

**KTL Test Report:** 9R01885

**Applicant:** VCALL Systems Inc.  
1900 Merivale Road, Suite 202  
Nepean, Ontario  
K2G 4N4

**Equipment Under Test:** VC 100 Receiver  
(E.U.T.)

**FCC ID:** OWKVC100

**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, Wireless Group Manager

**Date:**

**Total Number of Pages:** 18

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*EQUIPMENT: VC 100 Receiver*  
*FCC ID: OWKVC100*

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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.

<input checked="" type="checkbox"/>	New Submission	<input checked="" type="checkbox"/>	Production Unit			
<input type="checkbox"/>	Class II Permissive Change	<input type="checkbox"/>	Pre-Production Unit			
<table><tr><td>C</td><td>Y</td><td>Y</td></tr></table>	C	Y	Y	Equipment Code		
C	Y	Y				

**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 Rose, Test Technician

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This report applies only to the items tested.

*EQUIPMENT: VC 100 Receiver**FCC ID: OWKVC100*

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**Summary Of Test Data**

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

**Footnotes For N/A's:** Non-detachable antenna.**Test Conditions:****Indoor** Temperature: 21 °C  
Humidity: 32 %**Outdoor** Temperature: 10 °C  
Humidity: 18 %

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

Manufacturer:                            VCALL Systems

Model No.:                                VC 100

Serial No.:                                None

Date Received In Laboratory:        February 9, 2000

KTL Identification No.:                Item #17

**Equipment Details**

Frequency Range:                        303.89 MHz

Number of Channels:                    1

Operating Frequency(ies) of  
Sample:                                    303.89 MHz

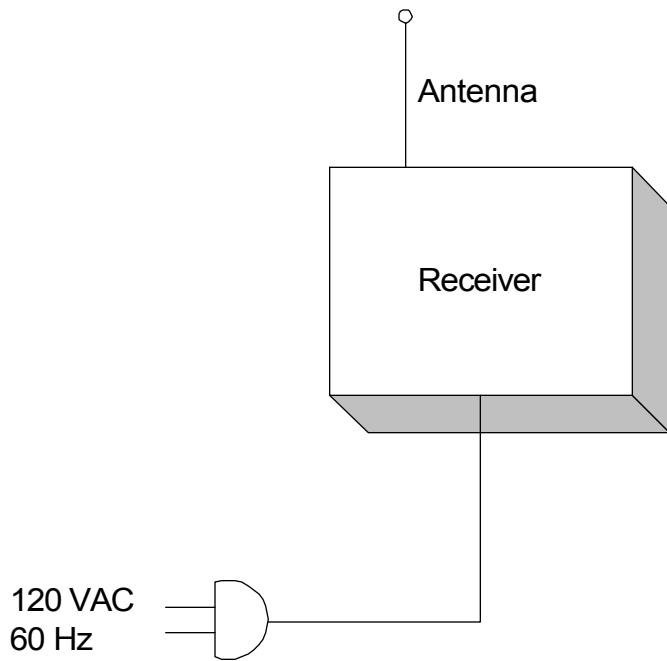
Crystal Frequency(ies):                48.17 MHz

Primary Power Requirement:        120 VAC to 12 Vdc XFormer

*EQUIPMENT: VC 100 Receiver*  
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**Configuration of the Equipment Under Test**



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### **Section 3. Radiated Emissions**

NAME OF TEST: Radiated Emissions	PARA. NO.: 15.109(a)
TESTED BY: Kevin Rose	DATE: February 9, 2000

#### **Minimum Standard:**

Frequency(MHz)	Field Strength (dB $\mu$ V/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 34.6 dB $\mu$ V/m @ 3m at 293.12 MHz. This is 11.4 dB below the specification limit.

**Measurement Data:** See attached table.

For super-regenerative receivers the receiver is cohersed 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: VC 100 Receiver**FCC ID: OWKVC100***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)	Ant. HGT. (m)	Table (deg.)	RCVD Signal (dB $\mu$ V/m)	Ant. Factor (dB)**	Amp. Gain (dB)***	Dist. Corr. (dB)	Field Strength (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)
293.12	E/D3				12.8	21.8			34.6	46.0	11.4
293.12	E/D3				12.3	21.8			34.1	46.0	11.9
586.25	E/D4				6.7	30.0			36.7	46.0	9.3
586.25	E/D4				6.7	30.0			36.7	46.0	9.3

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

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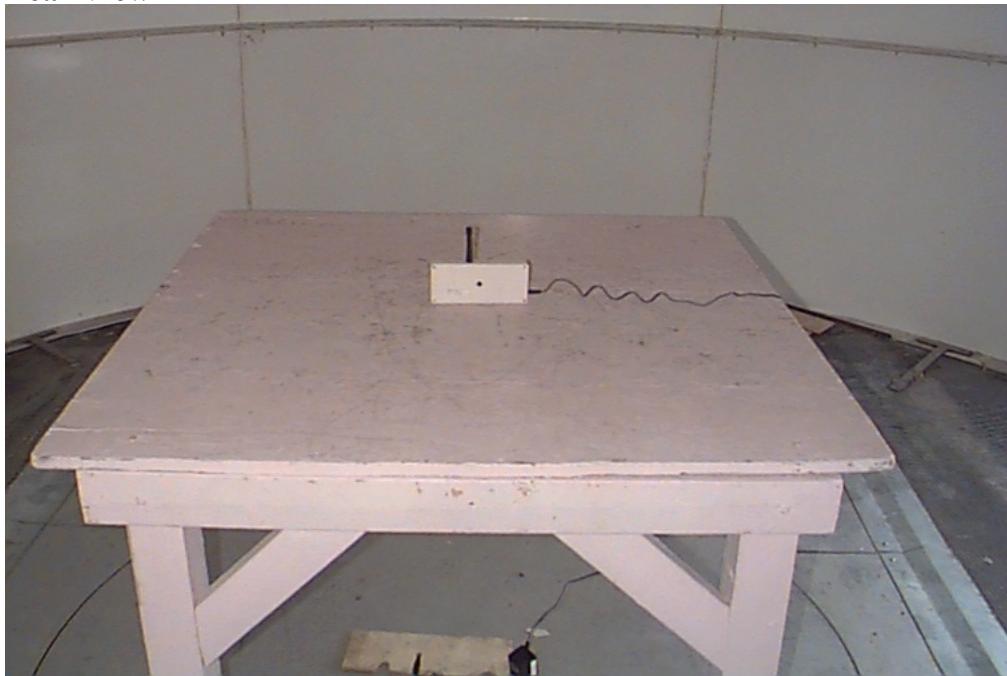
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**Radiated Photographs (Worst Case Configuration)**

**Front View**



**Rear View**



**KTL Ottawa**

FCC PART 15, SUBPART B  
RADIO RECEIVERS  
PROJECT NO.: 9R01885

*EQUIPMENT: VC 100 Receiver*

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FCC PART 15, SUBPART B  
RADIO RECEIVERS  
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**Section 4. Powerline Conducted Emissions**

NAME OF TEST: Powerline Conducted Emissions	PARA. NO.: 15.107
TESTED BY: Kevin Rose	DATE: February 9, 2000

**Minimum Standard:** The RF energy feed back into the power lines shall not exceed 48 dB $\mu$ V on any frequency between 0.45 MHz and 30 MHz inclusive.

**Test Results:** Complies. See attached graphs.

**Measurement Data:** See attached graphs.

*EQUIPMENT: VC 100 Receiver*  
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**Powerline Conducted Photographs (Worst Case Configuration)**

**Front View**



**Rear View**



**KTL Ottawa**

FCC PART 15, SUBPART B  
RADIO RECEIVERS  
PROJECT NO.: 9R01885

*EQUIPMENT: VC 100 Receiver*

FCC ID: OWKVC100

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**KTL Ottawa**

FCC PART 15, SUBPART B  
RADIO RECEIVERS  
PROJECT NO.: 9R01885

*EQUIPMENT: VC 100 Receiver*

FCC ID: OWKVC100

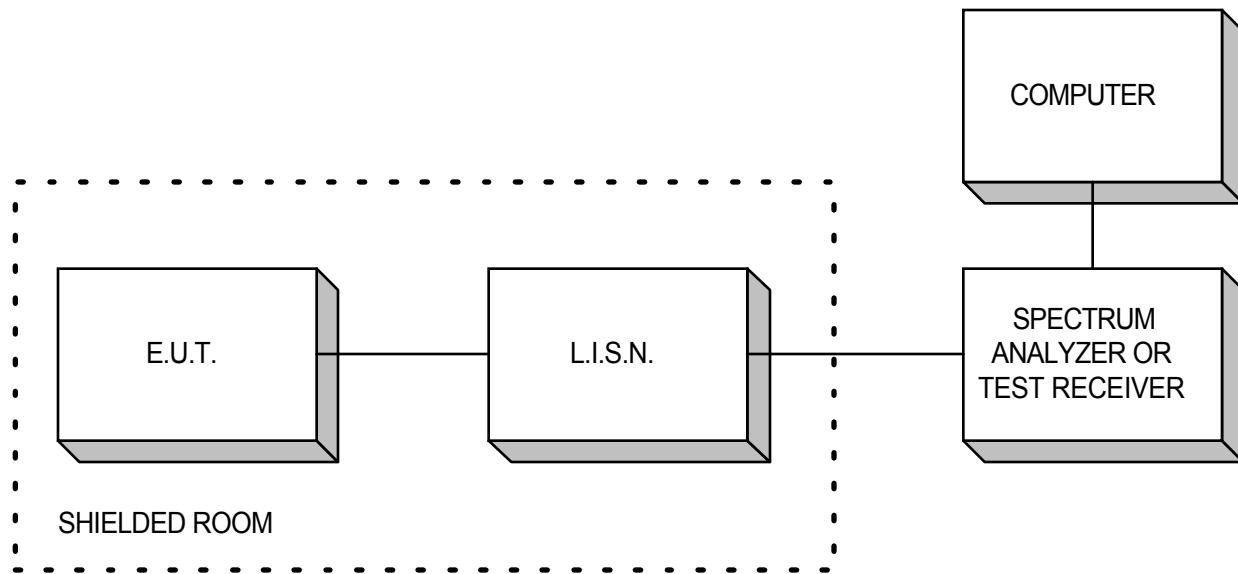
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*EQUIPMENT: VC 100 Receiver*  
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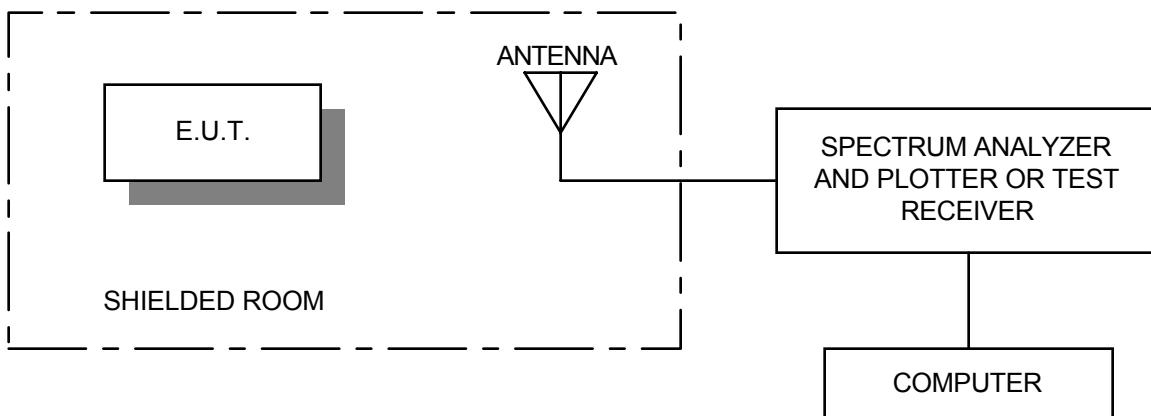
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## **Section 5. Block Diagrams**

### **Conducted Emissions**

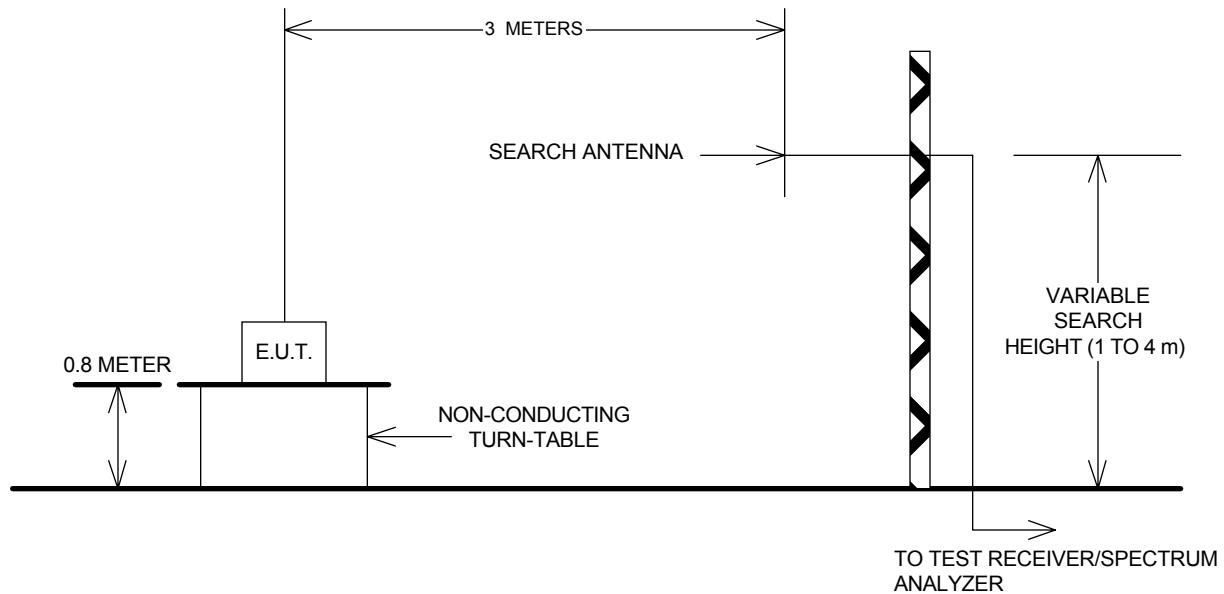


### **Radiated Prescan**



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**Outdoor Test Site For Radiated Emissions**

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

*EQUIPMENT: VC 100 Receiver**FCC ID: OWKVC100***Section 6. Test Equipment List**

CAL CYCLE	EQUIPMENT	MANUFACTURER	MODEL	SERIAL	LAST CAL.	NEXT CAL.
1 Year	Spectrum Analyzer-1	Hewlett Packard	8566B	2311A02238	Nov. 6/99	Nov. 6/00
1 Year	Spectrum Analyzer Display-1	Hewlett Packard	8566B	2314A04759	Nov. 6/99	Nov. 6/00
1 Year	Quasi-peak adapter-1	Hewlett-Packard	85650A	2043A00302	Nov. 11/99	Nov. 11/00
	Plotter	Hewlett Packard	7470A	2308A30807	NCR	NCR
1 Year	LISN	Rohde & Schwarz	ESH2-Z5	890485/017	Aug. 24/99	Aug. 24/00
1 Year	Receiver	Rohde & Schwarz	ESVP	892661/014	Mar. 29/99	Mar. 29/00
1 Year	Dipole Antenna Set	EMCO #2	3121C	FA001349	Apr. 5/99	Apr. 5/00

NA: Not Applicable

NCR: No Cal Required

COU: CAL On Use