DNB ENGINEERING, INC.

CERTIFICATION
FOR
INTENTIONAL RADIATOR

per
FCC Part 15 Subpart C
(CFR 47, 15.201, - 15.209 &15.249)
and
Industry Canada
RSS-210

Transmitter
Model No. EXC9158A
903-927 MHz

PREPARED FOR APPLICANT:
Cattron Theimeg, Inc.
58 West Shenango Street
Sharpsville, PA 16150-1198
FRN: 0008766842

PREPARED BY:
DNB ENGINEERING, INC.
5969 Robinson Avenue
Riverside, CA 92503-8620
(951) 637-2630

TRANSMITTAL SUMMARY

Unit tested: Remote Transmitter
Model #: EXC9158A
FCC ID: CN2EXC9158A
Industry Canada ID: 1007BEXC9158A
Specifications: ANSI C63.4 1992 and CFR 47 FCC part 15 Subpart C

Purpose of Report: This report was prepared to document the status of the RemoteTransmitter (903-927 MHz) with requirements of the standards listed above.

Requirements not applicable to EUT Part 15.37 - Not applicable
Emergency Broadcast System - Not applicable
Spread Spectrum Exhibit - Not applicable
Scanning Receiver - Not applicable

Test Summary The EUT's compliance status according to the tests performed is as follows.

REQUIREMENTS	STATUS
FCC part 15 Subpart C	
per 15.201-, 15.209 & 15.249	COMPLIANT
Industry Canada – RSS-210	COMPLIANT

The report shall not be reproduced, except in full, without the written approval of DNB ENGINEERING, INC. Results contained in this report relate only to the item tested.

The Remote Transmitter M/N EXC9158A met all the criteria pertaining to standards called out for testing.

DOCUMENT HISTORY

Revision Letter	Number of Pages	Page No. of Rev.	Description	Date
-001	45		Document Release	9 Mar 2007

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1.0 ADMINISTRATIVE DATA

Certifications and Qualifications

I certify that DNB Engineering, Inc conducted the tests performed in order to obtain the technical data presented in this application. Also, based on the results of the enclosed data, I have concluded that the equipment tested meets or exceeds the requirements of the Rules and Regulations governing this application.

NEMKO EMC Laboratory Authorization No.: ELA 115

NVLAP Lab Code: 200587-0

NVLAP CAB : US-0152 (Canada) IC# 4738

Measurement Repeatability Information

The test data presented in this report has been acquired using the guidelines set forth in FCC Part 15 Subpart C (CFR 47, 15.201 – 15.209 and 15.249) and to Industry Canada RSS-210. The test results presented in this document are valid only for the equipment identified herein under the test conditions described. Repeatability of these test results will only be achieved with identical measurement conditions. These conditions include: The same test distance, EUT Height, Measurement Site Characteristics, and the same EUT System Components. The system must have the same Interconnecting Cables arranged in identical placement to that in the test set-up, with the system and/or EUT functioning in the identical mode of operation (i.e. software and so on) as on the date of the test. Any deviation from the test conditions and the environment on the date of the test may result in measurement repeatability difficulties.

All changes made to the EUT during the course of testing as identified in this test report must be incorporated into the EUT or identical models to ensure compliance with the FCC regulations.

C. L. Payne III (Para. 1.1)
Manager, Test Dept.
DNB Engineering, Inc. (Riverside Facility)
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1.1.1 Request for Certification Per 2.1033(b)1:

Applicant: Cattron Theimeg Inc.
58 West Shenango Street
Sharpsville, PA 16150
FRN: 0008766842

Contact: Laurent Beaulieu
Phone: (514) 908-1659 x63151

Equipment Under Test: Remote ControlTransmitter

FCC ID: CN2EXC9158A
Industry Canada ID: 1007BEXC9158A

1.2 Related Submittals/Grants

None.

1.3 Purpose of Tests

The purpose of this series of tests was to demonstrate the Electromagnetic Compatibility (EMC) characteristics of the EUT. The following tests were performed:

REQUIREMENTS	STATUS
FCC part 15 Subpart C	
Per 15.201- 15.209 &15.249	COMPLIANT
Industry Canada – RSS-210	COMPLIANT

2. TEST DESCRIPTION

2.1 Test Configuration

Configuration	Unit Name - Processor, Monitor Printer, Cable, etc. (indent for features of a unit)	Style/Model/ Part No.	Comments/ FCC ID# / Industry Canada #
A	Remote –Low Channel (903 MHz)	EXC9158A	CN2EXC9158A 1007BEXC9158A
B	Remote –Mid Channel (915 MHz)	EXC9158A	CN2EXC9158A 1007BEXC9158A
C	Remote –High Channel (927 MHz)	EXC9158A	CN2EXC9158A 1007BEXC9158A

2.2 Equipment Description

The CATTRON® MK Unity Beta Series OCU is a lightweight palm sized, extremely rugged customizable radio control transmitter for use with any CATTRON® Unity based PRC System.

2.3 Mode of Operation

EUT was placed in both horizontal and vertical position with the antenna in both horizontal and vertical polarities to determine worst case emissions. Fresh batteries were used for final measurements.

2.4 Antenna Requirement - per 15.203

The antenna is internally fixed.

2.5 Circuit Description - per 2.1033(b)4

Please see Owners Manual – Separate attachment

2.6 Schematics

Separate attachment

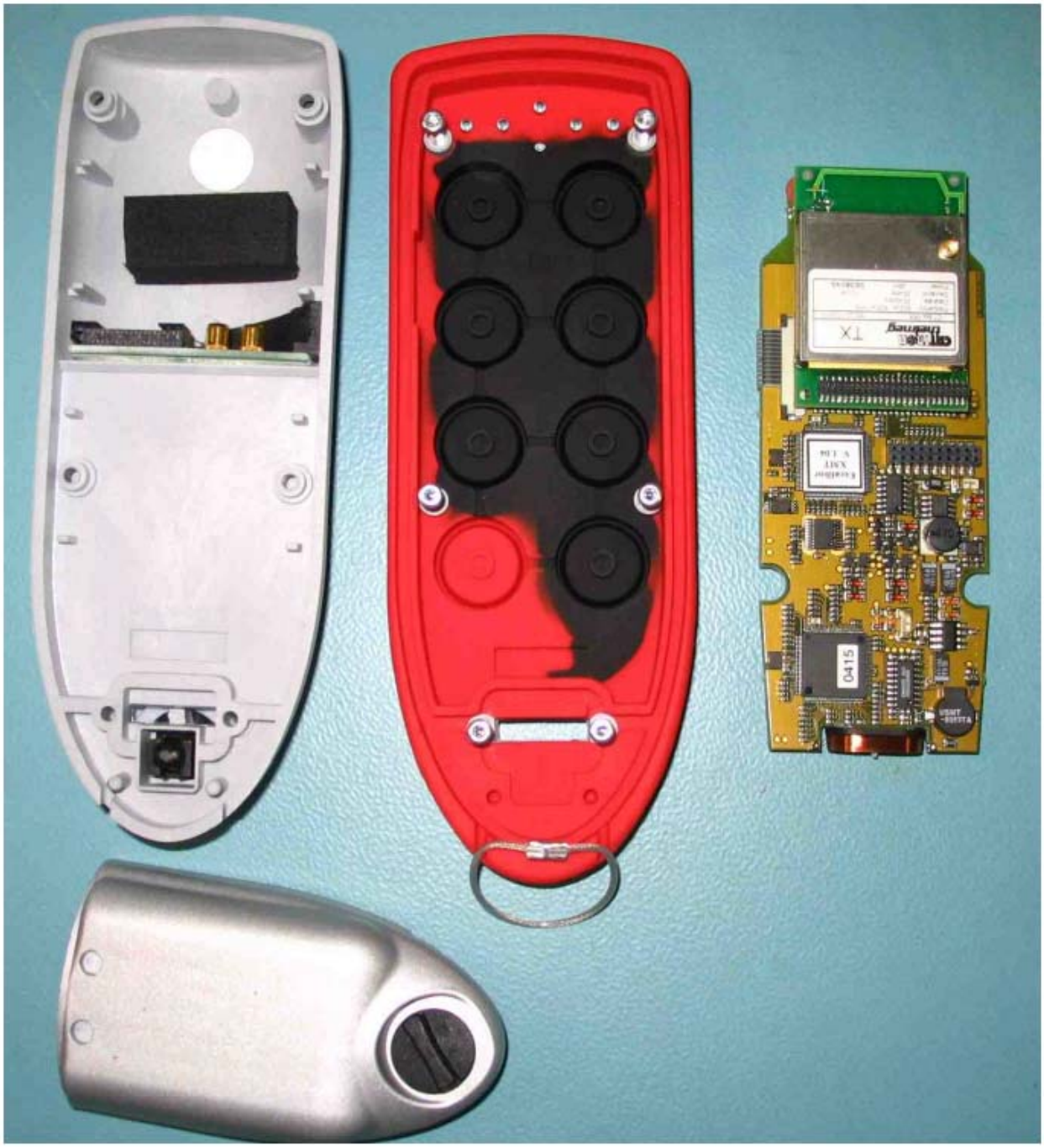
2.7 Block Diagram

Separate attachment

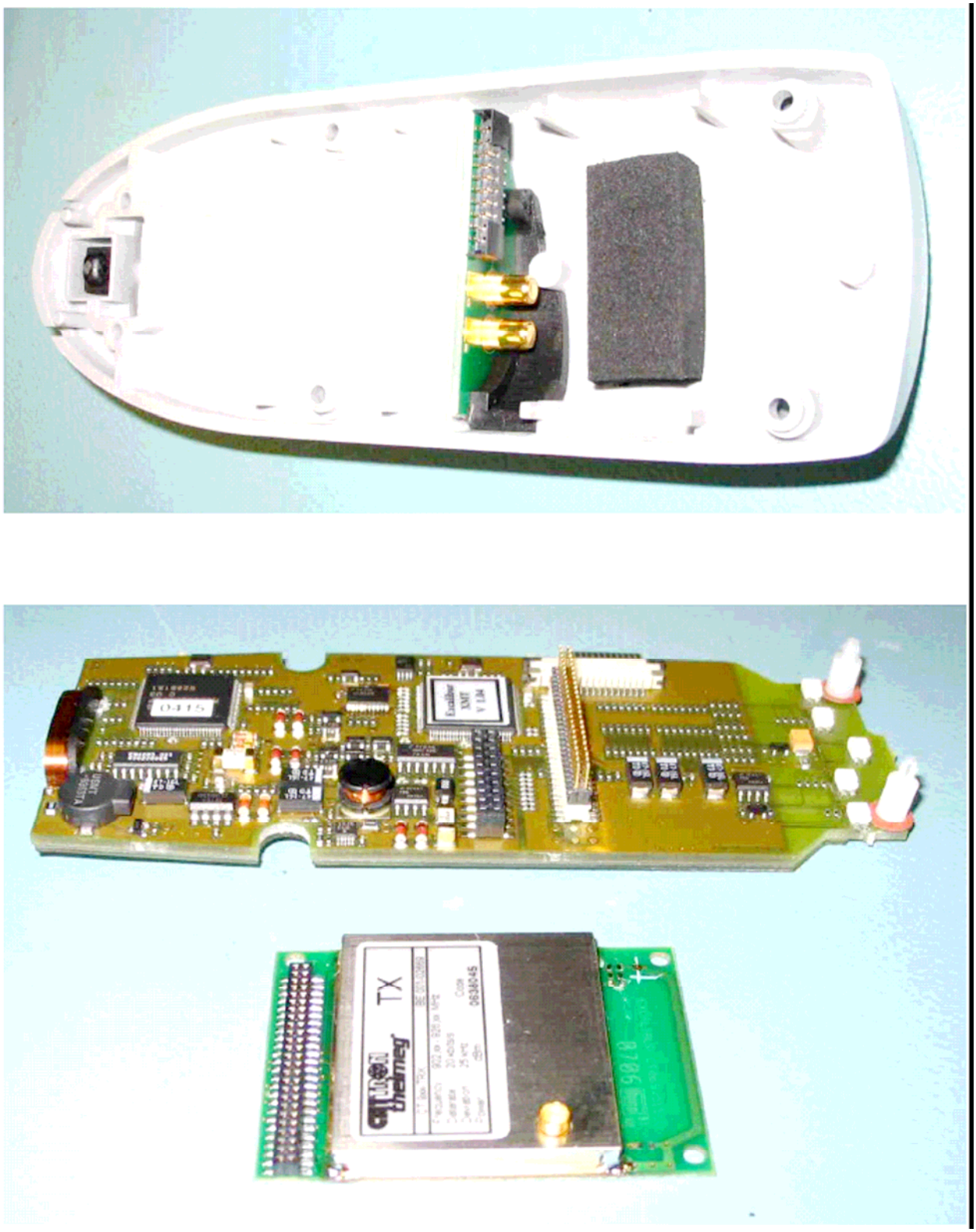
2.8 Photographs of EUT - per 2.1033(b)(7)

External

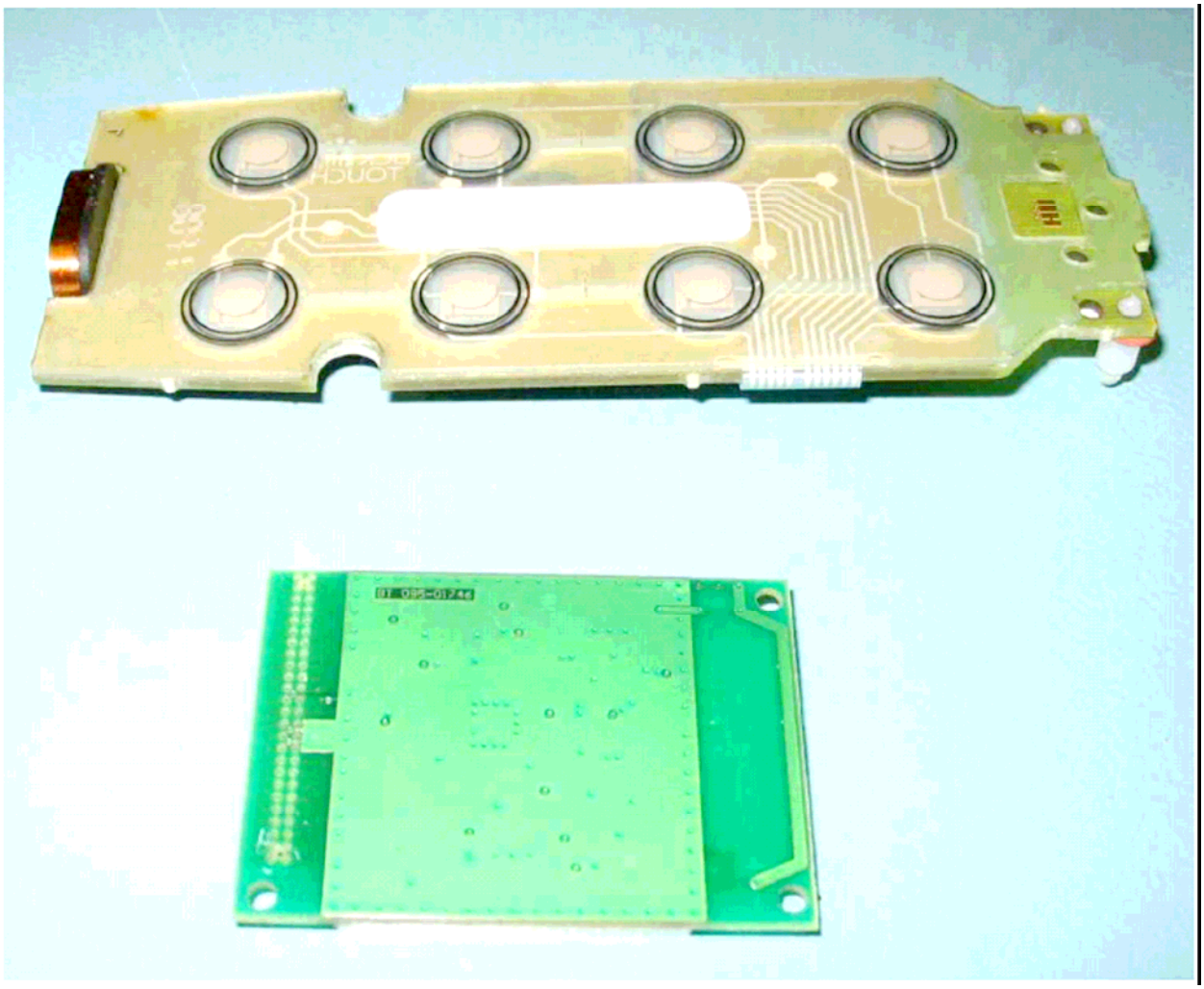
Photographs of EUT - per 2.1033(b)(7) continued
Internal



Photographs of EUT - per 2.1033(b)(7) continued
Internal



Photographs of EUT - per 2.1033(b)(7) continued
Internal



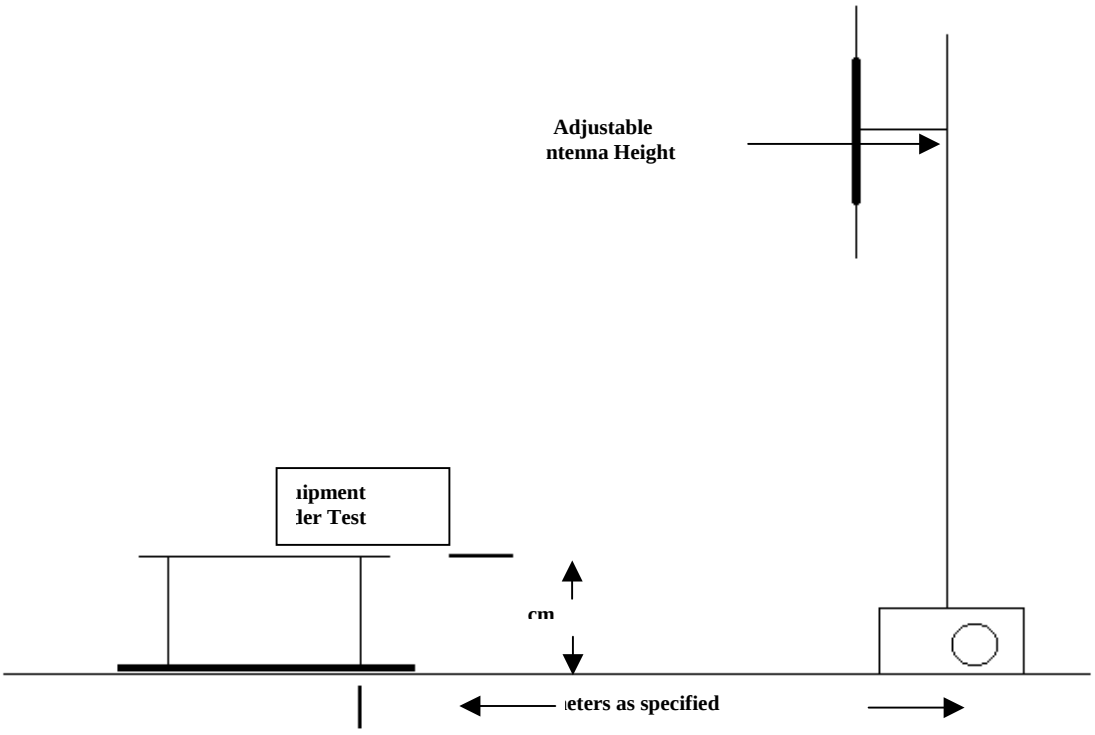
EMISSIONS

Per FCC Part 15 Subpart C – Industry Canada RSS-210

2.9 Radiated Emissions Test Setup and Procedure - Per 2.1033(b)(6) Per 2.947(a)

The EUT was placed on a wooden table 1 meter wide and 1.5 meters long, which rests on a in ground turntable 3 meter open area test site test site. The top of the table is 80 cm above the ground plane. The turntable can be rotated 360 degrees. Measuring antenna is set at the prescribed distance. (Measurements are made with broad band antennas that have been correlated with tuned dipole antennas). The mast is 6 meters high and is self-supporting. The height of the antenna can be varied from 1 to 4 meters. Positioning of the antenna is controlled remotely.

2.9.1 Spurious Radiation Test Site Per 2.1033(b)6



Radiated Test Setup and Procedure - cont'd

The EUT is put into the operational test mode as stated in Section 2.2.1 is then started.

The spectrum analyzer is setup to store the peak emission over the band of the antenna. Peak EUT and ambient emissions are stored while the turntable is rotated 360^0. Peak spectrum analyzer trace is then recorded with the addition of antenna and cable correction factors. The limit is recorded on the same graph. A receiver with CISPR Quasi Peak capabilities is then used on the frequencies identified as the highest with respect to the plotted limit. Ambience is noted on the graph along with EUT emissions. The highest EUT frequencies, with respect to the limit, are maximized.

To maximize emissions levels, the turntable is rotated and the antenna is raised and lowered to determine the point of maximum emanations. The cables are then manipulated at that point to maximize emissions. Measurements are made with the antennas in each horizontal and vertical polarization separately. The data obtained from these tests is corrected with the proper cable, preamplifier and antenna factors. The results are then transcribed onto tables that show the maximum emission levels. The highest emissions are listed in a Radiated Emissions Summary table.

If no emissions can be found, the lowest harmonics of the EUT clocks within the bands of the standard are tuned into with the receiver. If no emissions are found, the noise floor will be entered into the table and noted. A minimum of six frequencies will be logged. Summary results
will reflect only actual emissions from the EUT.

The field intensity measurements are made using standard techniques with a spectrum analyzer or EMI receiver as the calibrated Field Intensity Meter (FIM). Preamplifiers and filters are used when required.

When using the Hewlett Packard Model 8566B Spectrum Analyzer as the FIM, the Analyzer is calibrated to read signal level in dBm. Where:

0 dBm (50 ohms) = 107 dBuV (50 ohms)

The signal level (dBuV) = indicated signal level (dBm) + 107 dB. To obtain the signal level in dBuV/m it is necessary to add the antenna factor in dB.

2.9.2 Example Of Typical Calculation Per 2.1033(b)6

Measurement Distance = 3 Meter		
Reading @ 915 MHz	→	88.8 dBuV
Antenna Factor	+25.2 DB	
Cable Loss	+5.6 DB	
Preamplifier	-25.2 DB	
Duty Cycle Correction	-15.1 DB	
	-9.5 DB →	-9.5 dBuV
Field Strength dBuV/m at 3 Meter =	→	79.3 dBuV

The Following FCC and Industry Canada limits for acceptance were used:

Limit 915 MHz (Field Strength of Fundamental):
50,000 μV/M = 20 log (50,000) dBμV/M = 93.98 dBμV/M @ 3 Meters

Limit 915 MHz (Field Strength of Spurious Emissions):
500 μV/M = 20 log (500) dBμV/M = 53.98 dBμV/M @ 3 Meters

Limit 30 to 230 MHz: (per IEC 55022 @ 10 meters)
32 μV/M = 20 log (32) dBμV/M = 30.0 dBμV/M @ 10 Meters

Limit 230 to 1000 MHz: (Not at the Carrier Frequency)
71 μV/M = 20 log (71) dBμV/M = 37.0 dBμV/M @ 10 Meters

Limit >1000 MHz:
158μV/M = 20 log (158) dBμV/M = 44.0 dBμV/M @ 10 Meters

2.9.3 Field Strength of Fundamental

Test results are provided on pages 25 & 26.

2.9.4 Harmonic Radiated Emissions

Test results are provided on pages 25 & 26.

3.1.5 Spurious Emissions Not Associated With Fundamental

Per FCC Part 15 Subpart C, 15.209 @ 3meters and Table 3 of RSS-210.

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CFR 47 Subpart C Worksheet

DNB Job Number:	78059	Date: 14 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.209 paragraph 15.249
Model Number:	EXC9158A		[X] IC RSS-210
Description:	Remote Control Transmitter		
	Low Channel		

EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Tom Elders*

Bcn = A.H. Systems SAS-200/540 Biconical Antenna S/N 138 (30-200 Mhz)
Log = EMCO 3146 Log-Periodic Antenna S/N 1284 (200-1000 Mhz)
Drg = Electro-Metrics 3115 Double Ridge Guide Antenna S/N 2280 (1-18 GHz Mhz)
Cbl = Cable Loss
Amp = Preamplifier Gain
Dcf = Duty Cycle Correction
Typ = Type of reading PK = Peak reading QP = Quasi-peak reading AV = Average reading
Pol = Antenna polarity V = Vertical H = Horizontal
Pol = EUT V = Vertical H = Horizontal

NOTES: Readings greater than 3rd harmonic are ground floor readings
Fundamentals are in BOLD with a yellow background

FREQ.	Meter	Correction Factors					dBuV/m			uV/m			Positions		
		Log	Drg	Cbl	Amp	Dcf	Corr	Lim	Delta	Corr	Lim	Delta	Typ	Pol	EUT
903	**95.67**	**25.20**	**0.00**	**5.60**	**-25.20**	**-15.49**	**85.78**	**93.98**	**-8.20**	**19454**	**50000**	**-30546**	**PK**	**H**	**H**
1806	32.2	0.00	26.70	8.60	-19.30	-15.49	32.71	53.98	-21.27	43	500	-457	PK	H	H
2709	34.6	0.00	29.70	11.30	-20.50	-15.49	39.61	53.98	-14.37	96	500	-404	PK	H	H
3612	36.1	0.00	31.90	13.50	-24.40	-15.49	41.61	53.98	-12.37	120	500	-380	PK	H	H
4515	36.9	0.00	32.50	15.70	-25.10	-15.49	44.51	53.98	-9.47	168	500	-332	PK	H	H
5418	37.3	0.00	34.20	17.50	-25.60	-15.49	47.91	53.98	-6.07	249	500	-251	PK	H	H
6321	37.4	0.00	34.70	19.10	-24.30	-15.49	51.41	53.98	-2.57	372	500	-128	PK	H	H
7214	23.8	0.00	36.20	21.10	-25.00	-15.49	40.61	53.98	-13.37	107	500	-393	AV	H	H
8127	24.6	0.00	37.30	22.90	-24.20	-15.49	45.11	53.98	-8.87	180	500	-320	AV	H	H
9030	25.3	0.00	37.70	24.70	-24.30	-15.49	47.91	53.98	-6.07	249	500	-251	AV	H	H
903	**86.11**	**25.20**	**0.00**	**5.60**	**-25.20**	**-15.49**	**76.22**	**93.98**	**-17.76**	**6471**	**50000**	**-43529**	**PK**	**V**	**H**
1806	33.8	0.00	26.70	8.60	-19.30	-15.49	34.31	53.98	-19.67	52	500	-448	PK	V	H
2709	34.4	0.00	29.70	11.30	-20.50	-15.49	39.41	53.98	-14.57	93	500	-407	PK	V	H
3612	37.1	0.00	31.90	13.50	-24.40	-15.49	42.61	53.98	-11.37	135	500	-365	PK	V	H
4515	36.5	0.00	32.50	15.70	-25.10	-15.49	44.11	53.98	-9.87	161	500	-339	PK	V	H
5418	36.7	0.00	34.20	17.50	-25.60	-15.49	47.31	53.98	-6.67	232	500	-268	PK	V	H
6321	23.4	0.00	34.70	19.10	-24.30	-15.49	37.41	53.98	-16.57	74	500	-426	AV	V	H
7224	25.7	0.00	36.20	21.10	-25.00	-15.49	42.51	53.98	-11.47	134	500	-366	AV	V	H
8127	24.8	0.00	37.30	22.90	-24.20	-15.49	45.31	53.98	-8.67	184	500	-316	AV	V	H
9030	25.2	0.00	37.70	24.70	-24.30	-15.49	47.81	53.98	-6.17	246	500	-254	AV	V	H

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CFR 47 Subpart C Worksheet

DNB Job Number:	78059	Date: 14 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.209 paragraph 15.249
Model Number:	EXC9158A		[X] IC RSS-210
Description:	Remote Control Transmitter		
	Low Channel		

EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Tom Elders*

Bcn = A.H. Systems SAS-200/540 Biconical Antenna S/N 138 (30-200 Mhz)
Log = EMCO 3146 Log-Periodic Antenna S/N 1284 (200-1000 Mhz)
Drg = Electro-Metrics 3115 Double Ridge Guide Antenna S/N 2280 (1-18 GHz Mhz)
Cbl = Cable Loss
Amp = Preamplifier Gain
Dcf = Duty Cycle Correction
Typ = Type of reading PK = Peak reading QP = Quasi-peak reading AV = Average reading
Pol = Antenna polarity V = Vertical H = Horizontal
Pol = EUT V = Vertical H = Horizontal

NOTES: Readings greater than 3rd harmonic are ground floor readings
Fundamentals are in BOLD with a yellow background

FREQ.	Meter	Correction Factors					dBuV/m			uV/m			Positions		
		Log	Drg	Cbl	Amp	Dcf	Corr	Lim	Delta	Corr	Lim	Delta	Typ	Pol	EUT
903	**97.52**	**25.20**	**0.00**	**5.60**	**-25.20**	**-15.49**	**87.63**	**93.98**	**-6.35**	**24071**	**50000**	**-25929**	**PK**	**H**	**V**
1806	34.5	0.00	26.70	8.60	-19.30	-15.49	35.01	53.98	-18.97	56	500	-444	PK	H	V
2709	34.3	0.00	29.70	11.30	-20.50	-15.49	39.31	53.98	-14.67	92	500	-408	PK	H	V
3612	38.7	0.00	31.90	13.50	-24.40	-15.49	44.21	53.98	-9.77	162	500	-338	PK	H	V
4515	23.1	0.00	32.50	15.70	-25.10	-15.49	30.71	53.98	-23.27	34	500	-466	AV	H	V
5418	23.2	0.00	34.20	17.50	-25.60	-15.49	33.81	53.98	-20.17	49	500	-451	AV	H	V
6321	23.7	0.00	34.70	19.10	-24.30	-15.49	37.71	53.98	-16.27	77	500	-423	AV	H	V
7224	25.5	0.00	36.20	21.10	-25.00	-15.49	42.31	53.98	-11.67	130	500	-370	AV	H	V
8127	24.8	0.00	37.30	22.90	-24.20	-15.49	45.31	53.98	-8.67	184	500	-316	AV	H	V
9030	25.2	0.00	37.70	24.70	-24.30	-15.49	47.81	53.98	-6.17	246	500	-254	AV	H	V
903	**90.73**	**25.20**	**0.00**	**5.60**	**-25.20**	**-15.49**	**80.84**	**93.98**	**-13.14**	**11015**	**50000**	**-38985**	**PK**	**V**	**V**
1806	33.8	0.00	26.70	8.60	-19.30	-15.49	34.31	53.98	-19.67	52	500	-448	PK	V	V
2709	34.6	0.00	29.70	11.30	-20.50	-15.49	39.61	53.98	-14.37	96	500	-404	PK	V	V
3612	37.9	0.00	31.90	13.50	-24.40	-15.49	43.41	53.98	-10.57	148	500	-352	PK	V	V
4515	35.8	0.00	32.50	15.70	-25.10	-15.49	43.41	53.98	-10.57	148	500	-352	PK	V	V
5418	23.4	0.00	34.20	17.50	-25.60	-15.49	34.01	53.98	-19.97	50	500	-450	AV	V	V
6321	23.5	0.00	34.70	19.10	-24.30	-15.49	37.51	53.98	-16.47	75	500	-425	AV	V	V
7224	25.8	0.00	36.20	21.10	-25.00	-15.49	42.61	53.98	-11.37	135	500	-365	AV	V	V
8127	24.5	0.00	37.30	22.90	-24.20	-15.49	45.01	53.98	-8.97	178	500	-322	AV	V	V
9030	25.2	0.00	37.70	24.70	-24.30	-15.49	47.81	53.98	-6.17	246	500	-254	AV	V	V

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CFR 47 Subpart C Worksheet

DNB Job Number:	78059	Date: 14 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.209 paragraph 15.249
Model Number:	EXC9158A		[X] IC RSS-210
Description:	Remote Control Transmitter		
	Mid Channel		

EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Tom Elders*

Bcn = A.H. Systems SAS-200/540 Biconical Antenna S/N 138 (30-200 Mhz)
Log = EMCO 3146 Log-Periodic Antenna S/N 1284 (200-1000 Mhz)
Drg = Electro-Metrics 3115 Double Ridge Guide Antenna S/N 2280 (1-18 GHz Mhz)
Cbl = Cable Loss
Amp = Preamplifier Gain
Dcf = Duty Cycle Correction
Typ = Type of reading PK = Peak reading QP = Quasi-peak reading AV = Average reading
Pol = Antenna polarity V = Vertical H = Horizontal
Pol = EUT V = Vertical H = Horizontal

NOTES: Readings greater than 3rd harmonic are ground floor readings
Fundamentals are in BOLD with a yellow background

FREQ.	Meter	Correction Factors					dBuV/m			uV/m			Positions		
		Log	Drg	Cbl	Amp	Dcf	Corr	Lim	Delta	Corr	Lim	Delta	Typ	Pol	EUT
915	**95.43**	**25.20**	**0.00**	**5.60**	**-25.20**	**-15.49**	**85.54**	**93.98**	**-8.44**	**18923**	**50000**	**-31077**	**PK**	**H**	**H**
1830	41.00	0.00	26.80	8.60	-19.20	-15.49	41.71	53.98	-12.27	122	500	-378	PK	H	H
2745	35.00	0.00	29.80	11.40	-20.60	-15.49	40.11	53.98	-13.87	101	500	-399	PK	H	H
3660	37.30	0.00	32.00	13.60	-24.50	-15.49	42.91	53.98	-11.07	140	500	-360	PK	H	H
4575	36.70	0.00	32.60	15.80	-25.10	-15.49	44.51	53.98	-9.47	168	500	-332	PK	H	H
5490	23.40	0.00	34.40	17.60	-25.50	-15.49	34.41	53.98	-19.57	53	500	-447	AV	H	H
6405	23.60	0.00	34.70	19.30	-24.20	-15.49	37.91	53.98	-16.07	79	500	-421	AV	H	H
7320	25.60	0.00	36.50	21.30	-25.00	-15.49	42.91	53.98	-11.07	140	500	-360	AV	H	H
8235	25.30	0.00	37.40	23.10	-23.90	-15.49	46.41	53.98	-7.57	209	500	-291	AV	H	H
9150	25.60	0.00	37.70	25.20	-24.40	-15.49	48.61	53.98	-5.37	269	500	-231	AV	H	H
915	**92.48**	**25.20**	**0.00**	**5.60**	**-25.20**	**-15.49**	**82.59**	**93.98**	**-11.39**	**13474**	**50000**	**-36526**	**PK**	**V**	**H**
1830	32.20	0.00	26.80	8.60	-19.20	-15.49	32.91	53.98	-21.07	44	500	-456	PK	V	H
2745	31.90	0.00	29.80	11.40	-20.60	-15.49	37.01	53.98	-16.97	71	500	-429	PK	V	H
3660	36.10	0.00	32.00	13.60	-24.50	-15.49	41.71	53.98	-12.27	122	500	-378	PK	V	H
4575	35.00	0.00	32.60	15.80	-25.10	-15.49	42.81	53.98	-11.17	138	500	-362	PK	V	H
5490	34.90	0.00	34.40	17.60	-25.50	-15.49	45.91	53.98	-8.07	197	500	-303	PK	V	H
6405	23.50	0.00	34.70	19.30	-24.20	-15.49	37.81	53.98	-16.17	78	500	-422	AV	V	H
7320	25.90	0.00	36.50	21.30	-25.00	-15.49	43.21	53.98	-10.77	145	500	-355	AV	V	H
8235	25.20	0.00	37.40	23.10	-23.90	-15.49	46.31	53.98	-7.67	207	500	-293	AV	V	H
9150	25.40	0.00	37.70	25.20	-24.40	-15.49	48.41	53.98	-5.57	263	500	-237	AV	V	H

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CFR 47 Subpart C Worksheet

DNB Job Number:	78059	Date: 14 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.209 paragraph 15.249
Model Number:	EXC9158A		[X] IC RSS-210
Description:	Remote Control Transmitter		
	Mid Channel		

EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Tom Elders*

Bcn = A.H. Systems SAS-200/540 Biconical Antenna S/N 138 (30-200 Mhz)
Log = EMCO 3146 Log-Periodic Antenna S/N 1284 (200-1000 Mhz)
Drg = Electro-Metrics 3115 Double Ridge Guide Antenna S/N 2280 (1-18 GHz Mhz)
Cbl = Cable Loss
Amp = Preamplifier Gain
Dcf = Duty Cycle Correction
Typ = Type of reading PK = Peak reading QP = Quasi-peak reading AV = Average reading
Pol = Antenna polarity V = Vertical H = Horizontal
Pol = EUT V = Vertical H = Horizontal

NOTES: Readings greater than 3rd harmonic are ground floor readings
Fundamentals are in BOLD with a yellow background

FREQ.	Meter	Correction Factors					dBuV/m			uV/m			Positions		
		Log	Drg	Cbl	Amp	Dcf	Corr	Lim	Delta	Corr	Lim	Delta	Typ	Pol	EUT
915	**86.11**	**25.20**	**0.00**	**5.60**	**-25.20**	**-15.49**	**76.22**	**93.98**	**-17.76**	**6471**	**50000**	**-43529**	**PK**	**H**	**V**
1830	33.70	0.00	26.80	8.60	-19.20	-15.49	34.41	53.98	-19.57	53	500	-447	PK	H	V
2745	34.50	0.00	29.80	11.40	-20.60	-15.49	39.61	53.98	-14.37	96	500	-404	PK	H	V
3660	37.40	0.00	32.00	13.60	-24.50	-15.49	43.01	53.98	-10.97	141	500	-359	PK	H	V
4575	36.80	0.00	32.60	15.80	-25.10	-15.49	44.61	53.98	-9.37	170	500	-330	PK	H	V
5490	23.40	0.00	34.40	17.60	-25.50	-15.49	34.41	53.98	-19.57	53	500	-447	AV	H	V
6405	23.70	0.00	34.70	19.30	-24.20	-15.49	38.01	53.98	-15.97	80	500	-420	AV	H	V
7320	25.80	0.00	36.50	21.30	-25.00	-15.49	43.11	53.98	-10.87	143	500	-357	AV	H	V
8235	25.20	0.00	37.40	23.10	-23.90	-15.49	46.31	53.98	-7.67	207	500	-293	AV	H	V
9150	25.70	0.00	37.70	25.20	-24.40	-15.49	48.71	53.98	-5.27	273	500	-227	AV	H	V
915	**83.97**	**25.20**	**0.00**	**5.60**	**-25.20**	**-15.49**	**74.08**	**93.98**	**-19.90**	**5058**	**50000**	**-44942**	**PK**	**V**	**V**
1830	33.80	0.00	26.80	8.60	-19.20	-15.49	34.51	53.98	-19.47	53	500	-447	PK	V	V
2745	34.60	0.00	29.80	11.40	-20.60	-15.49	39.71	53.98	-14.27	97	500	-403	PK	V	V
3660	37.70	0.00	32.00	13.60	-24.50	-15.49	43.31	53.98	-10.67	146	500	-354	PK	V	V
4575	37.60	0.00	32.60	15.80	-25.10	-15.49	45.41	53.98	-8.57	186	500	-314	PK	V	V
5490	23.50	0.00	34.40	17.60	-25.50	-15.49	34.51	53.98	-19.47	53	500	-447	AV	V	V
6405	23.70	0.00	34.70	19.30	-24.20	-15.49	38.01	53.98	-15.97	80	500	-420	AV	V	V
7320	25.80	0.00	36.50	21.30	-25.00	-15.49	43.11	53.98	-10.87	143	500	-357	AV	V	V
8235	24.90	0.00	37.40	23.10	-23.90	-15.49	46.01	53.98	-7.97	200	500	-300	AV	V	V
9150	25.40	0.00	37.70	25.20	-24.40	-15.49	48.41	53.98	-5.57	263	500	-237	AV	V	V

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CFR 47 Subpart C Worksheet

DNB Job Number:	78059	Date: 14 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.209 paragraph 15.249
Model Number:	EXC9158A		[X] IC RSS-210
Description:	Remote Control Transmitter		
	Hi Channel		

EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Tom Elders*

Bcn = A.H. Systems SAS-200/540 Biconical Antenna S/N 138 (30-200 Mhz)
Log = EMCO 3146 Log-Periodic Antenna S/N 1284 (200-1000 Mhz)
Drg = Electro-Metrics 3115 Double Ridge Guide Antenna S/N 2280 (1-18 GHz Mhz)
Cbl = Cable Loss
Amp = Preamplifier Gain
Dcf = Duty Cycle Correction
Typ = Type of reading PK = Peak reading QP = Quasi-peak reading AV = Average reading
Pol = Antenna polarity V = Vertical H = Horizontal
Pol = EUT V = Vertical H = Horizontal

NOTES: Readings greater than 3rd harmonic are ground floor readings
Fundamentals are in BOLD with a yellow background

FREQ.	Meter	Correction Factors					dBuV/m			uV/m			Positions		
		Log	Drg	Cbl	Amp	Dcf	Corr	Lim	Delta	Corr	Lim	Delta	Typ	Pol	EUT
927	**92.48**	**25.20**	**0.00**	**5.60**	**-25.20**	**-15.49**	**82.59**	**93.98**	**-11.39**	**13474**	**50000**	**-36526**	**PK**	**H**	**H**
1854	42.60	0.00	26.90	8.70	-19.20	-15.49	43.51	53.98	-10.47	150	500	-350	PK	H	H
2781	34.50	0.00	29.90	11.50	-20.90	-15.49	39.51	53.98	-14.47	95	500	-405	PK	H	H
3708	38.10	0.00	32.10	13.70	-24.60	-15.49	43.81	53.98	-10.17	155	500	-345	PK	H	H
4635	36.30	0.00	32.80	16.00	-25.20	-15.49	44.41	53.98	-9.57	166	500	-334	PK	H	H
5562	23.50	0.00	34.40	17.70	-25.40	-15.49	34.71	53.98	-19.27	54	500	-446	AV	H	H
6489	23.30	0.00	34.70	19.50	-24.00	-15.49	38.01	53.98	-15.97	80	500	-420	AV	H	H
7416	25.30	0.00	36.80	21.50	-25.10	-15.49	43.01	53.98	-10.97	141	500	-359	AV	H	H
8343	25.20	0.00	37.50	23.30	-23.90	-15.49	46.61	53.98	-7.37	214	500	-286	AV	H	H
9270	25.50	0.00	37.70	25.80	-24.30	-15.49	49.21	53.98	-4.77	289	500	-211	AV	H	H
927	**83.73**	**25.20**	**0.00**	**5.60**	**-25.20**	**-15.49**	**73.84**	**93.98**	**-20.14**	**4920**	**50000**	**-45080**	**PK**	**V**	**H**
1854	35.00	0.00	26.90	8.70	-19.20	-15.49	35.91	53.98	-18.07	62	500	-438	PK	V	H
2781	34.20	0.00	29.90	11.50	-20.90	-15.49	39.21	53.98	-14.77	91	500	-409	PK	V	H
3708	37.50	0.00	32.10	13.70	-24.60	-15.49	43.21	53.98	-10.77	145	500	-355	PK	V	H
4635	35.80	0.00	32.80	16.00	-25.20	-15.49	43.91	53.98	-10.07	157	500	-343	PK	V	H
5562	23.50	0.00	34.40	17.70	-25.40	-15.49	34.71	53.98	-19.27	54	500	-446	AV	V	H
6489	23.40	0.00	34.70	19.50	-24.00	-15.49	38.11	53.98	-15.87	80	500	-420	AV	V	H
7416	25.20	0.00	36.80	21.50	-25.10	-15.49	42.91	53.98	-11.07	140	500	-360	AV	V	H
8343	25.30	0.00	37.50	23.30	-23.90	-15.49	46.71	53.98	-7.27	217	500	-283	AV	V	H
9270	25.40	0.00	37.70	25.80	-24.30	-15.49	49.11	53.98	-4.87	285	500	-215	AV	V	H

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CFR 47 Subpart C Worksheet

DNB Job Number:	78059	Date: 14 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.209 paragraph 15.249 [X] IC RSS-210
Model Number:	EXC9158A		
Description:	Remote Control Transmitter		
	Hi Channel		

EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Tom Elders*

Bcn = A.H. Systems SAS-200/540 Biconical Antenna S/N 138 (30-200 Mhz)
Log = EMCO 3146 Log-Periodic Antenna S/N 1284 (200-1000 Mhz)
Drg = Electro-Metrics 3115 Double Ridge Guide Antenna S/N 2280 (1-18 GHz Mhz)
Cbl = Cable Loss
Amp = Preamplifier Gain
Dcf = Duty Cycle Correction
Typ = Type of reading PK = Peak reading QP = Quasi-peak reading AV = Average reading
Pol = Antenna polarity V = Vertical H = Horizontal
Pol = EUT V = Vertical H = Horizontal

NOTES: Readings greater than 3rd harmonic are ground floor readings
Fundamentals are in BOLD with a yellow background

FREQ.	Meter	Correction Factors					dBuV/m			uV/m			Positions		
		Log	Drg	Cbl	Amp	Dcf	Corr	Lim	Delta	Corr	Lim	Delta	Typ	Pol	EUT
927	**88.00**	**25.20**	**0.00**	**5.60**	**-25.20**	**-15.49**	**78.11**	**93.98**	**-15.87**	**8045**	**50000**	**-41955**	**PK**	**H**	**V**
1854	35.40	0.00	26.90	8.70	-19.20	-15.49	36.31	53.98	-17.67	65	500	-435	PK	H	V
2781	34.20	0.00	29.90	11.50	-20.90	-15.49	39.21	53.98	-14.77	91	500	-409	PK	H	V
3708	37.40	0.00	32.10	13.70	-24.60	-15.49	43.11	53.98	-10.87	143	500	-357	PK	H	V
4635	37.30	0.00	32.80	16.00	-25.20	-15.49	45.41	53.98	-8.57	186	500	-314	PK	H	V
5562	23.70	0.00	34.40	17.70	-25.40	-15.49	34.91	53.98	-19.07	56	500	-444	AV	H	V
6489	23.40	0.00	34.70	19.50	-24.00	-15.49	38.11	53.98	-15.87	80	500	-420	AV	H	V
7416	25.50	0.00	36.80	21.50	-25.10	-15.49	43.21	53.98	-10.77	145	500	-355	AV	H	V
8343	25.40	0.00	37.50	23.30	-23.90	-15.49	46.81	53.98	-7.17	219	500	-281	AV	H	V
9270	25.40	0.00	37.70	25.80	-24.30	-15.49	49.11	53.98	-4.87	285	500	-215	AV	H	V
927	**93.73**	**25.20**	**0.00**	**5.60**	**-25.20**	**-15.49**	**83.84**	**93.98**	**-10.14**	**15560**	**50000**	**-34440**	**PK**	**V**	**V**
1854	40.60	0.00	26.90	8.70	-19.20	-15.49	41.51	53.98	-12.47	119	500	-381	PK	V	V
2781	34.70	0.00	29.90	11.50	-20.90	-15.49	39.71	53.98	-14.27	97	500	-403	PK	V	V
3708	37.70	0.00	32.10	13.70	-24.60	-15.49	43.41	53.98	-10.57	148	500	-352	PK	V	V
4635	37.90	0.00	32.80	16.00	-25.20	-15.49	46.01	53.98	-7.97	200	500	-300	PK	V	V
5562	23.50	0.00	34.40	17.70	-25.40	-15.49	34.71	53.98	-19.27	54	500	-446	AV	V	V
6489	23.50	0.00	34.70	19.50	-24.00	-15.49	38.21	53.98	-15.77	81	500	-419	AV	V	V
7416	25.30	0.00	36.80	21.50	-25.10	-15.49	43.01	53.98	-10.97	141	500	-359	AV	V	V
8343	25.30	0.00	37.50	23.30	-23.90	-15.49	46.71	53.98	-7.27	217	500	-283	AV	V	V
9270	25.40	0.00	37.70	25.80	-24.30	-15.49	49.11	53.98	-4.87	285	500	-215	AV	V	V

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Radiated Emissions Datasheet

DNB Job Number:	78059	Date: 1 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.209 paragraph 15.249
Model Number:	EXC9158A		[X] IC RSS-210
Description:	Remote Control Transmitter		

EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Tom Elders*

Bcn = A.H. Systems SAS-200/540 Biconical Antenna S/N 138 (30-200 Mhz)
Log = EMCO 3146 Log-Periodic Antenna S/N 1284 (200-1000 Mhz)
Dcf = Distance Correction Factor = 20*LOG$_{10}$(Test Distance/Specification Distance)
Typ = Type of reading PK = Peak reading QP = Quasi-peak reading

Cbl = Cable Loss
Amp = Preamplifier Gain
Pl = Antenna polarity V = Vertical H = Horizontal
"*" = Readings taken with a res bandwidth of 10KHz do to nearby ambient signal

NOTES: EUT placed vertically on table

FREQ.	Meter	Correction Factors					dBuV/m			uV/m			Positions			
		Bcn	Log	Cbl	Amp	Dcf	Corr	Lim	Delta	Corr	Lim	Delta	Typ	Tbl	Pl	Hgt
31.663	28.8	14.1	0.0	0.8	-23.9	0.0	19.8	40.0	-20.2	10	100	-90	PK	98	H	1.45
44.608	38.8	12.1	0.0	0.9	-23.8	0.0	28.0	40.0	-12.0	25	100	-75	PK	354	H	1.45
63.197	29.8	10.1	0.0	1.1	-23.7	0.0	17.3	40.0	-22.7	7	100	-93	PK	360	H	1.45
137.692	34.5	11.2	0.0	1.8	-23.7	0.0	23.8	43.5	-19.7	15	150	-135	PK	15	H	1.73
161.700	35.6	12.8	0.0	2.0	-23.7	0.0	26.7	43.5	-16.8	22	150	-128	PK	360	H	1.73
166.667	28.2	13.0	0.0	2.0	-23.7	0.0	19.5	43.5	-24.0	9	150	-141	PK	15	H	1.85
205.198	30.1	0.0	11.0	2.2	-23.8	0.0	19.5	43.5	-24.0	9	150	-141	PK	75	H	1.00
289.730	28.3	0.0	13.5	2.7	-24.3	0.0	20.2	46.0	-25.8	10	200	-190	PK	360	H	1.00
369.800	26.8	0.0	16.7	3.0	-24.4	0.0	22.1	46.0	-23.9	13	200	-187	PK	25	H	1.03
550.925	24.4	0.0	18.3	3.8	-24.9	0.0	21.6	46.0	-24.4	12	200	-188	PK	16	H	1.00
33.336	30.2	13.4	0.0	0.8	-23.9	0.0	20.5	40.0	-19.5	11	100	-89	PK	243	V	1.00
64.003	37.0	10.2	0.0	1.1	-23.7	0.0	24.6	40.0	-15.4	17	100	-83	PK	227	V	1.00
64.857	34.5	10.2	0.0	1.1	-23.7	0.0	22.1	40.0	-17.9	13	100	-87	PK	360	V	1.00
72.657	36.4	10.3	0.0	1.2	-23.7	0.0	24.2	40.0	-15.8	16	100	-84	PK	15	V	1.07
133.322	33.4	11.0	0.0	1.8	-23.7	0.0	22.5	43.5	-21.0	13	150	-137	PK	360	V	1.00
137.357	32.1	11.2	0.0	1.8	-23.7	0.0	21.4	43.5	-22.1	12	150	-138	PK	149	V	1.00
205.258	30.7	0.0	11.0	2.2	-23.8	0.0	20.1	43.5	-23.4	10	150	-140	PK	36	V	1.00
275.125	33.5	0.0	12.9	2.6	-24.2	0.0	24.8	46.0	-21.2	17	200	-183	PK	228	V	1.20
372.993	27.8	0.0	16.8	3.0	-24.5	0.0	23.1	46.0	-22.9	14	200	-186	PK	15	V	1.20
621.270	34.5	0.0	18.1	4.0	-25.0	0.0	31.6	46.0	-14.4	38	200	-162	PK	74	V	1.38

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Radiated Emissions Datasheet

DNB Job Number:	78059	Date: 1 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.209 paragraph 15.249
Model Number:	EXC9158A		[X] IC RSS-210
Description:	Remote Control Transmitter		

EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Tom Elders*

Bcn = A.H. Systems SAS-200/540 Biconical Antenna S/N 138 (30-200 Mhz)
Log = EMCO 3146 Log-Periodic Antenna S/N 1284 (200-1000 Mhz)
Dcf = Distance Correction Factor = 20*LOG$_{10}$(Test Distance/Specification Distance)
Typ = Type of reading PK = Peak reading QP = Quasi-peak reading

Cbl = Cable Loss
Amp = Preamplifier Gain
Pl = Antenna polarity V = Vertical H = Horizontal
"*" = Readings taken with a res bandwidth of 10KHz do to nearby ambient signal

NOTES: EUT placed horizontally on table

FREQ.	Meter	Correction Factors					dBuV/m			uV/m			Positions			
		Bcn	Log	Cbl	Amp	Dcf	Corr	Lim	Delta	Corr	Lim	Delta	Typ	Tbl	Pl	Hgt
31.660	31.2	14.1	0.0	0.8	-23.9	0.0	22.2	40.0	-17.8	13	100	-87	PK	242	H	1.07
36.005	34.7	12.6	0.0	0.8	-23.9	0.0	24.2	40.0	-15.8	16	100	-84	PK	360	H	1.40
156.610	24.8	12.5	0.0	2.0	-23.7	0.0	15.6	43.5	-27.9	6	150	-144	PK	360	H	1.40
194.520	23.6	14.9	0.0	2.2	-23.7	0.0	17.0	43.5	-26.5	7	150	-143	PK	25	H	1.49
205.213	36.5	0.0	11.0	2.2	-23.8	0.0	25.9	43.5	-17.6	20	150	-130	PK	254	H	1.00
220.295	38.4	0.0	11.2	2.3	-24.1	0.0	27.8	46.0	-18.2	25	200	-175	PK	16	H	1.28
375.475	29.9	0.0	16.9	3.0	-24.5	0.0	25.3	46.0	-20.7	18	200	-182	PK	360	H	1.65
456.003	31.3	0.0	18.6	3.4	-24.6	0.0	28.7	46.0	-17.3	27	200	-173	PK	312	H	1.79
31.660	29.5	14.1	0.0	0.8	-23.9	0.0	20.5	40.0	-19.5	11	100	-89	PK	242	V	1.07
35.770	29.8	12.6	0.0	0.8	-23.9	0.0	19.3	40.0	-20.7	9	100	-91	PK	134	V	1.00
74.470	30.5	10.2	0.0	1.2	-23.7	0.0	18.2	40.0	-21.8	8	100	-92	PK	126	V	1.00
173.273	26.5	13.3	0.0	2.1	-23.7	0.0	18.2	43.5	-25.3	8	150	-142	PK	118	V	1.00
205.235	29.8	0.0	11.0	2.2	-23.8	0.0	19.2	43.5	-24.3	9	150	-141	PK	186	V	1.00
284.355	32.5	0.0	13.3	2.6	-24.2	0.0	24.2	46.0	-21.8	16	200	-184	PK	15	V	1.01
391.995	26.8	0.0	17.4	3.1	-24.5	0.0	22.8	46.0	-23.2	14	200	-186	PK	336	V	1.16
586.550	26.7	0.0	17.6	3.9	-25.0	0.0	23.2	46.0	-22.8	14	200	-186	PK	229	V	1.16
788.150	17.6	0.0	22.8	4.7	-25.4	0.0	19.7	46.0	-26.3	10	200	-190	PK	360	V	1.16

3.1.6 Duty Cycle Correction (ref DA:04-3946 and ANSI C63.4 13.1.4.2)

Part 15 of the FCC Rules provides for the operation of low power communication devices without an individual license (e.g., intrusion detectors, pulsed water tank level gauges, etc.), subject to certain requirements. Some of these devices use extremely narrow pulses to generate wideband emissions, which are measured to determine compliance with the rules. These measurements are typically performed with a receiver or spectrum analyzer. Depending on a number of factors (e.g., resolution bandwidth, pulsewidth, etc.), the spectrum analyzer may not always display the true peak value of the measured emission. This effect, called "pulse desensitization," relates to the capabilities of the measuring instrument. For the measurement and reporting of the true peak of pulsed emissions, it may be necessary to apply a "pulse desensitization correction factor" (PDCF) to the measured value, pursuant to 47 CFR 15.35(a).

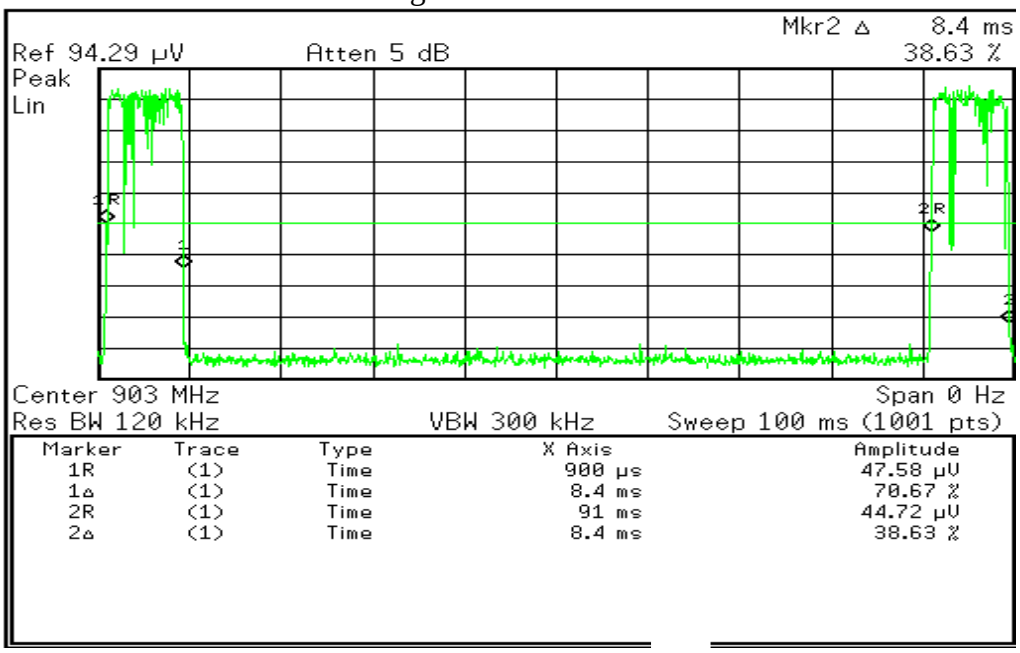
(PDCF) Duty cycle correction is determined by counting the number of pulses on over a 100 ms period.

Pulse width / Time = Duty Cycle

Duty cycle correction factor = 20 log (duty cycle)

		Time in ms	
Total on time per 100 ms		16.8	
Total off time per 100 ms		83.2	
Total duty cycle correction in dB		-15.49	

Plots showing modulation characteristics



3.1.7 Occupied Bandwidth

The transmitter's occupied bandwidth at (903 MHz and 927MHz) was measured with respect to the 26dB down point of the center frequency. Part 15.249 (c) stipulates that emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation. Part 15.209 (a) specifies that the emissions from an intentional radiator shall not exceed the field strength levels in the 216 to 960 MHz band of 200 uV/m (46 dBuV/m).

When transmitting at 903 MHz (Low Channel), emissions measured at the band edge of 902 MHz were 30.6 dBuV/m (< 46 dBuV/m).

Lower band edge 902MHz = 30.6dBuV/m

When transmitting at 927 MHz (High Channel), emissions measured at the band edge of 928 MHz were 30.2 dBuV/m (< 46 dBuV/m).

Upper band edge 928MHz = 30.2dBuV/m

Plots showing the occupied bandwidth are provided on page 25-27

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Riverside, CA 92503
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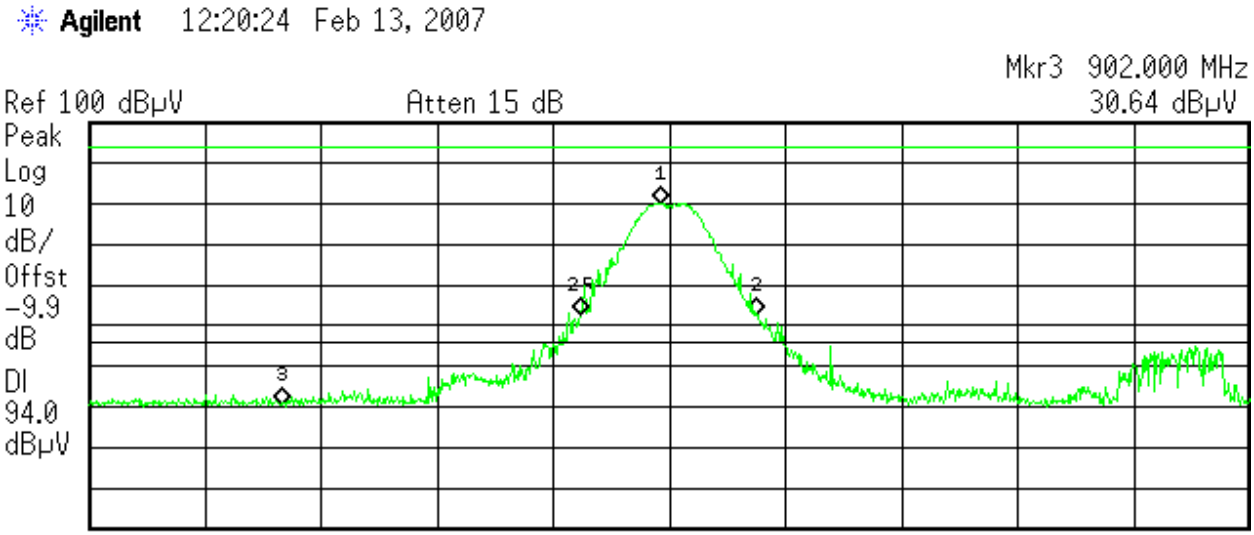
FAX (951) 637-2704

Occupied Bandwidth Datasheet

DNB Job Number:	78059	Date: 13 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.209 paragraph 15.249 [X] IC RSS-210
Model Number:	EXC9158A		
Description:	Remote Control Transmitter		
	Low Channel		
EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Tom Elders*			



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	902.976 MHz	80.03 dBµV
2R	(1)	Freq	902.772 MHz	52.62 dBµV
2Δ	(1)	Freq	450 kHz	0.083 dB
3	(1)	Freq	902.000 MHz	30.64 dBµV

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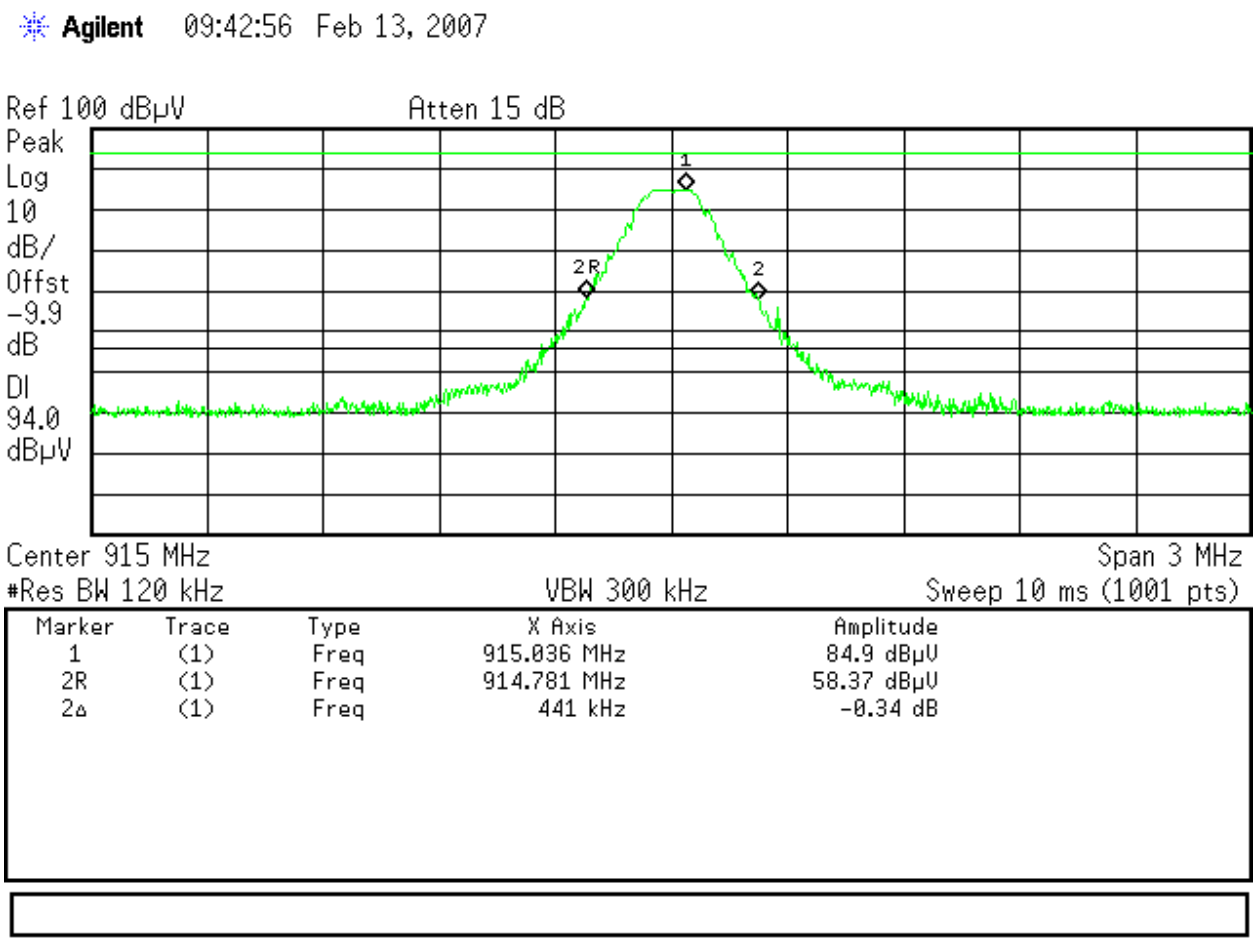
Occupied Bandwidth Datasheet

DNB Job Number:	78059	Date: 13 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.209 paragraph 15.249 [X] IC RSS-210
Model Number:	EXC9158A		
Description:	Remote Control Transmitter		
	Mid Channel		
EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Tom Elders*			



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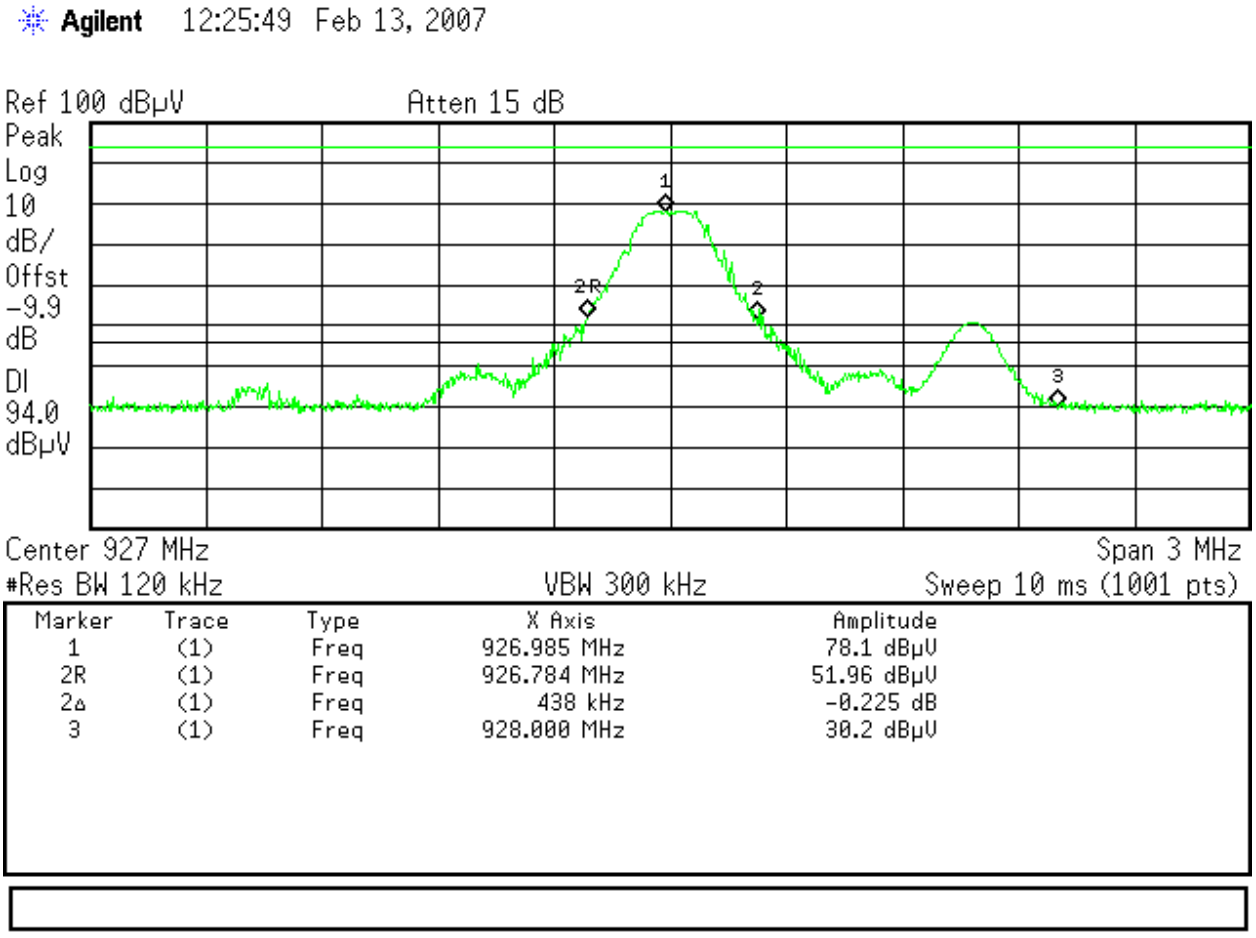
Occupied Bandwidth Datasheet

DNB Job Number:	78059	Date: 13 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.209 paragraph 15.249 [X] IC RSS-210
Model Number:	EXC9158A		
Description:	Remote Control Transmitter		
	High Channel		
EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Tom Elders*			



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Frequency Stability

DNB Job Number:	78059	Date: 14 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.249
Model Number:	EXC9158A		[X] IC RSS-210
Description:	Remote Control Transmitter		
	Low Channel		

EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Les Payne*

EUT was tested between –20 degrees C and + 50 degrees C and no frequency drift was observed. EUT Power was reduced until either frequency instability was observed or until the signal ceased to transmit. No frequency instability was observed.

Temp (C)	Voltage	Frequency (MHz)	Deviation (kHz)
-20.0	3.6	902.964	+2
-10.0	3.6	902.974	+12
0.0	3.6	902.960	-2
+10.0	3.6	902.960	-2
+20.0	3.6	902.962	0
+30.0	3.6	902.964	+2
+40.0	3.6	902.960	-2
+50.0	3.6	902.972	+10
Temp (C)	**Voltage**	**Frequency (MHz)**	**Deviation (kHz)**
+25	3.06	902.962	0
+25	3.60	902.962	0
+25	4.14	902.962	0

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Frequency Stability

DNB Job Number:	78059	Date: 14 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.249
Model Number:	EXC9158A		[X] IC RSS-210
Description:	Remote Control Transmitter		
	Mid Channel		

EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Les Payne*

EUT was tested between –20 degrees C and + 50 degrees C and no frequency drift was observed. EUT Power was reduced until either frequency instability was observed or until the signal ceased to transmit. No frequency instability was observed.

Temp (C)	Voltage	Frequency (MHz)	Deviation (kHz)
-20.0	3.6	915.030	+54
-10.0	3.6	914.980	+4
0.0	3.6	914.972	-4
+10.0	3.6	914.964	-12
+20.0	3.6	914.976	0
+30.0	3.6	914.966	-10
+40.0	3.6	914.966	-10
+50.0	3.6	914.958	-18
Temp (C)	**Voltage**	**Frequency (MHz)**	**Deviation (kHz)**
+25	3.06	914.976	0
+25	3.60	914.976	0
+25	4.14	914.976	0

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Frequency Stability

DNB Job Number:	78059	Date: 14 Feb 2007	Specification
Customer:	Cattron Theimeg		[X] FCC Part 15 Subpart C paragraph 15.249
Model Number:	EXC9158A		[X] IC RSS-210
Description:	Remote Control Transmitter		
	High Channel		

EUT performed within the requirements of the applicable Standard(s) [X] YES [ ] NO Signed *Les Payne*

EUT was tested between –20 degrees C and + 50 degrees C and no frequency drift was observed. EUT Power was reduced until either frequency instability was observed or until the signal ceased to transmit. No frequency instability was observed.

Temp (C)	Voltage	Frequency (MHz)	Deviation (kHz)
-20.0	3.6	927.028	-22
-10.0	3.6	927.028	-22
0.0	3.6	927.024	-26
+10.0	3.6	927.050	0
+20.0	3.6	927.050	0
+30.0	3.6	927.022	-28
+40.0	3.6	927.022	-28
+50.0	3.6	927.022	-28
Temp (C)	**Voltage**	**Frequency (MHz)**	**Deviation (kHz)**
+25	3.06	927.050	0
+25	3.60	927.050	0
+25	4.14	927.050	0

3.1.8 Photographs of Test Setups – per 2.1033(b)(7)

Radiated Emissions – 30-200MHz

Photographs of Test Setups – continued - per 2.1033(b)(7)

Radiated Emissions – 200-1000 MHz

Photographs of Test Setups - continued – per 2.1033(b)(7)

Radiated Emissions – 1000-18,000 MHz

Photographs of Test Setups – continued – per 2.1033(b)(7)

Frequency Stability – Temperature

Photographs of Test Setups - continued – per 2.1033(b)(7)

Frequency Stability – Voltage Variations

3. LABELING REQUIREMENTS - PER 2.1033(B)(7)

MATERIAL .010 THIICK MATTE FINISH POLYCARBONATE FILM WITH 3M #486 MP PSA

All information on the label will be etched or screened. All methods will exceed the expected lifetime of the equipment.

The label will be large enough to allow all information to be readily legible.

3.1 Additional Label Required

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Shown above is a copy of the label with the Part 15.19 Compliance Statement, Location of required information is checked “below”.

The label will be placed in a conspicuous location on the device.

3.2 Photograph of Label Placement and Contents

Because of the small size of this device the information in 4.1 may be placed in the documentation provided to the user. The FCC ID shall be placed upon the unit. This is in accordance with FCC Part 15.19 (a) (5).

UNCERTAINTY TOLERANCE

DNB Engineering's Riverside Facility (3 and 10 meter Open Area Test Sites) are within acceptable uncertainty tolerances per ANSI C63.4 (1992) sections 5.4.6.1 and 5.4.6.2.

ANSI C63.4 (1992)

5.4.6.1 Site Attenuation. A measurement site shall be considered acceptable for radiated electromagnetic field measurements if the horizontal and vertical NSA derived from measurements, i.e., the "measured NSA," are within ±4 dB of the theoretical NSA (5.4.6.3) for an ideal site.

5.4.6.1 NSA Tolerance. The ±4 dB tolerance in 5.4.6.1 includes instrumentation calibration errors, measurement technique errors, and errors due to site anomalies. These errors are analyzed in ANSI C63.6-1988 [3], wherein it is shown that the performance of a well-built site contributes only 1 dB of the total allowable tolerance.

INFORMATION PERTAINING TO EQUIPMENT MANUFACTURED AFTER COMPLIANCE TESTING

It is prudent that manufacturers have an established Quality Assurance program to spot check their products on a periodic basis, either based upon time or quantities produced. Obviously, a change in the engineering design should be sufficient justification for a re-test.

The Quality assurance test need not be formal Verification or Certification such as required during the initial production of the product. However, it should be sufficient in scope to assure that the EMI characteristics of the product have not changed to the degree that the product exceeds the FCC limits. If a new model of a product is produced, it must undergo full Verification or Certification testing and, in case of Certification, be filed with the FCC.

It is expected that the FCC will place greater emphasis and resources in spot checking commercially available products. If a product is found not to be compliant with the Limits specified in Part 15, Subpart B. the manufacturer will be subject to the appropriate penalties imposed by the Commission. The initial Certification or Verification is sufficient to justify initial production. The additional quality assurance testing performed is the manufacturer's responsibility to assure continued compliance.

Test Equipment Log

Asset	Description	Manufacturer	M/N	S/N	Cal On	Cal Due
11	Antenna	Emco	3115	2281	05-Oct-06	05-Oct-07
31	Antenna	Emco	3146	1284	03-Jan-07	03-Jan-09
51	Pre-Amp	Mini-Circuits	zhl-2-8	41185-2	28-Oct-06	28-Oct-07
364	Pre-Amp	Miteq	afd304008040	121391	28-Oct-06	28-Oct-07
387	Pre-Amp	H/P	10855A	1250-0212	28-Oct-06	28-Oct-07
550	Pre-Amp	DNB	TF10010	550	28-Oct-06	28-Oct-07
551	Pre-Amp	DNB	TF10010	551	28-Oct-06	28-Oct-07
552	Pre-Amp	Avantek	UTA-8751M	20	28-Oct-06	28-Oct-07
703	Pre-Amp	DNB	TF10010	7003	28-Oct-06	28-Oct-07
952	Meter	Amprobe	AM-1250	330224	17-Oct-06	17-Oct-07
1698	Pre-Amp	Miteq	AFS4-08001800-35-LN	378064	12-Sep-06	12-Sep-07
1758	Antenna	AH Systems	SAS-200/540	524	03-Nov-06	03-Nov-07
1760	Pre-Amp	Mini-Circuits	ZFL-2000	8350	05-Oct-06	05-Oct-07
1762	Antenna	Comp Design	Antenna Kit	NSN	12-Dec-05	12-Dec-08
1763	Antenna	Comp Design	Antenna Kit	NSN	12-Dec-05	12-Dec-08
1920	Weather Station	Davis	7400	MC20725A20	28-Nov-06	28-Nov-07
1921	Antenna Mast	DNB	AM200	11921	28-Oct-06	28-Oct-07
1922	Turn Table	DNB	TP1100	11922	28-Oct-06	28-Oct-07
2005	Meter	Fluke	179	83500008	17-Jun-06	17-Jun-07
2027	DMM	SGC	92-08	12027	03-Aug-05	03-Aug-06
2264	Spectrum Analyzer	Agilent	E4407B	MY45103462	25-Aug-06	25-Aug-07
2287	OATS	Industry Canada	Industry Canada	12287	01-Nov-06	01-Nov-09

Appendix A
Additional Information
See Attachments

END of REPORT