



**Class II Permissive Change Report**  
**(FCC Part 15.247 (c) Radiated Emissions**  
**in Restricted Bands)**  
for  
**Symbol Technologies**  
on the  
**Spread Spectrum Transmitter**  
**Model: LA3021-500**  
**Test Report #: 20160302**  
**Date of Report: June 30, 2000**

Job #: J20016030-H  
Date of Test: June 27, 2000

Total No. of Pages Contained in this Report: 18



<i>Collin M... for</i>	Barry E. Smith, Test Engineer
<i>David Chernomordik</i>	David Chernomordik, Ph.D., EMC Site Manager

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## 1.0 Summary of Tests

**Symbol Technologies Inc. - Model No.: LA3021-500:**

TEST	REFERENCE	RESULTS
Radiated Emission in Restricted Bands	15.247(c)	Pass*

\*In normal operation the EUT transmits data with a duty cycle. The test results in the data sheets do not include the duty cycle correction factor. The duty cycle specified by Symbol is 9.0 dB. With the duty cycle of 9.0 dB applied to the test data the margin is well below the limit.

Test Engineer: Barry E. Smith Date: 6/30/00  
Barry E. Smith

EMC Site Mgr.: David Chernomordik Date: 6/30/00  
David Chernomordik

**2.0 General Description**

## 2.1 Product Description

The Symbol Technologies model LA3021-500 is 2.4 GHz Spread Spectrum radio in the form of a PCMCIA card that is used for wireless communication from a computer to a LAN.

**Overview of the EUT**

Trade Name & Model No.	Symbol Technologies, Model No. LA3021-500
Frequency Range (MHz)	2402 - 2480
Antenna(s)	5 antenna
Manufacturer name & address	Symbol Technologies 6480 Via Del Oro San Jose CA 95119

### 2.3 Test Methodology

This report is designed to show that the 5 new antennas added to the previously certified device comply with FCC regulations. Only radiated emissions in restricted bands were tested because the transmitter itself has not been modified.

Radiated emissions measurements were performed according to the procedures in ANSI C63.4 (1992). Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Data Sheet**" of this Application.

### 2.4 Test Facility

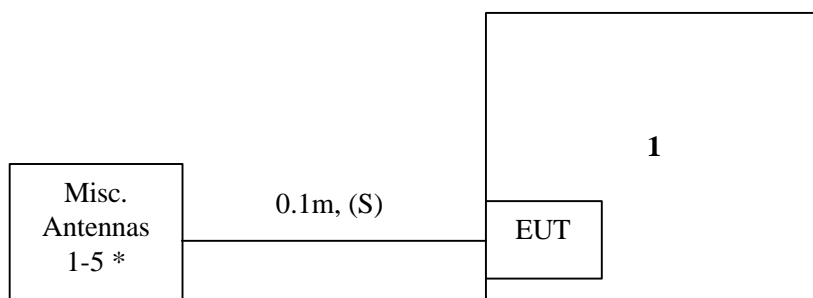
The open area test site facility used to collect the radiated data is located at 1365 Adams Court, Menlo Park, CA 94025. This test facility and site measurement data have been fully placed on file with the FCC.

**3.0 System Test Configuration**

## 3.1 Support Equipment

Item #	Description	Model No.	Serial No.	FCC ID
1	Compaq Notebook Computer	2860A	7448HJJ53R518	CNT75MB2CA

## 3.2 Block Diagram of Test Setup



- \*:  
Antenna #1 = Rubber DuckTNC-RP  
Antenna #2 = XP  
Antenna #3 = Toko  
Antenna #4 = Vocollect MMCX  
Antenna #5 = 1742

m: Length in meters

S: Shielded

### 3.3 Justification

For emission testing, the equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). During testing, all cables were manipulated to produce worst case emissions.

For radiated emission measurements, the EUT is attached to a cardboard box (if necessary) and placed on the wooden turntable. If the EUT attaches to peripherals, they are connected and operational (as typical as possible). The EUT is wired to transmit full power.

The signal is maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters. Radiated emissions are taken at three meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance.

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance.

### 3.4 Software Exercise Program

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

### 3.5 Mode of Operation During Test

For emissions testing, the units were setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing.

### 3.6 Modifications Required for Compliance

The following modifications were installed during compliance testing in order to bring the product into compliance (Please note that this list does not include changes made specifically by Symbol Technologies Inc. prior to compliance testing):

No modifications were made to the EUT by Intertek Testing Services.

#### 4.0 Measurement Results

##### 4.1 Transmitter Radiated Emissions in Restricted Bands, *FCC Ref: 15.247(c)*

Radiated emission measurements were performed from 30 MHz to 25000 MHz. Analyzer resolution is 100 kHz or greater for frequencies from 30 MHz to 1000 MHz and 1 MHz for frequencies above 1000 MHz.

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included. All measurements were performed with peak detection and average detection (above 1 GHz) unless otherwise specified.

On the following pages, the emissions on the harmonics frequencies, the limits, and the margin of compliance are presented. These tests were made when the transmitter is in full radiated power.

For the test results, refer to the following radiated emission data sheets.

For transmitters with hopping channel ON times < 100 msec, DUTY CYCLE CORRECTION is permitted for emissions above 1000 MHz: Duty Cycle of 0 dB was used.



4.2 Radiated Emission Test Results

**Radiated Emissions Test Data**

Company: Symbol						Model #: LA3021-500			Standard		FCC § 15.247 (R.B.)	
EUT: Direct Sequence Radio						S/N #:			Limits		11	
Project #:						Test Date: June 27, 2000			Test Distance		3 meters	
Test Mode: Lo/Mid channel antenna Rubber DuckTNC-RP						Engineer: Barry S.			Duty Relaxation		0 dB	
Frequency	Reading	Detector	Ant #	Amp #	Ant. Pol.	Ant. Factor	Pre-Amp	Insert. Loss	D. C. F.	Net	Limit @3m	Margin
MHz	dB(µV)	P/A/Q	#	#	H/V	dB(1/m)	dB	dB	dB	dB(µV/m)	dB(µV/m)	dB
<b>Xmit 2402</b>												
4804	41.7	Peak	14	8	V	33.9	28.1	3.2	0.0	50.7	74.0	-23.3
4804	40.7	Ave.	14	8	V	33.9	28.1	3.2	0.0	49.7	54.0	-4.3
12010	41.8	Peak	14	12	V	42.3	32.5	5.9	0.0	57.5	74.0	-16.6
12010	40.1	Ave.	14	12	V	42.3	32.5	5.9	0.0	55.8	54.0	1.8
19216	41.9	Peak	21	13	V	40.2	23.3	7.7	-9.5	57.0	74.0	-17.0
19216	30.7	Ave.	21	13	V	40.2	23.3	7.7	-9.5	45.8	54.0	-8.2
<b>Xmit 2440</b>												
4880	44.0	Peak	14	8	V	33.9	28.1	3.2	0.0	53.0	74.0	-21.1
4880	43.2	Ave.	14	8	V	33.9	28.1	3.2	0.0	52.2	54.0	-1.8
7320	42.9	Peak	14	8	V	38.0	28.0	4.3	0.0	57.2	74.0	-16.8
7320	41.8	Ave.	14	8	V	38.0	28.0	4.3	0.0	56.1	54.0	2.1
12220	41.7	Peak	14	10	V	42.3	39.1	5.9	0.0	50.8	74.0	-23.3
12220	39.7	Ave.	14	10	V	42.3	39.1	5.9	0.0	48.8	54.0	-5.3
19520	42.0	Peak	21	13	V	40.3	23.3	7.7	-9.5	57.2	74.0	-16.8
19520	31.5	Ave.	21	13	V	40.3	23.3	7.7	-9.5	46.7	54.0	-7.3
<b>Xmit 2480</b>												
4960	44.6	Peak	14	8	V	33.9	28.1	4.9	0.0	55.3	74.0	-18.7
4960	44.1	Ave.	14	8	V	33.9	28.1	4.9	0.0	54.8	54.0	0.8
7440	40.9	Peak	14	8	V	38.0	28.0	6.3	0.0	57.2	74.0	-16.8
7440	39.3	Ave.	14	8	V	38.0	28.0	6.3	0.0	55.6	54.0	1.6
12400	39.7	Peak	14	12	V	42.3	32.5	8.8	0.0	58.3	74.0	-15.7
12400	36.5	Ave.	14	12	V	42.3	32.5	8.8	0.0	55.1	54.0	1.1
22320	44.3	Peak	21	13	V	40.3	23.3	0.0	-9.5	51.8	74.0	-22.2
22320	31.5	Ave.	21	13	V	40.3	23.3	0.0	-9.5	39.0	54.0	-15.0
Subtract 9 dB for all readings to account for duty cycle												
DCF of -9.5 were taken at 1 meter with RBW at 300kHz												

<b>Notes:</b>	a) D.C.F.: Distance Correction Factor
	b) Insert. Loss (dB) = Cable A + Cable B + Cable C .
	c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).
	d) Negative signs (-) in Margin column signify levels below the limits.
	e) All other emissions: not reported are below the equipment noise floor which is at least 20 dB below the limits.

Radiated Emission Test Results (continued)

**Radiated Emissions Test Data**

<b>Company:</b> Symbol						<b>Model #:</b> LA3021-500			<b>Standard_</b>		<b>FCC § 15.247 (R.B.)</b>	
<b>EUT:</b> Direct Sequence Radio						<b>S/N #:</b>			<b>Limits</b>		11	
<b>Project #:</b>						<b>Test Date:</b> June 27, 2000			<b>Test Distance_</b>		3 meters	
<b>Test Mode:</b> Lo/Mid channel antenna X.P						<b>Engineer:</b> Barry S.			<b>Duty Relaxation</b>		0 dB	
Frequency	Reading	Detector	Ant #	Amp. #	Ant. Pol.	Ant. Factor	Pre-Amp	Insert. Loss	D. C. F.	Net	Limit @3m	Margin
MHz	dB(µV)	P/A/Q	#	#	H/V	dB(1/m)	dB	dB	dB	dB(µV/m)	dB(µV/m)	dB
<b>Xmit 2402</b>												
4804	38.2	Peak	14	8	V	33.9	28.1	3.2	0.0	47.2	74.0	-26.8
4804	35.6	Ave.	14	8	V	33.9	28.1	3.2	0.0	44.6	54.0	-9.4
12010	37.3	Peak	14	12	V	42.3	32.5	5.9	0.0	53.0	74.0	-21.1
12010	33.7	Ave.	14	12	V	42.3	32.5	5.9	0.0	49.4	54.0	-4.7
19216	41.1	Peak	21	13	V	40.2	23.3	7.7	-9.5	56.1	74.0	-17.9
19216	31.2	Ave.	21	13	V	40.2	23.3	7.7	-9.5	46.3	54.0	-7.7
<b>Xmit 2440</b>												
4880	40.4	Peak	14	8	V	33.9	28.1	3.2	0.0	49.4	74.0	-24.7
4880	39.0	Ave.	14	8	V	33.9	28.1	3.2	0.0	48.0	54.0	-6.0
7320	44.5	Peak	14	8	V	38.0	28.0	4.3	0.0	58.8	74.0	-15.2
7320	43.0	Ave.	14	8	V	38.0	28.0	4.3	0.0	57.3	54.0	3.3
12220	32.3	Peak	14	12	V	42.3	32.5	5.9	0.0	48.0	74.0	-26.1
12220	24.6	Ave.	14	12	V	42.3	32.5	5.9	0.0	40.3	54.0	-13.8
19520	41.4	Peak	21	13	V	40.3	23.3	7.7	-9.5	56.6	74.0	-17.4
19520	31.8	Ave.	21	13	V	40.3	23.3	7.7	-9.5	46.9	54.0	-7.1
<b>Xmit 2480</b>												
4960	40.5	Peak	14	8	V	33.9	28.1	4.9	0.0	51.2	74.0	-22.8
4960	39.3	Ave.	14	8	V	33.9	28.1	4.9	0.0	50.0	54.0	-4.0
7440	43.9	Peak	14	8	V	38.0	28.0	6.3	0.0	60.2	74.0	-13.8
7440	42.5	Ave.	14	8	V	38.0	28.0	6.3	0.0	58.8	54.0	4.8
12400	37.4	Peak	14	12	V	42.3	32.5	8.8	0.0	56.0	74.0	-18.0
12400	33.4	Ave.	14	12	V	42.3	32.5	8.8	0.0	52.0	54.0	-2.0
22320	45.7	Peak	21	13	V	40.3	23.3	0.0	-9.5	53.2	74.0	-20.8
22320	34.9	Ave.	21	13	V	40.3	23.3	0.0	-9.5	42.4	54.0	-11.6
Subtract 9 dB for all readings to account for duty cycle												
DCF of -9.5 were taken at 1 meter with RBW at 300kHz												

<b>Notes:</b>	a) D.C.F.: Distance Correction Factor
	b) Insert. Loss (dB) = Cable A + Cable B + Cable C .
	c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).
	d) Negative signs (-) in Margin column signify levels below the limits.
	e) All other emissions: not reported are below the equipment noise floor which is at least 20 dB below the limits.

Radiated Emission Test Results (continued)

**Radiated Emissions  
Test Data**

<b>Company:</b> Symbol						<b>Model #:</b> LA3021-500			<b>Standard_</b>		<b>FCC § 15.247 (R.B.)</b>	
<b>EUT:</b> Direct Sequence Radio						<b>S/N #:</b>			<b>Limits</b>		11	
<b>Project #:</b>						<b>Test Date:</b> June 27, 2000			<b>Test Distance_</b>		3 meters	
<b>Test Mode:</b> Lo/Mid channel antenna TOKO						<b>Engineer:</b> Barry S.			<b>Duty Relaxation</b>		0 dB	
Frequency	Reading	Detector	Ant #	Amp. #	Ant. Pol.	Ant. Factor	Pre-Amp	Insert. Loss	D. C. F.	Net	Limit @3m	Margin
MHz	dB(µV)	P/A/Q	#	#	H/V	dB(1/m)	dB	dB	dB	dB(µV/m)	dB(µV/m)	dB
<b>Xmit 2402</b>												
4804	37.7	Peak	14	8	V	33.9	28.1	3.2	0.0	46.7	74.0	-27.3
4804	36.3	Ave.	14	8	V	33.9	28.1	3.2	0.0	45.3	54.0	-8.7
12010	36.6	Peak	14	12	V	42.3	32.5	5.9	0.0	52.3	74.0	-21.8
12010	33.2	Ave.	14	12	V	42.3	32.5	5.9	0.0	48.9	54.0	-5.2
19216	41.4	Peak	21	13	V	40.2	23.3	7.7	-9.5	56.5	74.0	-17.5
19216	30.7	Ave.	21	13	V	40.2	23.3	7.7	-9.5	45.8	54.0	-8.2
<b>Xmit 2440</b>												
4880	38.6	Peak	14	8	V	33.9	28.1	3.2	0.0	47.6	74.0	-26.4
4880	37.3	Ave.	14	8	V	33.9	28.1	3.2	0.0	46.3	54.0	-7.7
7320	44.5	Peak	14	8	V	38.0	28.0	4.3	0.0	58.8	74.0	-15.2
7320	43.9	Ave.	14	8	V	38.0	28.0	4.3	0.0	58.2	54.0	4.2
12220	32.0	Peak	14	12	V	42.3	32.5	5.9	0.0	47.7	74.0	-26.4
12220	24.4	Ave.	14	12	V	42.3	32.5	5.9	0.0	40.1	54.0	-14.0
19520	42.3	Peak	21	13	V	40.3	23.3	7.7	-9.5	57.5	74.0	-16.5
19520	31.7	Ave.	21	13	V	40.3	23.3	7.7	-9.5	46.9	54.0	-7.1
<b>Xmit 2480</b>												
4960	38.9	Peak	14	8	V	33.9	28.1	4.9	0.0	49.6	74.0	-24.4
4960	37.8	Ave.	14	8	V	33.9	28.1	4.9	0.0	48.5	54.0	-5.5
7440	46.9	Peak	14	8	V	38.0	28.0	6.3	0.0	63.2	74.0	-10.8
7440	45.4	Ave.	14	8	V	38.0	28.0	6.3	0.0	61.7	54.0	7.7
12400	34.9	Peak	14	12	V	42.3	32.5	8.8	0.0	53.5	74.0	-20.5
12400	29.2	Ave.	14	12	V	42.3	32.5	8.8	0.0	47.8	54.0	-6.2
22320	45.9	Peak	21	13	V	40.3	23.3	0.0	-9.5	53.4	74.0	-20.6
22320	35.0	Ave.	21	13	V	40.3	23.3	0.0	-9.5	42.5	54.0	-11.5
Subtract 9 dB for all readings to account for duty cycle												
DCF of -9.5 were taken at 1 meter with RBW at 300kHz												

<b>Notes:</b>	a) D.C.F.: Distance Correction Factor
	b) Insert. Loss (dB) = Cable A + Cable B + Cable C .
	c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).
	d) Negative signs (-) in Margin column signify levels below the limits.
	e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

Radiated Emission Test Results (continued)

**Radiated Emissions Test Data**

Company: Symbol						Model #: LA3021-500			Standard		FCC § 15.247 (R.B.)	
EUT: Direct Sequence Radio						S/N #:			Limits		11	
Project #:						Test Date: June 27, 2000			Test Distance		3 meters	
Test Mode: Lo/Mid channel antenna Vocollect MMCX						Engineer: Barry S.			Duty Relaxation		0 dB	
Frequency	Reading	Detector	Ant #	Amp. #	Ant. Pol. H/V	Ant. Factor dB(1/m)	Pre-Amp dB	Insert. Loss dB	D. C. F. dB	Net dB(μV/m)	Limit @3m dB(μV/m)	Margin dB
<b>Xmit 2402</b>												
4804	41.9	Peak	14	8	V	33.9	28.1	3.2	0.0	50.9	74.0	-23.1
4804	40.3	Ave.	14	8	V	33.9	28.1	3.2	0.0	49.3	54.0	-4.7
12010	38.8	Peak	14	12	V	42.3	32.5	5.9	0.0	54.5	74.0	-19.6
12010	35.6	Ave.	14	12	V	42.3	32.5	5.9	0.0	51.3	54.0	-2.7
19216	43.5	Peak	21	13	V	40.2	23.3	7.7	-9.5	58.6	74.0	-15.4
19216	30.8	Ave.	21	13	V	40.2	23.3	7.7	-9.5	45.9	54.0	-8.1
<b>Xmit 2440</b>												
4880	43.1	Peak	14	8	V	33.9	28.1	3.2	0.0	52.1	74.0	-21.9
4880	42.4	Ave.	14	8	V	33.9	28.1	3.2	0.0	51.4	54.0	-2.6
7320	43.0	Peak	14	8	V	38.0	28.0	4.3	0.0	57.3	74.0	-16.7
7320	41.8	Ave.	14	8	V	38.0	28.0	4.3	0.0	56.1	54.0	2.1
12220	31.6	Peak	14	10	V	42.3	39.1	5.9	0.0	40.7	74.0	-33.4
12220	24.6	Ave.	14	10	V	42.3	39.1	5.9	0.0	33.7	54.0	-20.4
19520	41.8	Peak	21	13	V	40.3	23.3	7.7	-9.5	57.0	74.0	-17.0
19520	31.4	Ave.	21	13	V	40.3	23.3	7.7	-9.5	46.6	54.0	-7.4
<b>Xmit 2480</b>												
4960	40.4	Peak	14	8	V	33.9	28.1	4.9	0.0	51.1	74.0	-22.9
4960	39.8	Ave.	14	8	V	33.9	28.1	4.9	0.0	50.5	54.0	-3.5
7440	39.8	Peak	14	8	V	38.0	28.0	6.3	0.0	56.1	74.0	-17.9
7440	38.0	Ave.	14	8	V	38.0	28.0	6.3	0.0	54.3	54.0	0.3
12400	36.7	Peak	14	12	V	42.3	32.5	8.8	0.0	55.3	74.0	-18.7
12400	31.6	Ave.	14	12	V	42.3	32.5	8.8	0.0	50.2	54.0	-3.8
22320	45.9	Peak	21	13	V	40.3	23.3	0.0	-9.5	53.4	74.0	-20.6
22320	35.0	Ave.	21	10	V	40.3	36.1	0.0	-9.5	29.7	54.0	-24.3
Subtract 9 dB for all readings to account for duty cycle												
DCF of -9.5 were taken at 1 meter with RBW at 300kHz												

<b>Notes:</b>	a) D.C.F.:Distance Correction Factor
	b) Insert. Loss (dB) = Cable A + Cable B + Cable C .
	c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).
	d) Negative signs (-) in Margin column signify levels below the limits.
	e) All other emissions: not reported are below the equipment noise floor which is at least 20 dB below the limits.

Radiated Emission Test Results (continued)

**Radiated Emissions Test Data**

Company: Symbol						Model #: LA3120-500			Standard_		FCC § 15.247 (R.B.)	
EUT: Direct Sequence Radio						S/N #:			Limits		11	
Project #:						Test Date: June 27, 2000			Test Distance_		3 meters	
Test Mode: Lo/Mid channel antenna 1742						Engineer: Barry S.			Duty Relaxation		0 dB	
Frequency	Reading	Detector	Ant #	Amp. #	Ant. Pol. H/V	Ant. Factor dB(1/m)	Pre-Amp dB	Insert. Loss dB	D. C. F. dB	Net dB(µV/m)	Limit @3m dB(µV/m)	Margin dB
Xmit 2402							0.0	2.3	0.0			---
4804	42.3	Peak	14	8	V	33.9	28.1	3.2	0.0	51.3	74.0	-22.7
4804	41.3	Ave.	14	8	V	33.9	28.1	3.2	0.0	50.3	54.0	-3.7
12010	36.3	Peak	14	12	V	42.3	32.5	5.9	0.0	52.0	74.0	-22.1
12010	31.8	Ave.	14	12	V	42.3	32.5	5.9	0.0	47.5	54.0	-6.6
19216	41.9	Peak	21	13	V	40.2	23.3	7.7	-9.5	57.0	74.0	-17.0
19216	30.8	Ave.	21	13	V	40.2	23.3	7.7	-9.5	45.9	54.0	-8.1
Xmit 2440							0.0	2.3	0.0			---
4880	42.5	Peak	14	8	V	33.9	28.1	3.2	0.0	51.5	74.0	-22.5
4880	41.2	Ave.	14	8	V	33.9	28.1	3.2	0.0	50.2	54.0	-3.8
7320	42.3	Peak	14	8	V	38.0	28.0	4.3	0.0	56.6	74.0	-17.4
7320	40.6	Ave.	14	8	V	38.0	28.0	4.3	0.0	54.9	54.0	0.9
12220	32.5	Peak	14	12	V	42.3	32.5	5.9	0.0	48.2	74.0	-25.9
12220	24.5	Ave.	14	12	V	42.3	32.5	5.9	0.0	40.2	54.0	-13.9
19520	42.4	Peak	21	13	V	40.3	23.3	7.7	-9.5	57.6	74.0	-16.4
19520	31.5	Ave.	21	13	V	40.3	23.3	7.7	-9.5	46.7	54.0	-7.3
Xmit 2480												---
4960	44.0	Peak	14	8	V	33.9	28.1	4.9	0.0	54.7	74.0	-19.3
4960	43.0	Ave.	14	8	V	33.9	28.1	4.9	0.0	53.7	54.0	-0.3
7440	42.4	Peak	14	8	V	38.0	28.0	6.3	0.0	58.7	74.0	-15.3
7440	40.5	Ave.	14	8	V	38.0	28.0	6.3	0.0	56.8	54.0	2.8
12400	38.0	Peak	14	12	V	42.3	32.5	8.8	0.0	56.6	74.0	-17.4
12400	34.9	Ave.	14	12	V	42.3	32.5	8.8	0.0	53.5	54.0	-0.5
22320	46.6	Peak	21	13	V	40.3	23.3	0.0	-9.5	54.1	74.0	-19.9
22320	35.0	Ave.	21	13	V	40.3	23.3	0.0	-9.5	42.5	54.0	-11.5
Subtract 9 dB for all readings to account for duty cycle												
DCF of -9.5 were taken at 1 meter with RBW at 300kHz												

<b>Notes:</b>	a) D.C.F.: Distance Correction Factor
	b) Insert. Loss (dB) = Cable A + Cable B + Cable C .
	c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).
	d) Negative signs (-) in Margin column signify levels below the limits.
	e) All other emissions: not reported are below the equipment noise floor which is at least 20 dB below the limits.

4.3 Radiated Emission Configuration Photograph



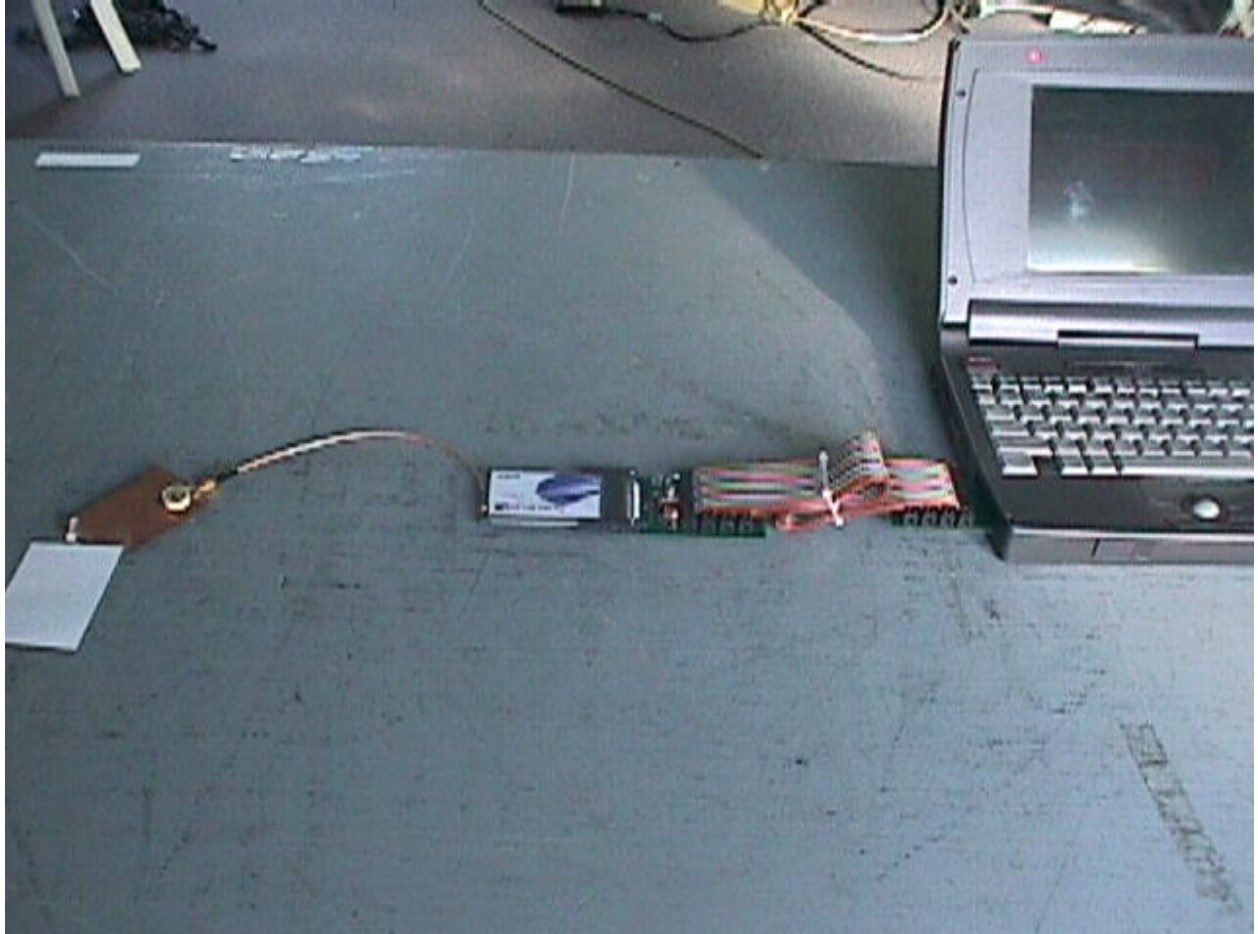
Antenna #1 – Rubber DuckTNC-RP

Configuration Photograph (continued)



Antenna #2 - XP

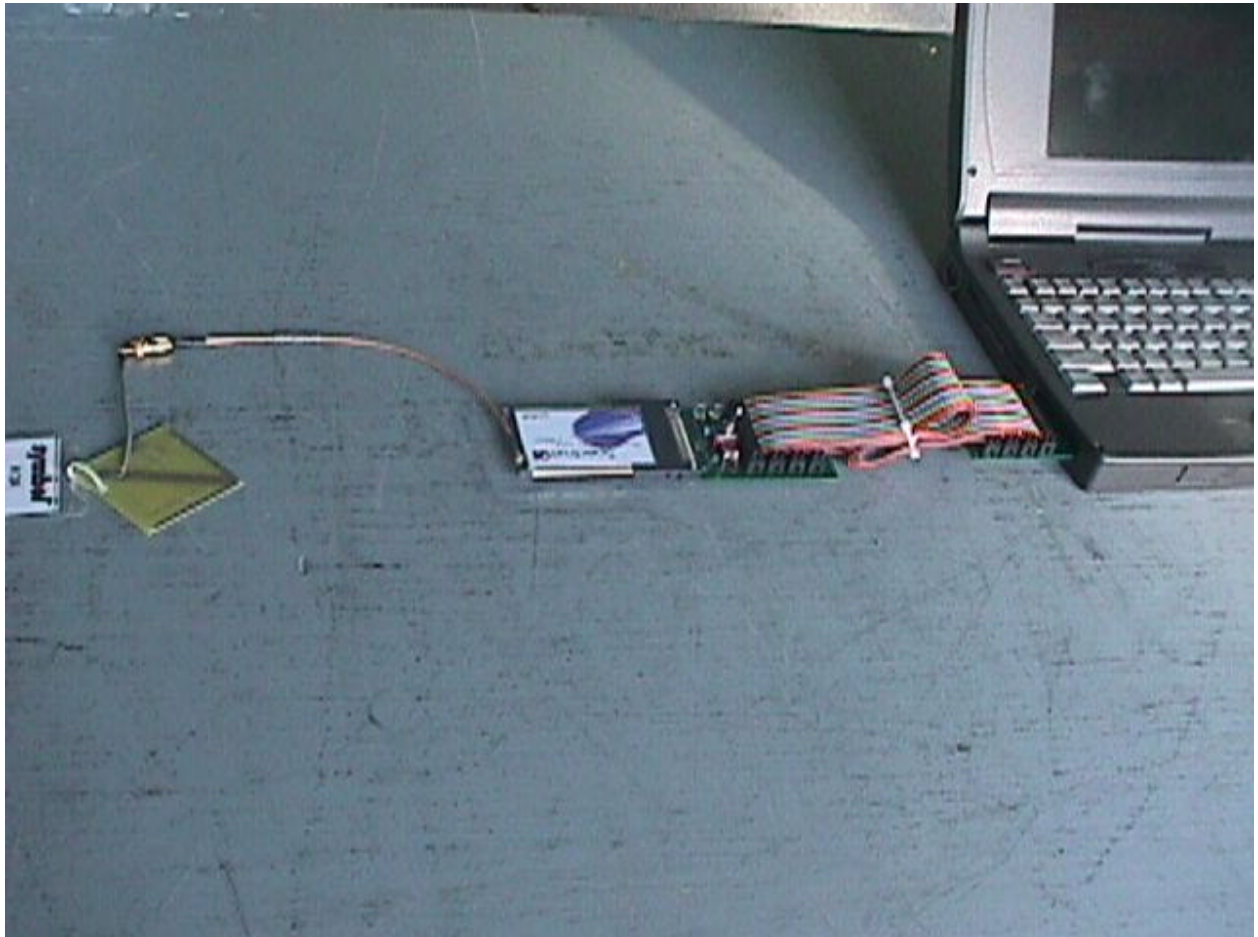
Configuration Photograph (continued)



Antenna #3 - Toko

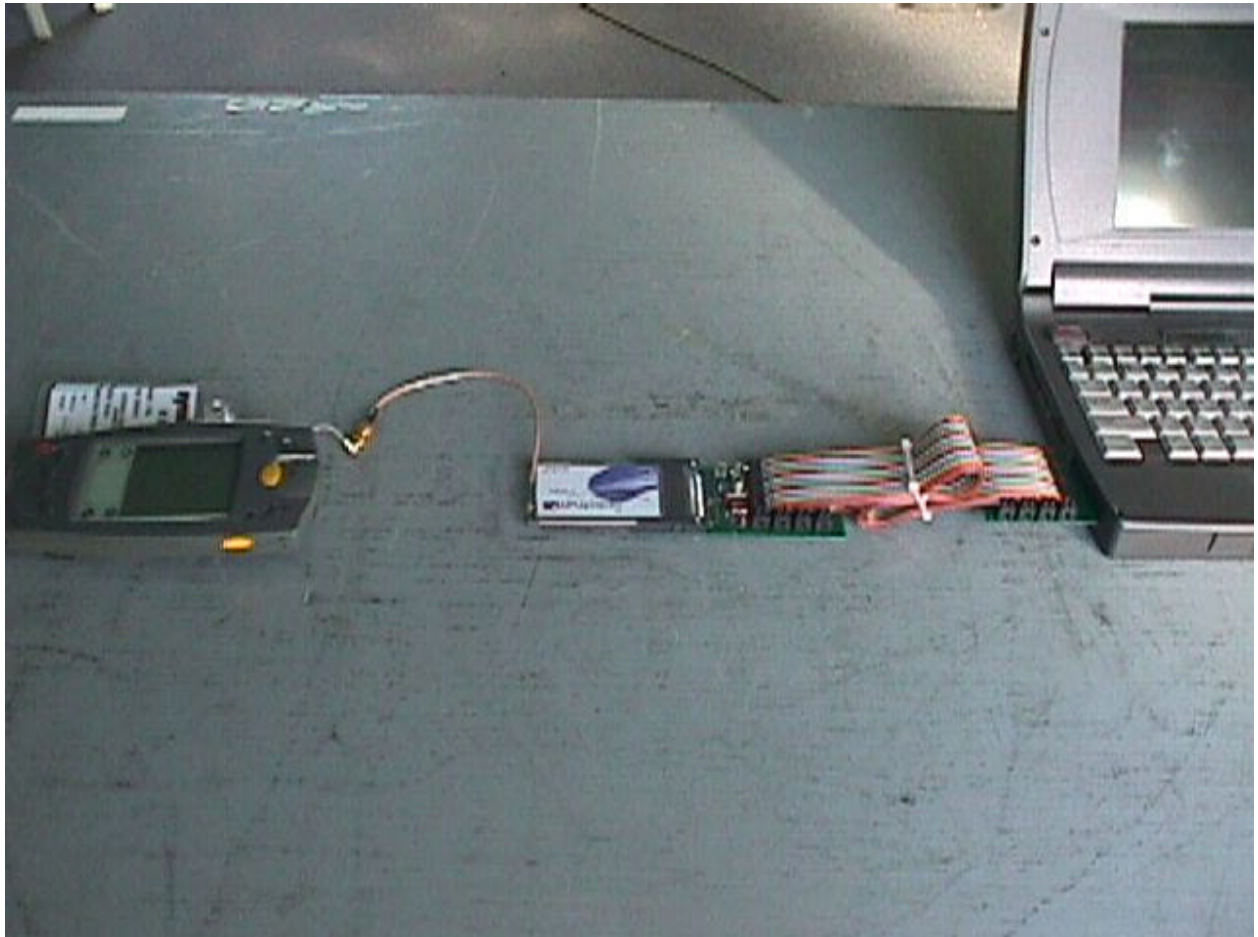


Configuration Photographs (continued)



Antenna #4 – Vocollect MMCX

Configuration Photographs (continued)



Antenna 5 - 1742

**5.0 Document History**

<b>Revision/Job Number</b>	<b>Date</b>	<b>Change</b>
1.0 / J20016030-H	6/30/00	Original document