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LOW POWER LICENSED-EXEMPT DEVICE PER PART 15.249 TEST REPORT

APPLICANT	COBRA ELECTRONICS CORPORATION
ADDRESS	6500 WEST CORTLAND STREET CHICAGO, IL 60707 USA
PROPOSED FCC ID	BBOXRSR7-RDU
MODEL NUMBER	XRSR7-RDU
PRODUCT DESCRIPTION	RF Link
DATE SAMPLE RECEIVED	March 1, 2007
DATE TESTED	March 2, 2007
TESTED BY	Richard Block
APPROVED BY	Mario de Aranzeta C.E.T.
TIMCO REPORT NO	309BUT7TestReport.PDF
TEST RESULTS	<input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL

**THE ATTACHED REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL OF TIMCO ENGINEERING, INC.**



Certificate # 0955-01

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STATEMENT OF COMPLIANCE

This equipment has been tested in accordance with the standards identified in the referenced test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report and demonstrate that the equipment complies with the appropriate standards.

All instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 17025 requirements.

I attest that the necessary measurements were made by me or under my supervision, at Timco Engineering, Inc. located at 849 N.W. State Road 45, Newberry, Florida 32669 USA.



Certificate #0955-01

Authorized by: Mario de Aranzeta

Signature: On File

Function: Engineer

Date: March 7, 2007

Tested By: Richard Block

Date: March 5, 2007

REPORT SUMMARY

Disclaimer:	The test results relate only to the items tested.
Purpose of Test:	To show the DUT in compliant with FCC Part 15.249 requirements for a 2.4 GHz low power radio.
Applicable Standards:	ANSI C63.4: 2003, Pt 15.249
Related Report/Approvals:	Digital interface portion per Pt 15 Subpart B is verified.

TEST ENVIRONMENT

Test Facilities:	All measurements were made at one or more of the test sites of TIMCO ENGINEERING INC. located at 849 N.W. State Road 45, Newberry, FL 32669.
Laboratory Test Conditions:	Temperature: 26°C, Humidity: 55%

TEST SETUP

Test Exercise (software, etc.):	The DUT was set in continuous transmit mode of operation.
Deviation to the Standards:	No deviation.
Modification to the DUT:	No modification
Supporting Equipment:	Not applicable

DUT DESCRIPTION

Description of Certified System:	The system is a handheld transceiver.
Product Description:	RF Link
FCC ID:	BBOXRSR7-RDU
Model Number:	XRSR7-RDU
Brand Name:	Cobra
Operating Frequency:	2.4 GHz
Number of Channels:	16
Occupied Bandwidth:	900 kHz
Max. Output Pwr:	Low Power Licensed-Exempt Device
Type of Modulation:	FHSS
EUT Power Source:	Battery Operated Exclusively
Test Item:	Pre-production
Type of Equipment:	Portable
Antennas:	Permanently attached per Pt 15.203
Antenna Connector:	None

EMC EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/27/04	3/26/07
3-Meter OATS	TEI	N/A	N/A	Listed 1/11/06	1/10/09
Biconnical Antenna	Eaton	94455-1	1057	CAL 12/12/05	12/12/07
Biconnical Antenna	Electro-Metrics	BIA-25	1171	CAL 4/29/05	4/29/07
Analyzer Tan Tower Quasi-Peak Adapter	HP	85650A	3303a01690	CAL 12/8/05	12/8/07
Analyzer Tan Tower RF Preselector	HP	85685A	3221A01400	CAL 12/7/05	12/7/07
Analyzer Tan Tower Spectrum Analyzer	HP	8566B OPT 462	3188A07786 3144A20661	CAL 12/7/05	12/7/07
Analyzer Tan Tower Preamplifier	HP	8449B-H02	3008A00372	CAL 12/8/05	12/8/07
LISN	Electro-Metrics	EM-7820	2682	CAL 4/28/05	4/28/07
Log-Periodic Antenna	Eaton	96005	1243	CAL 12/14/05	12/14/07

TEST PROCEDURES

Power Line Conducted Interference: The procedure used was ANSI C63.4-2003 using a 50uH LISN. The resolution bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

Occupied Bandwidth: A small sample of the transmitter output was fed into the spectrum analyzer and the attached plot was printed. The vertical scale is set to -10 dBm per division.

Radiation Interference: The test procedure used was ANSI C63.4-2003 using an Agilent spectrum receiver with preselector. The bandwidth (RBW) of the spectrum receiver was 100 kHz up to 1 GHz and 1 MHz above 1 GHz with an appropriate sweep speed. The VBW above 1 GHz was 3 MHz. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

ANSI C63.4-2003 Measurement Procedures: The DUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The DUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

POWER LINE CONDUCTED INTERFERENCE

Rules Part No.: 15.207(a)

Requirements:

Emission Frequency (MHz)	Conducted Limit (dB μ V)	
	Quasi-peak (QP)	Average (AV)
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 – 30	60	50
* Decreases with the logarithm of the frequency.		

Test Data: Not applicable. The device is battery operated exclusively.

OCCUPIED BANDWIDTH

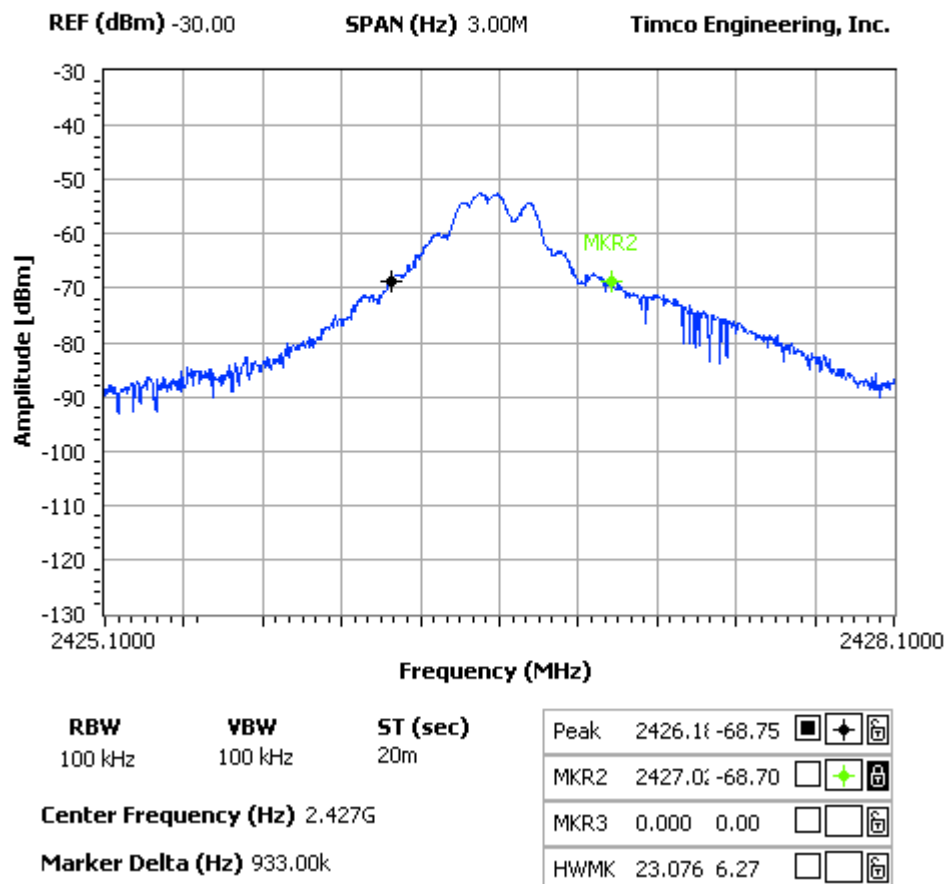
Rules Part No.: Pt 15.249 (d)

Requirements: The field strength of any emissions appearing outside the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 50 dB below the level of the carrier or to the general limits of 15.209. Whichever is the lesser.

Test Data: The test data demonstrated the DUT complies with the requirements. Three places in the band were measured and the worst case presented above.

NOTES:

COBRA ELECTRONICS CORPORATION - FCC ID: BBOXRSR7 RDU
20 dB BANDWIDTH - REMOTE UNIT



FIELD STRENGTH OF SPURIOUS EMISSIONS

Rules Part No.: 15.249 (c), 15.249 (d), 15.205 & 15.209(b)

Requirements:

(Fundamental) Frequency	Limits
902 – 928MHz 2.4 – 2.4835GHz	94dBuV/m @ 3M
Harmonics (restricted)	54 dBuV/m @3m

Unwanted Emissions Frequency	Limits dBuV/m @ 3m
30 - 88	40
88 - 216	43.5
216 - 960	46
Above 960 MHz	54

Emissions that fall in the restricted bands (15.205) must be less than or equal to 500 uV/m (54 dBuV/m).

Test Data: The test data demonstrated the DUT complies with the requirements.

Harmonics were measured to the 10th harmonic.

All emissions measured using a peak detector. Except as noted below.

Emissions attenuated more than 20 dB below the permissible value are not reported

Unwanted emissions from 30 to 1000 MHz

Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
44.68	14.8	H	0.47	11.21	26.48	13.52
44.82	19.5	V	0.47	10.09	30.06	9.94
49.29	27.7	H	0.50	11.20	39.40	0.60
52.63	20.3	V	0.51	11.47	32.28	7.72
59.01	19.7	H	0.53	11.12	31.35	8.65
62.47	19.4	V	0.54	10.46	30.40	9.60
66.38	20.1	V	0.55	8.88	29.53	10.47
73.80	16.9	H	0.58	7.36	24.84	15.16
78.68	19.7	H	0.60	6.71	27.01	12.99
83.64	24.7	V	0.61	7.50	32.81	7.19
91.95	23.5	H	0.63	8.67	32.80	10.70
93.48	25.5	V	0.63	10.34	36.47	7.03
97.12	27.0	V	0.64	11.08	38.72	4.78
100.18	24.1	H	0.65	11.50	36.25	7.25
105.26	17.6	H	0.66	11.65	29.91	13.59
105.70	20.8	V	0.66	11.94	33.40	10.10
118.02	16.3	V	0.67	14.51	31.48	12.02
122.97	20.7	H	0.67	13.36	34.73	8.77
127.87	13.9	H	0.68	13.14	27.72	15.78
192.19	17.1	H	0.87	17.44	35.41	8.09
288.29	15.2	H	1.08	13.97	30.25	15.75

[Continued]

RDU Remote Control - PEAK

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
2,401.0	2,401.00	50.0	V	3.18	32.32	85.50	8.5
2,401.0	2,401.00	50.0	H	3.18	32.32	85.50	8.5
2,401.0	4,802.00	11.3	H	4.90	34.34	50.54	3.46
2,401.0	4,802.00	11.5	V	4.90	34.34	50.74	3.26
2,401.0	7,203.00	9.0	V	5.72	36.14	50.86	3.14
2,401.0	7,203.00	10.9	H	5.72	36.14	52.76	1.24
2,401.0	9,604.00	9.6	H	6.78	37.52	53.90	0.10
2,401.0	9,604.00	9.6	V	6.78	37.52	53.90	0.10
2,401.0	12,005.00	8.6	H	7.80	38.90	55.30	-1.30
2,401.0	12,005.00	8.7	V	7.80	38.90	55.40	-1.40
2,401.0	14,406.00	12.7	V	9.06	40.39	62.15	-8.15
2,401.0	14,406.00	13.3	H	9.06	40.39	62.75	-8.75
2,426.7	2,426.70	38.5	H	3.20	32.39	74.09	19.91
2,426.7	2,426.70	49.0	V	3.20	32.39	84.59	9.41
2,426.7	4,853.40	10.2	H	4.93	34.38	49.51	4.49
2,426.7	4,853.40	11.1	V	4.93	34.38	50.41	3.59
2,426.7	7,280.10	8.9	V	5.77	36.24	50.91	3.09
2,426.7	7,280.10	9.5	H	5.77	36.24	51.51	2.49
2,426.7	9,706.80	8.6	V	6.81	37.65	53.06	0.94
2,426.7	9,706.80	9.1	H	6.81	37.65	53.56	0.44
2,426.7	12,133.50	8.7	H	7.89	38.95	55.54	-1.54
2,426.7	12,133.50	8.9	V	7.89	38.95	55.74	-1.74
2,426.7	14,560.20	12.2	V	9.12	40.62	61.94	-7.94
2,426.7	14,560.20	12.7	H	9.12	40.62	62.44	-8.44
2,452.0	2,452.00	45.4	H	3.22	32.47	81.09	12.91
2,452.0	2,452.00	48.9	V	3.22	32.47	84.59	9.41
2,452.0	4,904.00	9.9	H	4.95	34.42	49.27	4.73
2,452.0	4,904.00	13.6	V	4.95	34.42	52.97	1.03
2,452.0	7,356.00	10.0	H	5.81	36.33	52.14	1.86
2,452.0	7,356.00	10.9	V	5.81	36.33	53.04	0.96
2,452.0	9,808.00	8.7	V	6.84	37.77	53.31	0.69
2,452.0	9,808.00	9.1	H	6.84	37.77	53.71	0.29
2,452.0	12,260.00	8.5	V	7.98	39.00	55.48	-1.48
2,452.0	12,260.00	8.5	H	7.98	39.00	55.48	-1.48
2,452.0	14,712.00	12.7	V	9.18	40.68	62.56	-8.56
2,452.0	14,712.00	13.1	H	9.18	40.68	62.96	-8.96

* = Restricted Band

[Continued] RDU Remote Control – AVERAGE

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity V/H	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
2,401.0	4,802.00	-0.1	H	4.90	34.34	39.14	14.86
2,401.0	4,802.00	7.4	V	4.90	34.34	46.64	7.36
2,401.0	7,203.00	-1.6	V	5.72	36.14	40.26	13.74
2,401.0	7,203.00	0.1	H	5.72	36.14	41.96	12.04
2,401.0	9,604.00	-2.4	H	6.78	37.52	41.90	12.10
2,401.0	9,604.00	-2.2	V	6.78	37.52	42.10	11.90
2,401.0	12,005.00	-2.6	H	7.80	38.90	44.10	9.90
2,401.0	12,005.00	-2.5	V	7.80	38.90	44.20	9.80
2,401.0	14,406.00	1.5	H	9.06	40.39	50.95	3.05
2,401.0	14,406.00	1.6	V	9.06	40.39	51.05	2.95
2,426.7	4,853.40	0.7	H	4.93	34.38	40.01	13.99
2,426.7	4,853.40	4.5	V	4.93	34.38	43.81	10.19
2,426.7	7,280.10	-2.3	V	5.77	36.24	39.71	14.29
2,426.7	7,280.10	-0.7	H	5.77	36.24	41.31	12.69
2,426.7	9,706.80	-2.4	H	6.81	37.65	42.06	11.94
2,426.7	9,706.80	-2.3	V	6.81	37.65	42.16	11.84
2,426.7	12,133.50	-2.3	H	7.89	38.95	44.54	9.46
2,426.7	12,133.50	-2.3	V	7.89	38.95	44.54	9.46
2,426.7	14,560.20	1.7	H	9.12	40.62	51.44	2.56
2,426.7	14,560.20	1.7	V	9.12	40.62	51.44	2.56
2,453.0	4,904.00	0.9	H	4.95	34.42	40.27	13.73
2,453.0	4,904.00	7.1	V	4.95	34.42	46.47	7.53
2,453.0	7,356.00	-1.6	V	5.81	36.33	40.54	13.46
2,453.0	7,356.00	-0.3	H	5.81	36.33	41.84	12.16
2,453.0	9,808.00	-2.0	V	6.84	37.77	42.61	11.39
2,453.0	9,808.00	-2.0	H	6.84	37.77	42.61	11.39
2,453.0	12,260.00	-2.5	V	7.98	39.00	44.48	9.52
2,453.0	12,260.00	-2.4	H	7.98	39.00	44.58	9.42
2,453.0	14,712.00	1.9	H	9.18	40.68	51.76	2.24
2,453.0	14,712.00	2.0	V	9.18	40.68	51.86	2.14

* = Restricted Band