ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
CERTIFICATION TO FCC PART 15 REQUIREMENTS

for

UNINTENTIONAL RADIATOR

433.92 MHz CAR ALARM RECEIVER

MODEL: P-10

FCC ID NO: GOH-PAN01

REPORT NO: 02T1703-1

ISSUE DATE: JAN. 16, 2003

Prepared for

CODE SYSTEMS, INC.
525 MINNESOTA
TROY MI 48083
USA

Prepared by

COMPLIANCE ENGINEERING SERVICES, INC.
d.b.a.
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1. VERIFICATION OF COMPLIANCE

COMPANY NAME	:	CODE SYSTEMS, INC. 525 MINNESOTA TROY MI 48083 USA
CONTACT PERSON	:	SHANE WILSON
EUT DESCRIPTION	:	433.92 MHz CAR ALARM RECEIVER
MODEL NAME/NUMBER	:	P-10
DATE TESTED	:	01/10/2003
REPORT NUMBER	:	02T1703-1

TYPE OF EQUIPMENT	SECURITY EQUIPMENT (UNINTENTIONAL RADIATOR)
EQUIPMENT TYPE	433.92 MHz SUPERREGENERATE 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 radio frequency car-alarm is a system that it controllers locking(arm) and unlocking(disarm) the door of vehicle by wireless remote controller, manufactured by Advance Security, Inc. This system consists of transmitter and receiver. Model P-10 is the receiving portion of the system. It is designed to operate on a single fixed frequency 433.92 MHz by frequency modulation.

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 EQUIPMENTS LIST

Name of Equipment	Manufacturer	Model No.	Serial No.	Due Date
Quasi-Peak Detector	HP9K - 1GHz	85650A	2521A01038	4/15/03
Spectrum Analyzer	HP100Hz - 1.5GHz	8568A	101236	4/15/03
Spectrum Display	HP	8560A	2314A020604	4/15/03
Pre-Amplifier,25 dB	HP0.1 - 1300MHz	8447D (P5)	2944A06550	8/22/03
Antenna, LP	EMCO200 - 2000MHz	3146	9107-3163	3/30/03
Signal Generator	Rohde & Schwarz	SMY01	DE12311	2/25/05
Spectrum Analyzer	HP	8591A	3009A00791	11/6/03

5. TEST CONFIGURATION

Set frequency generator to 433.83 MHz, EUT receiving transmission continuously. 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. COHERENT TESTS

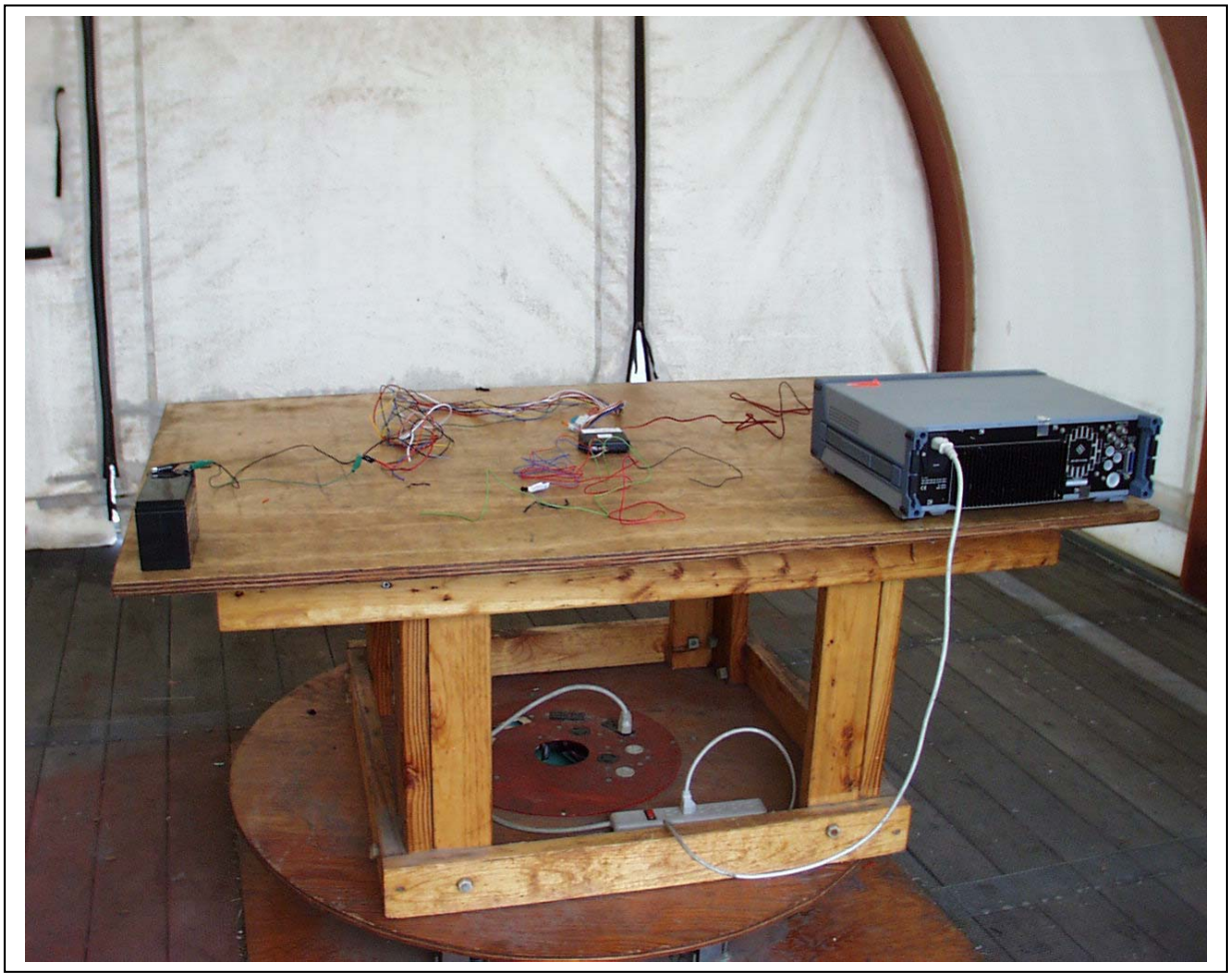
During Radiated Emission Tests, R & S. signal generator model no: SMY01 (0.9-1024 MHz) was used to radiate unmodulated CW signal to EUT at 433.83 MHz. Please refer to radiated emission data no: 030110C1.

9. EQUIPMENT MODIFICATIONS

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

NOT APPLICABLE

10. TEST CONFIGURATION PHOTOS (Radiated Emission Test)



COMPLIANCE Certification Services

FCC, VCCI, CISPR, CE, AUSTEL, NZ
UL, CSA, TUV, BSMI, DHHS, NVLAP

561F MONTEREY ROAD, SAN JOSE, CA 95037-9001
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Project #:	02T1703-1
Report #:	030110C1
Date& Time:	01/10/03 12:48 PM
Test Engr:	Chin Pang

Company:	Code Systems, Inc.
EUT Description:	Car Alarm Receiver
Test Configuration :	EUT Only
Type of Test:	FCC 15.109
Mode of Operation:	Receiving

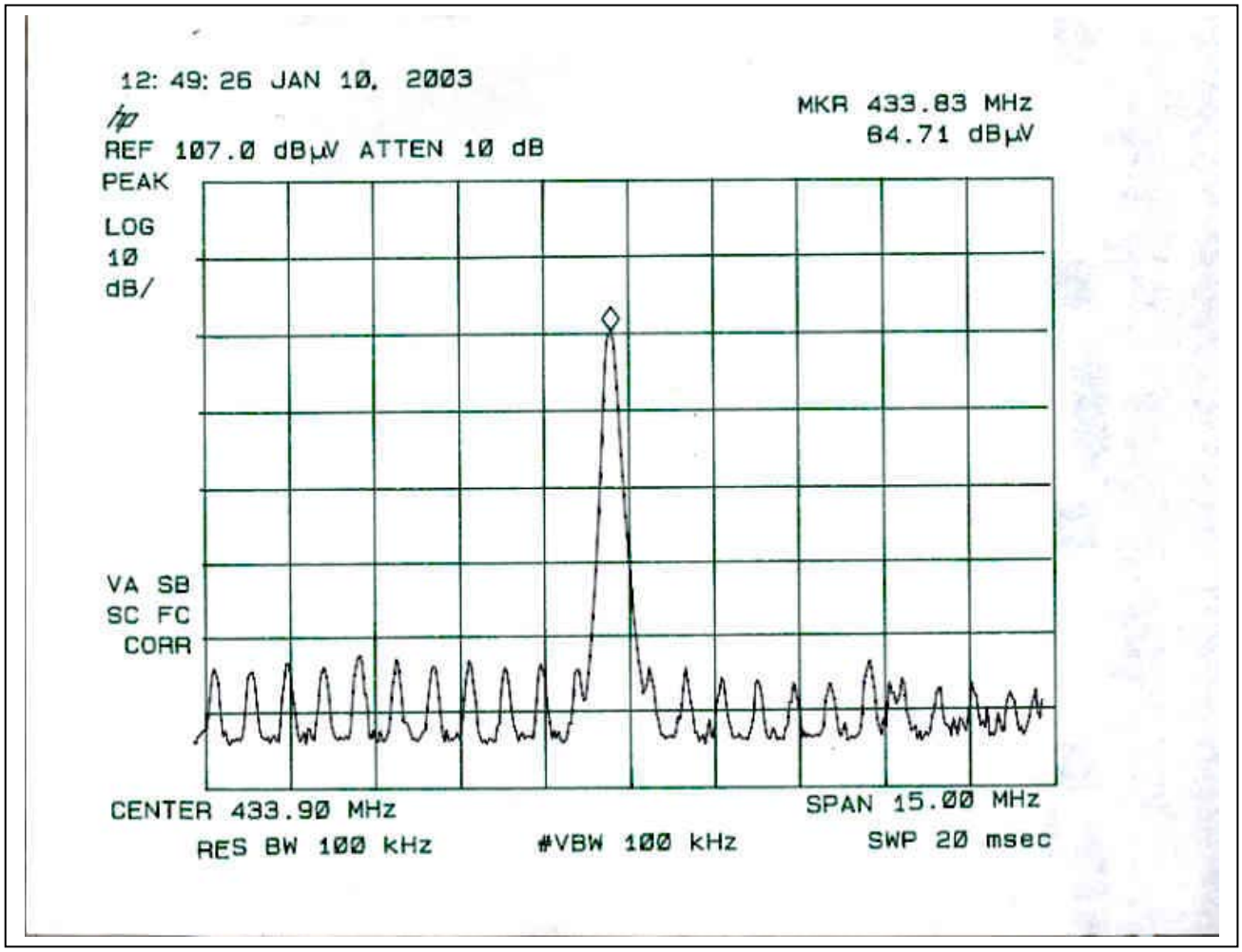
( ) A-Site ( ) B-Site (•) C-Site ( ) F-Site 6 Worst Data Descending

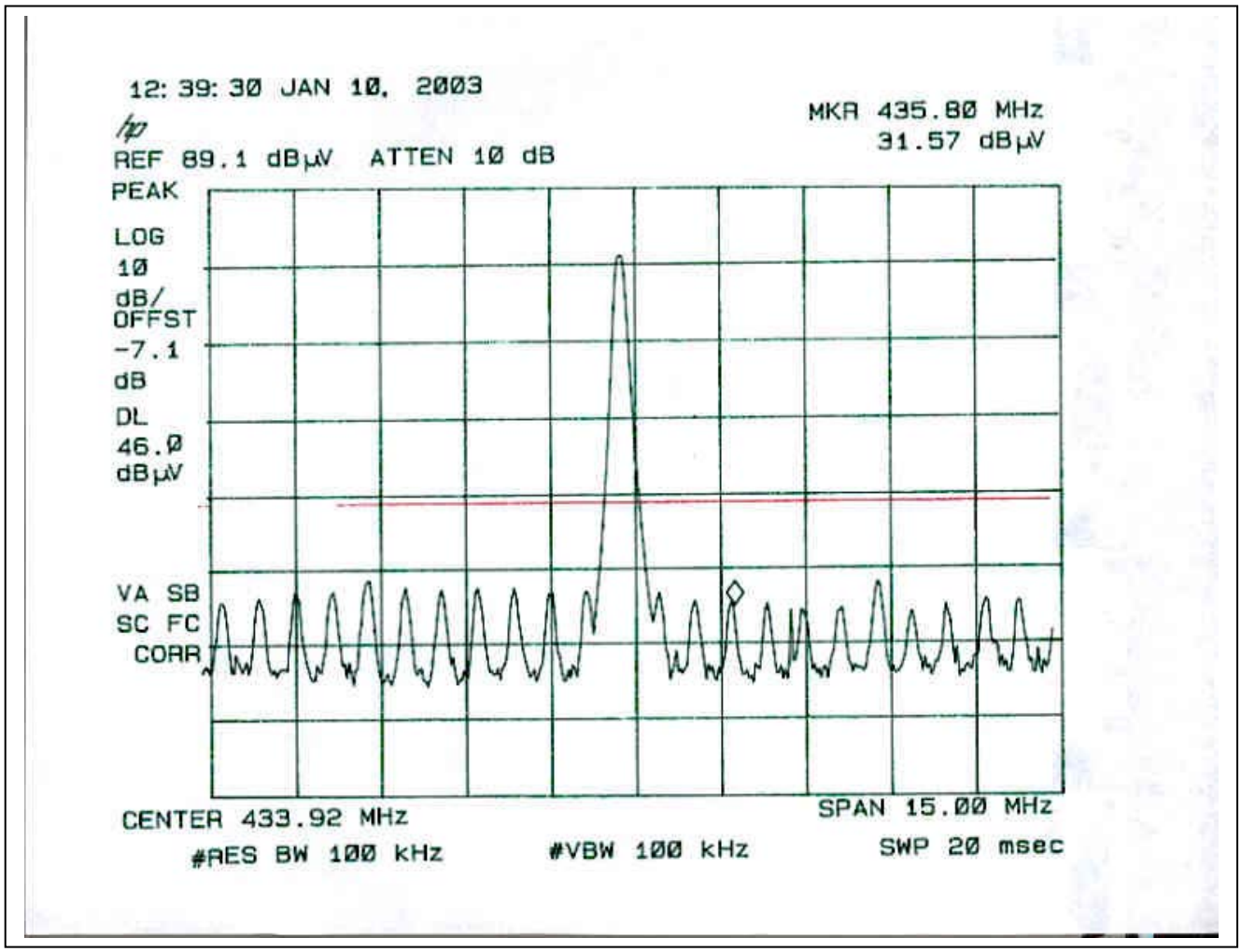
Freq. (MHz)	Reading (dBuV)	AF (dB)	Closs (dB)	Pre-amp (dB)	Level (dBuV/m)	Limit FCC_B	Margin (dB)	Pol (H/V)	Az (Deg)	Height (Meter)	Mark (P/Q/A)
429.32	43.50	16.23	3.70	27.25	36.18	46.00	-9.82	3mH	0.00	1.00	P
431.21	42.00	16.28	3.71	27.26	34.73	46.00	-11.27	3mH	0.00	1.00	P
432.47	41.60	16.31	3.72	27.26	34.36	46.00	-11.64	3mH	0.00	1.00	P
434.96	39.40	16.37	3.73	27.27	32.23	46.00	-13.77	3mH	0.00	1.00	P
436.88	39.60	16.42	3.74	27.28	32.48	46.00	-13.52	3mH	0.00	1.00	P
438.17	43.10	16.46	3.74	27.29	36.01	46.00	-9.99	3mH	0.00	1.00	P
439.40	40.80	16.49	3.75	27.29	33.74	46.00	-12.26	3mH	0.00	1.00	P
430.99	43.49	16.27	3.71	27.26	36.22	46.00	-9.78	3mV	0.00	1.00	P
431.90	42.24	16.30	3.71	27.26	34.99	46.00	-11.01	3mV	0.00	1.00	P
433.10	44.10	16.33	3.72	27.27	36.88	46.00	-9.12	3mV	0.00	1.00	P
435.60	44.54	16.39	3.73	27.28	37.39	46.00	-8.61	3mV	0.00	1.00	P
436.50	46.34	16.41	3.74	27.28	39.21	46.00	-6.79	3mV	0.00	1.00	P
434.35	45.22	16.36	3.72	27.27	38.03	46.00	-7.97	3mV	0.00	1.00	P

Total data #: 13
V.2c

No other emissions were found upto 2GHz

COHERENCE TEST
HORIZONTAL





ATTACHMENT

EUT PHOTOGRAPHS