KTL Test Report:	9R02131

Applicant:	Digital Security Controls Ltd. 3301 Langstaff Road Concord, Ontario L4K 4L2

Equipment Under Test: **(E.U.T.)**	PC5132-433 Radio Receiver

FCC ID:	F53005132

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:

Russell Grant, Wireless Group Manager

Date:

Total Number of Pages:	11

EQUIPMENT: PC5132-433 Radio Receiver
FCC ID: F53005132

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EQUIPMENT: PC5132-433 Radio Receiver
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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 | Y | Y	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

NVLAP LAB CODE: 100351-0

It is recommended that the margin of compliance be improved to allow for manufacturing tolerances

TESTED BY: _____   DATE: _____
                    Kevin Rose, Test Technician

EQUIPMENT: PC5132-433 Radio Receiver
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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	Not Applicable

Footnotes For N/A's: This equipment was tested with a permanently attached antenna.
                            This equipment is powered by 12 Vdc.

Test Conditions:

Indoor   Temperature: 20 °C
                    Humidity: 20 %

Outdoor   Temperature: 10 °C
                    Humidity: 20 %

EQUIPMENT: PC5132-433 Radio Receiver
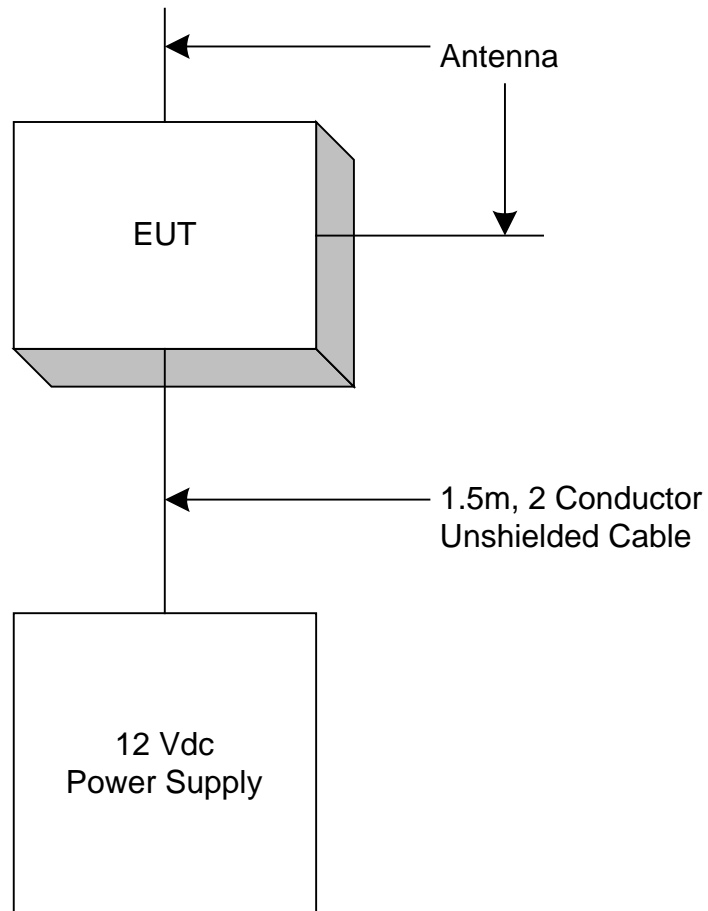*FCC ID: F53005132*

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

Manufacturer: Digital Security Controls Ltd.

Model No.:   PC5132-433

Serial No.:   None

Date Received In Laboratory: January 17, 2000

KTL Identification No.:   Item #2

Equipment Details

Frequency Range: 433.92 MHz

Number of Channels: 1

Operating Frequency(ies) of Sample: 433.92 MHz

Primary Power Requirement: 12 Vdc

Intermediate Frequency(ies):   10.7 MHz

EQUIPMENT: PC5132-433 Radio Receiver
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Configuration of the Equipment Under Test

Antenna

EUT

1.5m, 2 Conductor
Unshielded Cable

12 Vdc
Power Supply

EQUIPMENT: PC5132-433 Radio Receiver
FCC ID: F53005132

Section 3.   Radiated Emissions

NAME OF TEST: Radiated Emissions	PARA. NO.: 15.109(a)
TESTED BY: Kevin Rose	DATE: January 19, 2000

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 45.7 dBμV/m @ 3m at
                           423.21 MHz. This is 0.3 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.

EQUIPMENT: PC5132-433 Radio Receiver
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Test Data - Radiated Emissions

Test Distance (meters) : 3		Range: A Tower		Receiver: ESVP H.P. 8564E		RBW(kHz): 120K 1 MHz		Detector: CISPR, Q-PEAK, PEAK				
Freq. (MHz)	Ant. *	Pol. (V/H)	Ant. HGT. (m)	Table (deg.)	RCVD Signal (dBμV/m)	Ant. Factor (dB)**	Amp. Gain (dB)***	Duty Cycle (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
423.21	E/D4	V			20.0	25.7			45.7	46.0	0.3
423.21	E/D4	H			13.0	25.7			38.7	46.0	7.3
846.43	E/D4	V			6.8	34.3			41.1	46.0	4.9
845.43	E/D4	H			6.8	34.3			41.1	46.0	4.9
1269.65	Hrn2	V			8.0	28.0			36.0	54.0	18.0
1269.65	Hrn2	H			7.7	28.0			35.7	54.0	18.3
1692.88	Hrn2	V			23.6	29.4	-46.1		6.9	54.0	47.1
1692.88	Hrn2	H			24.0	29.4	-46.1		7.3	54.0	46.7
39.67	B/C2	V			14.1	13.0			27.1	40.0	12.9
39.67	B/C2	H			8.6	13.0			21.6	40.0	18.4

Notes:
B/C = Biconical, B/L = Biconilog, L/P = Log-Periodic, H = Horn, D/P = Dipole
*   Re-measured using dipole antenna.
**   Includes cable loss when amplifier is not used.
***   Includes cable loss.
( )   Denotes failing emission level.
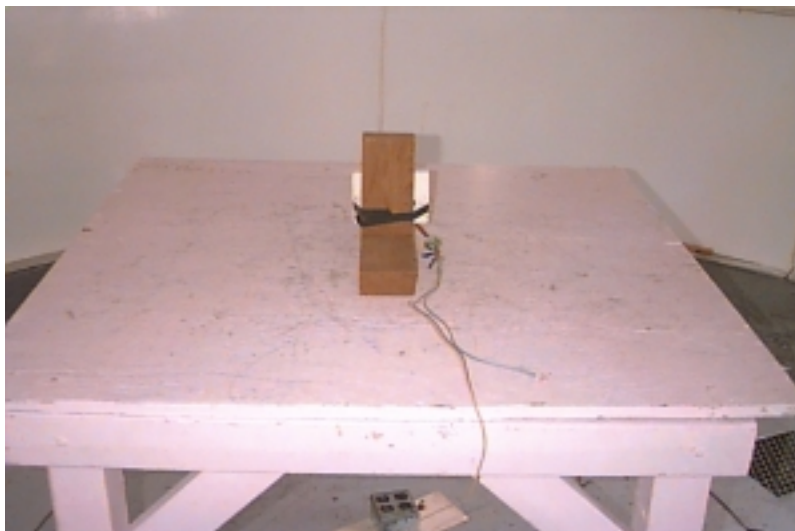
EQUIPMENT: PC5132-433 Radio Receiver
FCC ID: F53005132

Radiated Photographs   (Worst Case Configuration)

Front View

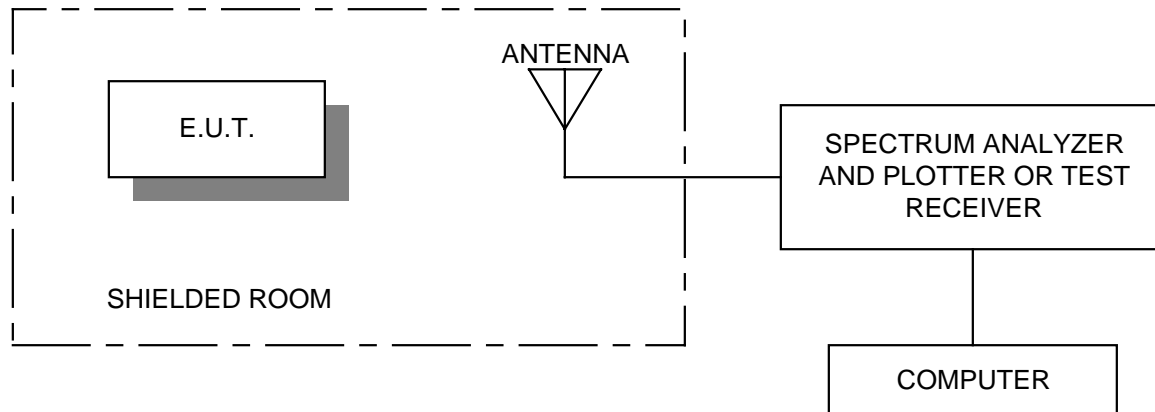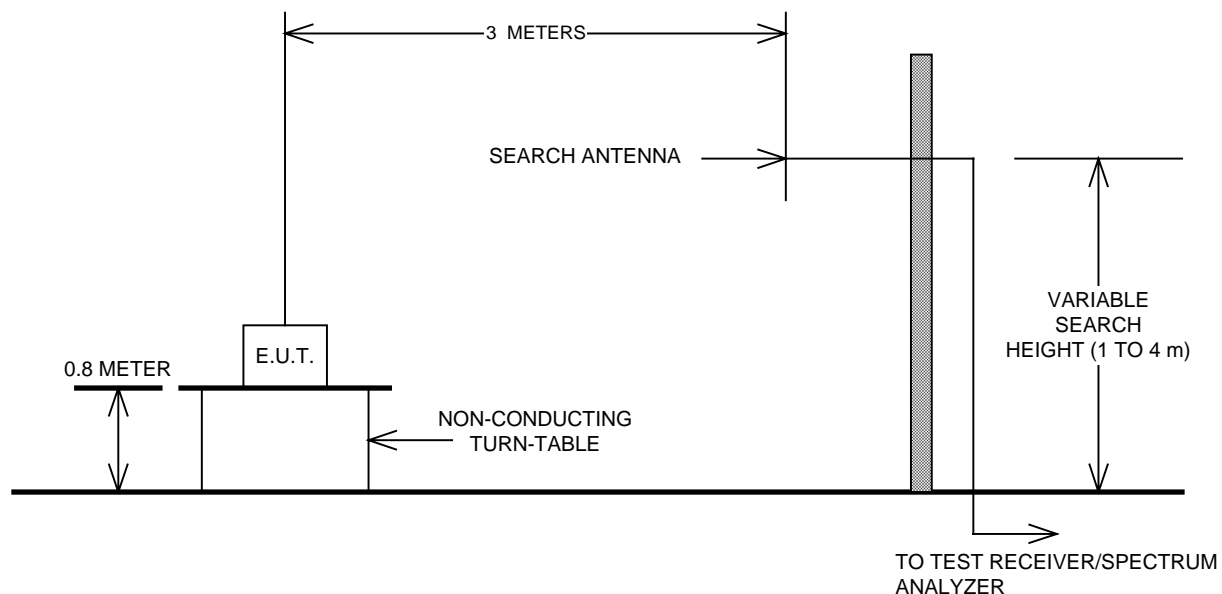

Rear View

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Section 4.   Block Diagrams

Radiated Prescan

Outdoor Test Site For Radiated Emissions

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

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Section 5. Test Equipment List

CAL CYCLE	EQUIPMENT	MANUFACTURER	MODEL	SERIAL	LAST CAL.	NEXT CAL.
1 Year	Spectrum Analyzer	Hewlett Packard	8564E	3846A01407	May 31/99	May 31/00
1 Year	Receiver	Rohde & Schwarz	ESVP	892661/014	Mar. 29/99	Mar. 29/00
2 Year	Horn Antenna	EMCO #2	3115	4336	Nov. 11/99	Nov. 11/00
1 Year	Dipole Antenna Set	EMCO #2	3121C	FA001349	Apr. 5/99	Apr. 5/00
1 Year	Biconical (2) Antenna	EMCO	3109	9503-2894	June 11/99	June 11/00
1 Year	RF Amplifier	AVENTEK	AWT-8035	FA001428	Jan. 7/00	Jan. 7/01

NA: Not Applicable
NCR: No Cal Required
COU: CAL On Use