ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
CERTIFICATION TO FCC PART 15 REQUIREMENTS

for

UNINTENTIONAL RADIATOR

433.92 MHz TIRE MONITORING SYSTEM-DISPLAY RECEIVER

MODEL: 200.0087 & 200.0088

FCC ID NO: NATRX433-RV-1

REPORT NO: 03U1837-1

ISSUE DATE: March 19, 2003

Prepared for

SMARTIRE SYSTEM INC.
#150 13151 VANIER PLACE
RICHMOND, BC
CANADA

Prepared by

COMPLIANCE ENGINEERING SERVICES, INC.
d.b.a.
COMPLIANCE CERTIFICATION SERVICES
561 F MONTEREY ROAD
MORGAN HILL, CA 95037
TEL: 408-463-0885
FAX: 408-463-0888

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1. VERIFICATION OF COMPLIANCE

COMPANY NAME	:	SMARTIRE SYSTEMS, INC. #150 13151 VANIER PLACE RICHMOND, BC CANADA
CONTACT PERSON	:	ROBERT PATTERSON
EUT DESCRIPTION	:	433.92 MHz TIRE MONITORING SYSTEM-DISPLAY RECEIVER
MODEL NAME/NUMBER	:	200.0087 & 200.0088
DATE TESTED	:	02/20/2003 – 03/14/2003
REPORT NUMBER	:	03U1837-1

TYPE OF EQUIPMENT	SECURITY EQUIPMENT (UNINTENTIONAL RADIATOR)
EQUIPMENT TYPE	433.92 MHz SUPER HETERPDYNE RECEIVER
MEASUREMENT PROCEDURE	ANSI 63.4 / 2001
LIMIT TYPE	CERTIFICATION
FCC RULE	CFR 47, PART 15.109

The above equipment was tested by Compliance Engineering Services, Inc. for compliance with the requirements set forth in CFR 47, PART 15. This said equipment in the configuration described in this report shows that maximum emission levels emanating from equipment are within the compliance requirements.

Tested By:

CHIN PANG
EMC TECHNICIAN
COMPLIANCE CERTIFICATION SERVICES

Approved & Released By:

THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

2. PRODUCT DESCRIPTION

The SmarTire Receiver 200.0087 receives wireless signals transmitted from the sensor modules (which are mounted inside the tires of the automobile. The signal is demodulated by the receiver and processed by a microprocessor. The information is then displayed on either the LCD display.

The SmarTire Receiver 200.0088 receives wireless signals transmitted from the sensor modules (which are mounted inside the tires of the automobile. The signal is demodulated by the receiver and processed by a microprocessor. The information is sent to RS232 interface.

On 200.0088 there is a no change in mechanical or pcb layout or electrical. There is a schematic change though.
On 200.0087 these parts are not populated. There is no change to the receiver in either design. The receiver then communicates to the display.
In 200.0088 these parts are populated. The device will now able to communicate to a computer instead of the Display.
The parts are a chip to change the data to RS232 format to be able to communicate to the RS232.

3. TEST FACILITY

The 3 meter open area test site and conducted measurement facility used to collect the radiated data is located at 561F Monterey Road, Morgan Hill, California, U.S.A. A detailed description of the test facilities was submitted to the Commission on May 27, 1994.

The measuring instrument which was utilized in performing the tests documented herein has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment which is traceable to recognized national standards.

4. MEASUREMENT EQUIPMENT USED

TEST EQUIPMENT LIST

Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date
Bilog Antenna	AR	LPB-25201A	1185	3/28/03
EMI Receiver	HP	8542E	3942A00280	11/20/03
RF Filter Section	HP	85420E	3705A00256	11/20/03

5. TEST CONFIGURATION

Turn on the EUT and set all the wires are placed on the turn table to their maximum length to simulate the worse emission conditions.

6. TESTS CONDUCTED

CFR 47, 15.109 RADIATED EMISSION TESTS	CONDUCTED AT 3 METERS

7. RADIATED EMISSION TEST PROCEDURE

The EUT and all other support equipment are placed on a wooden table 80 cm above the ground screen. Antenna to EUT distance is 3 meters. During the test, the table is rotated 360 degrees to maximize emissions and the antenna is positioned from 1 to 4 meters above the ground screen to further maximize emissions. The antenna is polarized in both vertical and horizontal positions.

Monitor the frequency range of interest at a fixed antenna height and EUT azimuth. Frequency span should be small enough to easily differentiate between broadcast stations and intermittent ambients. Rotate EUT 360 degrees to maximize emissions received from EUT. If emission increases by more than 1 dB, or if another emission appears that is greater by 1 dB, return to azimuth where maximum occurred and perform additional cable manipulation to further maximize received emission.

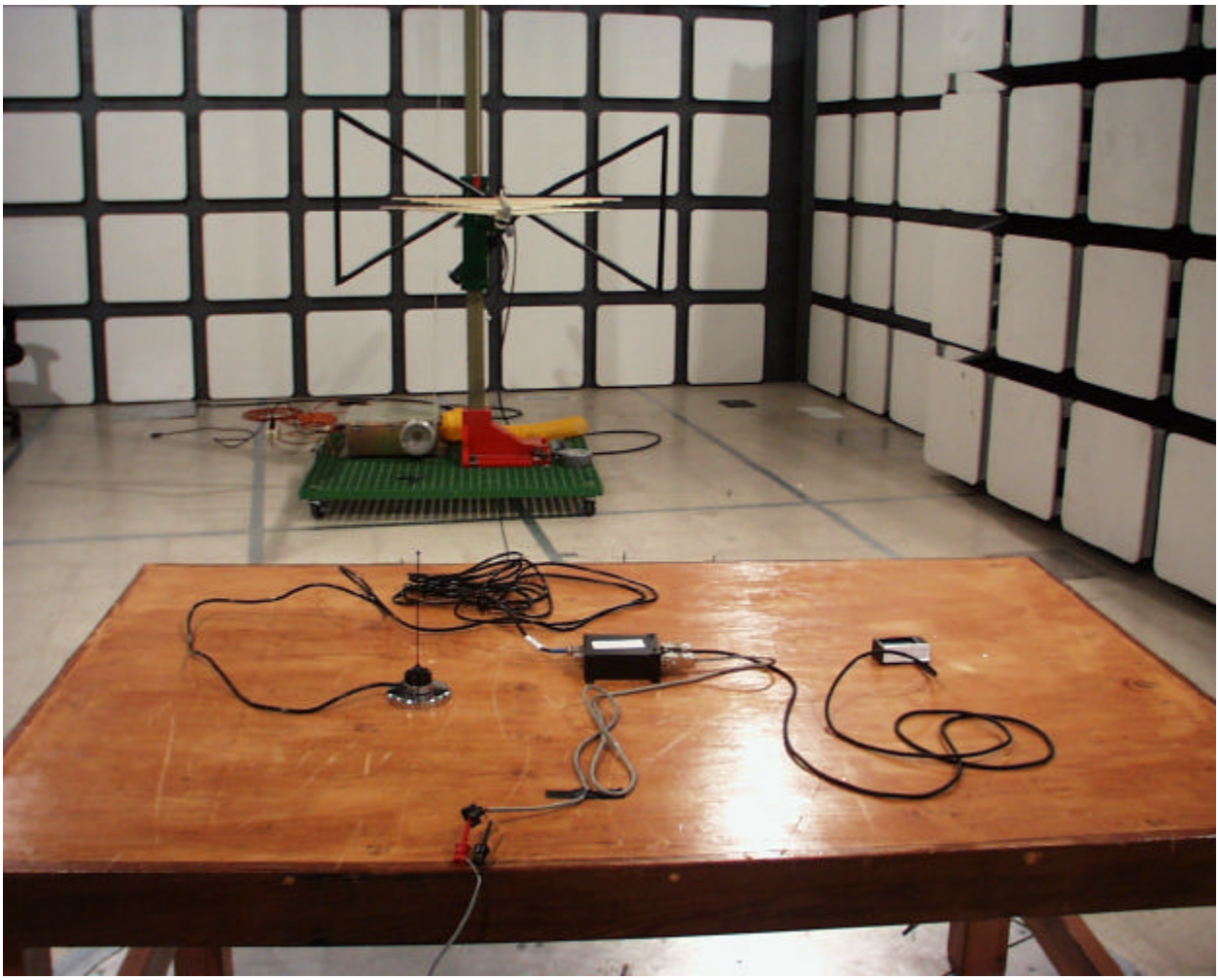
Move antenna up and down to further maximize suspected highest amplitude signal. If emission increased by 1 dB or more, or if another emission appears that is greater by 1dB or more, return to antenna height where maximum signal was observed and manipulate cables to produce highest emissions, noting frequency and amplitude.

8 EQUIPMENT MODIFICATIONS

To achieve compliance to FCC section 15.109, the following change(s) were made during compliance testing:

NOT APPLICABLE

9. TEST CONFIGURATION PHOTOS (Radiated Emission Test)

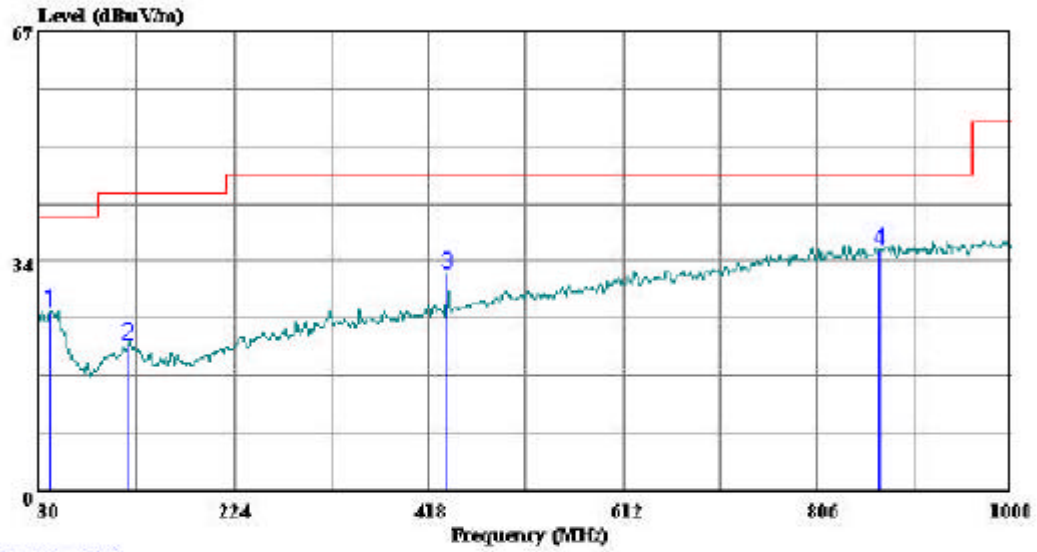


RADIATED EMISSION DATA

Vertical polarization (200.0087)

COMPLIANCE Engineering Services, Inc.
561F Monterey Road
Morgan Hill, CA 95037
Tel: (408) 463-0885
Fax:(408) 463-0888

Data#: 2 File#: test1.EMI Date: 02-20-2003 Time: 11:46:17



(Audix ATC)

Trace: 1 Ref Trace:

Condition: CHAMBER 030117 1185 VERTICAL
Company : Smartire Systems Inc
Project No : 03U1837-1
EUT Description : 433.92MHz Tire Monitoring System--
: Display Receiver
FCC ID : NATRX433RV-1
Test Configurtion : EUT Only
Test Target : FCC Class B
Mode of OpMeration: Receiving

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	Freq	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit
	MHz	dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB
1	40.670	7.78	17.73	0.61	0.00	26.12	40.00	-13.88
2	118.270	9.25	10.99	1.03	0.00	21.27	43.50	-22.23
3	436.430	13.58	15.89	2.12	0.00	31.59	46.00	-14.41
4	868.080	10.28	21.72	3.12	0.00	35.12	46.00	-10.88

Horizontal polarization (200.0087)

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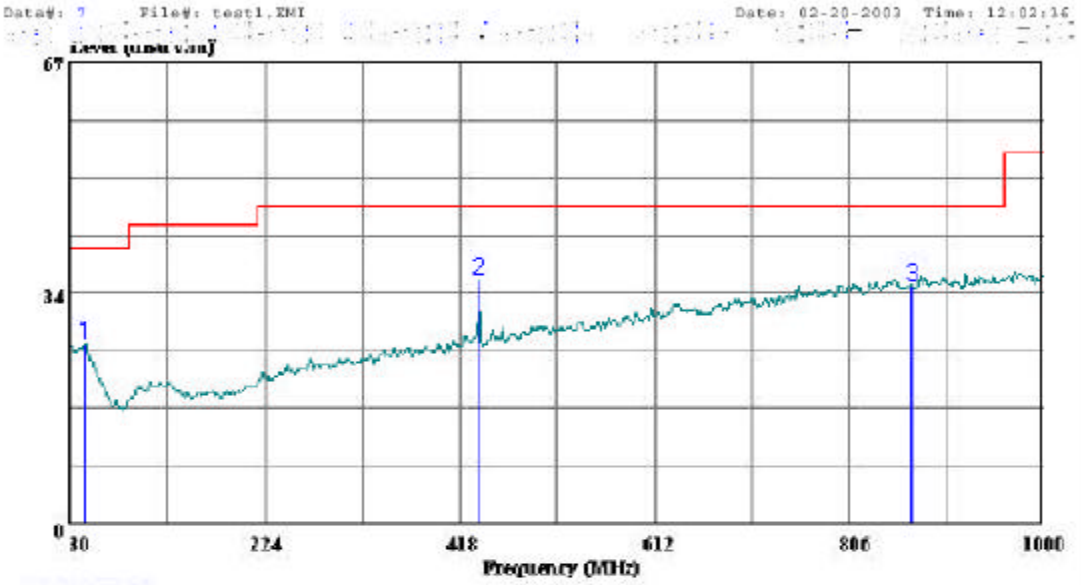

(Audix ATC)

Trace: 6 Ref Trace:

Condition: CHAMBER 030117 1185 HORIZONTAL
Company : Smartire Systems Inc
Project No : 03U1837-1
EUT Description : 433.92MHz Tire Monitoring System--
: Display Receiver
FCC ID : NATRX433RV-1
Test Configurtion : EUT Only
Test Target : FCC Class B
Mode of OpMeration: Receiving

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	Freq	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit
	MHz	dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB
1	44.550	7.58	17.75	0.65	0.00	25.98	40.00	-14.02
2	436.430	17.28	15.89	2.12	0.00	35.29	46.00	-10.71
3	867.110	9.68	21.71	3.13	0.00	34.51	46.00	-11.49

Vertical polarization (200.0088)

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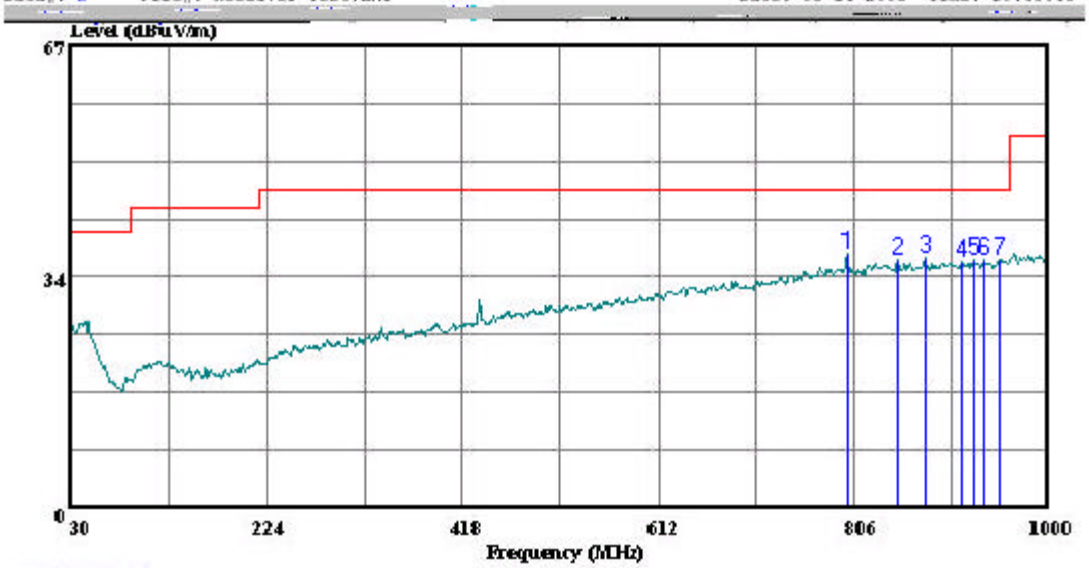

(Audix ATC)
Trace: 1 Ref Trace:

Condition: FCC CLASS-B 3m CHAMBER 030117 1185 VERTICAL
Company : Smarttire Systerms Inc..
Project No : 03U1837-1
EUT Description : Display Receiver
Model Number : 200.0088
Test Configurtion : EUT/ LED Display/ Antenna/ Power Supply
Test Target : FCC Class B
Mode of OpMeration: Receiving

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	Freq	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	798.240	12.77	20.93	3.03	0.00	36.73	46.00	-9.27	Peak
2	848.680	11.20	21.51	3.15	0.00	35.86	46.00	-10.14	Peak
3	875.840	11.24	21.81	3.19	0.00	36.24	46.00	-9.76	Peak
4	911.730	10.17	22.12	3.24	0.00	35.53	46.00	-10.47	Peak
5	924.340	10.39	22.19	3.24	0.00	35.82	46.00	-10.18	Peak
6	934.040	10.28	22.24	3.31	0.00	35.83	46.00	-10.17	Peak
7	950.530	10.33	22.33	3.38	0.00	36.04	46.00	-9.96	Peak

Horizontal polarization (200.0088)

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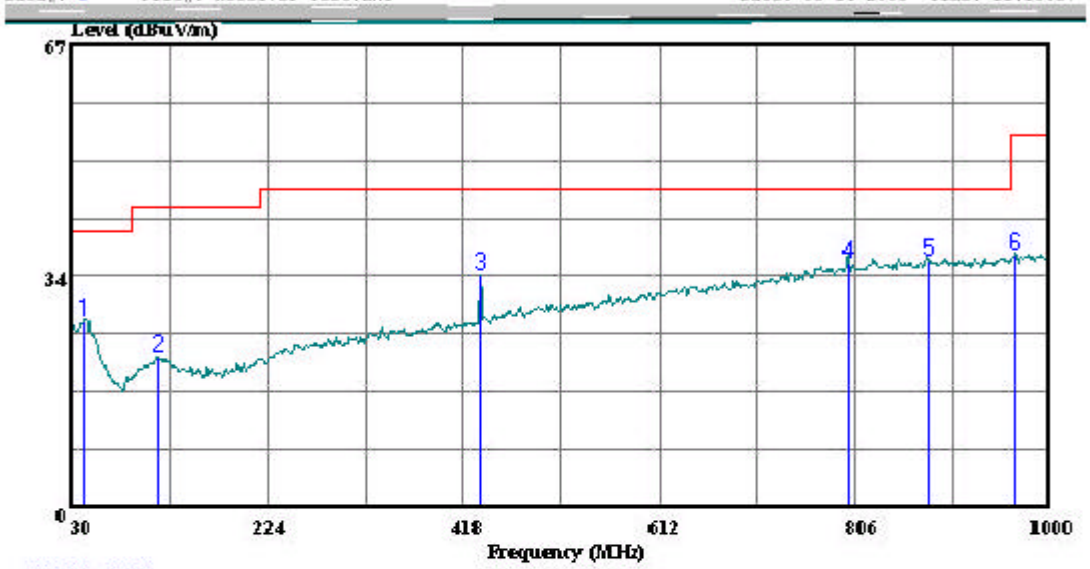

Condition: FCC CLASS-B 3m CHAMBER 030117 1185 HORIZONTAL
Company : Smarttire Systerms Inc..
Project No : 03U1837-1
EUT Description : Display Receiver
Model Number : 200.0088
Test Configurtion : EUT/ LED Display/ Antenna/ Power Supply
Test Target : FCC Class B
Mode of OpMeration: Receiving

Page: 1

	Freq	Read Level	Probe Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dBuV/m	dBuV/m	dB	
1	42.610	8.58	17.76	0.64	0.00	26.98	40.00	-13.02	Peak
2	116.330	9.66	10.93	1.03	0.00	21.62	43.50	-21.88	Peak
3	434.490	15.55	15.84	2.12	0.00	33.51	46.00	-12.49	Peak
4	799.210	11.53	20.94	3.02	0.00	35.49	46.00	-10.51	Peak
5	878.750	10.79	21.84	3.18	0.00	35.81	46.00	-10.19	Peak
6	964.110	10.71	22.40	3.43	0.00	36.54	54.00	-17.46	Peak

END OF REPORT