



RADIATION SCIENCES INC.

TEST REPORT NO. RSI-2065E
ELECTROMAGNETIC EMISSION EVALUATION
PER
FCC PART 15 - CLASS B
FOR THE
TACTICAL TECHNOLOGIES, INC.
MODEL RX500
MAY 2000

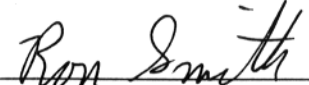
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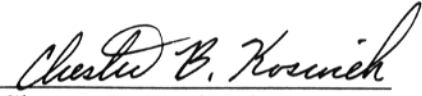
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TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
	Table of Contents	i
	List of Figures	i
	Administrative Data	ii
	Summary of Test Results	iii
1.0	INTRODUCTION	1
2.0	DESCRIPTION OF THE TEST SAMPLE	2
2.1	Test Setup	2
3.0	TEST INSTRUMENTATION	3
4.0	TEST RESULTS	4
4.1	Radiated Emission Measurements	4
5.0	CONCLUSIONS	8
APPENDIX A	RSI's Test Procedure 4963E	----
APPENDIX B	RSI' CERTIFICATIONS	----

LIST OF FIGURES

FIGURE	1	Radiated Emissions Test Setup Photograph	5
FIGURE	2	Radiated Emissions Class "B" Graph	6
FIGURE	3	Radiated Emissions Data Sheet	7



ADMINISTRATIVE DATA

PURPOSE OF TEST:

To evaluate the ElectroMagnetic Emission (EME) characteristics of the Equipment Under Test with respect to Part 15 of the Federal Communications Commission (FCC) Rules for Class "B" Information Technology Equipment (ITE).

SCOPE OF TEST:

Measurement of radiated emissions.

EQUIPMENT UNDER TEST (EUT):

Model Number: **RX500**

Serial Number: NSN

CONTRACT:

Purchase Order Number: 11338

TEST PERIOD:

4 May 2000

TEST FACILITY:

Radiation Sciences Incorporated (RSI), EMC Test Laboratory, located at 3131 Detwiler Road, Harleysville, Pennsylvania 19438.

TEST PERSONNEL AND COORDINATORS:

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SUMMARY OF TEST RESULTS

The Tactical Technologies Model RX500, configured as described herein, FULLY COMPLIES WITH THE REQUIREMENTS SET FORTH IN FCC PART 15 FOR CLASS "B" INFORMATION TECHNOLOGY EQUIPMENT (ITE).



1.0 INTRODUCTION

This document is a report of tests to determine the ElectroMagnetic Interference (EMI) characteristics of the **RX500 Receiver**, manufactured by **Tactical Technologies, Inc.**

The purpose of the tests was to evaluate the EMI characteristics of the test sample with respect to FCC Part 15 for Class "B" Information Technology Equipment (ITE).

Test setups and procedures are described in **RSI's Test Procedure 4963E** (see Appendix A) and test results are summarized herein on graphs.

All test procedures used meet the requirements of the Office of the American National Standards Institute Procedures C63-4: "Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz", dated 17 July 1992.



2.0 DESCRIPTION OF THE TEST SAMPLE:

Tactical Technologies Model RX500 is a desktop receiver for TX Model Transmitters.

2.1 Test Setup

The **RX500** test sample was tested for radiated emissions at 3 meters. The antenna was raised up and down.

Prior to formal test, receiver was scanned for emissions in a shield room.

Section 3 contains a list of the test equipment utilized.

**3.0 TEST INSTRUMENTATION**

<u>RSI INV #</u>	<u>DESCRIPTION</u>	<u>MANUFACTURER</u>	<u>MODEL #</u>	<u>SERIAL #</u>	<u>LAST CAL DATE</u>	<u>CAL DUE DATE</u>	<u>C Y C L E</u>	<u>T Y P E</u>
32	SPEC. ANALY.	H.P.	8568B	2841A04457	4/27/2000	4/27/2001	12	C
33	SPEC. ANALY.	H.P.	85662A	2848A17406	4/27/2000	4/27/2001	12	C
77	ANTENNA	TENSOR	4108	2011	5/25/1999	5/25/2000	12	UC
83	ANTENNA	EMCO	3146	1554	12/1/1999	12/1/2000	12	V
391	RECEIVER	R & S	ESVP	861744/015	4/18/2000	4/18/2001	12	C



4.0 TEST RESULTS

4.1 Radiated Emission Measurements

Radiated emission measurements were recorded with the **RX500** placed on a table. A photograph of the test setup is shown in Figure 1. The results of radiated emissions measurements are illustrated on a graph, Figure 2 and data sheet 1, Figure 3. Radiated emissions were measured with the antenna in the horizontal and vertical planes at a distance of 3 meters in height and the test sample was rotated as required. The unit was scanned using a Spectrum Analyzer to locate its emission frequencies.



Radiated Emissions Test Setup Photographs

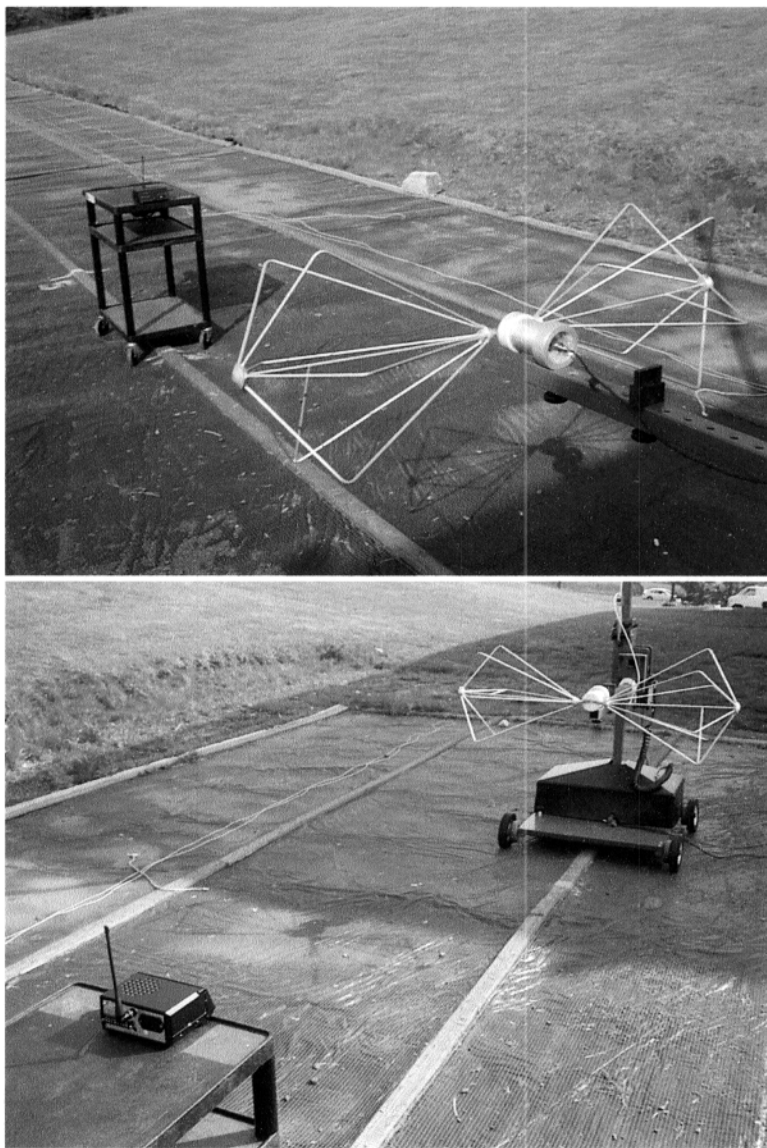


Figure 1

FCC RADIATED EMISSIONS CLASS B

▲ VERTICAL
○ HORIZONTAL
— LIMIT

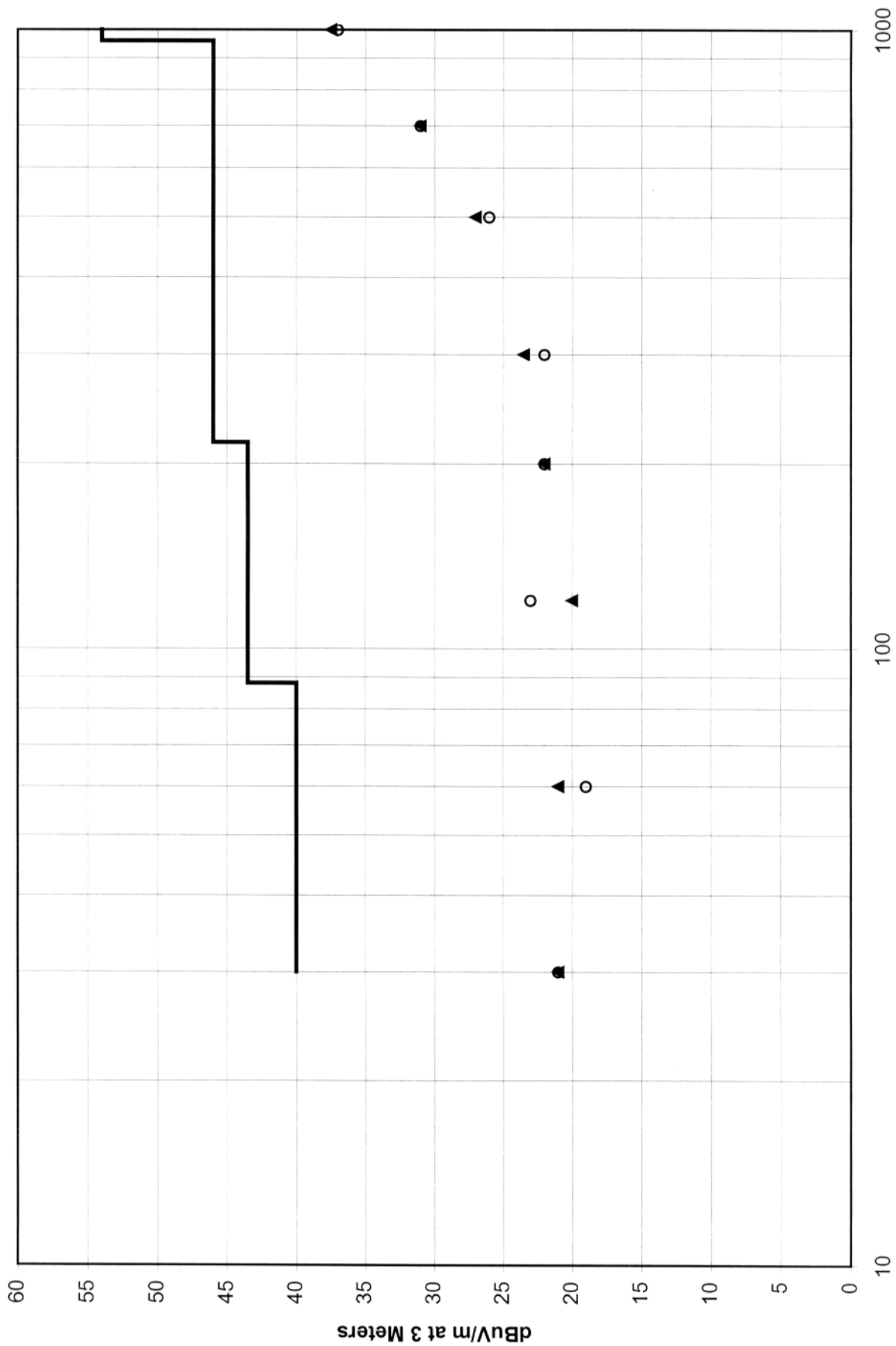


FIGURE 2



RADIATION SCIENCES INC.

ELECTROMAGNETIC EMISSION TEST

E U T	MANUFACTURER: <i>Tactical Technologies</i>		ADDITIONAL INFORMATION		DATE: <i>5-8-00</i>		TEST CODE <i>RE</i>	
	MODEL NO. - <i>RX500</i>				TECHNICIAN			
	SERIAL NO. - <i>Receiver</i>		ENGINEER <i>CBA</i>					
	MODE -				FREQ. RANGE: <i>30 - 1000 MHz</i>			
TEMPERATURE:		RSI EQUIPMENT NUMBERS <i>032, 033, 77, 83</i>				TEST SPEC. <i>FCC Part 15</i>		
HUMIDITY:		<i>391</i>				<i>Class B</i>		
RADIATED DISTANCE: <i>3 Meters</i> ANTENNA: <i>Bicon / Log Per</i>					CONDUCTED LINE:			
<input checked="" type="checkbox"/> HORIZ. <input type="checkbox"/> BB <input checked="" type="checkbox"/> NB <input checked="" type="checkbox"/> VERT. <input type="checkbox"/> H <input checked="" type="checkbox"/> E					<input type="checkbox"/> BB <input type="checkbox"/> NB			
FREQ.	IND. LEVEL	CORRECTION FACTORS		FINAL LEVEL	ANTENNA HEIGHT	EUT AZIMUTH	REMARKS	
MHz	dBμV	ANT.		dBμV/m	Meters	Degrees		
30	10	11		21	1.00	0	Vertical ↓	
60	11	10		21	1.00	0		
120	8	12		20	1.00	0		
200	7	15		22	1.00	0		
300	8	15.5		23.5	1.00	0		
500	9	18		27	1.00	0		
700	10	21		31	1.00	0		
1000	12.5	25		37.5	1.00	0		
30	10	11		21	1.00	0	Horizontal ↓	
60	9	10		19	1.00	0		
120	11	12		23	1.00	0		
200	7	15		22	1.00	0		
300	7	15		22	1.00	0		
500	8	18		26	1.00	0		
700	10	21		31	1.00	0		
1000	12	25		37	1.00	0		



5.0 CONCLUSIONS

The FCC evaluation of the **Tactical Technologies Model RX500** indicates that **THE UNIT COMPLIES WITH THE LIMITS SET FORTH IN FCC PART 15 FOR CLASS "B" INFORMATION TECHNOLOGY EQUIPMENT (ITE).**