

THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Kyunggi-Do, 469-803, Korea

T82-31-883-5092/F82-31-883-5169 email thrukang@paran.com

Test Report

Product Name: IQ Pager (Receiver)

FCCID: WDC-IQ2008

Model No.: IQ2008L

Applicant:

HME Wireless, Inc.

1400 Northbrook Parkway, Suite 320,
Suwanee City, GA, 30024, U.S.A

Date Receipt : 12/20/2008

Date Tested : 12/30/2008

Date Issued : 12/30/2008

APPLICANT: HME Wireless, Inc.

FCCID #: WDC-IQ2008

REPORT #: TK-FR8010

COVER SHEET

THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Kyunggi-Do, 469-803, Korea

T82-31-883-5092/F82-31-883-5169 email thrukang@paran.com

APPLICANT: HME Wireless, Inc.

FCCID: WDC-IQ2008

TABLE OF CONTENTS FOR A RECEIVER REPORT

PAGE 1..... TEST EQUIPMENT LIST

PAGE 2..... TEST PROCEDURE

PAGE 3-6..... RADIATED EMISSIONS TEST DATA

PAGE 7-9..... POWERLINE CONDUCTED EMISSIONS

APPLICANT: HME Wireless, Inc.

FCCID #: WDC-IQ2008

REPORT #: TK-FR8010

TABLE OF CONTENTS

THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Kyunggi-Do, 469-803, Korea

T82-31-883-5092/F82-31-883-5169 email thrukang@paran.com

EMC Equipment List

No	Description	Manufacturer	Model No.	Serial No.	Due Cal.	Used
1	Test Receiver	Rohde & Schwarz	ESHS 10	862970/018	2009.05.13	<input checked="" type="checkbox"/>
2	Test Receiver	Rohde & Schwarz	ESVS 10	826008/014	2009.06.20	<input checked="" type="checkbox"/>
3	Spectrum Analyzer	Hewlett Packard	8566B	2311A02394	2009.06.10	<input checked="" type="checkbox"/>
4	Spectrum Analyzer	Advantest Corp.	R3261C	61720208	2009.06.10	<input type="checkbox"/>
	Spectrum Analyzer	Advantest Corp.	R3273	101003536	2009.09.05	<input type="checkbox"/>
5	Modulation Analyzer	Hewlett Packard	8901B	3438A05094	2009.05.29	<input type="checkbox"/>
6	Audio analyzer	Hewlett Packard	8903B	3011A12915	2009.05.29	<input type="checkbox"/>
7	Preamplifier	Hewlett Packard	8447F	2805A02570	2009.05.26	<input type="checkbox"/>
8	Preamplifier	A.H. Systems	PAM-0118	164	2009.04.27	<input type="checkbox"/>
9	Signal Generator	Hewlett Packard	8673D	2708A00448	2009.06.10	<input type="checkbox"/>
10	Power Meter	Hewlett Packard	437B	312U24787	2009.04.29	<input type="checkbox"/>
11	Power Sensor	Hewlett Packard	8482B	3318A06943	2009.06.29	<input type="checkbox"/>
12	Loop Antenna	Rohde & Schwarz	HFH2-Z2.335.4711.52	826532/006	2009.01.31	<input type="checkbox"/>
13	Dipole Antenna	Rohde & Schwarz	VHAP	574	2010.07.07	<input type="checkbox"/>
14	Dipole Antenna	Rohde & Schwarz	VHAP	575	2010.07.17	<input type="checkbox"/>
15	Dipole Antenna	Rohde & Schwarz	UHAP	546	2010.07.07	<input type="checkbox"/>
16	Dipole Antenna	Rohde & Schwarz	UHAP	547	2010.07.07	<input type="checkbox"/>
17	Biconical Antenna	Eaton Corp.	94455-1	0977	2010.07.03	<input type="checkbox"/>
18	Biconical Antenna	EMCO	3104C	9111-2468	2010.07.03	<input checked="" type="checkbox"/>
19	Log Periodic Antenna	EMCO	3146	2051	2010.06.05	<input checked="" type="checkbox"/>
20	Log Periodic Antenna	EMCO	3146	8901-2320	2010.07.03	<input type="checkbox"/>
21	Horn Antenna	A.H. Systems	SAS-571	414	2009.03.17	<input type="checkbox"/>
22	LISN	EMCO	3810/1	2228	2009.10.29	<input checked="" type="checkbox"/>
23	LISN	Kyoritsu	KNW-242	8-923-2	2009.05.23	<input type="checkbox"/>

APPLICANT: HME Wireless, Inc.

FCCID #: WDC-IQ2008

REPORT #:TK-FR8010

1 of 9

THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Kyunggi-Do, 469-803, Korea

T82-31-883-5092/F82-31-883-5169 email thrukang@paran.com

24	Waveform Generator	Hewlett Packard	33120A	US34001190	2009.05.29	<input type="checkbox"/>
25	Digital Oscilloscope	Tektronix	TDS 340A	B012287	2009.06.10	<input type="checkbox"/>
26	Dummy Load	Bird Electronics	8251	11511	2009.02.02	<input type="checkbox"/>

APPLICANT: HME Wireless, Inc.

FCCID #: WDC-IQ2008

REPORT #:TK-FR8010

THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Kyunggi-Do, 469-803, Korea

T82-31-883-5092/F82-31-883-5169 email thrukang@paran.com

TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of Thru lab & Engineering. Shielded interface cables were used in all cases except for cables connecting to the telephone line and the power cords. A test program was run which filled the screen with H's and also with the modem dialing out. Peripherals were turned on and operating.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-2003 using a Rohde & Schwarz EMI Test Receiver ESVS10. The bandwidth of the test receiver was 120 kHz with an appropriate sweep speed. The test receiver was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 120 kHz. The ambient temperature of the UUT was 24°C with a humidity of 62%.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the test receiver (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

Freq (MHz)	METER READING + ACF = FS
33	20 dBuV + 10.36 dB = 30.36 dBuV/m @ 3m

ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES: The UUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The UUT was placed in a manner that was representative of the way the EUT would be used. If the EUT had any peripherals, they were attached and placed in a similar manner. 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. In addition, in the event of the test being for a computer set up, the modem and printer positions were swapped and cables were manipulated as much as possible. The monitor was not moved, as that would not represent a typical situation configuration.

The situation was similar for the conducted measurement except that the table did not rotate. The EUT was setup as described in ANSIC63.4-2003 with the EUT 40 cm from the vertical ground wall.

APPLICANT: HME Wireless, Inc.

FCCID #: WDC-IQ2008

REPORT #:TK-FR8010

3 of 9

THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Kyunggi-Do, 469-803, Korea

T82-31-883-5092/F82-31-883-5169 email thrukang@paran.com

APPLICANT: HME Wireless, Inc.

FCCID: WDC-IQ2008

NAME OF TEST: RADIATION INTERFERENCE

RULES PART NUMBER: 15.109, 15.33(b)(3)

REQUIREMENTS:

30 to 88 MHz:	40.0 dBuV/M @ 3 METERS
88 to 216 MHz:	43.5 dBuV/M
216 to 960 MHz:	46.0 dBuV/M
ABOVE 960 MHz:	54.0 dBuV/M

TEST RESULTS: A search was made of the spectrum from 30 to 1000 MHz and the measurements indicate that the unit DOES meet the FCC requirements.

TEST DATA:

* Tuning Frequency : 450.0000MHz

No	Emission Frequency (MHz)	Meter Reading dBuV/m	Ant. Polaritry	Correction Factor dB	Cable Loss dB	Field Strength (dBuV/m)	Margin (dBuV)	Limit (dBuV/m)
1	40.59	16.5	V	12.7	0.8	30.0	-10.0	40.0
2	77.71	12.4	V	7.5	1.3	21.2	-18.8	40.0
3	130.00	6.5	H	12.7	1.9	21.1	-22.4	43.5
4	226.60	5.7	V	10.8	2.8	19.4	-26.6	46.0
5	285.50	7.9	H	17.6	3.3	28.8	-17.2	46.0
6	368.30	7.2	H	14.9	4.0	26.1	-19.9	46.0
7	385.30	7.4	V	15.2	4.1	26.7	-19.3	46.0
8	405.80	7.3	V	15.5	4.3	27.1	-18.9	46.0
9	480.80	8.6	H	19.0	4.8	32.4	-13.6	46.0
10	514.30	6.3	H	17.9	5.0	29.2	-16.8	46.0
11	884.10	4.5	V	23.6	7.2	35.3	-10.7	46.0
12	930.10	5.9	V	23.1	7.4	36.4	-9.6	46.0

SAMPLE CALCULATION: $FS_{dBuV/m} = MR_{(dBuV)} + ACF_{dB}$.

TEST PROCEDURE: ANSI STANDARD C63.4-2003 using a Rohde & Schwarz EMI Test Receiver ESVS10, and an appropriate antenna – see the test equipment list. The bandwidth of test receiver was 120 kHz with an appropriate sweep speed. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported.

PERFORMED BY: Kyoung Moon Choi

DATE: 12/30/2008

APPLICANT: HME Wireless, Inc.

FCCID #: WDC-IQ2008

REPORT #:TK-FR8010

4 of 9

THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Kyunggi-Do, 469-803, Korea

T82-31-883-5092/F82-31-883-5169 email thrukang@paran.com

APPLICANT: HME Wireless, Inc.

FCCID: WDC-IQ2008

NAME OF TEST: RADIATION INTERFERENCE

RULES PART NUMBER: 15.109, 15.33(b)(3)

REQUIREMENTS:

30 to 88 MHz:	40.0 dBuV/M @ 3 METERS
88 to 216 MHz:	43.5 dBuV/M
216 to 960 MHz:	46.0 dBuV/M
ABOVE 960 MHz:	54.0 dBuV/M

TEST RESULTS: A search was made of the spectrum from 30 to 1000 MHz and the measurements indicate that the unit DOES meet the FCC requirements.

TEST DATA:

* Tuning Frequency : 457.5750MHz

No	Emission Frequency (MHz)	Meter Reading dBuV/m	Ant. Polaritry	Correction Factor dB	Cable Loss dB	Field Strength (dBuV/m)	Margin (dBuV)	Limit (dBuV/m)
1	40.15	18.2	H	12.8	0.8	31.8	-8.2	40.0
2	140.80	5.2	H	15.2	2.0	22.4	-21.1	43.5
3	162.50	5.3	V	16.9	2.2	24.4	-19.1	43.5
4	194.00	6.9	V	14.6	2.5	24.0	-19.5	43.5
5	240.50	6.0	V	11.4	3.0	20.4	-25.6	46.0
6	313.00	7.4	H	15.8	3.5	26.7	-19.3	46.0
7	354.00	7.2	H	14.8	3.9	25.9	-20.1	46.0
8	378.30	7.8	V	15.0	4.0	26.9	-19.1	46.0
9	421.50	7.0	H	15.7	4.4	27.1	-18.9	46.0
10	482.00	6.8	V	19.0	4.8	30.6	-15.4	46.0
11	880.50	7.5	H	23.6	7.2	38.3	-7.7	46.0
12	938.20	6.0	H	23.1	7.4	36.5	-9.5	46.0

SAMPLE CALCULATION: $FS_{dBuV/m} = MR_{(dBuV)} + ACF_{dB}$.

TEST PROCEDURE: ANSI STANDARD C63.4-2003 using a Rohde & Schwarz EMI Test Receiver ESVS10, and an appropriate antenna – see the test equipment list. The bandwidth of test receiver was 120 kHz with an appropriate sweep speed. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported.

PERFORMED BY: Kyoung Moon Choi

DATE: 12/30/2008

APPLICANT: HME Wireless, Inc.

FCCID #: WDC-IQ2008

REPORT #:TK-FR8010

5 of 9

THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Kyunggi-Do, 469-803, Korea

T82-31-883-5092/F82-31-883-5169 email thrukang@paran.com

APPLICANT: HME Wireless, Inc.

FCCID: WDC-IQ2008

NAME OF TEST: RADIATION INTERFERENCE

RULES PART NUMBER: 15.109, 15.33(b)(3)

REQUIREMENTS: 30 to 88 MHz: 40.0 dBuV/M @ 3 METERS
88 to 216 MHz: 43.5 dBuV/M
216 to 960 MHz: 46.0 dBuV/M
ABOVE 960 MHz: 54.0 dBuV/M

TEST RESULTS: A search was made of the spectrum from 30 to 1000 MHz and the measurements indicate that the unit DOES meet the FCC requirements.

TEST DATA:

* Tuning Frequency : 470.000MHz

No	Emission Frequency (MHz)	Meter Reading dBuV/m	Ant. Polarity	Correction Factor dB	Cable Loss dB	Field Strength (dBuV/m)	Margin (dBuV)	Limit (dBuV/m)
1	40.33	15.4	H	12.7	0.8	29.0	-11.0	40.0
2	123.50	5.0	V	11.5	1.9	18.3	-21.7	40.0
3	131.30	5.2	H	13.0	1.9	20.1	-23.4	43.5
4	170.80	5.3	V	16.0	2.3	23.6	-22.4	46.0
5	263.80	7.0	H	13.4	3.2	23.6	-22.4	46.0
6	310.00	7.5	V	15.8	3.5	26.7	-19.3	46.0
7	395.50	7.4	V	15.4	4.2	26.9	-19.1	46.0
8	419.90	7.0	H	15.7	4.3	27.0	-19.0	46.0
9	474.80	6.6	V	19.6	4.7	31.0	-15.0	46.0
10	480.50	8.4	H	19.0	4.8	32.2	-13.8	46.0
11	875.40	5.8	H	23.6	7.2	36.6	-9.4	46.0
12	928.50	6.7	V	23.1	7.4	37.2	-8.8	46.0

SAMPLE CALCULATION: $FS_{dBuV/m} = MR_{dBuV} + AC_{dB}$.

TEST PROCEDURE: ANSI STANDARD C63.4-2003 using a Rohde & Schwarz EMI Test Receiver ESVS10, and an appropriate antenna – see the test equipment list. The bandwidth of test receiver was 120 kHz with an appropriate sweep speed. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported.

PERFORMED BY: Kyoung Moon Choi

DATE: 12/30/2008

APPLICANT: HME Wireless, Inc.

FCCID #: WDC-IQ2008

REPORT #:TK-FR8010

6 of 9

THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Kyunggi-Do, 469-803, Korea

T82-31-883-5092/F82-31-883-5169 email thrukang@paran.com

APPLICANT: HME Wireless, Inc.

MODEL #: WDC-IQ2008

NAME OF TEST: POWER LINE CONDUCTED INTERFERENCE

RULES PART NO.: 15.107

REQUIREMENTS:	QUASI-PEAK	AVERAGE
.15 - 0.5 MHz	66-56 dBuV	56-46 dBuV
0.5 - 5.0	56	46
5.0 - 30.	60	50

TEST PROCEDURE: ANSI STANDARD C63.4-2003. The spectrum was scanned from .15 to 30 MHz.

TEST DATA:

THE HIGHEST EMISSION READ FOR LINE 1 WAS 51.2dBuV @ 0.150MHz

THE HIGHEST EMISSION READ FOR LINE 2 WAS 42.6dBuV @ 0.150MHz

THE GRAPHS ON THE FOLLOWING PAGE REPRESENT THE EMISSIONS TAKEN FOR THIS DEVICE.

TEST RESULTS: Both lines were observed. The measurements indicate that the unit DOES appear to meet the FCC requirements for this class of equipment.

PERFORMED BY: Kyoung Moon Choi

DATE: 12/30/2008

APPLICANT: HME Wireless, Inc.

FCCID #: WDC-IQ2008

REPORT #:TK-FR8010

THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun

Kyunggi-Do, 469-803, Korea

T82-31-883-5092/F82-31-883-5169 email thrukang@paran.com

Line1 (H)

CONDUCTED EMISSION CONDUCTED TEST

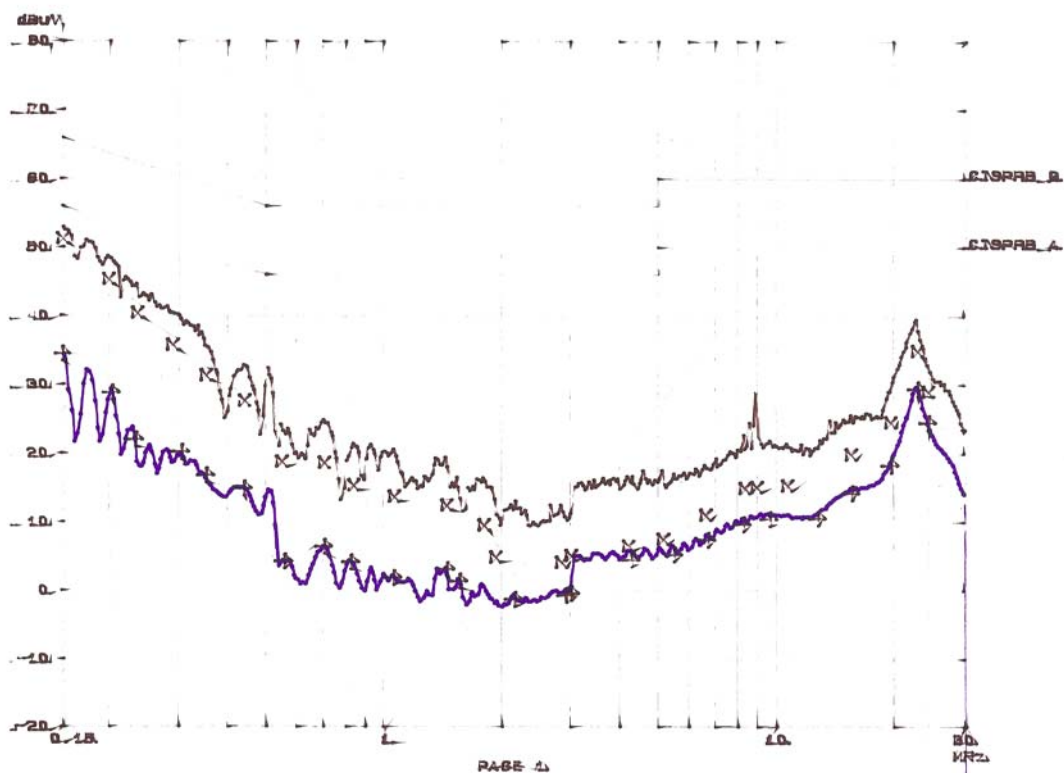
22 Dec 98 21:10

EUT: T9200BL
Model: LESTK
Op. Cond: LINE1
Operator: NPAU
Test Spec: EN22

Scan Settings (2 Ranges)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	K-Time	Atten	Preamp	OpAmp
150K	3K	3K	40K	PK-AV	100ms	AUTO	L1 OFF	50dB
3K	30K	3K	40K	PK-AV	20ms	AUTO	L1 OFF	50dB

Final Measurement: X BP 1 5 40
Measure Time: 1 s
Subrange: 25
Acc. Margin: 50dB



APPLICANT: HME Wireless, Inc.

FCCID #: WDC-IQ2008

REPORT #:TK-FR8010

8 of 9

T82-31-883-5092/F82-31-883-5169 email thrukang@paran.com

Line2(N)

CONDUCTED EMISSION
CONDUCTED TEST

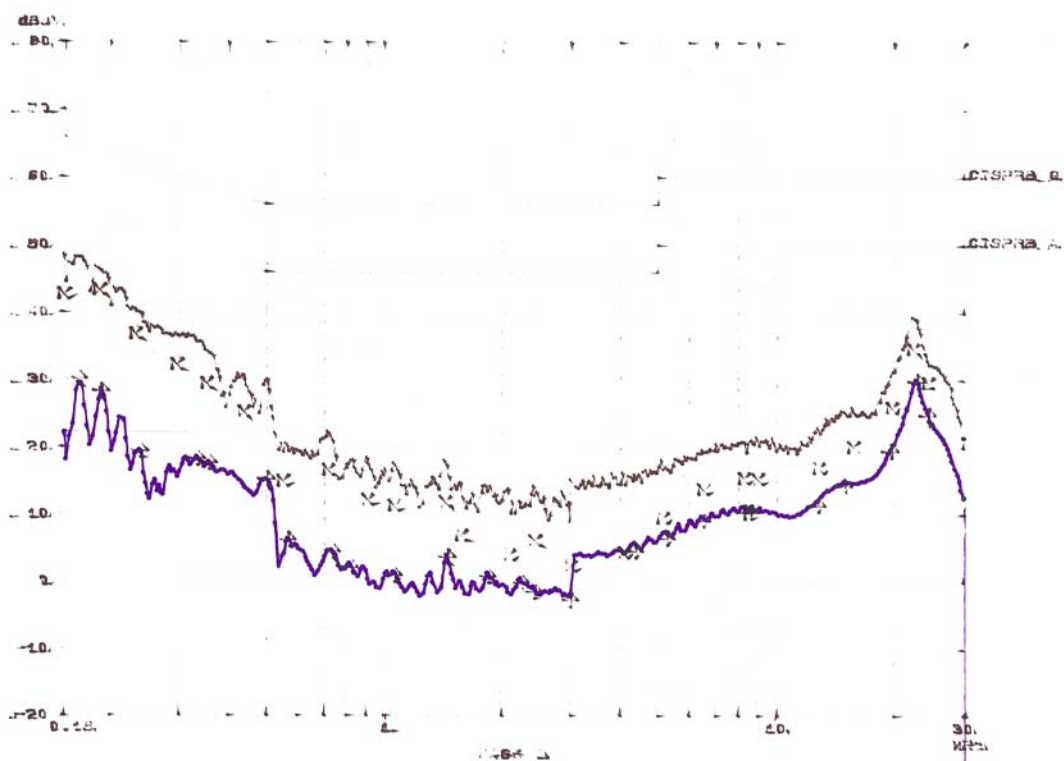
27. 202 28. 1053

10/17/77
 10/17/77
 10/17/77
 10/17/77
 10/17/77

Soan 17, June 17, 1955

[illegible]

1. 1. Name of the person
 2. 2. Address
 3. 3. City
 4. 4. State
 5. 5. Zip
 6. 6. Phone
 7. 7. E-mail
 8. 8. Date
 9. 9. Signature
 10. 10. Stamp
 11. 11. Other
 12. 12. Remarks
 13. 13. Date
 14. 14. Signature
 15. 15. Stamp
 16. 16. Other
 17. 17. Remarks
 18. 18. Date
 19. 19. Signature
 20. 20. Stamp
 21. 21. Other
 22. 22. Remarks
 23. 23. Date
 24. 24. Signature
 25. 25. Stamp
 26. 26. Other
 27. 27. Remarks
 28. 28. Date
 29. 29. Signature
 30. 30. Stamp
 31. 31. Other
 32. 32. Remarks
 33. 33. Date
 34. 34. Signature
 35. 35. Stamp
 36. 36. Other
 37. 37. Remarks
 38. 38. Date
 39. 39. Signature
 40. 40. Stamp
 41. 41. Other
 42. 42. Remarks
 43. 43. Date
 44. 44. Signature
 45. 45. Stamp
 46. 46. Other
 47. 47. Remarks
 48. 48. Date
 49. 49. Signature
 50. 50. Stamp
 51. 51. Other
 52. 52. Remarks
 53. 53. Date
 54. 54. Signature
 55. 55. Stamp
 56. 56. Other
 57. 57. Remarks
 58. 58. Date
 59. 59. Signature
 60. 60. Stamp
 61. 61. Other
 62. 62. Remarks
 63. 63. Date
 64. 64. Signature
 65. 65. Stamp
 66. 66. Other
 67. 67. Remarks
 68. 68. Date
 69. 69. Signature
 70. 70. Stamp
 71. 71. Other
 72. 72. Remarks
 73. 73. Date
 74. 74. Signature
 75. 75. Stamp
 76. 76. Other
 77. 77. Remarks
 78. 78. Date
 79. 79. Signature
 80. 80. Stamp
 81. 81. Other
 82. 82. Remarks
 83. 83. Date
 84. 84. Signature
 85. 85. Stamp
 86. 86. Other
 87. 87. Remarks
 88. 88. Date
 89. 89. Signature
 90. 90. Stamp
 91. 91. Other
 92. 92. Remarks
 93. 93. Date
 94. 94. Signature
 95. 95. Stamp
 96. 96. Other
 97. 97. Remarks
 98. 98. Date
 99. 99. Signature
 100. 100. Stamp
 101. 101. Other
 102. 102. Remarks
 103. 103. Date
 104. 104. Signature
 105. 105. Stamp
 106. 106. Other
 107. 107. Remarks
 108. 108. Date
 109. 109. Signature
 110. 110. Stamp
 111. 111. Other
 112. 112. Remarks
 113. 113. Date
 114. 114. Signature
 115. 115. Stamp
 116. 116. Other
 117. 117. Remarks
 118. 118. Date
 119. 119. Signature
 120. 120. Stamp
 121. 121. Other
 122. 122. Remarks
 123. 123. Date
 124. 124. Signature
 125. 125. Stamp
 126. 126. Other
 127. 127. Remarks
 128. 128. Date
 129. 129. Signature
 130. 130. Stamp
 131. 131. Other
 132. 132. Remarks
 133. 133. Date
 134. 134. Signature
 135. 135. Stamp
 136. 136. Other
 137. 137. Remarks
 138. 138. Date
 139. 139. Signature
 140. 140. Stamp
 141. 141. Other
 142. 142. Remarks
 143. 143. Date
 144. 144. Signature
 145. 145. Stamp
 146. 146. Other
 147. 147. Remarks
 148. 148. Date
 149. 149. Signature
 150. 150. Stamp
 151. 151. Other
 152. 152. Remarks
 153. 153. Date
 154. 154. Signature
 155. 155. Stamp
 156. 156. Other
 157. 157. Remarks
 158. 158. Date
 159. 159. Signature
 160. 160. Stamp
 161. 161. Other
 162. 162. Remarks
 163. 163. Date
 164. 164. Signature
 165. 165. Stamp
 166. 166. Other
 167. 167. Remarks
 168. 168. Date
 169. 169. Signature
 170. 170. Stamp
 171. 171. Other
 172. 172. Remarks
 173. 173. Date
 174. 174. Signature
 175. 175. Stamp
 176. 176. Other
 177. 177. Remarks
 178. 178. Date
 179. 179. Signature
 180. 180. Stamp
 181. 181. Other
 182. 182. Remarks
 183. 183. Date
 184. 184. Signature
 185. 185. Stamp
 186. 186. Other
 187. 187. Remarks
 188. 188. Date
 189. 189. Signature
 190. 190. Stamp
 191. 191. Other
 192. 192. Remarks
 193. 193. Date
 194. 194. Signature
 195. 195. Stamp
 196. 196. Other
 197. 197. Remarks
 198. 198. Date
 199. 199. Signature
 200. 200. Stamp
 201. 201. Other
 202. 202. Remarks
 203. 203. Date
 204. 204. Signature
 205. 205. Stamp
 206. 206. Other
 207. 207. Remarks
 208. 208. Date
 209. 209. Signature
 210. 210. Stamp
 211. 211. Other
 212. 212. Remarks
 213. 213. Date
 214. 214. Signature
 215. 215. Stamp
 216



APPLICANT: HME Wireless, Inc.

FCCID #: WDC-IQ2008

REPORT #:TK-FR8010