

*FCC PART 15, SUBPART C  
TEST REPORT*

*for*

**TRANSCEIVER MODULE**

**Model: TC-916-SC**

Prepared for

**LINX TECHNOLOGIES  
575 SE ASHLEY PLACE  
GRANTS PASS, OR 97526**

Prepared by: *Kyle Fujimoto*

**KYLE FUJIMOTO**

Approved by: *Scott McCutchan*

**SCOTT McCUTCHAN**

**COMPATIBLE ELECTRONICS INC.  
114 OLINDA DRIVE  
BREA, CALIFORNIA 92823  
(714) 579-0500**

**DATE: JANUARY 20, 2000**

	REPORT BODY	APPENDICES				TOTAL
		<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	
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## GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced in any form unless done so in full with the written permission of Compatible Electronics.

This report must not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Device Tested: Transceiver Module  
Model: TC-916-SC  
S/N: N/A

Product Description: See Expository Statement.

Modifications: The EUT was not modified during the testing.

Manufacturer: Linx Technologies  
575 SE Ashley Place  
Grants Pass, OR 97526

Test Date: January 19, 2000

Test Specifications: EMI requirements  
CFR Title 47, Part 15 Subpart C, Sections 15.205 and 15.249

Test Procedure: ANSI C63.4: 1992

Test Deviations: The test procedure was not deviated from during the testing.

## SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 450 kHz - 30 MHz	This test was not performed because the EUT is powered by a nine volt battery.
2	Radiated RF Emissions, 10 kHz - 9300 MHz	Complies with the limits of CFR Title 47, Part 15, Subpart C, sections 15.205 and 15.249



## 1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Transceiver Module Model: TC-916-SC. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 1992. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the specification limits defined by CFR Title 47, Part 15, Subpart C, sections 15.205 and 15.249.



## **2. ADMINISTRATIVE DATA**

### **2.1 Location of Testing**

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

### **2.2 Traceability Statement**

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

### **2.3 Cognizant Personnel**

Linx Technologies

Paul True President

Compatible Electronics Inc.

Kyle Fujimoto Test Engineer  
Scott McCutchan Lab Manager

### **2.4 Date Test Sample was Received**

The test sample was received on January 19, 2000.

### **2.5 Disposition of the Test Sample**

The test sample was returned to Linx Technologies on January 20, 2000.

### **2.6 Abbreviations and Acronyms**

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network



### 3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
CFR Title 47, Subpart C.	FCC Rules – Radio frequency devices (including digital devices) – Intentional Radiators
ANSI C63.4 1992	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz.



## **4. DESCRIPTION OF TEST CONFIGURATION**

### **4.1 Description of Test Configuration - EMI**

#### **Specifics of the EUT and Peripherals Tested**

The Transceiver Module Model: TC-916-SC (EUT) was tested as a stand alone unit. The EUT is powered by a nine volt battery. The EUT was mounted on a PCB that provided the power and data input/output lines to the module. The EUT was tested in three orthogonal axis. The EUT was continuously transmitting when the jumper on JP1 of the PCB was set to transmit. The EUT was continuously receiving when the jumper on JP1 of the PCB was set to receive. The antennas used for the EUT both have reverse polarity SMA connectors. The connector on the module is also reverse polarity SMA.

Note: The EUT was investigated in both transmitting and receiving modes separately. Two different antennas were used:

1. 2 inch antenna (ANT 900-RH)
2. 3 inch antenna (ANT 900 CW)

The final radiated data was taken in both the transmitting and receiving modes using both antennas. Complete data for each mode was taken with both antennas. Please see Appendix D for the data sheets.





#### 4.1.1 Cable Construction and Termination

There are no external cables on the EUT.



## 5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

### 5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
Transceiver Module (EUT)	LINX TECHNOLOGIES	TC-916-SC	N/A	OJM-TC-916-SC
PCB	N/A	N/A	N/A	N/A



## 5.2 EMI Test Equipment

EQUIPMENT TYPE	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Spectrum Analyzer	Hewlett Packard	8566B	3638A08768	Dec. 14, 1999	Dec. 14, 2000
Preamplifier	Com Power	PA-102	1017	Jan. 11, 1999	Jan. 11, 2000
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01363	Dec. 14, 1999	Dec. 14, 2000
Biconical Antenna	Com Power	AB-100	1548	Oct. 14, 1999	Oct. 14, 2000
Log Periodic Antenna	Com Power	AL-100	16039	Oct. 14, 1999	Oct. 14, 2000
Turntable	Com Power	TT-100	N/A	N/A	N/A
Computer	Hewlett Packard	HP98561A	2522A05178	N/A	N/A
Printer	Hewlett Packard	2225A	2925S33268	N/A	N/A
Plotter	Hewlett Packard	7440A	8726K38417	N/A	N/A
Microwave Preamplifier	Com-Power	PA-122	25195	Jan. 13, 2000	Jan. 13, 2001
Horn Antenna	Antenna Research	DRG-118/A	1053	Dec. 8, 1995	N/A
Loop Antenna	Com-Power	AL-130	25309	April 13, 1999	April 13, 2000



## **6. TEST SITE DESCRIPTION**

### **6.1 Test Facility Description**

Please refer to section 2.1 and 7.1 of this report for EMI test location.

### **6.2 EUT Mounting, Bonding and Grounding**

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was not grounded.



## 7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

### 7.1 Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com Power Preamplifier Model: PA-102 was used for frequencies from 30 MHz to 1 GHz, and the Hewlett Packard Microwave Preamplifier Model: 8449B was used for frequencies above 1 GHz. The spectrum analyzer was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps.

For the peak readings below 1000 MHz that were within 3 dB of the spec limit or higher, the quasi-peak adapter was used.

For the peak readings above 1000 MHz that were within 3dB of the spec limit or higher, the readings were averaged manually by narrowing the video filter down to 1 Hz and slowing the sweep time to keep the amplitude reading calibrated.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna
1 GHz to 9.3 GHz	1 MHz	Horn Antenna

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4: 1992. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results.



**Radiated Emissions (Spurious and Harmonics) Test (con't)**

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance to obtain final test data. The final qualification data sheets are located in Appendix D.



## 8. CONCLUSIONS

The Transceiver Module Model: TC-916-SC meets all of the specification limits defined in CFR Title 47, Part 15, Subpart C, sections 15.205 and 15.249.





## ***MODIFICATIONS TO THE EUT***



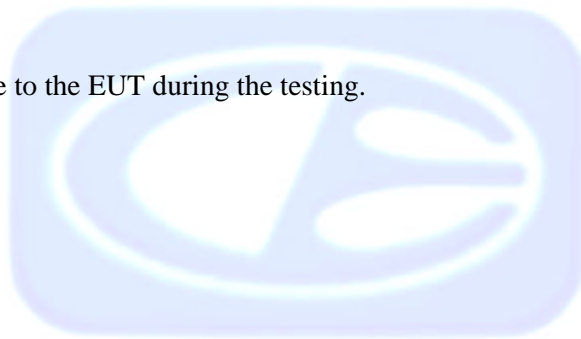


## MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.249 specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT during the testing.





**APPENDIX B**

***ADDITIONAL MODELS COVERED  
UNDER THIS REPORT***



## **ADDITIONAL MODELS COVERED UNDER THIS REPORT**

USED FOR THE PRIMARY TEST

Transceiver Module  
Model: TC-916-SC  
S/N: N/A

There were no additional models covered under this report.

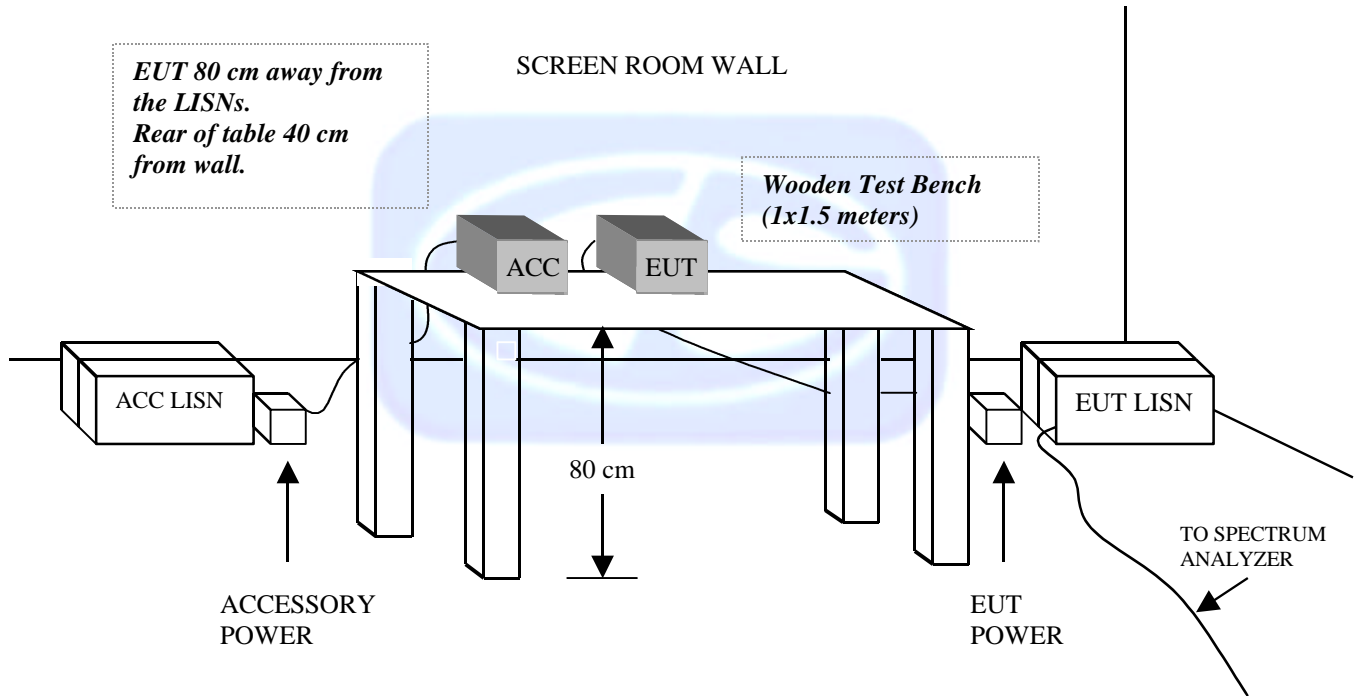




**APPENDIX C**

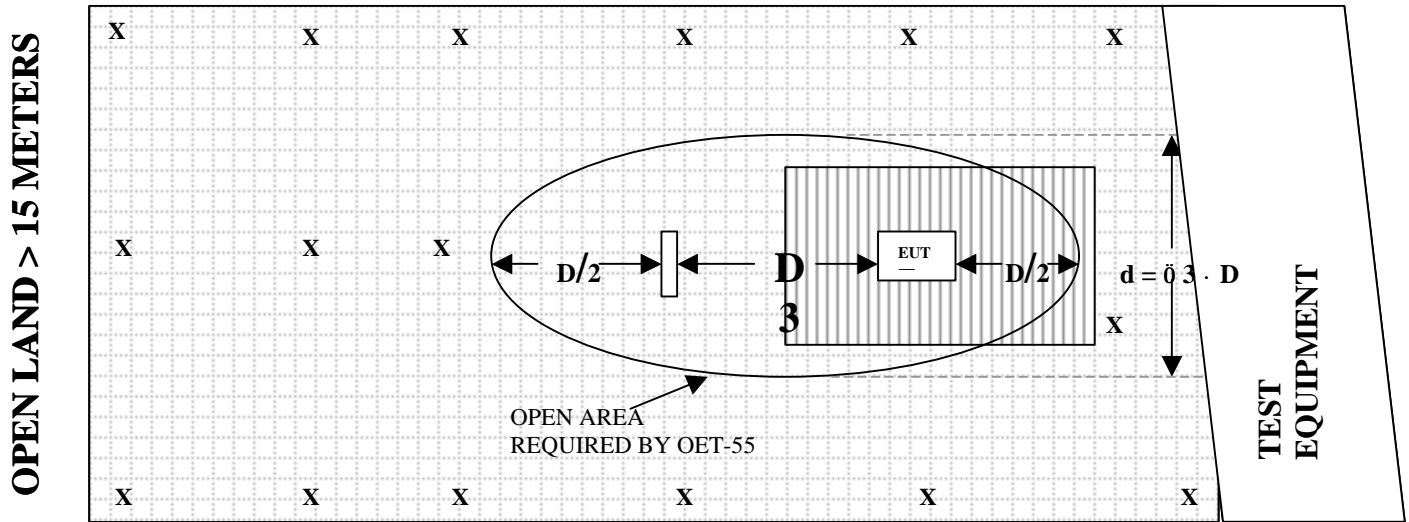
***DIAGRAMS, CHARTS AND PHOTOS***



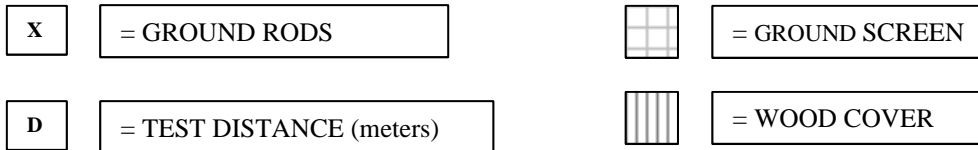
**FIGURE 1: CONDUCTED EMISSIONS TEST SETUP**

## FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE

### OPEN LAND > 15 METERS



### OPEN LAND > 15 METERS





**FRONT VIEW**

LINX TECHNOLOGIES  
TRANSCIVER MODULE  
MODEL: TC-916-SC  
FCC SUBPART C - RADIATED EMISSIONS – 1-19-00

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**





**REAR VIEW**

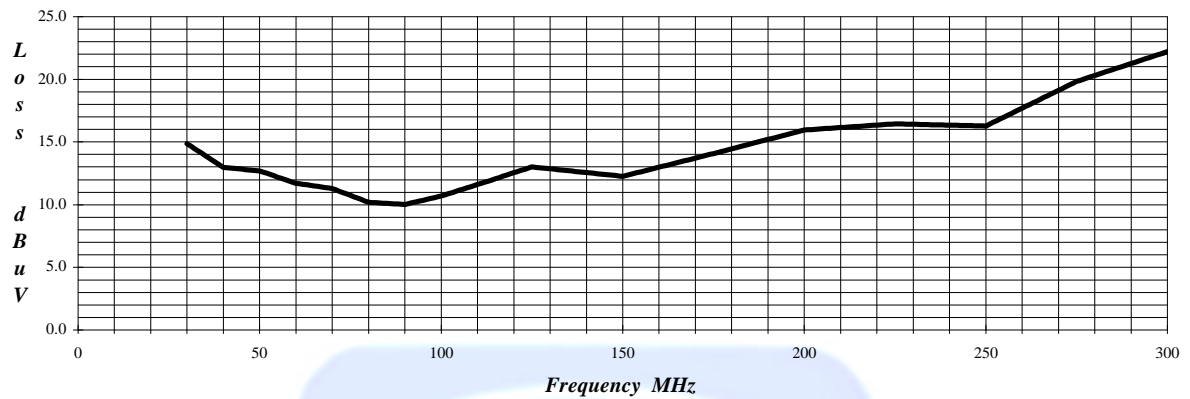
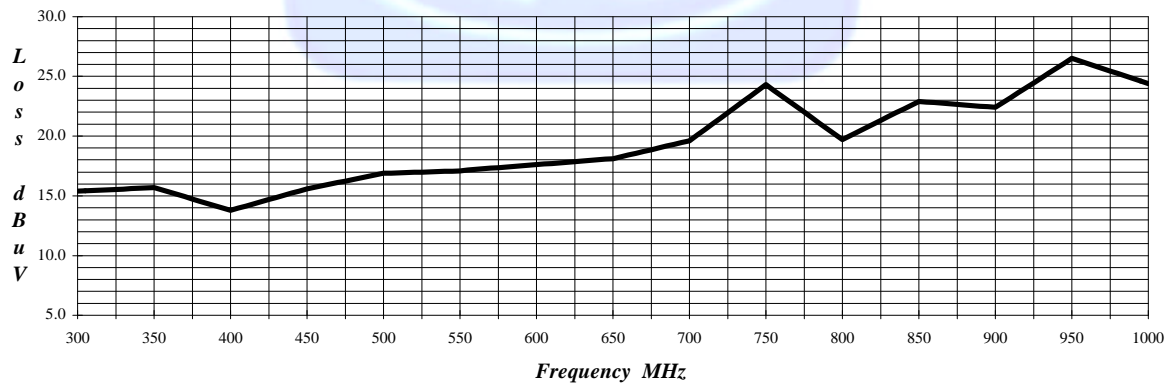
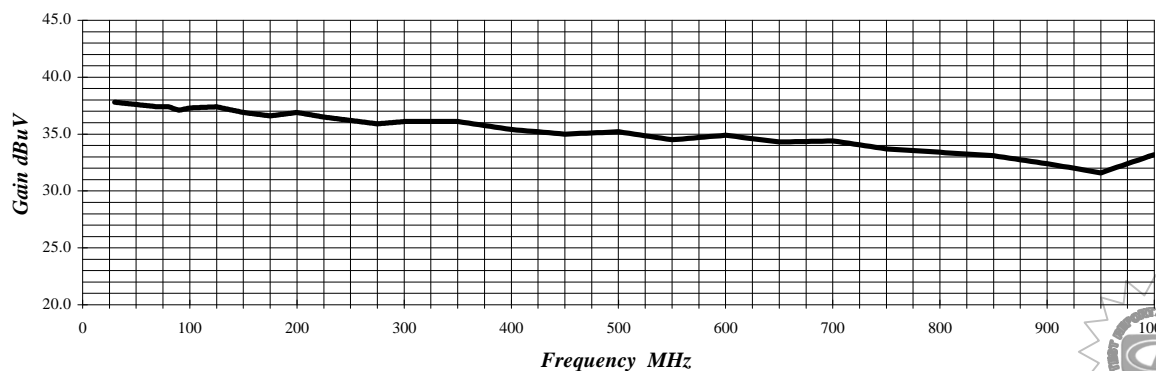
LINX TECHNOLOGIES  
TRANSCIVER MODULE  
MODEL: TC-916-SC

FCC SUBPART C - RADIATED EMISSIONS – 1-19-00

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION  
FOR MAXIMUM EMISSIONS**





**LAB "D" BICONICAL ANTENNA AB-100 S/N 01548 Cal: 10-14-99****LAB "D" LOG PERIODIC ANTENNA AL-100 S/N 16039 Cal: 10-14-99****PREAMPLIFIER EFFECTIVE GAIN AT 3 METERS PA-102 S/N: 1017 Lab "D"  
Effective 1-16-99**

# COM-POWER PA-122

## MICROWAVE PREAMPLIFIER

S/N: 25195

CALIBRATION DATE: JANUARY 13, 2000

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	34.4	9.5	31.5
1.1	34.1	10.0	31.0
1.2	34.2	10.5	31.4
1.3	34.1	11.0	30.7
1.4	33.9	11.5	29.5
1.5	33.8	12.0	27.8
1.6	33.0	12.5	31.4
1.7	33.3	13.0	31.0
1.8	33.3	13.5	31.0
1.9	31.9	14.0	31.5
2.0	32.7	14.5	30.2
2.5	31.8	15.0	29.2
3.0	31.7	15.5	30.1
3.5	31.9	16.0	29.0
4.0	31.0	16.5	27.8
4.5	31.4	17.0	30.8
5.0	31.1	17.5	31.5
5.5	31.0	18.0	30.8
6.0	32.0		
6.5	31.6		
7.0	32.3		
7.5	32.9		
8.0	32.1		
8.5	31.6		



# E-FIELD ANTENNA FACTOR CALIBRATION

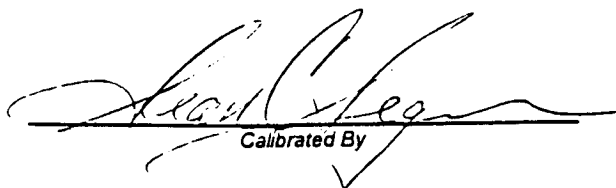
$$E(\text{dB V/m}) = V_o(\text{dB V}) + AFE(\text{dB/m})$$

Model number : DRG-118/A

Frequency GHz	AFE dB/m	Gain dBi
1	22.3	8.0
2	26.7	9.5
3	29.7	10.1
4	29.5	12.8
5	32.3	12.0
6	32.4	13.4
7	36.1	11.0
8	37.4	10.9
9	36.8	12.5
10	39.5	10.7
11	39.6	11.5
12	39.8	12.0
13	39.7	12.8
14	41.8	11.3
15	41.9	11.9
16	38.1	16.3
17	41.0	13.9
18	46.5	8.9

Serial number : 1053  
Job number : 96-092  
Remarks : 3 meter calibration  
Standards : LPD-118/A, TE-1000

Temperature : 72° F  
Humidity : 56 %  
Traceability : A01887  
Date : December 08, 1995

  
Calibrated By

# Com-Power Corporation

(949) 587-9800

## Antenna Calibration

Antenna Type:		Loop Antenna	
Model:		AL-130	
Serial Number:		25309	
Calibration Date:		4/13/99	
	Frequency MHz	Magnetic (dB/m)	Electric dB/m
	0.01	-40.6	10.9
	0.02	-41.5	10.0
	0.03	-39.9	11.6
	0.04	-40.2	11.3
	0.05	-41.5	10.0
	0.06	-41.1	10.4
	0.07	-41.3	10.2
	0.08	-41.6	9.9
	0.09	-41.7	9.8
	0.1	-41.7	9.8
	0.2	-44.0	7.5
	0.3	-41.6	9.9
	0.4	-41.6	9.9
	0.5	-41.7	9.8
	0.6	-41.5	10.0
	0.7	-41.4	10.1
	0.8	-41.5	10.0
	0.9	-41.6	9.9
	1	-41.2	10.3
	2	-40.5	11.0
	3	-40.8	10.7
	4	-41.0	10.5
	5	-40.5	11.0
	6	-40.5	11.0
	7	-40.7	10.8
	8	-40.8	10.7
	9	-40.1	11.4
	10	-40.4	11.1
	12	-41.0	10.5
	14	-42.1	9.4
	15	-42.3	9.2
	16	-42.7	8.8
	18	-41.0	10.5
	20	-41.1	10.4
	25	-43.4	8.1
	30	-45.3	6.2

Trans. Antenna Height	2 meter
Receiving Antenna Height	2 meter



**APPENDIX D**

***DATA SHEETS***





***RADIATED EMISSIONS***

***DATA SHEETS FOR THE TRANSMITTER PORTION***



Test location: Compatible Electronics

Customer : LINX TECHNOLOGIES

Date : 1/19/2000

Manufacturer : LINX TECHNOLOGIES

Time : 9.40

EUT name : TRANSCEIVER MODULE

Model: TC-916-SC

Specification: Fcc\_B Test distance: 3.0 mtrs Lab: D

Distance correction factor( $20 \cdot \log(\text{test}/\text{spec})$ ) : 0.00

Test Mode : TRANSMITTING MODE

TEMPERATURE 75 DEGREES F.

RELATIVE HUMIDITY 55%

TESTED BY: Kyle Fujimoto  
KYLE FUJIMOTO

NO SPURIOUS EMISSIONS WERE FOUND FOR THE TRANSMITTING  
MODE FROM 10 KHZ TO 9300 MHz IN EITHER POLARIZATION  
FOR BOTH THE 900 CW AND 900-RH ANTENNAS

# RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.249)

COMPANY	LINX TECHNOLOGIES	DATE	1/19/00
EUT	TRANSCEIVER MODULE	DUTY CYCLE	N/A
MODEL	TC-916-SC	PEAK TO AVG	N/A
S/N	N/A	TEST DIST.	3 METERS
TEST ENGINEER	KYLE FUJIMOTO	LAB	D

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
916.5000	61.3	61.2 Q	H	1.5	180	X		23.8	4.5	0.0	89.5	-4.5	94.0	short antenna #1 (ANT 900-RH)
916.5000	63.8	63.7 Q	H	1.0	180	Y		23.8	4.5	0.0	92.0	-2.0	94.0	short antenna #1 (ANT 900-RH)
916.5000	63.1	63.0 Q	H	1.0	90	Z		23.8	4.5	0.0	91.3	-2.7	94.0	short antenna #1 (ANT 900-RH)
916.5000	58.2	58.1 Q	V	1.5	90	X		23.8	4.5	0.0	86.4	-7.6	94.0	short antenna #1 (ANT 900-RH)
916.5000	62.2	62.1 Q	V	1.0	90	Y		23.8	4.5	0.0	90.4	-3.6	94.0	short antenna #1 (ANT 900-RH)
916.5000	63.9	63.8 Q	V	1.0	90	Z		23.8	4.5	0.0	92.1	-1.9	94.0	short antenna #1 (ANT 900-RH)
916.5000	65.1	65.0 Q	H	1.0	180	X		23.8	4.5	0.0	93.3	-0.7	94.0	long antenna #1 (ANT 900 CW)
916.5000	62.4	62.3 Q	H	1.0	180	Y		23.8	4.5	0.0	90.6	-3.4	94.0	long antenna #1 (ANT 900 CW)
916.5000	65.2	65.1 Q	H	1.0	90	Z		23.8	4.5	0.0	93.4	-0.6	94.0	long antenna #1 (ANT 900 CW)
916.5000	60.6	60.5 Q	V	1.5	90	X		23.8	4.5	0.0	88.8	-5.2	94.0	long antenna #1 (ANT 900 CW)
916.5000	64.1	64.0 Q	V	1.0	90	Y		23.8	4.5	0.0	92.3	-1.7	94.0	long antenna #1 (ANT 900 CW)
916.5000	63.5	63.4 Q	V	1.0	90	Z		23.8	4.5	0.0	91.7	-2.3	94.0	long antenna #1 (ANT 900 CW)

\* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

\*\* DELTA = SPEC LIMIT - CORRECTED READING



# RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.249)

COMPANY	LINX TECHNOLOGIES	DATE	1/19/00
EUT	TRANSCIVER MODULE	DUTY CYCLE	N/A
MODEL	TC-916-SC	PEAK TO AVG	N/A
S/N	N/A	TEST DIST.	3 METERS
TEST ENGINEER	KYLE FUJIMOTO	LAB	D

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
1833.0000	49.8	48.1	A	H	1.0	180	X	24.5	3.5	33.3	42.8	-11.2	54.0	short antenna #1 (ANT 900-RH)
1833.0000	55.5	55.1	A	H	1.0	270	Y	24.5	3.5	33.3	49.8	-4.2	54.0	short antenna #1 (ANT 900-RH)
1833.0000	55.4	54.9	A	H	1.0	270	Z	24.5	3.5	33.3	49.6	-4.4	54.0	short antenna #1 (ANT 900-RH)
1833.0000	53.5	52.6	A	V	1.0	270	X	24.5	3.5	33.3	47.3	-6.7	54.0	short antenna #1 (ANT 900-RH)
1833.0000	52.0	50.9	A	V	1.0	270	Y	24.5	3.5	33.3	45.6	-8.4	54.0	short antenna #1 (ANT 900-RH)
1833.0000	56.5	56.0	A	V	1.0	270	Z	24.5	3.5	33.3	50.7	-3.3	54.0	short antenna #1 (ANT 900-RH)
1833.0000	53.6	53.0	A	H	1.0	180	X	24.5	3.5	33.3	47.7	-6.3	54.0	long antenna #1 (ANT 900 CW)
1833.0000	53.5	52.7	A	H	2.5	0	Y	24.5	3.5	33.3	47.4	-6.6	54.0	long antenna #1 (ANT 900 CW)
1833.0000	51.7	50.7	A	H	2.0	90	Z	24.5	3.5	33.3	45.4	-8.6	54.0	long antenna #1 (ANT 900 CW)
1833.0000	53.0	52.2	A	V	1.0	270	X	24.5	3.5	33.3	46.9	-7.1	54.0	long antenna #1 (ANT 900 CW)
1833.0000	56.1	55.6	A	V	1.0	270	Y	24.5	3.5	33.3	50.3	-3.7	54.0	long antenna #1 (ANT 900 CW)
1833.0000	53.3	52.5	A	V	1.5	270	Z	24.5	3.5	33.3	47.2	-6.8	54.0	long antenna #1 (ANT 900 CW)

\* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN  
 \*\* DELTA = SPEC LIMIT - CORRECTED READING

# RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.249)

COMPANY	LINX TECHNOLOGIES	DATE	1/19/00
EUT	TRANSCEIVER MODULE	DUTY CYCLE	N/A
MODEL	TC-916-SC	PEAK TO AVG	N/A
S/N	N/A	TEST DIST.	3 METERS
TEST ENGINEER	KYLE FUJIMOTO	LAB	D

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
2749.5000	46.4	43.6 A	H	1.0	270	X		28.2	4.5	31.8	44.5	-9.5	54.0	short antenna #1 (ANT 900-RH)
2749.5000	52.5	51.5 A	H	2.0	180	Y		28.2	4.5	31.8	52.4	-1.6	54.0	short antenna #1 (ANT 900-RH)
2749.5000	51.4	50.6 A	H	1.5	90	Z		28.2	4.5	31.8	51.5	-2.5	54.0	short antenna #1 (ANT 900-RH)
2749.5000	48.7	46.0 A	V	1.0	180	X		28.2	4.5	31.8	46.9	-7.1	54.0	short antenna #1 (ANT 900-RH)
2749.5000	48.9	47.0 A	V	1.0	180	Y		28.2	4.5	31.8	47.9	-6.1	54.0	short antenna #1 (ANT 900-RH)
2749.5000	47.5	45.1 A	V	1.0	0	Z		28.2	4.5	31.8	46.0	-8.0	54.0	short antenna #1 (ANT 900-RH)
2749.5000	50.4	48.9 A	H	1.5	270	X		28.2	4.5	31.8	49.8	-4.2	54.0	long antenna #1 (ANT 900 CW)
2749.5000	52.3	51.5 A	H	1.5	90	Y		28.2	4.5	31.8	52.4	-1.6	54.0	long antenna #1 (ANT 900 CW)
2749.5000	46.4	43.6 A	H	2.0	0	Z		28.2	4.5	31.8	44.5	-9.5	54.0	long antenna #1 (ANT 900 CW)
2749.5000	47.5	45.0 A	V	1.0	180	X		28.2	4.5	31.8	45.9	-8.1	54.0	long antenna #1 (ANT 900 CW)
2749.5000	45.9	42.6 A	V	1.0	180	Y		28.2	4.5	31.8	43.5	-10.5	54.0	long antenna #1 (ANT 900 CW)
2749.5000	47.5	44.1 A	V	1.0	180	Z		28.2	4.5	31.8	45.0	-9.0	54.0	long antenna #1 (ANT 900 CW)

\* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN  
 \*\* DELTA = SPEC LIMIT - CORRECTED READING

# RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.249)

COMPANY	LINX TECHNOLOGIES	DATE	1/19/00
EUT	TRANSCIVER MODULE	DUTY CYCLE	N/A
MODEL	TC-916-SC	PEAK TO AVG	N/A
S/N	N/A	TEST DIST.	3 METERS
TEST ENGINEER	KYLE FUJIMOTO	LAB	D

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
3666.0000	38.4	28.6	A	H	1.5	0	X	29.6	5.0	31.9	31.3	-22.7	54.0	short antenna #1 (ANT 900-RH)
3666.0000	40.3	32.6	A	H	2.0	0	Y	29.6	5.0	31.9	35.3	-18.7	54.0	short antenna #1 (ANT 900-RH)
3666.0000	39.1	29.3	A	H	1.0	90	Z	29.6	5.0	31.9	32.0	-22.0	54.0	short antenna #1 (ANT 900-RH)
3666.0000	38.9	29.7	A	V	1.5	180	X	29.6	5.0	31.9	32.4	-21.6	54.0	short antenna #1 (ANT 900-RH)
3666.0000	40.0	30.5	A	V	1.5	0	Y	29.6	5.0	31.9	33.2	-20.8	54.0	short antenna #1 (ANT 900-RH)
3666.0000	38.4	30.5	A	V	2.0	90	Z	29.6	5.0	31.9	33.2	-20.8	54.0	short antenna #1 (ANT 900-RH)
3666.0000	39.1	29.5	A	H	1.5	90	X	29.6	5.0	31.9	32.2	-21.8	54.0	long antenna #1 (ANT 900 CW)
3666.0000	40.1	29.5	A	H	1.5	180	Y	29.6	5.0	31.9	32.2	-21.8	54.0	long antenna #1 (ANT 900 CW)
3666.0000	38.8	28.4	A	H	2.0	90	Z	29.6	5.0	31.9	31.1	-22.9	54.0	long antenna #1 (ANT 900 CW)
3666.0000	39.5	28.8	A	V	1.0	90	X	29.6	5.0	31.9	31.5	-22.5	54.0	long antenna #1 (ANT 900 CW)
3666.0000	37.6	29.1	A	V	1.5	90	Y	29.6	5.0	31.9	31.8	-22.2	54.0	long antenna #1 (ANT 900 CW)
3666.0000	36.4	28.6	A	V	1.5	0	Z	29.6	5.0	31.9	31.3	-22.7	54.0	long antenna #1 (ANT 900 CW)

\* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN  
 \*\* DELTA = SPEC LIMIT - CORRECTED READING

No Harmonics nor Emissions found  
 after the 4th harmonics for either antenna



***RADIATED EMISSIONS***

***DATA SHEETS FOR THE RECEIVER PORTION***



Test location: Compatible Electronics  
 Customer : LINX TECHNOLOGIES Date : 1/19/2000  
 Manufacturer : LINX TECHNOLOGIES Time : 9.40  
 EUT name : TRANSCEIVER MODULE Model: TC-916-SC  
 Specification: Fcc\_B Test distance: 3.0 mtrs Lab: D  
 Distance correction factor(20\*log(test/spec)) : 0.00  
 Test Mode : RECEIVING MODE  
 TEMPERATURE 75 DEGREES F.  
 RELATIVE HUMIDITY 55%  
 TESTED BY: Kyle Fujimoto  
 KYLE FUJIMOTO

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	limit = L dBuV/m	Delta R-L dB
WITH ANT 900-RH ANTENNA								
1H	905.89	47.70	4.59	22.91	37.52	37.67	46.00	-8.33
2V	905.88	47.20	4.59	22.91	37.52	37.17	46.00	-8.83
3H	1811.76	38.20	3.50	24.50	33.30	32.90	54.00	-21.10
4V	1811.76	39.90	3.50	24.50	33.30	33.60	54.00	-20.40
WITH ANT 900-CW ANTENNA								
5V	905.89	49.20	4.59	22.91	37.52	39.17	46.00	-6.83
6H	905.84	51.60	4.59	22.90	37.52	41.57	46.00	-4.43
7V	1811.76	40.20	3.50	24.50	33.30	34.90	46.00	-11.10
8H	1811.76	41.20	3.50	24.50	33.30	35.90	46.00	-10.10

NO OTHER EMISSIONS NOR HARMONICS WERE FOUND  
 FROM 10 kHz to 9300 MHz IN THE RECEIVING MODE  
 IN EITHER POLARIZATION  
 FOR BOTH THE 900 CW AND 900-RH ANTENNAS