D.L.S. ELECTRONIC SYSTEMS, INC.
1250 PETERSON DRIVE
WHEELING, ILLINOIS 60090

REPORT NO. 6771

FCC "Rules and Regulations", Part 15, Subpart C
Sections 15.249, 15.207 & 15.209 General Requirements

Intentional Radiators

Operation within the frequency range 902-928 MHz, 2400-2483.5 MHz, 5725 to 5875 MHz, & 24.0 to 24.25 GHz

THE FOLLOWING "MEETS" THE ABOVE TEST SPECIFICATION

Formal Name: Nelson 8081 Programmer Plus Consoles

Kind of Equipment: Commercial and Consumer Irrigation Systems

Test Configuration: NA

FCC ID Number: NYD8081

Model Number: 8081

Serial Number: NA

Dates of Test: July 20 & 21, 1998

Test Conducted For: L. R. Nelson Corporation
One Sprinkler Lane
Peoria, Illinois 61615

D.L.S. ELECTRONIC SYSTEMS, INC.
1250 PETERSON DRIVE
WHEELING, ILLINOIS 60090

REPORT NO. 6771

SIGNATURE PAGE

Report Written By:

Arnom C. Rowe
Test Engineer
EMC-001375-NE

Report Reviewed by:

Jack Prawica
Lab Manager

Report Approved by:

Brian J. Mattson
General Manager

Company Official:

L. R. Nelson Corporation

INSERT NVLAP CERTIFICATE OF ACCREDITATION

INSERT NVLAP SCOPE OF ACCREDITATION

INSERT PUBLIC NOTICES (Page 1)

INSERT PUBLIC NOTICES (Page 2)

D.L.S. ELECTRONIC SYSTEMS, INC.
REPORT NO. 6771

TABLE OF CONTENTS

D.L.S. ELECTRONIC SYSTEMS, INC.
EMC TEST SERVICES
REPORT NO. 6771

Kind of Equipment: Commercial and Consumer Irrigation Systems

S/N: NA

1.0 SUMMARY OF TEST REPORT

It was found that the Nelson 8081 Programmer Plus Consoles, S/N NA **"meets"** the radio interference emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Sections 15.249, 15.207 & 15.209, for Intentional Radiators used in the frequency bands 902 to 928 MHz. It should be noted that the amount of margin was only 2.68 dB at 1833.22 MHz, radiated. The normal tolerance of the test equipment is + or - 3 dB. Due to this tolerance and the variation in normal production, a margin of at least 4 dB is recommended. With only a 2.68 dB margin, there is a probability that if this or another unit were tested by the Domestic or Foreign Compliance Regulatory Agency using similar equipment, it could be found to not meet the above requirement.

2.0 INTRODUCTION

On July 20 & 21, 1998, a series of radio frequency interference measurements were performed on Commercial and Consumer Irrigation Systems, S/N NA. The tests were performed according to the procedures of the FCC as stated in the "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" found in the American National Standards Institute, ANSI C63.4-1992 (Revision of ANSI C63.4-1988). Tests were performed by personnel of D.L.S. Electronic Systems, Inc. who are responsible to Donald L. Sweeney, Senior EMC Engineer.

3.0 OBJECT

The purpose of this series of tests was to determine if the test sample could meet the radio frequency emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Sections 15.33, 15.207, 15.209, & 15.249 (a-d), for Intentional Radiators used in the frequency bands 902 to 928 MHz.

4.0 TEST SET-UP

All conducted emission tests were performed in a shield enclosure or lab at D.L.S. Electronic Systems, Inc. The conducted tests were performed with the test item placed on a wooden table located in the Test Room. The power line supplied was connected to a dual line impedance stabilization network located on the floor, a ground plane. The networks were constructed per the requirements of the American National Standards Institute, ANSI C63.4-1992, Section 4, (Figure 2). The only ground supplied to the unit was through the third wire of the standard power cord when supplied.

5.0 TEST EQUIPMENT (Bandwidths and Detector Function)

All preliminary data below 1000 MHz was automatically plotted using the HP 8566B Spectrum Analyzer. This data was taken using the Peak or CISPR Detector Functions. This information was then used to determine the frequencies of maximum emissions. Above 1000 MHz final data was taken using the Peak Detector.

Below 1000 MHz final data was taken using the EMC-25 fixed tuned receiver. Plots were made using the Peak Detector, with manual measurements made on the frequencies of interest, using the Peak and CISPR Detector Functions of the receiver. The actual detector used is indicated on the spreadsheets found in the Data Summary Section of this report.

The bandwidths used are specified by the FCC as stated in the American National Standards Institute, ANSI C63.4-1992, Section 4.2. From 30 MHz to 1000 MHz a bandwidth of 120 kHz was used, and above 1000 MHz, a bandwidth of 1 MHz was used.

A list of the equipment used can be found in Table 1. All equipment was calibrated per the instruction manuals supplied by the manufacturer.

6.0 CONDUCTED EMISSION MEASUREMENTS

The conducted emissions were measured over the frequency range from 0.45 MHz to 30 MHz in accordance with the power line measurements as specified in the American National Standards Institute, ANSI C63.4-1992 (Revision of ANSI C63.4-1991), Section 12. Since the device is operated from the public utility lines, the 115 Vac 60 Hz power leads, high and low sides, were to be measured by connecting the measuring equipment to the appropriate meter terminal of the LISN. All signals were then recorded. The allowed levels for Intentional Radiators can not exceed 250 uV (47.96 dBuV) at any frequency between 450 kHz and 30 MHz, as stated in Section 15.207a.

NOTE:

The equipment under test is battery operated and will not at any time be plugged into the Public Utility lines, therefore the conducted test was not performed.

7.0 RADIATED EMISSION MEASUREMENTS

The conducted and radiated measurements made at D.L.S. Electronic Systems, Inc., for the Nelson 8081 Programmer Plus Consoles, Model Number 8081, are shown in tabulated and graph form in Appendixes A & B which are found at the end of this report.

Preliminary radiation measurements were performed at a 3 meter test distance with the limits adjusted linearly when required. The frequency range from 9 kHz to over 960 MHz, depending upon the fundamental frequency as stated in Part 15.33a, was automatically scanned and plotted at various angles.

Measurements for the Nelson 8081 Programmer Plus Consoles were made up to 10000 MHz, in accordance with Section 15.33a for Unintentional Radiators with a fundamental frequency of 916.5 MHz. For intentional radiators, the frequency range to be investigated is determined by the lowest radio frequency generated by the device without going below 9 kHz, up to at least the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower.

7.0 RADIATED EMISSION MEASUREMENTS

At those frequencies where significant signals were detected, measurements were made at an open field test site, located at Genoa City, Wisconsin, FCC file number 31040/SIT, to determine the actual radiation levels.

All signals in the frequency range of 30 to 200 MHz were measured with a biconical antenna or tuned dipoles as the pickup device. From 200 MHz to 1000 MHz, a Log Periodic or Tuned Dipoles were used, and above 1000 MHz a Double Ridge Horn Antenna was used. During the test, when investigating below 1000 MHz the equipment was rotated and the antenna was raised and lowered from 1 meter to 4 meters to find the maximum level of emissions. In order to find maximum emissions, the cables were moved thru all the positions the equipment would be expected to experience in the field. Tests were made in both the horizontal and vertical planes of polarization with the Biconical, Log Periodic and Double Ridge Horn. Above 1000 MHz the antenna is set 1 meter off the ground and 3 meters from the test item. The table was rotated to find the maximum emissions.

The allowed radiated emissions for transmitters of this type can not exceed the following field strength limits at a distance of 3 meters as shown in Section 15.249a. The limits are shown in the following table.

Fundamental Frequency in MHz	Field Strength of Fundamental (mV/M at 3m)	Field Strength of Harmonics (uV/M at 3m)
905 - 928	50 (93.98 dBuV)	500 (53.98 dBuv)
2400 - 2483.5	50 (93.98 dBuV)	500 (53.98 dBuv)
5725 - 5875	50 (93.98 dBuV)	500 (53.98 dBuv)
24.0 - 24.25 GHz	500 (107.96 dBuV)	2500 (67.96 dBuv)

NOTE:

All emissions other than harmonics radiated outside the above specified bands, shall be attenuated 50 dB below the level of the fundamental or meet the limits of Section 15.209, whichever is the lesser attenuation.

8.0 RESTRICTED BANDS

As stated in Section 15.209a, the restricted band limit (see Section 15.205) above 960 MHz is 53.98 dBuV at 3 meters. This limit is the same as the limit stated in Section 15.249a for all the harmonics.

9.0 PHOTO INFORMATION AND TEST SET-UP

The test set-up can be seen on the accompanying photo page.

Item 0 Nelson 8081 Programmer Plus Consoles
FCC ID#: NYD8081 SN: NA

Item 1

Item 2

Item 3

Item 4

Item 5

Item 6

Item 7

Item 8

Item 9

10.0 RADIATED PHOTOS TAKEN DURING TESTING.

10.0 CONDUCTED PHOTOS TAKEN DURING TESTING.

There were no conducted photos taken during the testing because the equipment under test is battery operated and will not at any time be plugged into the Public Utility lines.

11.0 CHANGE INFORMATION

The following changes were implemented during the testing and must be incorporated into the production units to insure compliance.

Change 1. Added aluminum tape to inside back cover, 4" x 4" square over radio board location.

Change 2. Change the value of the antenna capacitor (CAntenna) to 5 pF

Change 3. Change L2 to 150 ohm resistor.

Change 4. Change C7A, and C11A to 10 pF.

Change 5. Straightened Antenna.

NOTE:

For each antenna polarization (vertical & horizontal), the transmitter along with its cables was maximized for worst case positions (standing up or laying down).

The Telco Port was left opened during testing. This port is used for direct wire communication between transceivers.

The responsibility of implementing the changes listed in this report is accepted or I certify that no changes were made

by _____ Electronics Engineering Mgr
Signature Title

for L.R. Nelson Corp. ~~Jul 98~~ 06AUG98
Company Name Date

12.0 RESULTS OF TESTS

The conducted and radiated emission results can be seen on pages at the end of this report. Data sheets indicating the conducted and radiated measurements can also be found with this report. Those points on the radiated charts shown with a yellow mark are background frequencies which were verified during the test.

13.0 CONCLUSION

It was found that the Commercial and Consumer Irrigation Systems, Model Number 8081, S/N NA "meets" the radio interference emission requirements of the FCC "Rules and Regulations", Part 15, Subpart C, Section 15.249 (a-d), for Intentional Radiators used in the frequency bands of 902 to 928 MHz. It should be noted that the amount of margin was only 2.68 dB at 1833.22 MHz, radiated The normal tolerance of the test equipment is + or - 3 dB. Due to this tolerance and the variation in normal production, a margin of at least 4 dB is recommended. With only a 2.68 dB margin, there is a probability that if this or another unit were tested by the Domestic or Foreign Compliance Regulatory Agency using similar equipment, it could be found to not meet the above requirement

This test report relates only to the items tested and contains the following number of pages.

Text:	19 pages
Data Summary:	10 pages
Charts:	24 pages

TABLE 1 - EQUIPMENT LIST

Test Equipment	Manufacturer/ Description	Model Number	Serial Number	Frequency Range	Cal Due Date
*Spectrum Analyzer	Hewlett/ Packard	8566B	2240A 02041	5 Hz -22GHz	4/99
Quasi-Peak Adapter	Hewlett/ Packard	85650A	2043A 00121	10 kHz - 1GHz	4/99
**Spectrum Analyzer	Hewlett/ Packard	8566B	2421A 00452	25 Hz-22 GHz	9/98
Quasi-Peak Adapter	Hewlett/ Packard	85650A	2043A 00248	10 kHz-1 GHz	9/98
***Spectrum Analyzer	Hewlett/ Packard	8591A	3009A 00700	9 kHz-1.8 GHz	6/99
Receiver	Electrometrics	EMC-25 Mark-III	772	.01-1000 MHz	10/98
Meter Module	Electrometrics	CRM-25	162	.01-1000 MHz	10/98
Receiver	Electrometrics	EMC-25 Mark-III	804	.01-1000 MHz	10/98
Meter Module	Electrometrics	CRM-25	138	.01-1000 MHz	10/98
Antenna	Electrometrics	BIA-25	2453	20-200 MHz	10/98
Antenna	Electrometrics	LPA-25	1114	200-1000 MHz	10/98
Antenna	Electrometrics	BIA-25	2614	20-200 MHz	10/98
Antenna	Electrometrics	LPA-25	1205	200-1000 MHz	10/98
Antenna		Dipoles		20-1000 MHz	I/O
Antenna	Electro-Mechanics Co	3115	2479	1 - 18 GHz	I/O
LISN	Solar	Dual		10 - 30 kHz	4/99

*Firmware Version 29.9.86 Software Version 85864C Rev A
**Firmware Version 14.1.85 Software Version 85864C Rev A
***Firmware Version 5.1.3 Software Version 82301-12029 Rev C

I/O Initial Calibration Only

APPENDIX A

DATA SUMMARY

D.L.S. ELECTRONIC SYSTEMS INC. REPORT NO. 6771

SUMMARY DATA SHEET OF RADIATED **FUNDAMENTAL** EMISSIONS **<1000 MHz**

TEST DATE:--------July 21, 1998
MANUFACTURER:-----L. R. Nelson Corporation
MODEL NO:---------8081
S/N:--------------NA
CONFIGURATION:----**NA**

******FUNDAMENTAL** MEASUREMENTS MADE USING THE **CISPR QUASI-PEAK DETECTOR******

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 15, SUBPART C,
INTENTIONAL RADIATORS / **SECTION 15.249a**

TEST EQUIPMENT: Receiver --- EMC-25 -- SN 804
Antennas --- BIA-25 -- SN 2614
LPA-25 -- SN 1205

TYPE OF TEST: RADIATED // **VERTICAL** // MEASURED **AT 3 METERS**

THE FOLLOWING ARE SIGNIFICANT RADIATED **FUNDAMENTAL** LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	METER CORR. dB	ANTENNA FACTOR dB	TOTAL dBuV/m	LIMIT dBuV/m	MARGIN dB
916.50	54.50	8.00	28.09	90.59	93.98	3.39

D.L.S. ELECTRONIC SYSTEMS INC. REPORT NO. 6771

SUMMARY DATA SHEET OF RADIATED **FUNDAMENTAL** EMISSIONS **<1000 MHz**

TEST DATE:--------July 21, 1998
MANUFACTURER:-----L. R. Nelson Corporation
MODEL NO:---------8081
S/N:--------------NA
CONFIGURATION:----**NA**

******FUNDAMENTAL** MEASUREMENTS MADE USING THE **CISPR QUASI-PEAK DETECTOR******

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 15, SUBPART C,
INTENTIONAL RADIATORS / **SECTION 15.249a**

TEST EQUIPMENT: Receiver --- EMC-25 -- SN 804
Antennas --- BIA-25 -- SN 2614
LPA-25 -- SN 1205

TYPE OF TEST: RADIATED / **HORIZONTAL** / MEASURED **AT 3 METERS**

THE FOLLOWING ARE SIGNIFICANT RADIATED **FUNDAMENTAL** LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	METER CORR. dB	ANTENNA FACTOR dB	TOTAL dBuV/m	LIMIT dBuV/m	MARGIN dB
916.50	54.00	8.00	28.09	90.09	93.98	3.89

D.L.S. ELECTRONIC SYSTEMS INC. REPORT NO. 6771

SUMMARY DATA SHEET OF RADIATED HARMONIC EMISSIONS **>1000 MHz**

TEST DATE:--------July 20, 1998
MANUFACTURER:-----L. R. Nelson Corporation
MODEL NO:---------8081
S/N:--------------NA
CONFIGURATION:----**NA**
DCCF in dB:-------0

****HARMONIC MEASUREMENTS MADE USING THE **PEAK DETECTOR****

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 15, SUBPART C
INTENTIONAL RADIATORS / **SECTION 15.249a**

TEST EQUIPMENT: SPECTRUM ANALYZER -- HP 8566B -- PEAK DETECTOR

TYPE OF TEST: RADIATED **VERTICAL** MEASURED **AT 1 OR 3 METERS** (SEE *)

NOTE: LIMIT LINE ON CHARTS INCLUDE ALL CORRECTION FACTORS, INCLUDING THE DUTY CYCLE CORRECTION FACTOR

THE FOLLOWING ARE SIGNIFICANT RADIATED **HARMONICS** LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	ANTENNA & CABLE dB	40 dB PRE-AMP & ATTEN	DCCF+ TOTAL dBuV/m	LIMIT dBuV/m	* ANTENNA DISTANCE IN METERS	MARGIN dB
2749.00	60.60	32.86	-39.62	53.84	63.52	1	9.68
3664.00	59.10	35.87	-39.72	55.25	63.52	1	8.27
4580.00	53.40	37.30	-38.80	51.90	63.52	1	11.62

D.L.S. ELECTRONIC SYSTEMS INC. REPORT NO. 6771

SUMMARY DATA SHEET OF RADIATED HARMONIC EMISSIONS **>1000 MHz**

TEST DATE:--------July 20, 1998
MANUFACTURER:-----L. R. Nelson Corporation
MODEL NO:---------8081
S/N:--------------NA
CONFIGURATION:----**NA**
DCCF in dB:-------0

****HARMONIC** MEASUREMENTS MADE USING THE **PEAK DETECTOR****

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 15, SUBPART C
INTENTIONAL RADIATORS / **SECTION 15.249a**

TEST EQUIPMENT: SPECTRUM ANALYZER -- HP 8566B -- PEAK DETECTOR

TYPE OF TEST: RADIATED **HORIZONTAL** MEASURED **AT 1 OR 3 METERS** (SEE *)

NOTE: LIMIT LINE ON CHARTS INCLUDES ALL CORRECTION FACTORS
INCULDING THE DUTY CYCLE CORRECTION FACTOR

THE FOLLOWING ARE SIGNIFICANT RADIATED **HARMONIC** LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	ANTENNA & CABLE dB	40 dB PRE-AMP & ATTEN	DCCF+ TOTAL dBuV/m	LIMIT dBuV/m	* ANTENNA DISTANCE IN METERS	MARGIN dB
2749.00	56.70	32.86	-39.62	49.94	63.52	1	13.58
3668.00	57.40	35.87	-39.72	53.55	63.52	1	9.97
4584.00	53.40	37.30	-38.80	51.90	63.52	1	11.62

D.L.S. ELECTRONIC SYSTEMS INC. REPORT NO. 6771

SUMMARY DATA SHEET OF RADIATED HARMONIC EMISSIONS **>1000 MHz**

TEST DATE:--------July 20, 1998
MANUFACTURER:-----L. R. Nelson Corporation
MODEL NO:---------8081
S/N:--------------NA
CONFIGURATION:----**NA**
DCCF in dB:-------0

****HARMONIC** MEASUREMENTS MADE USING THE **AVERAGE DETECTOR****

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 15, SUBPART C
INTENTIONAL RADIATORS / **SECTION 15.249a**

TEST EQUIPMENT: SPECTRUM ANALYZER -- HP 8566B -- PEAK DETECTOR

TYPE OF TEST: RADIATED **VERTICAL** MEASURED **AT 1 OR 3 METERS** (SEE *)

NOTE: WHEN THE AVERAGE READINGS ARE MADE USING A SPECTRUM ANALYZER, THE ANTENNA & CABLE AND THE 40 DB PRE-AMP & ATTEN READINGS ARE SET TO ZERO.

THE FOLLOWING ARE SIGNIFICANT RADIATED **HARMONICS** LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	ANTENNA & CABLE dB	40 dB PRE-AMP & ATTEN	DCCF+ TOTAL dBuV/m	LIMIT dBuV/m	* ANTENNA DISTANCE IN METERS	MARGIN dB
1833.22	51.30	.00	.00	51.30	53.98	3	2.68
5499.74	60.70	.00	.00	60.70	63.52	1	2.82
7333.04	59.80	.00	.00	59.80	63.52	1	3.72
8249.71	53.90	.00	.00	53.90	63.52	1	9.62

D.L.S. ELECTRONIC SYSTEMS INC. REPORT NO. 6771

SUMMARY DATA SHEET OF RADIATED HARMONIC EMISSIONS **>1000 MHz**

TEST DATE:--------July 20, 1998
MANUFACTURER:-----L. R. Nelson Corporation
MODEL NO:---------8081
S/N:--------------NA
CONFIGURATION:----**NA**
DCCF in dB:-------0

****HARMONIC** MEASUREMENTS MADE USING THE **AVERAGE DETECTOR****

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 15, SUBPART C INTENTIONAL RADIATORS / **SECTION 15.249a**

TEST EQUIPMENT: SPECTRUM ANALYZER -- HP 8566B -- PEAK DETECTOR

TYPE OF TEST: RADIATED **HORIZONTAL** MEASURED **AT 1 OR 3 METERS** (SEE *)

NOTE: WHEN THE AVERAGE READINGS ARE MADE USING A SPECTRUM ANALYZER, THE ANTENNA & CABLE AND THE 40 DB PRE-AMP & ATTEN READINGS ARE SET TO ZERO.

THE FOLLOWING ARE SIGNIFICANT RADIATED **HARMONIC** LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	ANTENNA & CABLE dB	40 dB PRE-AMP & ATTEN	DCCF+ TOTAL dBuV/m	LIMIT dBuV/m	* ANTENNA DISTANCE IN METERS	MARGIN dB
1833.18	47.50	.00	.00	47.50	53.98	3	6.48
5499.70	55.40	.00	.00	55.40	63.52	1	8.12
7333.10	60.80	.00	.00	60.80	63.52	1	2.72
8249.79	57.00	.00	.00	57.00	63.52	1	6.52

D.L.S. ELECTRONIC SYSTEMS INC. REPORT NO. 6771

SUMMARY DATA SHEET OF RADIATED **SPURIOUS** EMISSIONS **<1000 MHz**

TEST DATE:--------July 21, 1998
MANUFACTURER:-----L. R. Nelson Corporation
MODEL NO:---------8081
S/N:--------------NA
CONFIGURATION:----**NA**

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 15, SUBPART C,
INTENTIONAL RADIATORS / **SECTION 15.209A**

TEST EQUIPMENT: Receiver --- EMC-25 -- SN 804
Antennas --- BIA-25 -- SN 2614
LPA-25 -- SN 1205

TYPE OF TEST: RADIATED **VERTICAL** MEASURED **AT 3 METERS**

THE FOLLOWING ARE SIGNIFICANT RADIATED LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	METER CORR. dBuV	ANTENNA FACTOR dB	TOTAL dBuV/m	LIMIT dBuV/m	MARGIN dB
ALL						>20dB

D.L.S. ELECTRONIC SYSTEMS INC. REPORT NO. 6771

SUMMARY DATA SHEET OF RADIATED **SPURIOUS** EMISSIONS **<1000 MHz**

TEST DATE:--------July 21, 1998
MANUFACTURER:-----L. R. Nelson Corporation
MODEL NO:---------8081
S/N:--------------NA
CONFIGURATION:----**NA**

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 15, SUBPART C,
INTENTIONAL RADIATORS / **SECTION 15.209A**

TEST EQUIPMENT: Receiver --- EMC-25 -- SN 804
Antennas --- BIA-25 -- SN 2614
LPA-25 -- SN 1205

TYPE OF TEST: RADIATED **HORIZONTAL** MEASURED **AT 3 METERS**

THE FOLLOWING ARE SIGNIFICANT RADIATED LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	METER CORR. dBuV	ANTENNA FACTOR dB	TOTAL dBuV/m	LIMIT dBuV/m	MARGIN dB
ALL						>20dB

D.L.S. ELECTRONIC SYSTEMS INC. REPORT NO. 6771

SUMMARY DATA SHEET OF RADIATED **SPURIOUS** EMISSIONS **>1000 MHz**

TEST DATE:--------July 20, 1998
MANUFACTURER:-----L. R. Nelson Corporation
MODEL NO:---------8081
S/N:--------------NA
CONFIGURATION:----**NA**

****SPURIOUS** MEASUREMENTS MADE USING THE **PEAK DETECTOR****

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 15, SUBPART C
INTENTIONAL RADIATORS / **SECTION 15.209A**

TEST EQUIPMENT: SPECTRUM ANALYZER -- HP 8566B

TYPE OF TEST: RADIATED **VERTICAL** MEASURED **AT 3 METERS**

NOTE: LIMIT LINE ON CHARTS INCLUDE ALL CORRECTION FACTORS, INCLUDING THE DUTY CYCLE CORRECTION FACTOR

THE FOLLOWING ARE SIGNIFICANT RADIATED **SPURIOUS** LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	ANTENNA & CABLE dB	PRE-AMP + CABLE dB	TOTAL dBuV/m	DUTY CYCLE CORRECTION FACTOR	LIMIT dBuV/m	MARGIN dB
ALL							>10dB

D.L.S. ELECTRONIC SYSTEMS INC. REPORT NO. 6771

SUMMARY DATA SHEET OF RADIATED **SPURIOUS** EMISSIONS **>1000 MHz**

TEST DATE:--------July 20, 1998
MANUFACTURER:-----L. R. Nelson Corporation
MODEL NO:---------8081
S/N:--------------NA
CONFIGURATION:----**NA**

****SPURIOUS** MEASUREMENTS MADE USING THE **PEAK DETECTOR****

TEST SPECIFICATION: FCC "RULES AND REGULATION", PART 15, SUBPART C
INTENTIONAL RADIATORS / **SECTION 15.209A**

TEST EQUIPMENT: SPECTRUM ANALYZER -- HP 8566B

TYPE OF TEST: RADIATED **HORIZONTAL** MEASURED **AT 3 METERS**

NOTE: LIMIT LINE ON CHARTS INCLUDES ALL CORRECTION FACTORS
INCULDING THE DUTY CYCLE CORRECTION FACTOR

THE FOLLOWING ARE SIGNIFICANT RADIATED **SPURIOUS** LEVELS FOUND:

FREQ IN MHz.	METER READING dBuV	ANTENNA FACTORS dB	PRE-AMP + CABLE dB	TOTAL dBuV/m	DUTY CYCLE CORRECTION FACTOR	LIMIT dBuV/m	MARGIN dB
ALL							>10dB

APPENDIX B

CHARTS TAKEN DURING TESTING

Charts are available upon request