15°C to 35°C,  
Relative Humidity: 30% to 60%,  
Atmospheric Pressure: 86kPa (860mbar) to 106kPa (1 060mbar)

## Measurement Equipment Setup

These are the standard bandwidth and possible detector settings used during emissions testing

9 kHz - 150 kHz	200 Hz bandwidth, Quasi-Peak detector with linear response; Peak detector with log response; Average detector with linear response
150 kHz - 30 MHz	9 kHz bandwidth, Quasi-Peak detector with linear response; Peak detector with log response; Average detector with linear response
30 MHz - 1 GHz	120 kHz bandwidth, Quasi-Peak detector with linear response; Peak detector with log response
1 GHz - 18 GHz	1 MHz bandwidth, Peak detector with log response, Average detector with linear response



## Statement of Compliance

	<b>TEST RESULT</b>
<b>EN 55022: 1998 + amendment A1: 2000 + amendment A2: 2003 Class A</b>	<b>PASS/FAIL/NA</b>
Radiated Disturbance	PASS
Conducted Disturbance at Mains Port	PASS
Conducted Common mode (asymmetric mode) Disturbance at Telecommunication Ports	N/A
Notes	
<ul style="list-style-type: none"> <li>- Test Method Used: CISPR 22</li> <li>- System Power: 230VAC/50Hz</li> <li>- All tests were performed using measurement apparatus defined in CISPR 16-1. Radiated Emissions were performed on an open area test site within the NSA conforming to the requirements of CISPR16-1.</li> </ul>	
	<b>TEST RESULT</b>
<b>FCC 47 CFR Part 15, Subpart B for Digital Devices. Class A</b>	<b>PASS/FAIL/NA</b>
Radiated Disturbance	PASS
Conducted Disturbance at Mains Port	PASS
Notes	
<ul style="list-style-type: none"> <li>- Test Method Used: ANSI C63.4-2003</li> <li>- System Power: 120VAC/60Hz</li> <li>- The equipment was tested for conducted emissions from 0.15MHz to 30MHz using a 50 microhenry line impedance stabilization network (L.I.S.N.) as described in ANSI C63.4-2003. Peripheral equipment was also operated through a 50 microhenry L.I.S.N.</li> </ul>	
	<b>TEST RESULT</b>
<b>ICES-003 Issue 4 February 2004. Class A</b>	<b>PASS/FAIL/NA</b>
Radiated Disturbance	PASS
Conducted Disturbance at Mains Port	PASS
Notes	
<ul style="list-style-type: none"> <li>- Test Method Used: CISPR 22</li> <li>- System Power: Radiated: 120VAC/60Hz</li> <li>- All tests were performed using measurement apparatus defined in CISPR 16-1. Radiated Emissions were performed on an open area test site within the NSA conforming to the requirements of CISPR16-1.</li> </ul>	



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Statement of Compliance, continued

<b>EN 61000-3-2: 2000</b>	<b>TEST RESULT PASS/FAIL/NA</b>
Class A	PASS
Class B	N/A
Class C	N/A
Class D	N/A
Notes	
<ul style="list-style-type: none"><li>- Test Method Used: EN 61000-3-2: 2000</li><li>- System Power: 230VAC/50Hz</li><li>- Refer to EN 61000-3-2: 2000 for classification of equipment.</li></ul>	
<b>EN 61000-3-3: 1995 + Amendment A1: 2001</b>	<b>TEST RESULT PASS/FAIL/NA</b>
Voltage fluctuations and flicker at the supply terminals of the Equipment under test	PASS
Notes	
<ul style="list-style-type: none"><li>- Test Method Used: EN 61000-3-3: 1995 + Amendment A1: 2001</li><li>- System Power: 230VAC/50Hz</li></ul>	

## Engineering Considerations

### Product Modification Required for Compliance

The following modification was installed by Nemko as requested by client to pass radiated disturbance. See picture below:



### Justification

Client provided two units for assessment (H/S Kiosk "C" and H/S Kiosk "V" Printer). Both samples were pre-scanned at 3m in a lined chamber. Advised client that units had a similar emissions footprint. Client then decided to continue testing on H/S Kiosk "C" Printer as the worst-case representative. The two samples have the same electrical hardware. The only difference is the housing.

### Deviations from Standard Test Procedure

None

### Test Report Revision History

Issue #	Details of changes made to test report
-	Original Report Issued
N/A	N/A



Nemko Canada Inc.,  
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## General Information Regarding the Equipment Under Test (EUT)

**Date Received In Laboratory:** October 16, 2006

**Nemko Identification Number:** Item #1

**Description & Theory of Operation:**

High Speed Kiosk Compact Version Thermal Printer with 80mm roll of paper, right hand side paper loading.

**EUT Clock and Operational Frequencies:**

12MHz (crystal), 192MHz internal to DSP processor

**Exercise/Monitoring method:**

Continual Printing Feature. Press paper feed button once prints one ticket, hold for 5 seconds will print continually.

Continual Printing Feature, no errors should occur during testing process, unit will recover if failure occurs.

**Software Version:**

Continual Printing Feature.



## Equipment Configuration

### Equipment Configuration List

Item	Description	Identification: (MN#, SN#, PN#, Rev.)
(A)	H/S Kiosk "C" Printer	MN# 103544
(B)	Nanoptix ITE Power Supply	PN# 100600-0023-00-ROHS, MN# GT-21126-6024

### EUT Ports

Item	Description	Indoor/Outdoor	Type (See Legend)	Qty
i.	24VDC Input	Indoor	2	1
ii.	AC Input	Indoor	1	1
iii.	USB	Indoor	4	1
iv.	Serial (DB25 to DB9)	Indoor	4	1
v.	JR11	Indoor	5	1

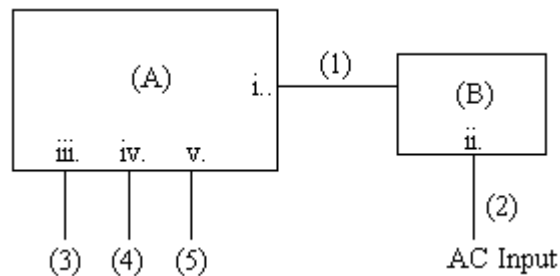
### Inter-Connection Cables

Item	Description	Length (m)
(1)	18AWG Two conductor	0.5
(2)	Three Conductor Power Cable	1.8
(3)	USB	2.5
(4)	DB25 to DB9 Serial Cable	2.5
(5)	RJ11	2.5

### Legend:

1 = AC Power Input/Output, 2 = DC Power Input/Output, 3 = Telecom, 4 = Non-telecom I/O, 5 = Maintenance, 6 = Fiber Optic

### Configuration of the Equipment Under Test (EUT)



### Notes

None



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## Radiated Disturbance

Test Date: October 25, 2006

Engineer's Name: David Duchesne

Tested as per: Table Top

### Enclosure Investigation Data

Test Distance (meters): 10

Location: Dome 1

### EN 55022: 1998 + amendment A1: 2000 + amendment A2: 2003

Freq. (MHz)	Ant.	Pol. V/H	RCVD Signal (dBµV)	Ant. Factor (dB)	Amp. Gain (dB)	Cable Loss (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Amp.
88.0044	BC1	V	30.5	7.7	N/A	1.5	39.7	40.0	0.3	Q-Peak	N/A
168.0044	BC1	V	25.0	12.5	N/A	2.0	39.4	40.0	0.6	Q-Peak	N/A
184.0044	BC1	V	22.0	13.8	N/A	2.0	37.8	40.0	2.2	Q-Peak	N/A
72.0044	BC1	V	26.0	8.5	N/A	1.3	35.8	40.0	4.2	Q-Peak	N/A
56.0044	BC1	V	26.0	8.7	N/A	1.1	35.8	40.0	4.2	Q-Peak	N/A
120.0044	BC1	V	22.0	10.7	N/A	1.7	34.4	40.0	5.6	Q-Peak	N/A
152.0044	BC1	V	16.2	11.5	N/A	1.8	29.5	40.0	10.5	Q-Peak	N/A
136.0044	BC1	V	15.0	11.8	N/A	1.8	28.6	40.0	11.4	Q-Peak	N/A

### FCC 47 CFR Part 15, Subpart B

Freq. (MHz)	Ant.	Pol. V/H	RCVD Signal (dBµV)	Ant. Factor (dB)	Amp. Gain (dB)	Cable Loss (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Amp.
72.0044	BC1	V	26.0	8.5	N/A	1.3	35.8	39.1	3.3	Q-Peak	N/A
56.0044	BC1	V	26.0	8.7	N/A	1.1	35.8	39.1	3.3	Q-Peak	N/A
88.0044	BC1	V	30.5	7.7	N/A	1.5	39.7	43.5	3.8	Q-Peak	N/A
168.0044	BC1	V	25.0	12.5	N/A	2.0	39.4	43.5	4.1	Q-Peak	N/A
184.0044	BC1	V	22.0	13.8	N/A	2.0	37.8	43.5	5.7	Q-Peak	N/A
120.0044	BC1	V	22.0	10.7	N/A	1.7	34.4	43.5	9.1	Q-Peak	N/A
152.0044	BC1	V	16.2	11.5	N/A	1.8	29.5	43.5	14.0	Q-Peak	N/A
136.0044	BC1	V	15.0	11.8	N/A	1.8	28.6	43.5	14.9	Q-Peak	N/A

Legend:

Antenna Legend: BC = Biconical, BL = Bilog, LP = Log-Periodic, Horn = Horn, ED = EMCO Dipole

Detector Legend: Q-Peak = 120kHz RBW, Average = 1.0MHz RBW

Notes

None



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**Radiated Disturbance, continued**

**Enclosure Investigation Data, continued**

Test Distance (meters): 10      Location: Dome 1

**ICES-003 Issue 4 February 2004**

Freq. (MHz)	Ant.	Pol. V/H	RCVD Signal (dBµV)	Ant. Factor (dB)	Amp. Gain (dB)	Cable Loss (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Amp.
88.0044	BC1	V	30.5	7.7	N/A	1.5	39.7	40.0	0.3	Q-Peak	N/A
168.0044	BC1	V	25.0	12.5	N/A	2.0	39.4	40.0	0.6	Q-Peak	N/A
184.0044	BC1	V	22.0	13.8	N/A	2.0	37.8	40.0	2.2	Q-Peak	N/A
72.0044	BC1	V	26.0	8.5	N/A	1.3	35.8	40.0	4.2	Q-Peak	N/A
56.0044	BC1	V	26.0	8.7	N/A	1.1	35.8	40.0	4.2	Q-Peak	N/A
120.0044	BC1	V	22.0	10.7	N/A	1.7	34.4	40.0	5.6	Q-Peak	N/A

Legend:  
Antenna Legend: BC = Biconical, BL = Bilog, LP = Log-Periodic, Horn = Horn, ED = EMCO Dipole  
Detector Legend: Q-Peak = 120kHz RBW, Average = 1.0MHz RBW

**Notes**

None

**Deviations**

Refer to Engineering Considerations.

**Test Result**

**Final Test Result: Pass**

**Test Equipment Used**

CAL Cycle	Equipment	Manufacturer	Model No.	Asset/Serial No.	Next Cal.
1 Year	Receiver	Rohde & Schwarz	ESVS-30	FA001445	July 14/07
1 Year	Biconical (1) Antenna	EMCO	3109	FA000805	May 03/07

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use

**Radiated Disturbance, continued**

**Setup Photos**





## Conducted Disturbance at Mains Port

Test Date: October 18, 2006

Engineer's Name: David Duchesne

Tested as per: Table Top

### Port Investigation Data

Spectral plots for each frequency band can be found at the back of this section.

- All plots were generated with a peak detector.
- Spectral plots have been corrected with cable, LISN, and attenuator losses to show compliance with the average limit.
- Peak measurements with 3dB or less margin of the average limit line have been measured with a test receiver.

Port under test: AC mains input

Results: Refer to plots and tables of this section.

Receiver Results:

### 120VAC/60Hz

Conductor	Frequency (MHz)	Detector	Emission Level (dBuV)	LISN Loss (dB)	Cable Loss (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)
Phase	24.0000	Quasi Peak	46.0	9.87	0.29	56.16	73.0	16.8
		Average	31.0	9.87	0.29	41.16	60.0	18.8
Neutral	24.0000	Quasi Peak	45.0	9.98	0.29	55.27	73.0	17.7
		Average	30.0	9.98	0.29	40.27	60.0	19.7

### 230VAC/50Hz

Conductor	Frequency (MHz)	Detector	Emission Level (dBuV)	LISN Loss (dB)	Cable Loss (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)
Phase	0.4030	Quasi Peak	35.0	9.89	0.04	44.93	79.0	34.1
		Average	28.2	9.89	0.04	38.13	66.0	27.9
	24.0000	Quasi Peak	45.0	9.87	0.29	55.16	73.0	17.8
		Average	30.0	9.87	0.29	40.16	60.0	19.8
	16.0000	Quasi Peak	36.0	9.82	0.23	46.05	73.0	27.0
		Average	20.3	9.82	0.23	30.35	60.0	29.7
Neutral	0.4030	Quasi Peak	34.8	9.87	0.04	44.72	79.0	34.3
		Average	30.6	9.87	0.04	40.52	66.0	25.5
	24.0000	Quasi Peak	43.0	9.98	0.29	53.27	73.0	19.7
		Average	26.0	9.98	0.29	36.27	60.0	23.7
	16.0000	Quasi Peak	37.0	9.87	0.23	47.10	73.0	25.9
		Average	22.0	9.87	0.23	32.10	60.0	27.9

Notes

None

Deviations

Refer to Engineering Considerations.

Test Result

**Final Test Result: Pass**

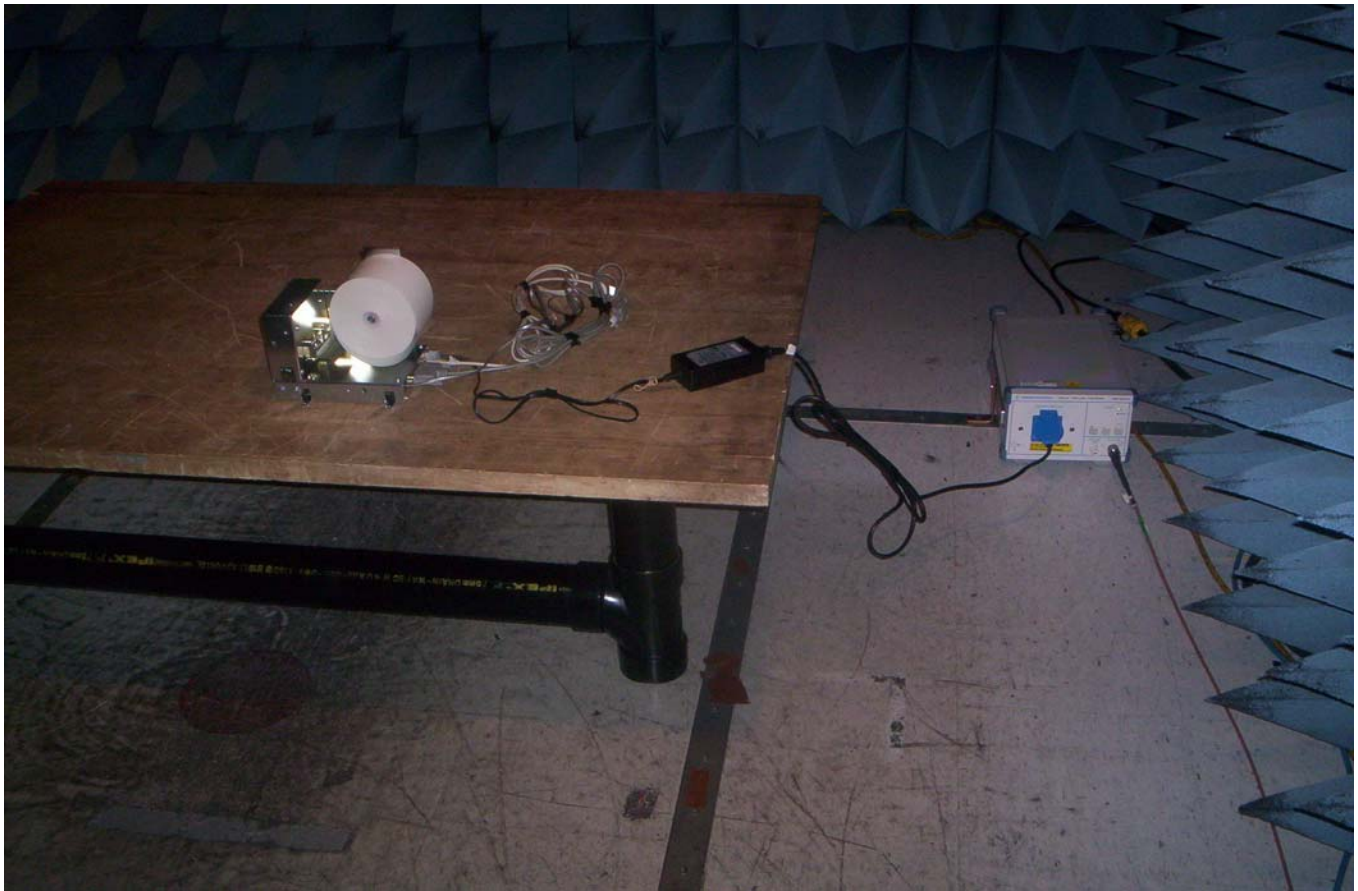
**Conducted Disturbance at Mains, continued**

**Test Equipment Used**

CAL Cycle	Equipment	Manufacturer	Model No.	Asset/Serial No.	Next Cal.
1 Year	LISN	Rohde & Schwarz	ENV216	FA002023	Aug. 28/07
1 Year	Spectrum Analyzer	Hewlett-Packard	8566B	FA001309	May 16/07
1 Year	Spectrum Analyzer Display	Hewlett-Packard	85662A	FA001309	May 16/07
1 Year	International Power Supply	California Inst.	3001i	FA001021	Jan. 11/07
1 Year	50 Coax cable	HUBER + SUHNER	None	FA002021	Sept. 08/07
1 Year	50 Coax cable	WFU	None	FA002028	Oct. 02/07

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use

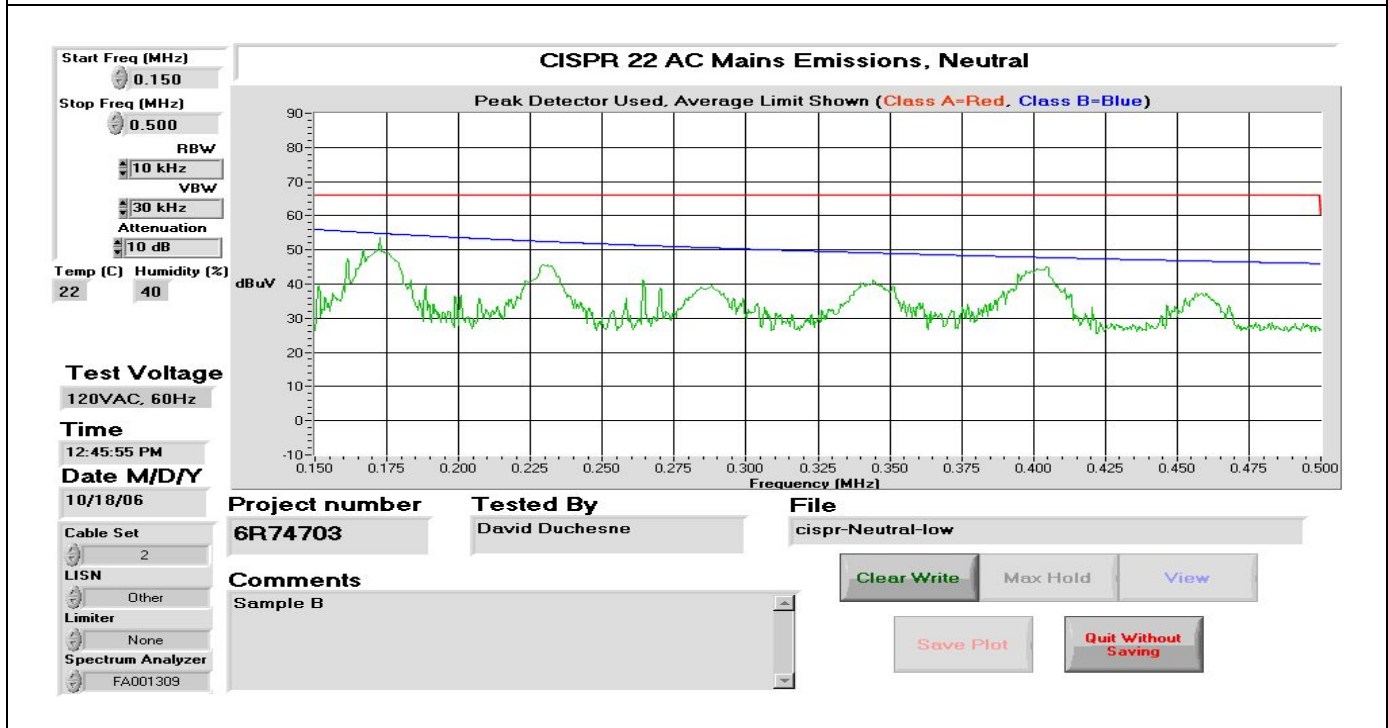
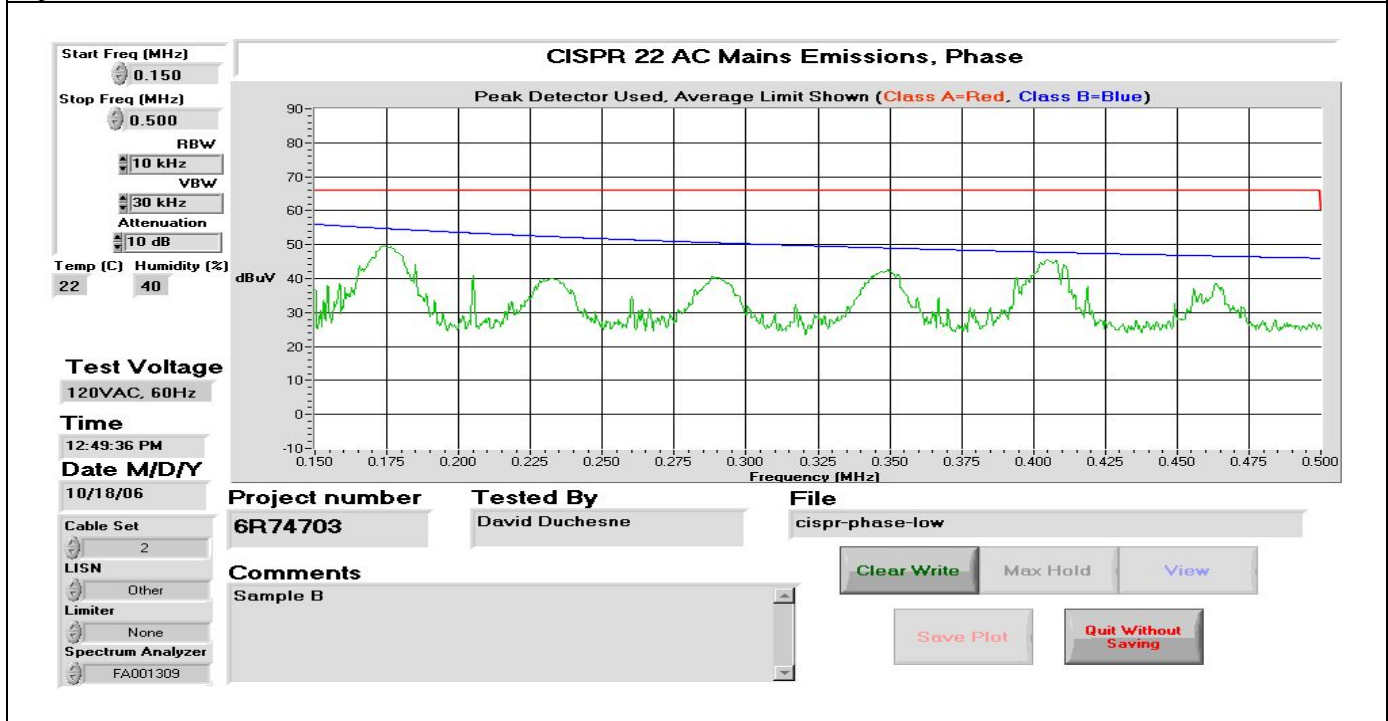
**Setup Photos**





Conducted Disturbance at Mains, continued

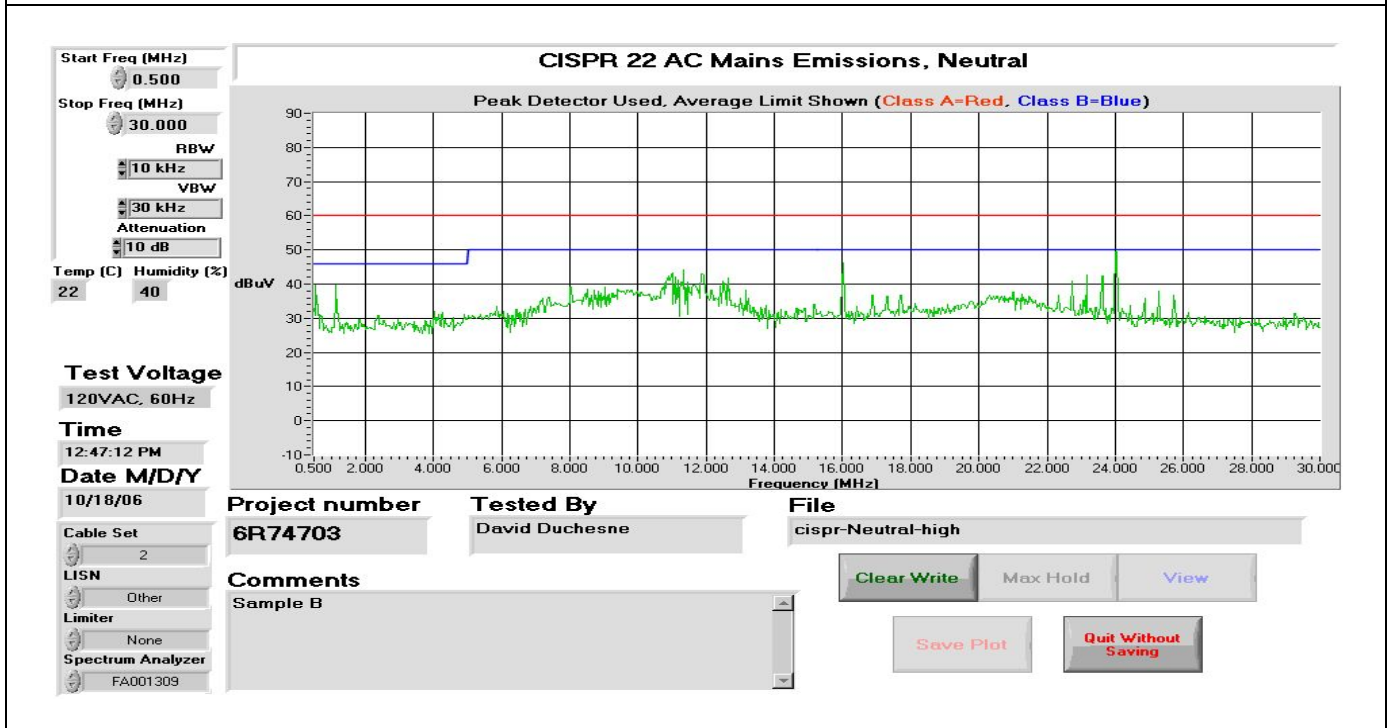
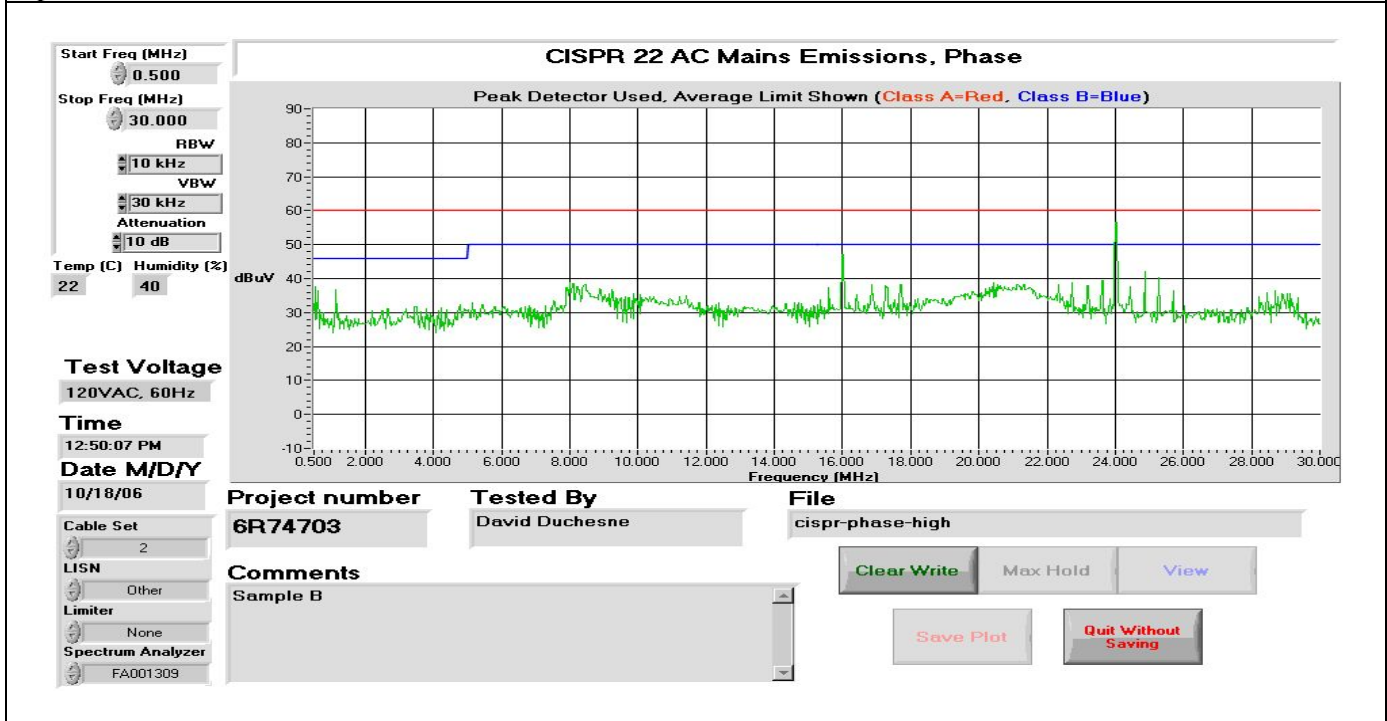
Spectral Plots





Conducted Disturbance at Mains, continued

Spectral Plots, continued

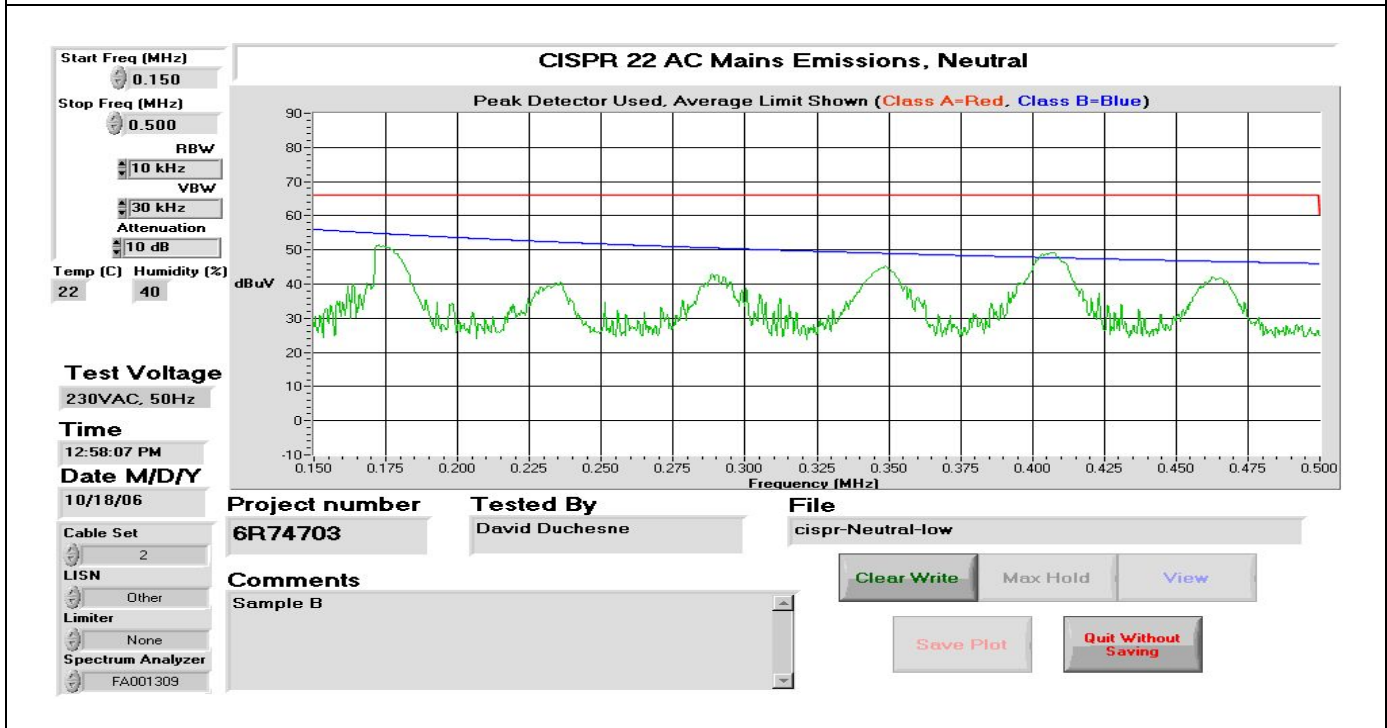
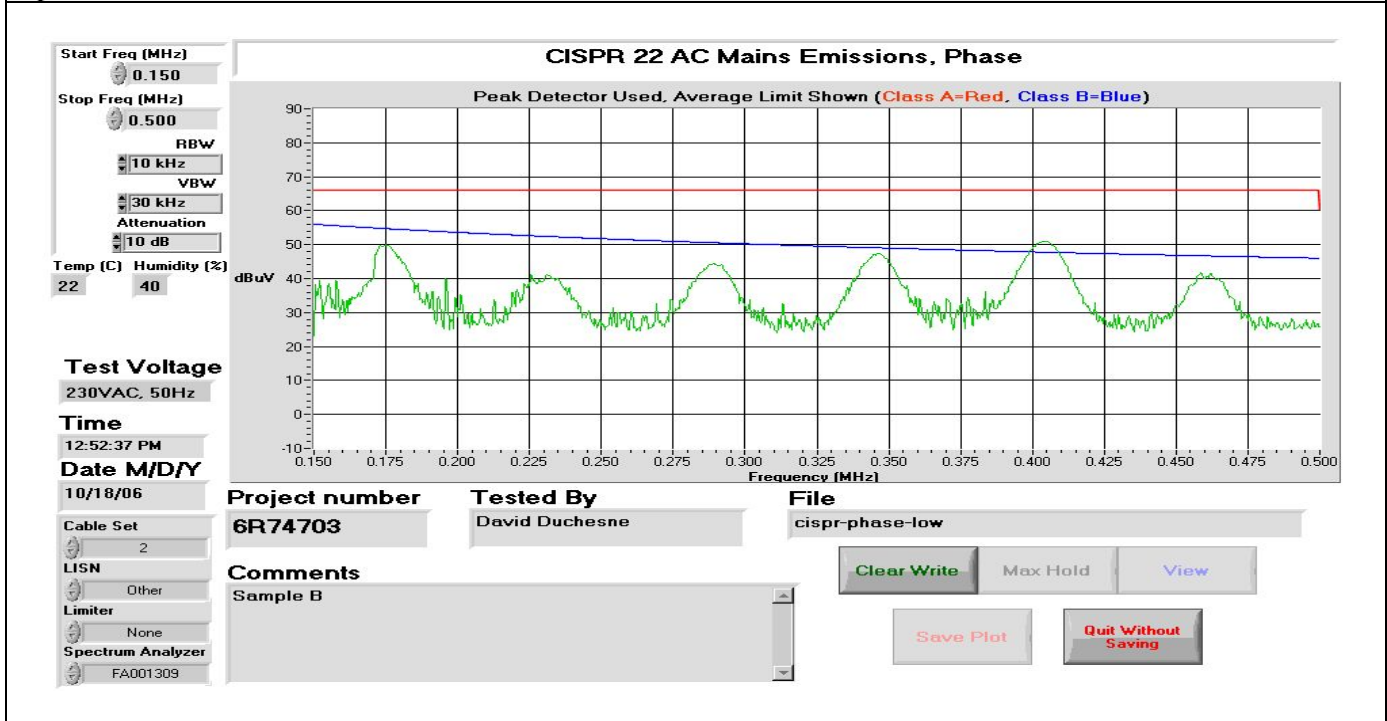






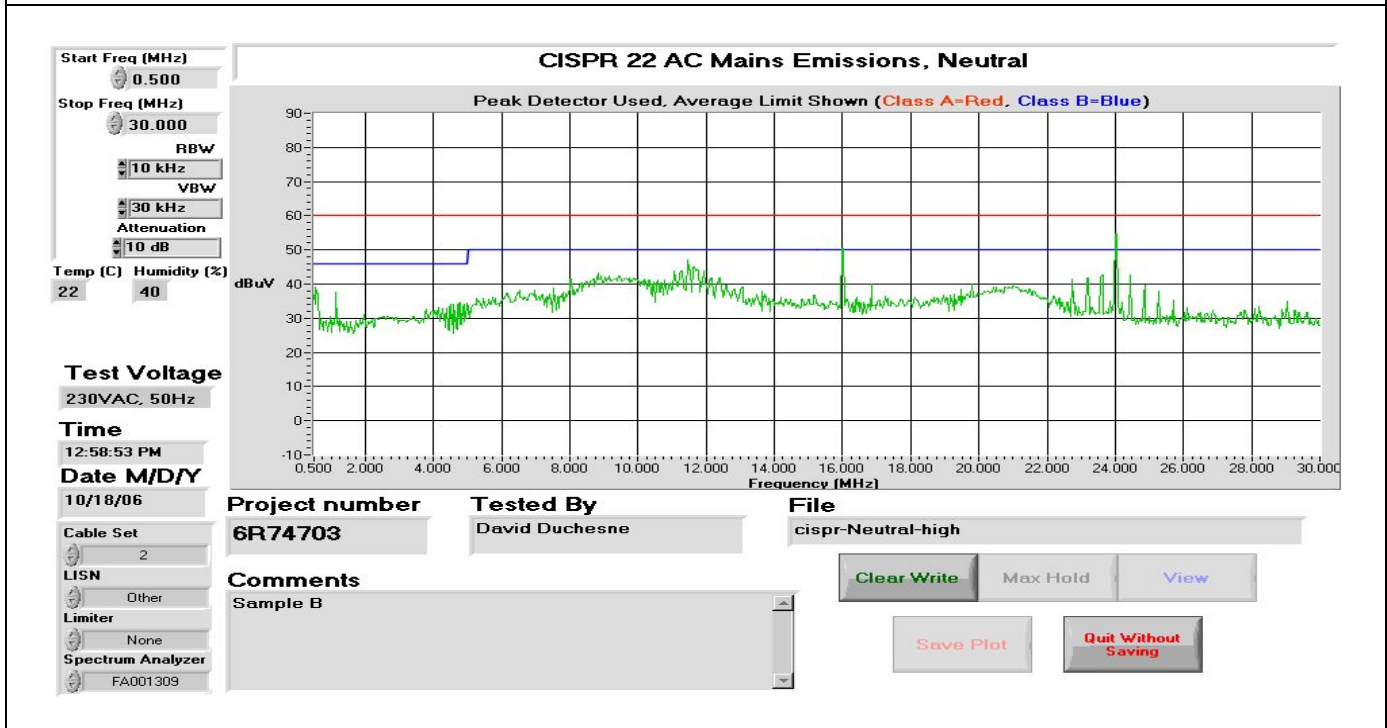
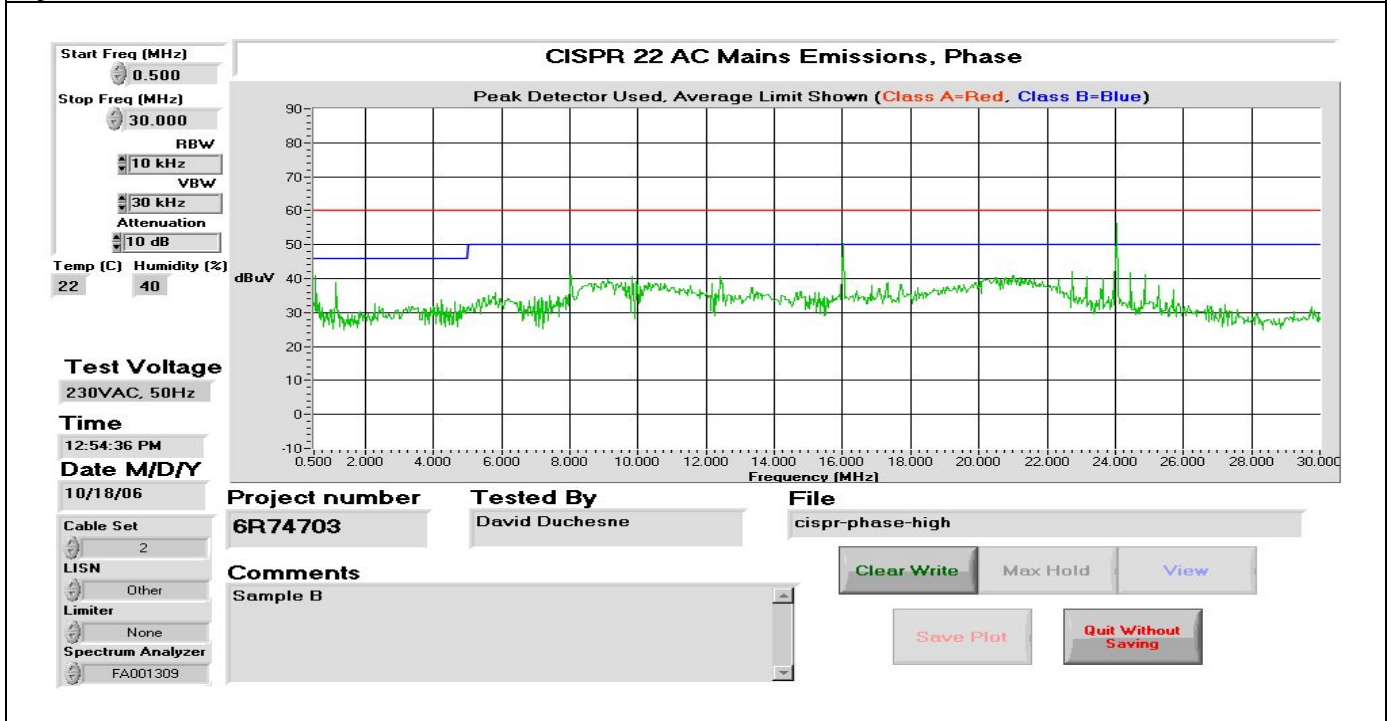
Conducted Disturbance at Mains, continued

Spectral Plots, continued



Conducted Disturbance at Mains, continued

Spectral Plots, continued





Nemko Canada Inc.,  
 303 River Road, R.R. 5, Ottawa, Ontario, Canada, K1V 1H2

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## Harmonic Current

Test Date: October 25, 2006
Engineer's Name: David Duchesne
<b>Port Investigation Data</b>
Port under test: AC mains input
Results: Refer to California Instruments CTS – V3.0 data at end of section.
Notes
None
Deviations
Refer to Engineering Considerations.
Test Result
<b>Final Test Result: Pass</b>

Test Equipment Used					
CAL Cycle	Equipment	Manufacturer	Model No.	Asset/Serial No.	Next Cal.
1 Year	Waveform Analyzer	California Instruments	PACS-1	FA001239	March 21/07
1 Year	Power Source	California Instruments	5001ix	FA001238	March 21/07

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use

**Harmonic Current, continued**

**Setup Photos**





Harmonic Current, continued

California Instruments CTS – V3.0 Data

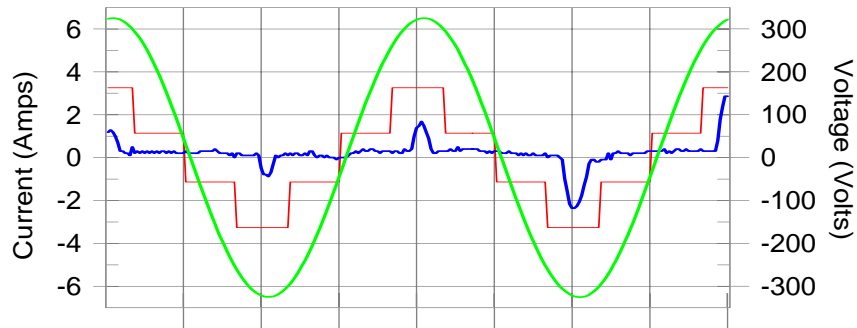
Harmonics – Class A Steady State (Run time)

EUT: Printer	Tested by: David Duchesne
Test category: Class A Steady State (European limits)	Test Margin: 100
Test date: 10/25/06	Start time: 3:00:29 PM
Test duration (min): 2	End time: 3:02:40 PM
	Data file name: H-000225.cts_data

Test Result: Pass                      Source qualification: Normal

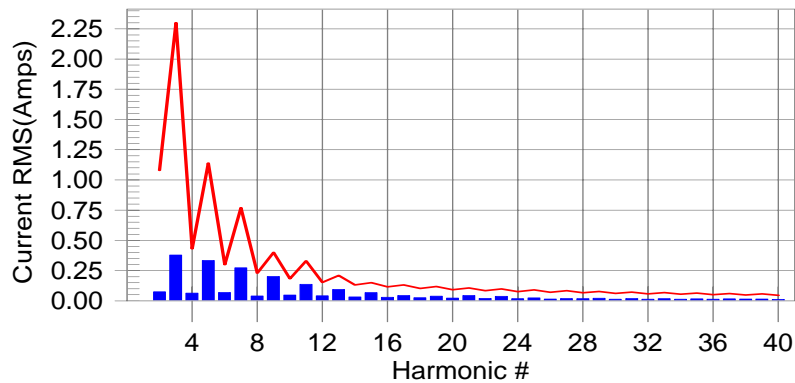
Harmonics and Class A limit line

European Limits



Current & voltage waveforms

It is 0.0% outside Class-D envelope



Test result: Pass                      Worst harmonic was #9 with 50.31% of the limit.



Harmonic Current, continued

California Instruments CTS – V3.0 Data, continued

Current Test Result Summary (Run time)

Test category: Class A Steady State (European limits)      Test Margin: 100  
 Test date: 10/25/06      Start time: 3:00:29 PM      End time: 3:02:40 PM  
 Test duration (min): 2      Data file name: H-000225.cts\_data

Test Result: Pass      Source qualification: Normal

Highest parameter values during test:

V_RMS (Volts):	229.97	Frequency (Hz):	50.00
I_Peak (Amps):	3.261	I_RMS (Amps):	0.474
I_Fund (Amps):	0.501	Crest Factor:	8.351
Power (Watts):	50	Power Factor:	0.468

Harm#	Harmonics	Limit	% of Limit	Status
2	0.074	1.080	6.88	Pass
3	0.379	2.300	16.47	Pass
4	0.064	0.430	14.94	Pass
5	0.334	1.140	29.29	Pass
6	0.070	0.300	23.21	Pass
7	0.273	0.770	35.51	Pass
8	0.040	0.230	17.60	Pass
9	0.201	0.400	50.31	Pass
10	0.048	0.184	26.26	Pass
11	0.137	0.330	41.63	Pass
12	0.042	0.153	27.34	Pass
13	0.094	0.210	44.85	Pass
14	0.033	0.131	24.91	Pass
15	0.068	0.150	45.55	Pass
16	0.029	0.115	25.28	Pass
17	0.044	0.132	33.34	Pass
18	0.025	0.102	24.97	Pass
19	0.038	0.118	32.25	Pass
20	0.023	0.092	24.91	Pass
21	0.044	0.107	41.35	Pass
22	0.019	0.084	23.29	Pass
23	0.038	0.098	38.71	Pass
24	0.018	0.077	23.11	Pass
25	0.025	0.090	27.42	Pass
26	0.016	0.071	21.84	Pass
27	0.019	0.083	23.09	Pass
28	0.018	0.066	26.64	Pass
29	0.021	0.078	27.07	Pass
30	0.014	0.061	23.05	Pass
31	0.019	0.073	26.40	Pass
32	0.013	0.058	22.95	Pass
33	0.017	0.068	25.51	Pass
34	0.014	0.054	25.45	Pass
35	0.017	0.064	26.79	Pass
36	0.013	0.051	26.22	Pass
37	0.016	0.061	27.13	Pass
38	0.015	0.048	31.45	Pass
39	0.015	0.058	26.77	Pass
40	0.013	0.046	28.46	Pass



Harmonic Current, continued

California Instruments CTS – V3.0 Data, continued

Voltage Source Verification Data (Run time)

Test category: Class A Steady State (European limits)      Test Margin: 100  
 Test date: 10/25/06      Start time: 3:00:29 PM      End time: 3:02:40 PM  
 Test duration (min): 2      Data file name: H-000225.cts\_data

Test Result: Pass      Source qualification: Normal

Highest parameter values during test:

Voltage (Vrms):	229.97	Frequency (Hz):	50.00
I_Peak (Amps):	3.261	I_RMS (Amps):	0.474
I_Fund (Amps):	0.501	Crest Factor:	8.351
Power (Watts):	50	Power Factor:	0.468

Harm#	Harmonics	V-rms	Limit V-rms	% of Limit	Status
2		0.132	0.460	28.75	OK
3		0.403	2.070	19.47	OK
4		0.058	0.460	12.65	OK
5		0.065	0.920	7.11	OK
6		0.116	0.460	25.17	OK
7		0.064	0.690	9.22	OK
8		0.039	0.460	8.38	OK
9		0.044	0.460	9.66	OK
10		0.030	0.460	6.42	OK
11		0.067	0.230	29.33	OK
12		0.028	0.230	12.39	OK
13		0.039	0.230	16.90	OK
14		0.022	0.230	9.64	OK
15		0.031	0.230	13.60	OK
16		0.022	0.230	9.62	OK
17		0.026	0.230	11.44	OK
18		0.024	0.230	10.31	OK
19		0.028	0.230	12.26	OK
20		0.022	0.230	9.57	OK
21		0.028	0.230	12.36	OK
22		0.017	0.230	7.53	OK
23		0.023	0.230	10.18	OK
24		0.017	0.230	7.56	OK
25		0.022	0.230	9.51	OK
26		0.018	0.230	7.90	OK
27		0.017	0.230	7.60	OK
28		0.016	0.230	6.88	OK
29		0.021	0.230	8.96	OK
30		0.016	0.230	6.90	OK
31		0.017	0.230	7.33	OK
32		0.017	0.230	7.18	OK
33		0.020	0.230	8.65	OK
34		0.018	0.230	7.91	OK
35		0.018	0.230	7.90	OK
36		0.018	0.230	7.84	OK
37		0.019	0.230	8.24	OK
38		0.015	0.230	6.62	OK
39		0.017	0.230	7.20	OK
40		0.018	0.230	7.95	OK



Nemko Canada Inc.,  
303 River Road, R.R. 5, Ottawa, Ontario, Canada, K1V 1H2

**Report No: 6R74703**

## Voltage Fluctuation

Test Date: October 25, 2006

Engineer's Name: David Duchesne

### Port Investigation Data

Port under test: AC mains input

Results: Refer to California Instruments CTS – V3.0 data at end of section.

Notes

None

Deviations

Refer to Engineering Considerations.

Test Result

**Final Test Result: Pass**

### Test Equipment Used

CAL Cycle	Equipment	Manufacturer	Model No.	Asset/Serial No.	Next Cal.
1 Year	Waveform Analyzer	California Instruments	PACS-1	FA001239	March 21/07
1 Year	Power Source	California Instruments	5001ix	FA001238	March 21/07

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use



Voltage Fluctuation, continued

Setup Photos





Voltage Fluctuation, continued

California Instruments CTS – V3.0 Data

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

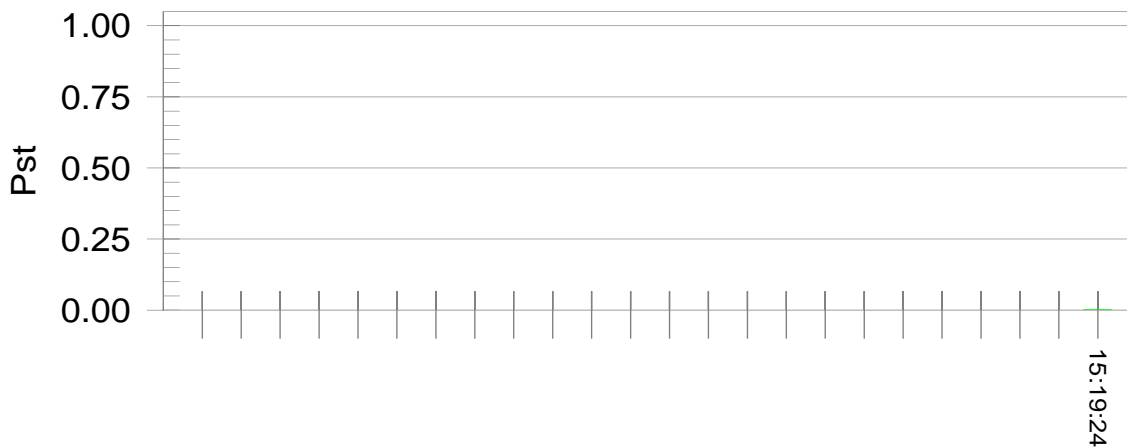
EUT: Printer  
 Test category: All parameters (European limits)  
 Test date: 10/25/06  
 Test duration (min): 10  
 Comment:  
 Customer: Nanoptic

Tested by: David D  
 Test Margin: 100  
 End time: 3:19:24 PM

Start time: 3:09:11 PM  
 Data file name: F-000226.cts\_data

Test Result: Pass Status: Test Completed

Pst, and limit line European Limits



Time is too short for Plt plot

Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.15		
Highest dt (%):	0.00	Test limit (%):	3.30 Pass
Time (mS) > dt:	0.0	Test limit (mS):	500.0 Pass
Highest dc (%):	0.00	Test limit (%):	3.30 Pass
Highest dmax (%):	0.00	Test limit (%):	4.00 Pass
Highest Pst (10 min. period):	0.001	Test limit:	1.000 Pass
Highest Plt (2 hr. period):	0.001	Test limit:	0.650 Pass