KTL Test Report:	9R05094
Applicant:	Internet Security Lifeguard Inc. 2005 23rd Avenue Lachine, Quebec H8T 1X1
Equipment Under Test: **(E.U.T.)**	S.L.U. 100 Receiver With Satellite 102 Remote Unit
FCC ID:	OQNSLU100
In Accordance With:	**FCC Part 15, Subpart B** Radio Receivers
Tested By:	KTL Ottawa Inc. 3325 River Road, R.R. 5 Ottawa, Ontario K1V 1H2
Authorized By:	
	R. Grant, Senior RF Specialist
Date:	
Total Number of Pages:	32

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Section 1. Summary of Test Results

General:

All measurements are traceable to national standards.

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 15, Subpart B. Measurement procedure ANSI C63.4-1992 was used for all tests. Radiated Emissions were measured on an open area test site.

☒	New Submission	☒	Production Unit
☐	Class II Permissive Change	☐	Pre-Production Unit

C	R	R	Equipment Code

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.
See " Summary of Test Data".

NVLAP LAB CODE: 100351-0

TESTED BY: _____ DATE: _____
Kevin Carr, Technologist

Summary Of Test Data

Name Of Test	Para. No.	Results
Antenna Conducted Emissions	15.111	Not Applicable
Radiated Emissions	15.109	Complies
Powerline Conducted Emissions	15.107	Complies

Footnotes For N/A's: The E.U.T. has an integral antenna.

Test Conditions:

Indoor Temperature: 25 °C
Humidity: 50 %

Outdoor Temperature: 25 °C
Humidity: 50 %

Section 2. Equipment Under Test (E.U.T.)

Manufacturer: Internet Security Lifeguard Inc.

Model No.: S.L.U. 100

Serial No.: None

Equipment Details

Frequency Range:	303 MHz Fixed
Number of Channels:	One
Operating Frequency(ies) of Sample:	303 MHz
Crystal Frequency(ies):	Not Applicable
Primary Power Requirement:	120 VAC, 60 Hz
Intermediate Frequency(ies):	Not Applicable

Description of E.U.T.

The E.U.T. is a telephone / wireless receiver emergency monitoring unit that contains a 303 MHz super-regenerative receiver.

Modifications Incorporated in E.U.T.

The EUT has not been modified from what is described by the brand name and unique type identification stated above.

Theory of Operation

Security Lifeguard Unit (S.L.U.)

The S.L.U. is a telephone / alarm monitor that includes a wireless alarm receiver that receives messages from various alarm transmitters operating at 303 MHz.

Remote Satellite Unit

The R.S.U. connects directly to the S.L.U. to provide hands-free voice communication with monitoring station via the S.L.U.

Justification

The E.U.T. was configured for testing as per typical installation. Position and bundling of cables were investigated to establish maximum amplitude of emissions.

The following combinations were investigated to establish worst case configuration:

(1) R.S.U. connected to S.L.U. with S.L.U. receiver cohered using a CW signal.

Exercise Program

The E.U.T. exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to typical use.

Exercise Mode:

(1) Normal operation.

Section 3. Equipment Configuration

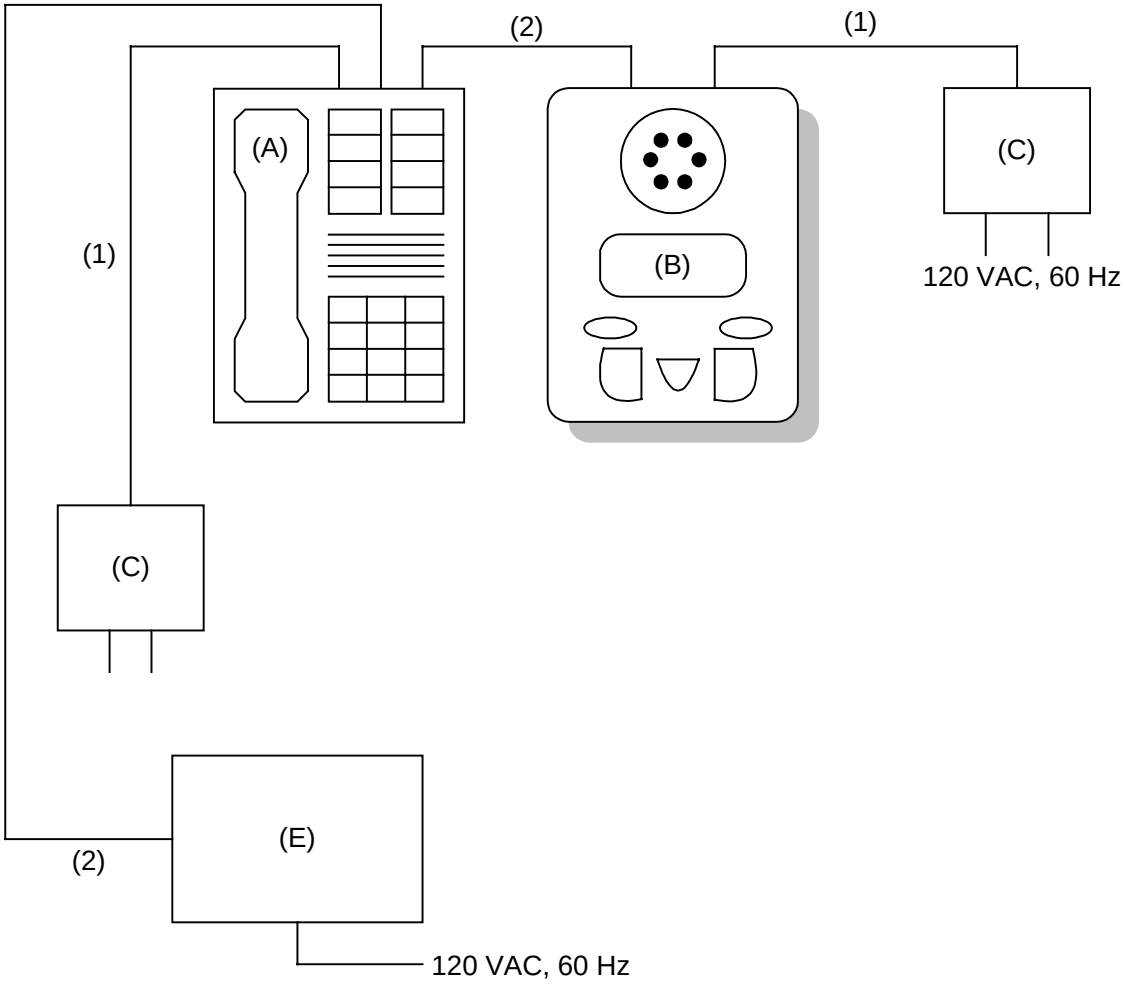
Equipment Configuration List:

Item	Description	Model No.	Serial.	Rev.
(A)	Security Lifeguard Unit	S.L.U. 100	970600205	
(B)	Remote Satellite Unit	Satellite 102	97060103	
(C)	AC-DC Adaptor	MWD-9250	None	
(D)	AC-DC Adaptor	MWD-9250	None	
(E)	Loop Simulator	CLI-001	None	

Inter-connection Cables:

Item	Description	Length (m)
(1)	Power Cord	2.0
(2)	Telco Cable	2.0

Configuration of the Equipment Under Test (E.U.T)



Section 4. Receiver Antenna Conducted Emissions

NAME OF TEST: Receiver Antenna Conducted Emissions	PARA. NO.: 15.111
TESTED BY:	DATE:

Test Results: Complies/Does Not Comply. See attached graphs and table.

Measurement Data: See attached graphs and table.

NOT APPLICABLE

Section 5(A). Radiated Emissions

NAME OF TEST: Radiated Emissions	PARA. NO.: 15.109(a)
TESTED BY: Kevin Carr	DATE: August 4, 1998

Minimum Standard:

Frequency(MHz)	Field Strength (dBμV/m @ 3m)
30 - 88	40.0
88 - 216	43.5
216 - 960	46.0
Above 960	54.0

Test Results: Complies. The worst-case emission level is 20.2 dBμV/m @ 3m at 911.538 MHz. This is 25.8 dB below the specification limit.

Measurement Data: See attached table.

For super-regenerative receivers the receiver is cohered using a signal generator and dipole antenna.

Handheld equipment and equipment not designed to be mounted in any fixed orientation, the E.U.T. is tested in three orthogonal axis to obtain worst case results.

Test Data - Radiated Emissions

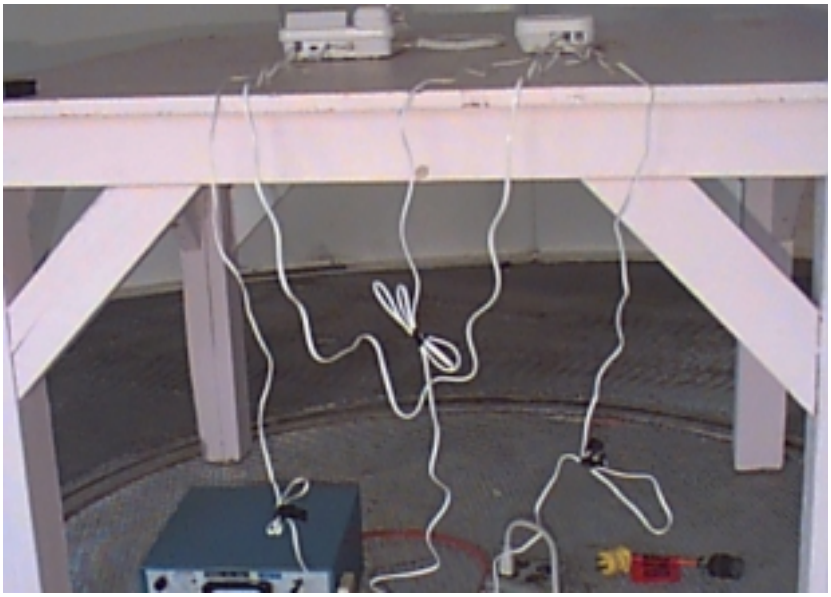
Distance: 3m		A tower		Receiver: 014		Detector: (2) 10 kHz		Peak			
Freq. (MHz)	Ant. *	Pol. (V/H)	Ant. HGT. (m)	Table (deg.)	RCVD Signal (dBµV/m)	Ant. Factor (dB)**	Amp. Gain (dB)***	Dist. Corr. (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
303.846	L/P	V			-10.8	18.7			7.9	46.0	38.1
303.846	L/P	H			-10.7	18.7			8.0	46.0	38.0
607.692	L/P	V			-11.6	24.9			13.3	46.0	32.7
607.692	L/P	H			-10.8	24.9			14.1	46.0	31.9
911.538	L/P	V			-9.9	30.1			20.2	46.0	25.8
911.538	L/P	H			-10.4	30.1			19.7	46.0	26.3

Notes:
B/C = Biconical, B/L = Biconilog, L/P = Log-Periodic, H = Horn, D/P = Dipole
* Re-measured using dipole antenna. ( ) Denotes failing emission level.
(1) 120 kHz, Q-Peak, (2) 10 kHz, Peak, (3) 100 kHz RGW, 300 kHz VBW, Peak,
(4) 300 kHz RBW, 1 MHz VBW, Peak, (5) 1 MHz RBW, 3 MHz VBW, Peak, (6) 1 MHz RBW, 10 Hz VBW, Peak

Radiated Photographs (Worst Case Configuration)

Front View

Rear View



Section 5(B). Radiated Emissions

NAME OF TEST: Radiated Emissions	PARA. NO.: 15.109(b)
TESTED BY:	DATE:

NOT APPLICABLE

Minimum Standard: Equipment manufactured or imported before June 23, 1999 is permitted the following limits:

Frequency (MHz)	**Field Strength (dBµV/m @ 3m)**
30-70	320 (50.1 dBµV/m)
70-130	500 (54.0 dBµV/m)
130-174	500 - 1500 dBµV/m)
174-260	1500 (63.5 dBµV/m)
260-470	1500 - 5000 (linear interpolation)
Above 470	5000 (74.0 dBµV/m)

Test Results: Complies / Does Not Comply. The worst-case emission level is _____ dBµV/m @ 3m at _____ MHz. This is _____ dB above/below the specification limit.

Measurement Data: See attached table.

Test Data - Radiated Emissions

Test Distance (meters) :		Range:		Receiver:		RBW(kHz):		Detector:			
Freq. (MHz)	Ant. *	Pol. (V/H)	Ant. HGT. (m)	Table (deg.)	RCVD Signal (dBµV/m)	Ant. Factor (dB)**	Amp. Gain (dB)***	Dist. Corr. (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)

NOT APPLICABLE

Notes:
B/C = Biconical, B/L = Biconilog, L/P = Log-Periodic, H = Horn, D/P = Dipole
* Re-measured using dipole antenna. ( ) Denotes failing emission level.
(1) 120 kHz, Q-Peak, (2) 10 kHz, Peak, (3) 100 kHz RBW, 300 kHz VBW, Peak,
(4) 300 kHz RBW, 1 MHz VBW, Peak, (5) 1 MHz RBW, 3 MHz VBW, Peak, (6) 1 MHz RBW, 10 Hz VBW, Peak

Radiated Photographs (Worst Case Configuration)

FRONT VIEW

REAR VIEW

Section 6. Powerline Conducted Emissions

NAME OF TEST: Powerline Conducted Emissions	PARA. NO.: 15.107
TESTED BY: Kevin Carr	DATE: August 4, 1998

Minimum Standard: The RF energy feed back into the power lines shall not exceed 48 dBµV on any frequency between 0.45 MHz and 30 MHz inclusive.

Test Results: Complies. See attached graphs.

Measurement Data: See attached graphs.

Powerline Conducted Photographs (Worst Case Configuration)

Front View

Rear View

Section 7. Sample Calculations

Conducted Emissions:

If the Quasi-Peak to Average ratio is greater than 6 dB, then the emission is classified as broadband and its Quasi-Peak level is reduced by 13 dB for comparison to the limit.

i.e. Quasi-Peak level = 40 dBµV
Average level = 34 dBµV
Corrected level = 40 - 13 = 27 dBµV

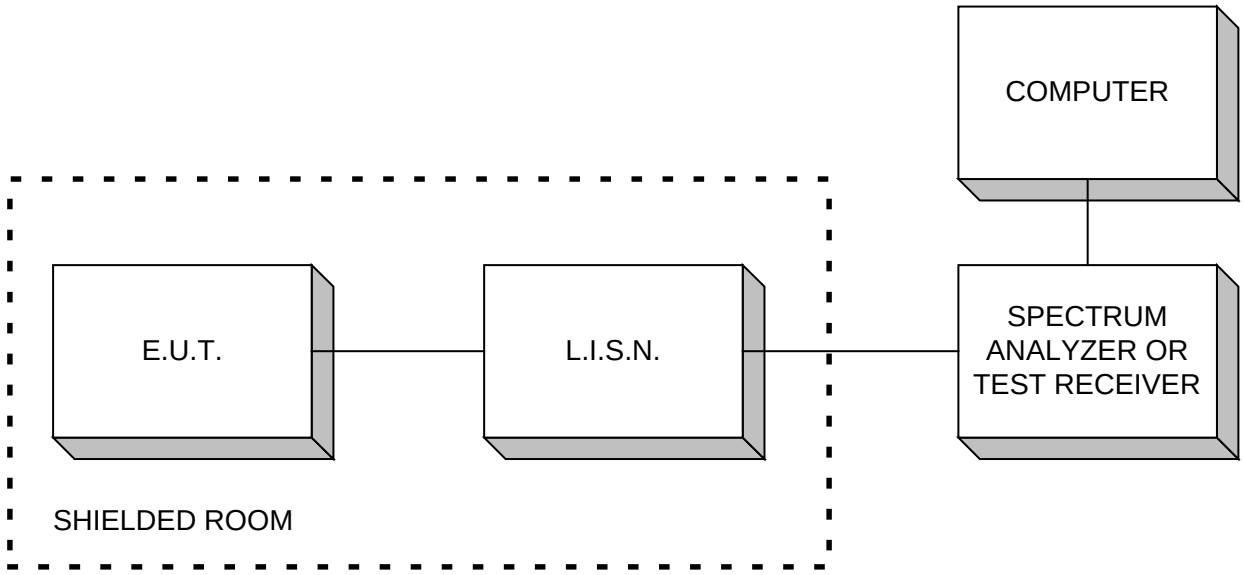
Radiated Emissions

Emissions are measured at a distance of 3 meters and corrected for antenna factor and cable loss.

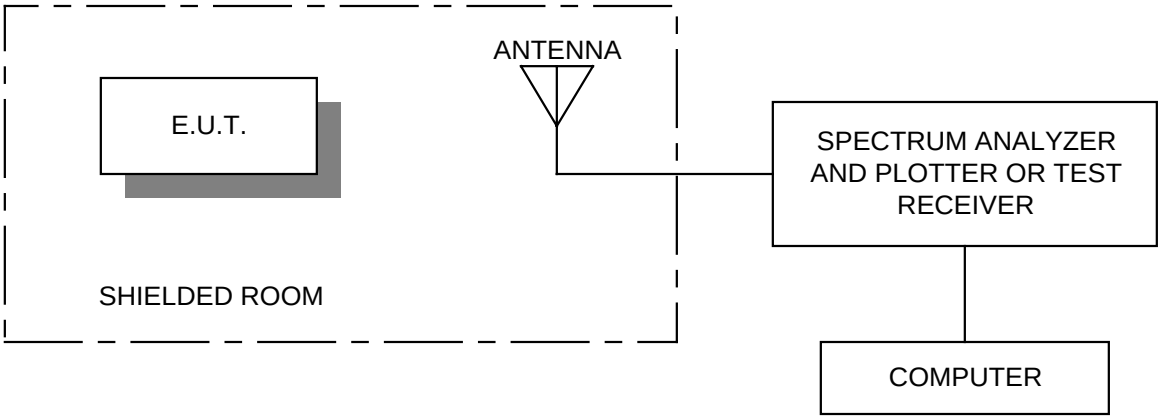
i.e. Received Signal = 25 dBµV @ 100 MHz
Antenna Factor & Cable Loss = 9.8 dB
Field Intensity = 25 + 9.8 = 34.8 dBµV/m @ 3 m

Section 8. Block Diagrams

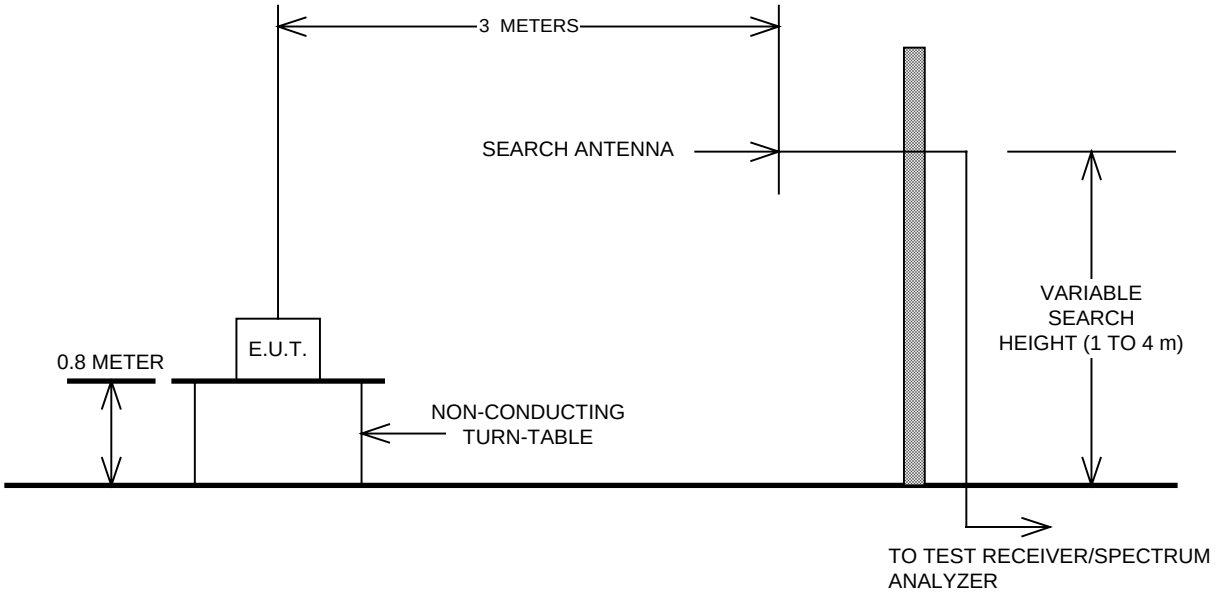
Conducted Emissions



Radiated Prescan



Outdoor Test Site For Radiated Emissions



The spectrum was searched up to the 10th harmonic of the fundamental frequency of operation.

Section 9. Test Equipment List

Equipment List - Radiated Emissions

CAL Cycle	Equipment	Manufacturer	Model #	Serial/Asset #	Last Cal.	Next Cal.
	Biconilog Antenna	EMCO	3143	9404-1039	NCR	NCR
1Year	Receiver	Rohde & Schwarz	ESVP	892661/014	Mar. 29/99	Mar. 29/00
1Year	Spectrum Analyzer	Hewlett-Packard	8565E	FA000981	June 16/99	June 16/00
1 Year	Biconical (1) Antenna	EMCO	3109	9204-2708	July 27/98	Sept. 24/99
2 Year	Horn Antenna	EMCO	3115	4336	Oct. 30/97	Oct. 30/99
2 Year	Horn Antenna	EMCO	3115	3132	Feb. 9/98	Feb.9/00
1 Year	Log Periodic Antenna	EMCO	LPA-25	1141	July 27/98	Sept. 24/99
1 Year	Low Noise Amplifier	Avantek	AWT-8035	1005	Aug. 4/98	Aug. 4/99
1 Year	Radio Test Set	Rohde & Schwarz	CMS 52	840.0009.52	July 23/99	July 23/00
1 Year	Dipole Antenna	Roberts. Inst.	N/A	FA000747	June 5/99	June 5/00

Note: N/A = Not Applicable
NCR = No Cal Required