

*FCC PART 15, SUBPART B and C
TEST REPORT**for***MOBILETOUCH2****MODEL: Mobiletouch**

Prepared for
PENTAIR WATER POOL & SPA
10951 WEST LOS ANGELES AVENUE
MOORPARK, CALIFORNIA 93021

Prepared by: *Kyle Fujimoto*

KYLE FUJIMOTO

Approved by: *James Ross*

JAMES ROSS

COMPATIBLE ELECTRONICS INC.
114 OLINDA DRIVE
BREA, CALIFORNIA 92823
(714) 579-0500

DATE: MAY 23, 2007

	REPORT BODY	APPENDICES					TOTAL
		<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>	
PAGES	15	2	2	2	12	13	46

This report shall not be reproduced except in full, without the written approval of Compatible Electronics.

TABLE OF CONTENTS

Section / Title	PAGE
GENERAL REPORT SUMMARY	4
SUMMARY OF TEST RESULTS	4
1. PURPOSE	5
2. ADMINISTRATIVE DATA	6
2.1 Location of Testing	6
2.2 Traceability Statement	6
2.3 Cognizant Personnel	6
2.4 Date Test Sample was Received	6
2.5 Disposition of the Test Sample	6
2.6 Abbreviations and Acronyms	6
3. APPLICABLE DOCUMENTS	7
4. Description of Test Configuration	8
4.1 Description Of Test Configuration - EMI	8
4.1.1 Cable Construction and Termination	9
5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT	10
5.1 EUT and Accessory List	10
5.2 EMI Test Equipment	11
6. TEST SITE DESCRIPTION	12
6.1 Test Facility Description	12
6.2 EUT Mounting, Bonding and Grounding	12
7. TEST PROCEDURES	13
7.1 Radiated Emissions (Spurious and Harmonics) Test	13
7.2 Radiated Emissions (Spurious and Harmonics) Test (continued)	14
8. CONCLUSIONS	15

LIST OF APPENDICES

APPENDIX	TITLE
A	Laboratory Recognitions
B	Modifications to the EUT
C	Additional Models Covered Under This Report
D	Diagrams, Charts, and Photos • Test Setup Diagrams • Radiated Emissions Photos • Antenna and Effective Gain Factors
E	Data Sheets

LIST OF FIGURES

FIGURE	TITLE
1	Plot Map And Layout of 3 Meter Radiated Test Site

GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested: Mobiletouch2
 Model: Mobiletouch
 S/N: N/A

Product Description: See Expository Statement

Modifications: The EUT was not modified during the testing.

Manufacturer: Pentair Water Pool & Spa
 10951 West Los Angeles Avenue
 Moorpark, California 93021

Test Dates: May 4 and 7, 2007

Test Specifications: EMI requirements
 CFR Title 47, Part 15 Subpart B; and Subpart C, Sections 15.205, 15.209 and 15.249

Test Procedure: ANSI C63.4

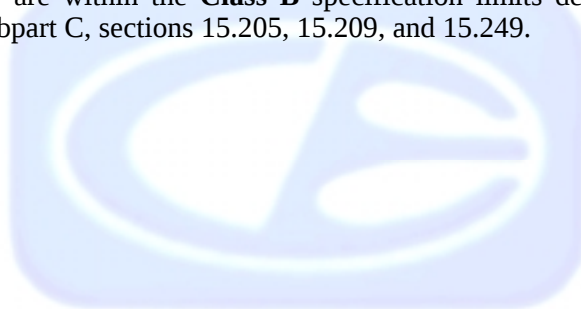
Test Deviations: The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz – 30 MHz	This test was not performed because the EUT operates on battery power only and cannot be plugged into the AC public mains.
2	Radiated RF Emissions, 10 kHz – 9.3 GHz	Complies with the Class B limits of CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249.

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Mobiletouch2 Model: Mobiletouch. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249.



2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Pentair Water Pool & Spa

Ed Brown	Engineer
Darrin Swanson	NPD Engineer

Compatible Electronics, Inc.

James Ross	Test Engineer
Kyle Fujimoto	Test Engineer

2.4 Date Test Sample was Received

The test sample was received prior to the initial test date of May 4, 2007.

2.5 Disposition of the Test Sample

The test sample was returned to Pentair Water Pool & Spa on May 7, 2007.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Model
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network
TX	Transmit
RX	Receive
PCB	Printed Circuit Board
FSK	Frequency Shift Keying

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4 2003	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description Of Test Configuration - EMI

Setup and operation of the equipment under test.

The Mobiletouch2 Model: Mobiletouch (EUT) was tested as a stand alone unit. The EUT was tested while it was continuously transmitting and receiving to a Transceiver Model: Virtual Cable. The EUT was also tested in three orthogonal axis.

The antenna is directly connected to the EUT's PCB by a screw.

The EUT uses FSK modulation.

The final radiated data was taken in the mode above. Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

There were no external cables connected to the EUT.



5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL	SERIAL NUMBER	FCC ID
MOBILETOUCH2 (EUT)	PENTAIR WATER POOL & SPA	Mobiletouch	N/A	P4HMOBILETOUCH
TRANSCIVER	PENTAIR WATER POOL & SPA	VIRTUALCABLE	N/A	P4HVIRTUALCABLE

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUE DATE
GENERAL TEST EQUIPMENT USED FOR ALL RF EMISSIONS TESTS					
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
EMI Receiver	Rohde & Schwarz	ESIB40	100194	November 18, 2005	November 18, 2007
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
Radiated Emissions Data Capture Program	Compatible Electronics	2.0	N/A	N/A	N/A
Preamplifier	Com Power	PA-102	1017	January 16, 2007	Jan. 16, 2008
Biconical Antenna	Com Power	AB-900	15227	March 8, 2007	March 8, 2008
Log Periodic Antenna	Com Power	AL-100	16060	July 17, 2006	July 17, 2007
Loop Antenna	Com Power	AL-130	17089	September 21, 2005	Sept. 21, 2007
Horn Antenna	Antenna Research	DRG-118/A	1053	March 6, 2006	March 6, 2008
Microwave Preamplifier	Com Power	PA-122	181921	February 27, 2007	Feb. 27, 2008
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A

6. TEST SITE DESCRIPTION**6.1 Test Facility Description**

Please refer to section 2.1 and 7.1 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT is battery powered and was not grounded.

7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com-Power Active Loop Antenna Model: AL-130 was used for frequencies from 9 kHz to 30 MHz, the Com-Power Preamplifier Model: PA-102 was used for frequencies from 30 MHz to 1 GHz, and the Com-Power Microwave Preamplifier Model: PA-122 was used for frequencies from 1 GHz to 9.3 GHz. The spectrum analyzer was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps.

The frequencies above 1 GHz were averaged manually by narrowing the video filter down to 10 Hz and putting the sweep time on AUTO on the spectrum analyzer to keep the amplitude reading calibrated.

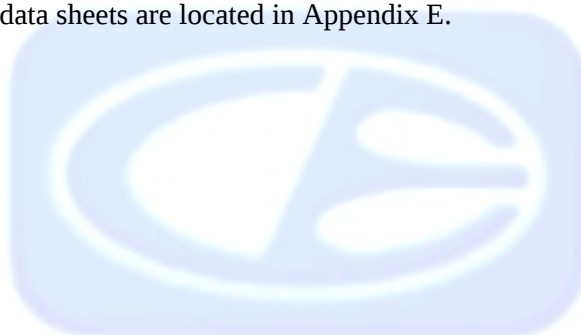
The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
10 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna
1 GHz to 9.3 GHz	1 MHz	Horn Antenna

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results. The loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.

7.2 Radiated Emissions (Spurious and Harmonics) Test (continued)

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance to obtain final test data. The final qualification data sheets are located in Appendix E.



8. CONCLUSIONS

The Mobiletouch2 Model: Mobiletouch meets all of the **Class B** specification limits defined in CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.209, and 15.249.



APPENDIX A

LABORATORY RECOGNITIONS

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200528-0

Voluntary Control Council for Interference - Registration Numbers: R-983, C-1026, R-984 and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Conformity Assessment Body for the EMC Directive Under the US/EU MRA Appointed by NIST

Compatible Electronics is recognized or on file with the following agencies:

Federal Communications Commission

Industry Canada

Radio-Frequency Technologies (Competent Body)

APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC 15.249 or FCC Class B specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT during the testing.





APPENDIX C

***ADDITIONAL MODELS COVERED
UNDER THIS REPORT***

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

Mobiletouch2
Model: Mobiletouch
S/N: N/A

There are no additional models covered under this report.

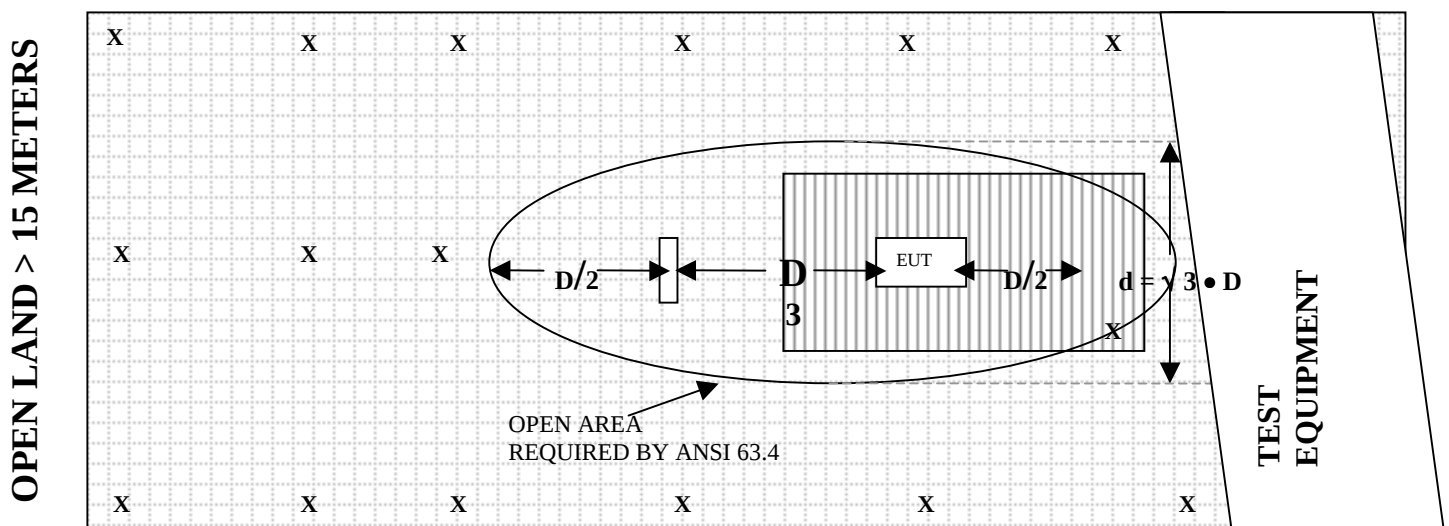


APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: PLOT MAP AND LAYOUT OF 3 METER RADIATED TEST SITE

OPEN LAND > 15 METERS



OPEN LAND > 15 METERS

X	= GROUND RODS		= GROUND SCREEN
D	= TEST DISTANCE (meters)		= WOOD COVER

COM-POWER AB-900

BICONICAL ANTENNA

S/N: 15227

CALIBRATION DATE: MARCH 8, 2007

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	12.6	100	12.3
35	10.0	120	14.7
40	9.5	140	13.0
45	9.2	160	13.7
50	9.4	180	16.4
60	7.4	200	17.2
70	6.5	250	14.6
80	7.0	275	19.0
90	8.0	300	22.3

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16060

CALIBRATION DATE: JULY 17, 2006

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	13.58	700	20.49
400	14.53	800	20.13
500	15.36	900	22.15
600	18.29	1000	22.76

COM-POWER PA-102**PREAMPLIFIER**

S/N: 1017

CALIBRATION DATE: JANUARY 16, 2007

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	38.4	300	38.2
40	38.3	350	38.2
50	38.2	400	38.1
60	38.3	450	37.8
70	38.4	500	37.8
80	38.6	550	38.1
90	38.3	600	37.8
100	38.4	650	37.8
125	38.3	700	37.6
150	38.2	750	37.9
175	38.4	800	37.6
200	38.4	850	37.2
225	38.4	900	37.4
250	38.3	950	37.0
275	38.3	1000	37.2

COM-POWER PA-122**PREAMPLIFIER****S/N: 181921****CALIBRATION DATE: FEBRUARY 27, 2007**

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	36.2	10.0	35.1
1.5	35.4	10.5	34.8
2.0	34.7	11.0	33.5
2.5	34.8	11.5	33.9
3.0	34.8	12.0	34.0
3.5	34.6	12.5	34.4
4.0	34.2	13.0	34.4
4.5	34.1	13.5	34.7
5.0	34.1	14.0	36.0
5.5	34.7	14.5	35.7
6.0	35.6	15.0	36.1
6.5	36.8	15.5	35.6
7.0	36.7	16.0	35.4
7.5	34.9	16.5	35.3
8.0	33.3	17.0	34.9
8.5	33.6	17.5	33.7
9.0	34.6	18.0	33.3
9.5	35.9		

ANTENNA RESEARCH DRG-118/A**HORN ANTENNA**

S/N: 1053

CALIBRATION DATE: MARCH 6, 2006

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	24.46	10.0	39.55
1.5	25.05	10.5	39.86
2.0	28.42	11.0	38.49
2.5	29.91	11.5	40.71
3.0	31.46	12.0	40.59
3.5	31.91	12.5	40.17
4.0	31.55	13.0	39.70
4.5	31.94	13.5	40.84
5.0	32.90	14.0	41.58
5.5	34.07	14.5	45.14
6.0	35.69	15.0	42.20
6.5	33.11	15.5	39.42
7.0	36.51	16.0	38.80
7.5	37.27	16.5	41.08
8.0	37.21	17.0	44.11
8.5	37.16	17.5	46.29
9.0	38.27	18.0	41.61
9.5	39.73		

COM-POWER AL-130**LOOP ANTENNA**

S/N: 17089

CALIBRATION DATE: SEPTEMBER 21, 2005

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-42.84	8.66
0.01	-41.93	9.57
0.02	-41.29	10.21
0.05	-42.37	9.13
0.07	-41.8	9.7
0.1	-41.83	9.67
0.2	-44.13	7.37
0.3	-41.73	9.77
0.5	-41.8	9.7
0.7	-41.53	9.97
1	-41.46	10.04
2	-41.14	10.36
3	-41.26	10.24
4	-41.46	10.04
5	-41.10	10.40
10	-40.83	10.67
15	-41.47	10.03
20	-35.44	16.06
25	-42.37	9.13
30	-42.94	8.56



FRONT VIEW

**PENTAIR WATER POOL & SPA
MOBILETOUCH2
MODEL: MOBILETOUCH**

FCC SUBPART B AND C – RADIATED EMISSIONS – 05-04-07 and 05-07-07

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

PENTAIR WATER POOL & SPA

MOBILETOUCH2

MODEL: MOBILETOUCH

FCC SUBPART B AND C – RADIATED EMISSIONS – 05-04-07 and 05-07-07

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



FRONT VIEW

PENTAIR WATER POOL & SPA

MOBILETOUCH2

MODEL: MOBILETOUCH

FCC SUBPART B AND C – RADIATED EMISSIONS – 05-04-07 and 05-07-07

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

PENTAIR WATER POOL & SPA

MOBILETOUCH2

MODEL: MOBILETOUCH

FCC SUBPART B AND C – RADIATED EMISSIONS – 05-04-07 and 05-07-07

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

FCC 15.249

Pentair Water Pool & Spa

Mobiletouch2

Model: Mobiletouch

Date: 05/04/07

Lab: B

Tested By: Kyle Fujimoto

X-Axis

Level Adjust = 20 Kohms

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
916.39	83.69	V	94	-10.31	Peak	1	45	
916.39	83.3	V	94	-10.7	QP	1	45	
1832.85	45.28	V	74	-28.72	Peak	1	135	
1832.85	43.02	V	54	-10.98	Avg	1	135	
2749.2	47.01	V	74	-26.99	Peak	1.25	135	
2749.2	44.47	V	54	-9.53	Avg	1.25	135	
3665.7	53.31	V	74	-20.69	Peak	1.71	225	
3665.7	49.81	V	54	-4.19	Avg	1.71	225	
4582.1	46.84	V	74	-27.16	Peak	1.25	135	
4582.1	38.98	V	54	-15.02	Avg	1.25	135	
5498.5	43.88	V	74	-30.12	Peak	1.25	190	
5498.5	32.14	V	54	-21.86	Avg	1.25	190	
6415	45.85	V	74	-28.15	Peak	1.35	180	
6415	32.26	V	54	-21.74	Avg	1.35	180	
7331.4	47.75	V	74	-26.25	Peak	1.25	135	
7331.4	35.44	V	54	-18.56	Avg	1.25	135	
8247.8	48.25	V	74	-25.75	Peak	1.35	150	
8247.8	35.22	V	54	-18.78	Avg	1.35	150	
9164.2	45.39	V	74	-28.61	Peak	1.55	315	
9164.2	35.58	V	54	-18.42	Avg	1.55	315	

FCC 15.249

Pentair Water Pool & Spa

Mobiletouch2

Model: Mobiletouch

Date: 05/04/07

Lab: B

Tested By: Kyle Fujimoto

X-Axis

Level Adjust = 20 Kohms

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
916.39	90.94	H	94	-3.06	Peak	1	45	
916.39	90.49	H	94	-3.51	QP	1	45	
1832.85	42.51	H	74	-31.49	Peak	1.83	45	
1832.85	38.91	H	54	-15.09	Avg	1.83	45	
2749.2	51.05	H	74	-22.95	Peak	1.05	125	
2749.2	47.78	H	54	-6.22	Avg	1.05	125	
3665.7	52.16	H	74	-21.84	Peak	1.13	135	
3665.7	48.61	H	54	-5.39	Avg	1.13	135	
4582.1	47.87	H	74	-26.13	Peak	1.25	135	
4582.1	42.58	H	54	-11.42	Avg	1.25	135	
5498.5	44.31	H	74	-29.69	Peak	1.25	180	
5498.5	30.71	H	54	-23.29	Avg	1.25	180	
6415	42.35	H	74	-31.65	Peak	1.35	125	
6415	29.28	H	54	-24.72	Avg	1.35	125	
7331.4	45.82	H	74	-28.18	Peak	1.25	125	
7331.4	33.12	H	54	-20.88	Avg	1.25	125	
8247.8	46.11	H	74	-27.89	Peak	1	135	
8247.8	33.53	H	54	-20.47	Avg	1	135	
9164.2	49.11	H	74	-24.89	Peak	1.25	125	
9164.2	35.98	H	54	-18.02	Avg	1.25	125	

FCC 15.249

Pentair Water Pool & Spa

Mobiletouch2

Model: Mobiletouch

Date: 05/04/07

Lab: B

Tested By: Kyle Fujimoto

Y-Axis

Level Adjust = 20 Kohms

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
916.39	92.42	V	94	-1.58	Peak	1	135	
916.39	92.07	V	94	-1.93	QP	1	135	
1832.85	54.11	V	74	-19.89	Peak	1	135	
1832.85	51.55	V	54	-2.45	Avg	1	135	
2749.2	48.67	V	74	-25.33	Peak	1.25	135	
2749.2	44.93	V	54	-9.07	Avg	1.25	135	
3665.7	50.24	V	74	-23.76	Peak	1.25	135	
3665.7	46.46	V	54	-7.54	Avg	1.25	135	
4582.1	45.92	V	74	-28.08	Peak	1.35	135	
4582.1	30.01	V	54	-23.99	Avg	1.35	135	
5498.5	42.25	V	74	-31.75	Peak	1.58	150	
5498.5	29.76	V	54	-24.24	Avg	1.58	150	
6415	41.71	V	74	-32.29	Peak	1.25	135	
6415	29.41	V	54	-24.59	Avg	1.25	135	
7331.4	46.15	V	74	-27.85	Peak	1.35	125	
7331.4	33.06	V	54	32.52	Avg	1.35	125	
8247.8	46.6	V	74	-27.4	Peak	1.25	180	
8247.8	33.75	V	54	-20.25	Avg	1.25	180	
9164.2	48.54	V	74	-25.46	Peak	1.35	135	
9164.2	36.06	V	54	-17.94	Avg	1.35	135	

FCC 15.249

Pentair Water Pool & Spa

Mobiletouch2

Model: Mobiletouch

Date: 05/04/07

Lab: B

Tested By: Kyle Fujimoto

Y-Axis

Level Adjust = 20 Kohms

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
916.39	86.08	H	94	-7.92	Peak	1	135	
916.39	85.11	H	94	-8.89	QP	1	135	
1832.85	44.46	H	74	-29.54	Peak	1.25	135	
1832.85	41.19	H	54	-12.81	Avg	1.25	135	
2749.2	50.87	H	74	-23.13	Peak	1.11	135	
2749.2	48.57	H	54	-5.43	Avg	1.11	135	
3665.7	52.31	H	74	-21.69	Peak	1.15	135	
3665.7	49.54	H	54	-4.46	Avg	1.15	135	
4582.1	47.53	H	74	-26.47	Peak	1.15	135	
4582.1	41.16	H	54	-12.84	Avg	1.15	135	
5498.5	43.14	H	74	-30.86	Peak	1.14	135	
5498.5	30.03	H	54	-23.97	Avg	1.14	135	
6415	42.03	H	74	-31.97	Peak	1.15	125	
6415	29.31	H	54	-24.69	Avg	1.15	125	
7331.4	46.73	H	74	-27.27	Peak	1.15	135	
7331.4	33.21	H	54	-20.79	Avg	1.15	135	
8247.8	46.51	H	74	-27.49	Peak	1.16	225	
8247.8	33.55	H	54	-20.45	Avg	1.16	225	
9164.2	49.58	H	74	-24.42	Peak	1.17	135	
9164.2	36.11	H	54	-17.89	Avg	1.17	135	

FCC 15.249

Pentair Water Pool & Spa

Mobiletouch2

Model: Mobiletouch

Date: 05/04/07

Lab: B

Tested By: Kyle Fujimoto

Z-Axis

Level Adjust = 20 Kohms

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
916.39	87.65	V	94	-6.35	Peak	1.5	135	
916.39	87.58	V	94	-6.42	QP	1.5	135	
1832.85	50.81	V	74	-23.19	Peak	1.25	135	
1832.85	48.67	V	54	-5.33	Avg	1.25	135	
2749.2	47.37	V	74	-26.63	Peak	1.37	135	
2749.2	43.71	V	54	-10.29	Avg	1.37	135	
3665.7	50.82	V	74	-23.18	Peak	1.25	135	
3665.7	47.67	V	54	-6.33	Avg	1.25	135	
4582.1	44.83	V	74	-29.17	Peak	1.25	135	
4582.1	35.56	V	54	-18.44	Avg	1.25	135	
5498.5	44.37	V	74	-29.63	Peak	1.25	180	
5498.5	32.13	V	54	-21.87	Avg	1.25	180	
6415	44.68	V	74	-29.32	Peak	1.25	135	
6415	32.16	V	54	-21.84	Avg	1.25	135	
7331.4	48.33	V	74	-25.67	Peak	1.25	225	
7331.4	35.13	V	54	-18.87	Avg	1.25	225	
8247.8	48.44	V	74	-25.56	Peak	1.25	225	
8247.8	35.22	V	54	-18.78	Avg	1.25	225	
9164.2	47.94	V	74	-26.06	Peak	1.25	135	
9164.2	35.66	V	54	-18.34	Avg	1.25	135	

FCC 15.249

Pentair Water Pool & Spa

Mobiletouch2

Model: Mobiletouch

Date: 05/04/07

Lab: B

Tested By: Kyle Fujimoto

Z-Axis

Level Adjust = 20 Kohms

Transmit Mode

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
916.39	89.91	H	94	-4.09	Peak	1	135	
916.39	89.27	H	94	-4.73	QP	1	135	
1832.85	50.18	H	74	-23.82	Peak	1.25	135	
1832.85	47.94	H	54	-6.06	Avg	1.25	135	
2749.2	47.24	H	74	-26.76	Peak	1.01	135	
2749.2	44.08	H	54	-9.92	Avg	1.01	135	
3665.7	50.78	H	74	-23.22	Peak	1.01	135	
3665.7	46.73	H	54	-7.27	Avg	1.01	135	
4582.1	45.21	H	74	-28.79	Peak	1.25	135	
4582.1	33.44	H	54	-20.56	Avg	1.25	135	
5498.5	44.76	H	74	-29.24	Peak	1.25	150	
5498.5	32.19	H	54	-21.81	Avg	1.25	150	
6415	44.84	H	74	-29.16	Peak	1.25	135	
6415	32.05	H	54	-21.95	Avg	1.25	135	
7331.4	48.25	H	74	-25.75	Peak	1.25	135	
7331.4	35.19	H	54	-18.81	Avg	1.25	135	
8247.8	48.72	H	74	-25.28	Peak	1.35	125	
8247.8	35.21	H	54	-18.79	Avg	1.35	125	
9164.2	48.44	H	74	-25.56	Peak	1.25	135	
9164.2	35.56	H	54	-18.44	Avg	1.25	135	

FCC Class B and FCC 15.249

Pentair Water Pool & Spa

Mobiletouch2

Model: Mobiletouch

Date: 5/7/2007

Lab: D

Tested By: Kyle Fujimoto

Radiated Emissions -- 10 kHz to 1000 MHz -- Vertical Polarization**Transmit Mode - Worst Case**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit (dBuV/m)	Margin (dB)	Peak / QP / Avg	Comments
132.51	23.51	V	43.50	-19.99	Pk	
250.04	22.86	V	46.00	-23.14	Pk	
275.02	20.46	V	46.00	-25.54	Pk	
277.51	27.14	V	46.00	-18.86	Pk	
302.51	25.50	V	46.00	-20.50	Pk	
305.51	29.11	V	46.00	-16.89	Pk	
322.51	39.37	V	46.00	-6.63	Pk	
325.01	39.39	V	46.00	-6.61	Pk	
327.50	39.35	V	46.00	-6.65	Pk	
332.51	38.21	V	46.00	-7.79	Pk	
337.52	36.15	V	46.00	-9.85	Pk	
342.51	34.61	V	46.00	-11.39	Pk	
347.52	35.03	V	46.00	-10.97	Pk	
352.51	33.76	V	46.00	-12.24	Pk	
357.51	30.96	V	46.00	-15.04	Pk	
362.53	34.39	V	46.00	-11.61	Pk	
367.53	35.57	V	46.00	-10.43	Pk	
372.52	36.52	V	46.00	-9.48	Pk	
377.52	38.68	V	46.00	-7.32	Pk	
382.52	40.57	V	46.00	-5.43	Pk	
385.03	36.37	V	46.00	-9.63	Pk	
387.52	40.52	V	46.00	-5.48	Pk	
392.52	37.01	V	46.00	-8.99	Pk	
402.52	35.63	V	46.00	-10.37	Pk	
407.52	40.05	V	46.00	-5.95	Pk	
415.01	36.01	V	46.00	-9.99	Pk	
417.52	37.55	V	46.00	-8.45	Pk	
422.48	31.58	V	46.00	-14.42	Pk	
452.51	30.10	V	46.00	-15.90	Pk	
463.03	30.93	V	46.00	-15.07	Pk	
472.51	29.94	V	46.00	-16.06	Pk	
497.53	27.62	V	46.00	-18.38	Pk	
552.52	29.37	V	46.00	-16.63	Pk	
730.04	27.54	V	46.00	-18.46	Pk	

Model: Mobiletouch

Tested By: Kyle Fujimoto

Transmit Mode - Worst Case

[illegible]

FCC Class B and FCC 15.249

Pentair Water Pool & Spa

Mobiletouch2

Model: Mobiletouch

Date: 5/7/2007

Lab: D

Tested By: Kyle Fujimoto

**Radiated Emissions -- 300 MHz to 1000 MHz -- Horizontal Polarization (page 1 of 2)
Transmit Mode - Worst Case**

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit (dBuV/m)	Margin (dB)	Peak / QP / Avg	Comments
302.51	29.03	H	46.00	-16.97	Pk	
305.51	27.31	H	46.00	-18.69	Pk	
322.51	37.42	H	46.00	-8.58	Pk	
325.01	38.85	H	46.00	-7.15	Pk	
327.50	39.56	H	46.00	-6.44	Pk	
332.51	34.90	H	46.00	-11.10	Pk	
337.52	36.25	H	46.00	-9.75	Pk	
342.51	32.95	H	46.00	-13.05	Pk	
347.52	33.39	H	46.00	-12.61	Pk	
352.51	34.14	H	46.00	-11.86	Pk	
357.51	34.47	H	46.00	-11.53	Pk	
362.53	36.47	H	46.00	-9.53	Pk	
367.53	39.96	H	46.00	-6.04	Pk	
372.52	43.35	H	46.00	-2.65	Pk	
372.52	42.84	H	46.00	-3.16	QP	
377.52	44.81	H	46.00	-1.19	Pk	
377.52	44.43	H	46.00	-1.57	QP	
385.03	42.81	H	46.00	-3.19	Pk	
387.52	45.44	H	46.00	-0.56	Pk	
387.52	44.94	H	46.00	-1.06	QP	
390.01	42.13	H	46.00	-3.87	Pk	
402.52	43.57	H	46.00	-2.43	Pk	
402.52	43.17	H	46.00	-2.83	QP	
395.01	39.35	H	46.00	-6.65	Pk	
397.51	45.04	H	46.00	-0.96	Pk	
397.51	44.58	H	46.00	-1.42	Pk	
400.01	39.13	H	46.00	-6.87	Pk	
402.51	43.20	H	46.00	-2.80	Pk	
402.51	42.77	H	46.00	-3.23	QP	
405.02	39.41	H	46.00	-6.59	Pk	
407.52	39.41	H	46.00	-6.59	Pk	
413.11	39.37	H	46.00	-6.63	Pk	
417.51	39.21	H	46.00	-6.79	Pk	
422.52	39.63	H	46.00	-6.37	Pk	
427.52	40.28	H	46.00	-5.72	Pk	

Model: Mobiletouch

Tested By: Kyle Fujimoto

Transmit Mode - Worst Case

[illegible]