



849 NW State Road 45
PO Box 370
Newberry, FL 32669

**CLASS II PERMISSIVE CHANGE
TEST REPORT**

STANDARD (s):

**FCC Part 15, Subparts B, C, and D
IC RSS-213 & ICES-003
UPCS / LE-PCS Isochronous Device
Handset: 1921.536 – 1928.448 MHz
ANSI C63.17 - 1998 (or 2005 Draft where applicable)
ANSI C63.4 – 2003**

APPLICANT: ASCALADE TECHNOLOGIES INC.
12051 RIVERSIDE WAY
RICHMOND, BC V6W 1K7 V6W 1K7
Tel.: 1-604-204-2853
MR. CHI-KIT WONG, QUALITY MANAGER

MODEL NUMBERS: XL3501B/07 – 1 Base + 1 Handset
XL3502B/07 – 1 Base + 2 Handsets + 1 Charger
XL3503B/07 – 1 Base + 3 Handsets + 2 Chargers
XL3504B/07 – 1 Base + 4 Handsets + 3 Chargers

**DESCRIPTION OF
PRODUCT:** 1.9 GHz DECT TELEPHONE SYSTEM

FCC IDs: PBWDT19R42H (HANDSET)

IC: 3842A-B262

**DATE SAMPLE
RECEIVED FOR TESTING:** 10/29/2007

DATE TESTED: 11/7/2007

TEST RESULTS: ☒ PASS ☐ FAIL

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

TABLE OF CONTENTS

1	GENERAL INFORMATION	3
1.1	COMPLIANCE STATEMENT:	3
1.2	EQUIPMENT UNDER TEST SPECIFICATION	4
1.2.1	TRANSMITTER TECHNICAL CHARACTERISTICS	4
1.3	TEST STANDARDS	4
2	TEST RESULTS	5
2.1	TRANSMITTER SPURIOUS EMISSIONS	5
2.1.1	HANDSET:	5
2.2	GENERAL RADIATED SPURIOUS EMISSIONS	6
2.2.1	RADIATED SPURIOUS EMISSIONS	6
2.2.2	HANDSET IN STAND-BY MODE:	7
3	TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS.....	8
4	TEST SETUP PHOTOGRAPHS	9

APPLICANT: ASCALADE TECHNOLOGIES INC.
FCC ID #: PBWDT19R42H
IC CERT #: 3842A-B262
REPORT #: A\ASCALADE\3454AUT7\3454AUT7TestReport.doc

1 GENERAL INFORMATION

The test results relate only to the items tested.

This report is for a Class II Permissive change. The modifications to the device are in an exhibit that is part of the filing. The data in the following pages shows that there is no degradation in results.

1.1 COMPLIANCE STATEMENT:

This equipment has been tested in accordance with the standards identified in this 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. No modifications were made to the equipment during testing in order to demonstrate compliance with these standards.

I attest that the necessary measurements were made, under my supervision, at TIMCO ENGINEERING, INC. located at 849 N.W. State Road 45, Newberry, Florida 32669.

Authorized Signatory Name: Mario de Aranzeta

Signature: *Mario de Aranzeta*

Function: Engineer

Date: 11/7/2007

APPLICANT: ASCALADE TECHNOLOGIES INC.
FCC ID #: PBWDT19R42H
IC CERT #: 3842A-B262
REPORT #: A\ASCALADE\3454AUT7\3454AUT7TestReport.doc

1.2 EQUIPMENT UNDER TEST SPECIFICATION

Characterization of test item:

Prototype ☒
 Pre-production ☐
 Production ☐

Construction of equipment:

☒ Single unit
☐ Multiple units (If multiple units describe each one clearly)

TYPE OF EQUIPMENT:

Fixed ☒
 Mobile ☐
 Portable Station ☐

X	Transmitter		Simplex	X	Integral antenna (Handset and Base)
	Receiver	X	Duplex		Single antenna connector
	Transceiver				Two antenna connector
X	Battery charger				Vehicle battery adaptor
	Remote Control Head				

1.2.1 TRANSMITTER TECHNICAL CHARACTERISTICS

FREQUENCY CHARACTERISTICS (Method of frequency generation):

CRYSTAL ☐ SYNTHESIZER ☒ OTHER ☐

MAXIMUM RATED TRANSMITTER OUTPUT POWER REPORTED IN THE ORIGINAL FILING:
 0.078 W.

1.3 TEST STANDARDS

FCC Part 15, Subparts B, C, and D
 IC RSS-213 & ICES-003
 UPCS / LE-PCS Isochronous Device
 Base & Handset: 1921.536 – 1928.448 MHz
 ANSI C63.17 - 1998 (or 2005 Draft where applicable)
 ANSI C63.4 - 2003

APPLICANT: ASCALADE TECHNOLOGIES INC.
FCC ID #: PBWDT19R42H
IC CERT #: 3842A-B262
REPORT #: A\ASCALADE\3454AUT7\3454AUT7TestReport.doc

2 TEST RESULTS

2.1 TRANSMITTER SPURIOUS EMISSIONS

Clause: 15.319 (g) and 15.323(d)

Test procedure: ANSI C63.17 section 6.1.1

Technical requirements/Limits:

15.319(g) Notwithstanding other technical requirements specified in this subpart, attenuation of emissions below the general emission limits in Section 15.209 is not required.

15.323(d) Emissions outside the sub-band shall be attenuated below a reference power of 112 milliwatts as follows: 30 dB between the sub-band and 1.25 MHz above or below the sub-band; 50 dB between 1.25 and 2.5 MHz above or below the sub-band; and 60 dB at 2.5 MHz or greater above or below the subband. Compliance with the emission limits is based on the use of measurement instrumentation employing peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

Test Conditions:

Lowest and Highest channel only. Radiated on an Open Area Test Site at a distance of 3 meter.

Results:

2.1.1 HANDSET:

CH 5			CH 3			CH 1		
Emission MHz	V dBuV/m	H dBuV/m	Emission MHz	V dBuV/m	H dBuV/m	Emission MHz	V dBuV/m	H dBuV/m
3843.08	7.9	6.1	3856.90	7.6	5.4	3856.89	5.3	3.2
5764.62	5.6	10.7	5785.35	6.4	8.3	5785.34	8.1	9.7
7686.16	*	*	7713.80	*	*	7713.78	*	*
9607.70	*	*	9642.25	*	*	9642.23	*	*
11529.24	*	*	11570.70	*	*	11570.67	*	*
13450.78	*	*	13499.15	*	*	13499.12	*	*
15372.32	*	*	15427.60	*	*	15427.56	*	*
17293.86	*	*	17356.05	*	*	17356.01	*	*
19215.40	*	*	19284.50	*	*	19284.45	*	*

* Noise floor. All harmonic emissions are >60dBc.

APPLICANT: ASCALADE TECHNOLOGIES INC.

FCC ID #: PBWDT19R42H

IC CERT #: 3842A-B262

REPORT #: A\ASCALADE\3454AUT7\3454AUT7TestReport.doc

2.2 GENERAL RADIATED SPURIOUS EMISSIONS

2.2.1 RADIATED SPURIOUS EMISSIONS

Clause: 15.109, 15.33, and 15.31

Test procedure: ANSI C63.4 - 2003

Technical requirements/Limits:

Emission Frequency (MHz)	Field Strength		At Distance (m)	Detector Type
	(μ V/m)	(dB μ V/m)		
0.009 – 0.490	2400/f (kHz)	67.6 / kHz	300	AV (9-90 kHz, 110-490 kHz) QP (others)
0.490 – 1.705	24000/f (kHz)	87.6 / kHz	30	QP
1.705 – 30.0	30	29.5	30	QP
30 – 88	100	40	3	QP
88 – 216	150	43.5	3	QP
216 – 960	200	46	3	QP
> 960	500	54	3	AV (> 1GHz)

Test Conditions:

Lowest and Highest channel only. Radiated on an Open Area Test Site at a distance of 3meter.

PK: RBW \geq 100 kHz for $f < 1$ GHz, 1 MHz for $f \geq 1$ GHz, VBW \geq RBW

Avg: RBW = 1 MHz for $f \geq 1$ GHz, VBW = 10Hz, Linear average. If the emission is pulsed, the device was modified for continuous operations, and the average level was calculated according to part 15.35(c)

APPLICANT: ASCALADE TECHNOLOGIES INC.

FCC ID #: PBWDT19R42H

IC CERT #: 3842A-B262

REPORT #: A\ASCALADE\3454AUT7\3454AUT7TestReport.doc

Results:

2.2.2 HANDSET IN STAND-BY MODE:

Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
55.30	6.4	H	0.52	10.99	17.91	22.09
55.30	11.9	V	0.52	11.06	23.48	16.52
82.95	14.2	V	0.61	7.80	22.61	17.39
82.97	7.0	H	0.61	6.66	14.27	25.73
96.76	10.4	V	0.64	10.92	21.96	21.54
110.61	10.9	V	0.66	13.75	25.31	18.19
276.49	6.3	H	1.05	13.69	21.04	24.96
290.32	9.6	V	1.08	13.92	24.60	21.40
290.34	9.5	H	1.08	14.01	24.59	21.41
304.11	11.9	V	1.10	14.69	27.69	18.31
317.94	17.3	V	1.12	14.78	33.20	12.80
317.98	10.8	H	1.12	15.04	26.96	19.04
331.76	14.6	V	1.13	14.52	30.25	15.75
345.59	15.8	V	1.15	14.60	31.55	14.45
359.43	11.8	V	1.16	14.79	27.75	18.25
373.26	14.7	V	1.17	15.17	31.04	14.96
387.12	11.3	V	1.19	15.51	28.00	18.00
456.21	13.6	V	1.26	16.79	31.65	14.35
483.85	13.7	V	1.28	17.45	32.43	13.57
511.51	11.7	V	1.33	18.47	31.50	14.50
539.17	11.8	V	1.42	18.07	31.29	14.71
566.82	12.5	V	1.50	18.17	32.17	13.83
594.45	13.9	V	1.58	18.60	34.08	11.92
649.73	14.5	V	1.65	19.89	36.04	9.96

APPLICANT: ASCALADE TECHNOLOGIES INC.

FCC ID #: PBWDT19R42H

IC CERT #: 3842A-B262

REPORT #: A\ASCALADE\3454AUT7\3454AUT7TestReport.doc

3 TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/20/07	3/19/10
3-Meter OATS	TEI	N/A	N/A	Listed 1/11/06	1/10/09
3-Meter Semi-Anechoic Chamber	Panashield	N/A	N/A	Listed 5/11/07	5/10/10
Antenna: Biconnical	Eaton	94455-1	1057	CAL 12/12/05	12/12/07
Antenna: Biconnical	Eaton	94455-1	1096	CAL 10/11/06	10/11/08
Analyzer Blue Tower Quasi-Peak Adapter	HP	85650A	2811A01279	CAL 5/17/07	5/17/09
Analyzer Blue Tower RF Preselector	HP	85685A	2926A00983	CAL 5/17/07	5/17/09
Analyzer Blue Tower Spectrum Analyzer	HP	8568B	2928A04729 2848A18049	CAL 5/17/07	5/17/09
LISN	Electro-Metrics	ANS-25/2	2604	CAL 10/5/06	10/5/08
Antenna: Log-Periodic	Electro-Metrics	LPA-25	1122	CAL 12/1/06	12/1/08

APPLICANT: ASCALADE TECHNOLOGIES INC.
FCC ID #: PBWDT19R42H
IC CERT #: 3842A-B262
REPORT #: A\ASCALADE\3454AUT7\3454AUT7TestReport.doc

4 TEST SETUP PHOTOGRAPHS

RADIATED TEST SET UP (HANDSET):



APPLICANT: ASCALADE TECHNOLOGIES INC.
FCC ID #: PBWDT19R42H
IC CERT #: 3842A-B262
REPORT #: A\ASCALADE\3454AUT7\3454AUT7TestReport.doc