THRU Lab & Engineering.

477-6, Hager-Ri, Yoju-Up, Yoju-Gun
Kyunggi-Do,469-803, Korea
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Test Report

Product Name: IQ Pager (Receiver)

FCCID: WDC-IQ2008

Applicant:
HME Wireless, Inc.

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

Date Receipt: 05/20/2008

Date Tested: 05/22/2008

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APPLICANT: **HME Wireless, Inc.**

FCCID: WDC-IQ2008

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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	☒
2	Test Receiver	Rohde & Schwarz	ESVS 10	826008/014	2008.06.12	☒
3	Spectrum Analyzer	Hewlett Packard	8566B	2311A02394	2008.06.13	☒
4	Spectrum Display	Hewlett Packard	85662A	2542A12429	2008.06.13	☒
5	Quasi-peak Adapter	Hewlett Packard	85650A	2521A00887	2008.06.13	☐
6	RF Preselector	Hewlett Packard	85685A	2648A00504	2008.06.13	☐
7	Preamplifer	Hewlett Packard	8447F	2805A02570	2009.05.28	☐
8	Preamplifer	A.H. Systems	PAM-0118	164	2009.04.28	☐
9	Biconical Antenna	Eaton Corp.	94455-1	0977	2009.04.01	☐
10	Biconical Antenna	EMCO	3104C	9111-2468	2008.07.07	☒
11	Log Periodic Antenna	EMCO	3146	2051	2010.06.05	☒
12	Horn Antenna	A.H. Systems	SAS-571	414	2009.03.17	☐
13	Loop Antenna	Rohde & Schwarz	HFH2-Z2.335.4711.52	826532/006	2009.01.31	☐
14	Dipole Antenna	Rohde & Schwarz	VHAP	574	2008.12.12	☐
15	Dipole Antenna	Rohde & Schwarz	VHAP	575	2008.12.12	☐
16	Dipole Antenna	Rohde & Schwarz	UHAP	546	2008.12.12	☐
17	Dipole Antenna	Rohde & Schwarz	UHAP	547	2008.12.12	☐
18	Signal Generator	Hewlett Packard	8673D	2708A00448	2008.06.12	☐
19	Spectrum Analyzer	Advantest Corp.	R3261C	61720208	2008.06.12	☐
20	LISN	EMCO	3825/2	9111-1912	2008.12.12	☐
21	LISN	Kyoritsu	KNW-242	8-923-2	2009.06.05	☒
22	Modulation Analyzer	Hewlett Packard	8901B	3438A05094	2009.05.25	☐
23	Waveform Generator	Hewlett Packard	33120A	US34001190	2009.05.21	☐

24	**Audio analyzer**	**Hewlett Packard**	**8903B**	**3011A12915**	**2009.05.21**	☐
25	**Digital Oscilloscope**	**Tektronix**	**TDS 340A**	**B012287**	**2008.06.13**	☐

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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 24ºC 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.

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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	46.27	15.5	H	11.6	1.0	28.0	-12.0	40.0
2	83.48	16.1	H	8.9	1.4	26.4	-13.6	40.0
3	125.48	14.4	V	11.8	1.9	28.1	-15.4	43.5
4	131.83	14.2	H	13.1	1.9	29.2	-14.3	43.5
5	211.40	10.1	V	10.8	2.7	23.6	-19.9	43.5
6	339.20	7.5	V	15.8	3.7	27.0	-19.0	46.0
7	455.90	9.5	H	17.4	4.6	31.5	-14.5	46.0
8	573.00	4.6	H	18.5	5.4	28.5	-17.5	46.0
9	628.00	6.2	V	20.6	5.7	32.6	-13.4	46.0
10	857.00	8.5	V	23.2	7.1	38.8	-7.2	46.0
11	885.00	5.5	H	23.6	7.2	36.3	-9.7	46.0
12	939.50	7.1	V	23.1	7.4	37.6	-8.4	46.0

SAMPLE CALCULATION: FSdBuV/m = MR(dBuV) + ACFdB.

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**: 05/23/2008

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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	46.53	10.2	V	11.6	1.0	22.7	-17.3	40.0
2	83.48	11.3	H	8.9	1.4	21.6	-18.4	40.0
3	156.94	10.5	V	17.0	2.2	29.7	-13.8	43.5
4	185.65	12.4	V	14.0	2.4	28.8	-14.7	43.5
5	186.94	7.5	H	13.9	2.4	23.8	-19.7	43.5
6	211.20	10.1	H	10.8	2.7	23.6	-19.9	43.5
7	364.80	9.4	H	14.9	3.9	28.2	-17.8	46.0
8	470.40	8.1	V	20.1	4.7	32.9	-13.1	46.0
9	592.00	5.3	H	18.8	5.5	29.6	-16.4	46.0
10	874.40	10.0	V	23.6	7.2	40.8	-5.2	46.0
11	892.80	4.2	H	23.5	7.3	35.0	-11.0	46.0
12	949.60	7.4	V	23.2	7.4	37.9	-8.1	46.0

SAMPLE CALCULATION: FSdBuV/m = MR(dBuV) + ACFdB.

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**: 05/23/2008

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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. Polaritry	Correction Factor dB	Cable Loss dB	Field Strength (dBuv/m)	Margin (dBuv)	Limit (dBuv/m)
1	40.67	10.6	H	12.7	0.9	24.1	-15.9	40.0
2	62.07	13.1	V	7.0	1.1	21.2	-18.8	40.0
3	119.13	10.1	V	10.8	1.8	22.8	-20.7	43.5
4	181.35	8.6	H	14.5	2.4	25.5	-18.0	43.5
5	252.80	5.0	H	12.2	3.1	20.3	-25.7	46.0
6	352.00	8.0	V	14.8	3.8	26.7	-19.3	46.0
7	469.00	9.1	V	20.0	4.7	33.8	-12.2	46.0
8	598.40	5.6	H	18.9	5.5	30.1	-15.9	46.0
9	628.00	7.1	V	20.6	5.7	33.4	-12.6	46.0
10	632.00	8.1	H	20.6	5.8	34.5	-11.5	46.0
11	876.80	5.5	V	23.6	7.2	36.2	-9.8	46.0
12	926.40	6.0	V	23.2	7.4	36.5	-9.5	46.0

SAMPLE CALCULATION: FSdBuV/m = MR(dBuV) + ACFdB.

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**: 05/23/2008

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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 32.5dBuV @ 0.171MHz

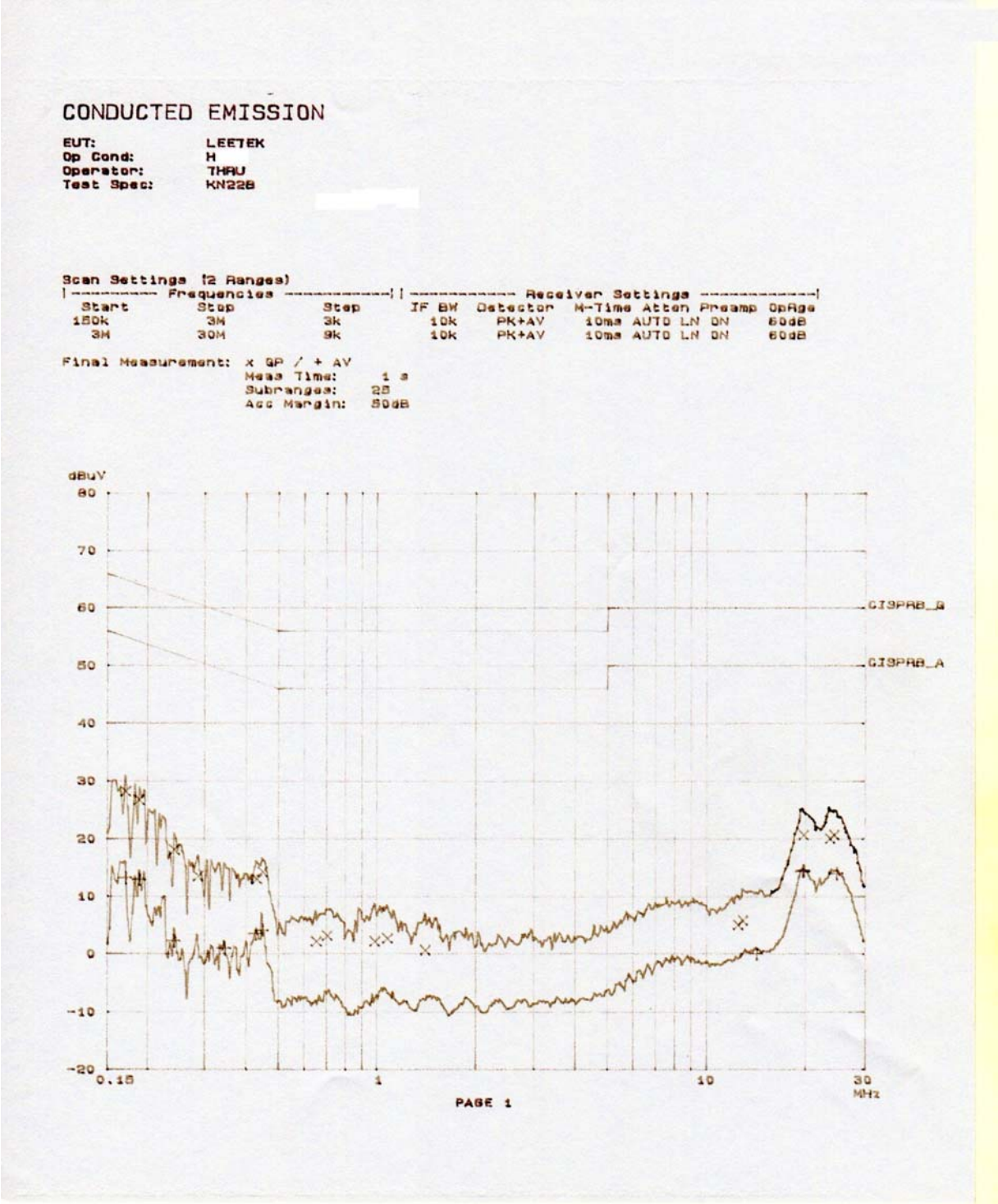
THE HIGHEST EMISSION READ FOR LINE 2 WAS 31.9dBuV @ 0.172MHz

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**: 05/22/2008

Line1(H)


CONDUCTED EMISSION
EUT: LEETEK
Op Cond: H
Operator: THRU
Test Spec: KN22B
Scan Settings (2 Ranges)
Frequencies
Receiver Settings
Start Stop Step IF BW Detector M-Time Atten Preamp OpRge
150k 3M 3k 10k PK+AV 10ms AUTO LN ON 60dB
3M 30M 9k 10k PK+AV 10ms AUTO LN ON 60dB
Final Measurement: x QP / + AV
Meas Time: 1 s
Subranges: 2S
Acc Margin: 50dB
dBuV
80
70
60
50
40
30
20
10
0
-10
-20
0.15
1
10
30
MHz
CISPRB_Q
CISPRB_A
PAGE 1

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Line2(N)