KTL Test Report:	0R03329
Applicant:	Digital Security Controls Ltd. 3301 Langstaff Road Vaughan, Ontario L4K 4L2
Equipment Under Test: **(E.U.T.)**	NT9010A-433 Receiver
FCC ID:	F5301NB9010
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:	
	G. Westwell, Technologist
Date:	
Total Number of Pages:	15

Table Of Contents

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 LAB CODE: 100351-0

TESTED BY: _____ DATE: _____
Russell Grant, Wireless Group Manager

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

Section 2. General Equipment Specification

Manufacturer:	Digital Security Controls Ltd.
Date Received In Laboratory:	November 27, 2000
KTL Identification No.:	Item #1
Frequency Range:	433.92 MHz
Number of Channels:	1

Section 3. Radiated Emissions

Para. No.: 15.109(a)

Test Performed By: Russell Grant	**Date of Test:** November 28, 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 43.2 dBμV/m @ 3m at 846.44 MHz. This is 2.8 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

Test Distance (meters) : 3		Range: A Tower		Receiver: ESVP		RBW(kHz): 120		Detector: Q-Peak	
Freq. (MHz)	Ant. *	Pol. (V/H)	RCVD Signal (dBµV/m)	Ant. Factor (dB)**	Amp. Gain (dB)***	Dist. Corr. (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
174.08	B/C1	V	21.7	13.9			35.6	43.5	7.9
174.08	B/C1	H	23.5	13.9			37.4	43.5	6.1
163.84	B/C1	V	19.4	13.7			33.1	43.5	10.4
163.84	B/C1	H	21.7	13.7			35.4	43.5	8.1
194.56	B/C1	V	18.4	15.5			33.9	43.5	9.6
194.56	B/C1	H	21.6	15.5			37.1	43.5	6.4
423.22	L/P2	V	21.7	20.2			41.9	46.0	4.1
423.22	L/P2	H	21.3	20.2			41.5	46.0	4.5
846.44	L/P2	V	15.5	27.4			42.9	46.0	3.1
846.44	L/P2	H	15.8	27.4			43.2	46.0	2.8
300.0	L/P2	V	13.3	17.5			30.8	46.0	15.2
300.0	L/P2	H	13.1	17.5			30.6	46.0	15.4

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.

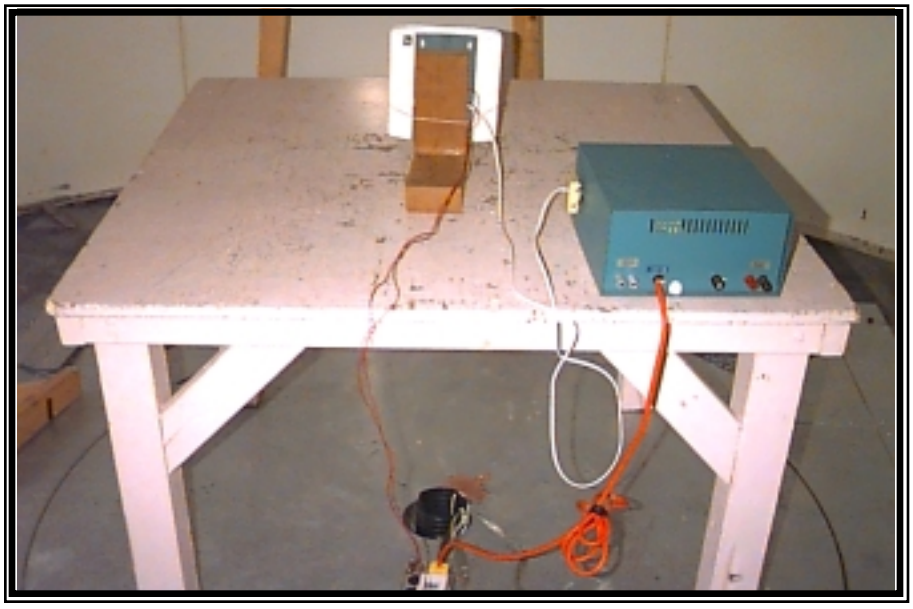
(1) 120 kHz, Q-Peak,
(2) 10 kHz, Peak,
(3) 100 kHz RGW, 300 kHz VBW, Peak,
(4) 300 kHz RBW, 1 MHz VBW, Peak,
(5) 1 MHz RBW, 3 MHz VBW, Peak,
(6) 1 MHz RBW, 10 Hz VBW, Peak

N.D. = Not Detected

Radiated Photographs

Front View

Rear View



Section 4. Powerline Conducted Emissions

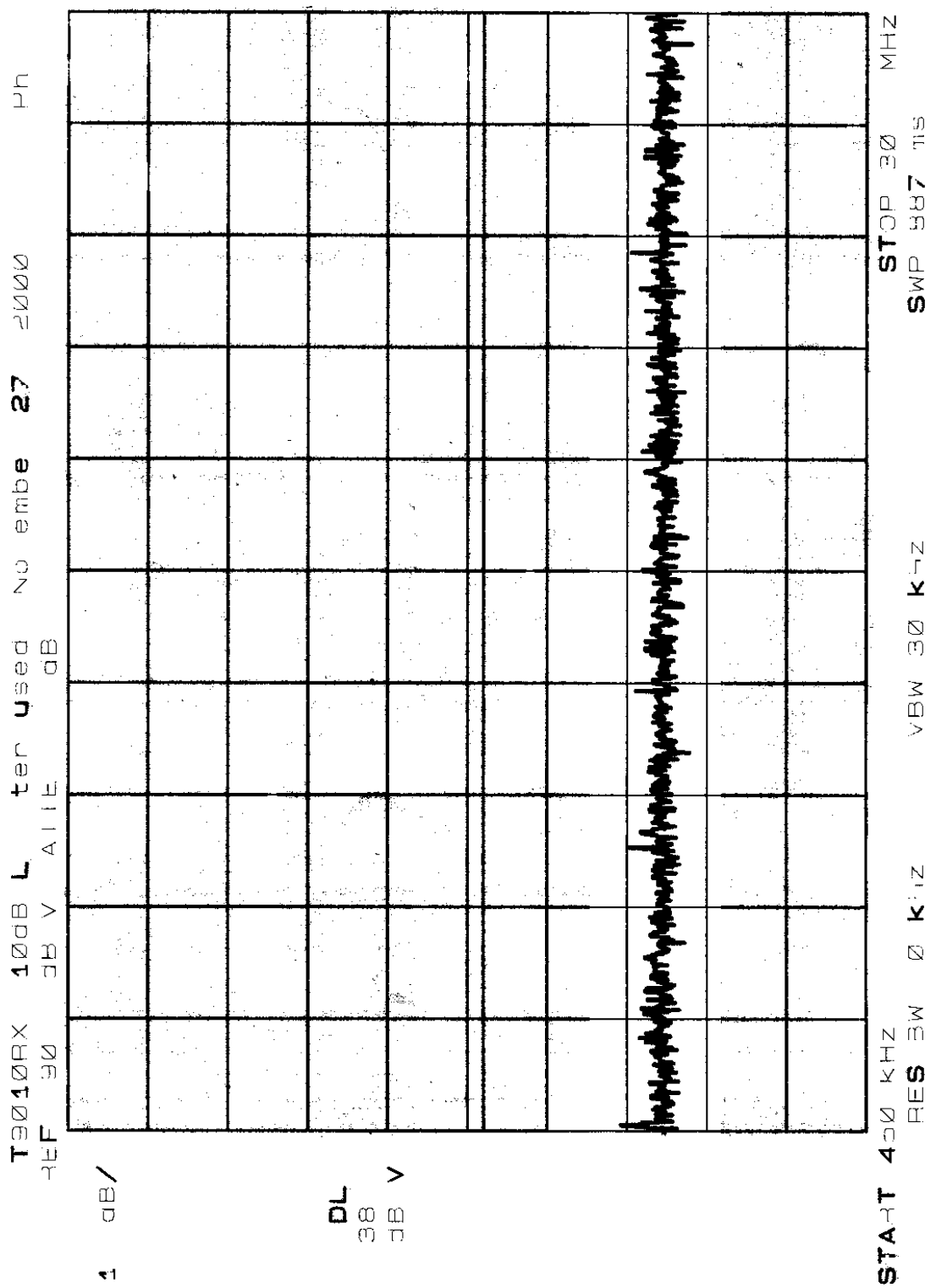
Para. No.: 15.107

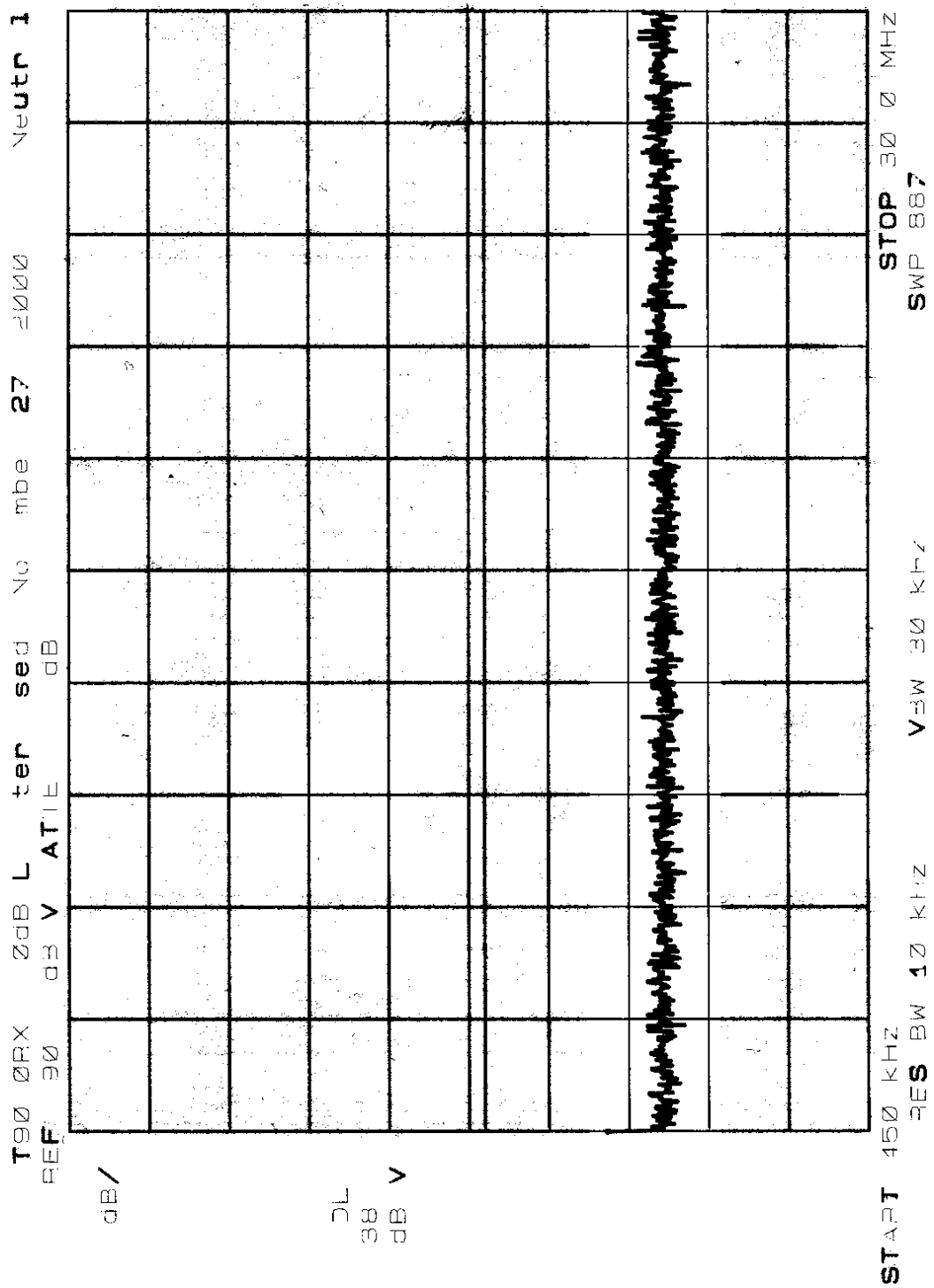
Test Performed By: Russell Grant	**Date of Test:** November 28, 2000

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.

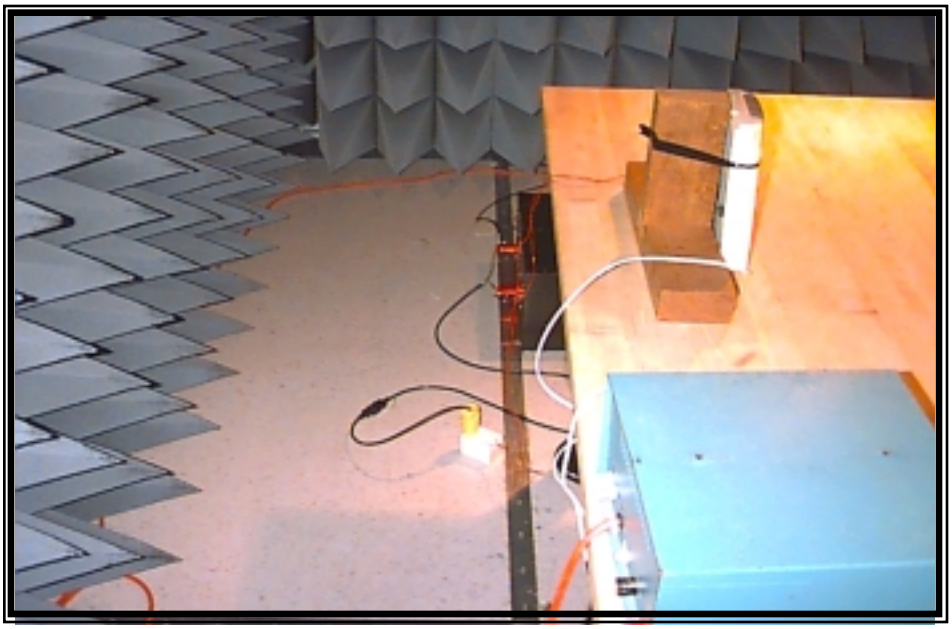

T3010RX 10dB L ter Used No embe 27 2000 Ph
REF 30 dB V Alle dB
dB/
DL
dB V
START 400 kHz
RES BW 0 kHz
VBW 30 kHz
STOP 30 MHz
SWP 987 ms


Veutr 1
2000
27
STOP 30 Ø MHz
SWP 887
V3W 30 kHz
START 450 kHz
RES BW 10 kHz
dB/
DL
38 dB V

Powerline Conducted Photographs

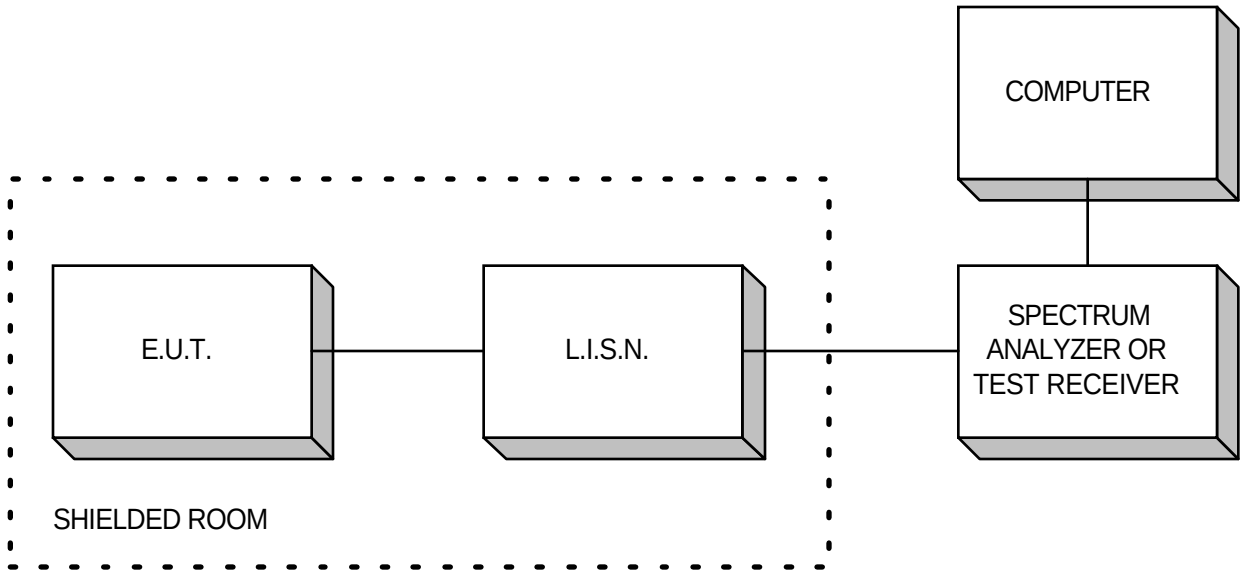
Front View

Side View

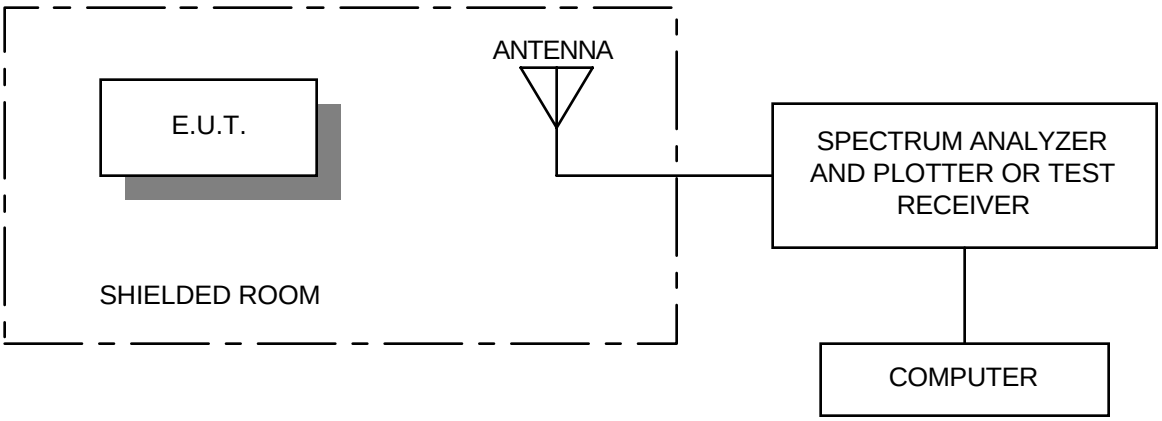


Section 5. Block Diagrams

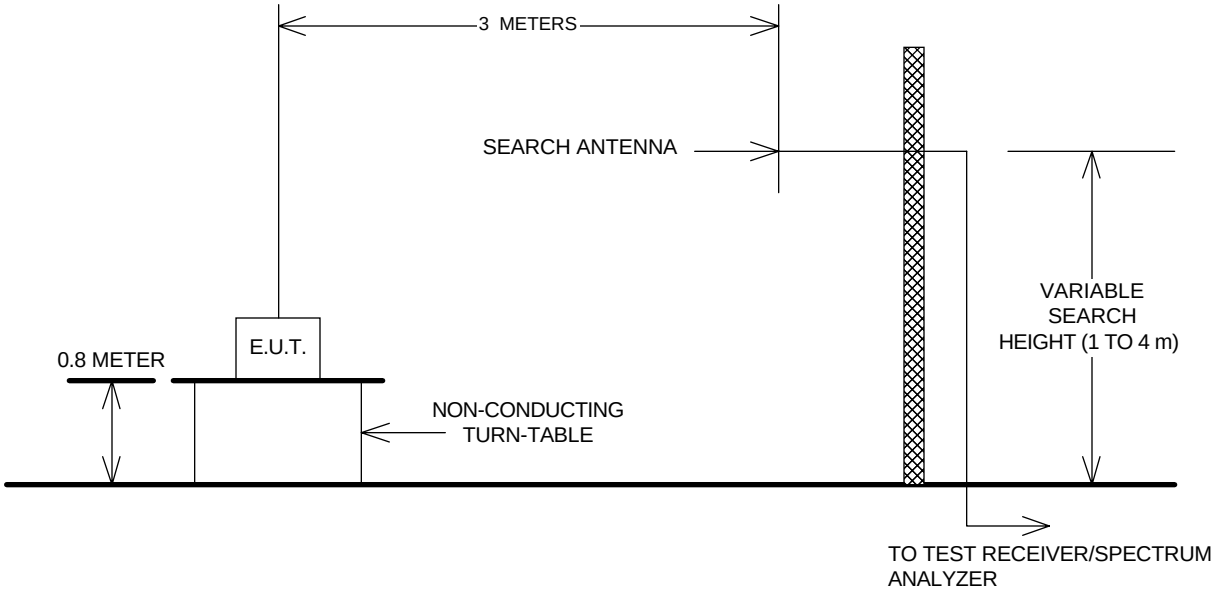
Conducted Emissions



Radiated Prescan



Outdoor Test Site For Radiated Emissions



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

Section 6. Test Equipment List

CAL CYCLE	EQUIPMENT	MANUFACTURER	MODEL	SERIAL	LAST CAL.	NEXT CAL.
1 Year	Spectrum Analyzer Display-**1**	Hewlett Packard	8566B	2314A04759	Nov. 6/99	Nov. 6/00
1 Year	LISN	Rohde & Schwarz	ESH2-Z5	890485/017	Aug. 24/99	Aug. 24/00
1 Year	Receiver	Rohde & Schwarz	ESVP	892661/014	April 5/00	April 5/01
1 Year	Log Periodic Antenna 2	EMCO	3148	9904-1054	Apr. 30/99	Oct. 30/00
1 Year	Biconical (1) Antenna	EMCO	3109	9204-2708	Aug. 4/99	Aug. 4/00

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