DATE: 14 October 2010

I.T.L. (PRODUCT TESTING) LTD.

FCC Radio Test Report

for

HomeFree System Ltd.

(An Attenti Subsidiary)

Equipment under test:

Personal Watcher*

PW-830-2*

* See customer's declaration on page 5.

Written by: _____

E. Ever, Documentation

Approved by: _____

E. Ever, Test Engineer

Approved by: _____

I. Raz, EMC Laboratory Manager

Measurement/Technical Report for

HomeFree System Ltd.

Personal Watcher*

PW-830-2*

*** See customer's declarationon page 5.**

FCC ID: QUX-VVST

This report concerns:	Original Grant:	x
	Class I change:	
	Class II change:	

Equipment type: Part 15 Security/Remote Control Transceiver

47CFR15 Section 15231 (a-d)

Measurement procedure used is ANSI C63.4-2003.

Application for Certification:
prepared by:

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1. General Information

1.1 Administrative Information

Manufacturer:	HomeFree System Ltd.
Manufacturer's Address:	2 Habarzel St. Tel-aviv 61131 Israel Tel: +972-3-647-8871 Fax: +972-3-647-8872
Manufacturer's Representative:	Koby Cohen
Equipment Under Test (E.U.T):	Personal Watcher *
Equipment Model No.:	PW-830-2 *
Equipment Serial No.:	Not Designated
Date of Receipt of E.U.T:	28/07/2010
Start of Test:	28/07/2010
End of Test:	28/07/2010
Test Laboratory Location:	I.T.L (Product Testing) Ltd. Kfar Bin Nun, ISRAEL 99780
Test Specifications:	FCC Part 15 Subpart C

* See customer's declaration on following page.

Israel Testing Laboratories

HomeFree
Wireless Resident Monitoring Solutions

19th of September 2010

DECLARATION

I hereby declare that the Personal Watcher PW-830-2 is identical to the Personal Watcher VVST, in terms of Radio, EMC and Safety specifications.

The PW-830-2 is actually a VVST which is strapped to the patient's hand using a disposable strap.

Signature:_____

Gil Gemer
CTO

HomeFree Systems Ltd. 2 Habarzel St., P.O.Box 13236, Tel Aviv 61132, Israel. Tel: +972-3-7671900, Fax: +972-3-7671901. www.homefreesys.com

1.2 List of Accreditations

The EMC laboratory of I.T.L. is accredited by the following bodies:

1. The American Association for Laboratory Accreditation (A2LA) (U.S.A.), Certificate No. 1152.01.
2. The Federal Communications Commission (FCC) (U.S.A.), Registration No. 90715.
3. The Israel Ministry of the Environment (Israel), Registration No. 1104/01.
4. The Voluntary Control Council for Interference by Information Technology Equipment (VCCI) (Japan), Registration Numbers: C-1350, R-1285.
5. Industry Canada (Canada), IC File No.: 46405-4025; Site No. IC 4025B-1.
6. TUV Product Services, England, ASLLAS No. 97201.
7. Nemko (Norway), Authorization No. ELA 207.

I.T.L. Product Testing Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this test report have been determined in accordance with I.T.L.'s terms of accreditation unless stated otherwise in the report.

1.3 Product Description

The PW-830-2 patient Tag is a wristwatch-like unit worn on the wrist of an Elderly Care patient.

The Tag is a battery-operated unit. The tag comprises one Printed Circuit Board (PCB) which includes a RF transmitter module with an integral antenna, and a microcontroller, which controls its operation.

The PW-830-2 (VVST) is an AMS (Area Monitoring System) / EMS (Electronic Monitoring System) network transmitter that is hidden in an analog wristwatch, and is aimed for the HomeFree (Elderly Care) users.

The VVST contains a few sensors like "Body" sensor, "Strap open/close" sensor, temperature, battery level sensors and tilt.

The Tag is turned on and off by a nurse, using an electronic key which is temporarily attached to the tag strap. The PW-830 transmit every approximately 10sec, it transmits one message that takes 6.5msec.

While turned-on the Tag transmits a 5mSec identification & status signal and then it stops transmission. As a life safety equipment the Tag transmits the next signal about 10 seconds after the last signal transmission – any interruption in the reception of the transmitted signal (which might indicate a lost Alzheimer patient) may put the patient life at risk – the central monitoring system sends an immediate alert to the nurse in-charge, which should take immediate actions to find the lost patient.

The tag operates at 433.9 MHz.

1.4 Test Methodology

Radiated testing was performed according to the procedures in ANSI C63.4: 2003. Radiated testing was performed at an antenna to EUT distance of 3 meters.

1.5 Test Facility

The radiated emissions tests were performed at I.T.L.'s testing facility at Kfar Bin-Nun, Israel. This site is a FCC listed test laboratory (FCC Registration No. 90715, date of listing September 3, 2009).
I.T.L.'s EMC Laboratory is also accredited by A2LA, certificate No. 1152.01.

1.6 Measurement Uncertainty

Radiated Emission

The Open Site complies with the ±4 dB Normalized Site Attenuation requirements of ANSI C63.4-2003. In accordance with Paragraph 5.4.6.1 of this standard, this tolerance includes instrumentation calibration errors, measurement technique errors, and errors due to site anomalies.

2. System Test Configuration

2.1 Justification

Radiated emission screening was performed in 3 orthogonal orientations. The worst case orientation was the vertical position.

2.2 EUT Exercise Software

Normal unit software was used.

2.3 Special Accessories

No special accessories were needed.

2.4 Equipment Modifications

No modifications were needed in order to achieve compliance

2.5 Configuration of Tested System

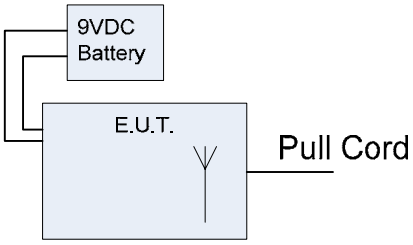


Figure 1. Configuration of Tested System

3. Radiated Measurement Test Set-up Photo

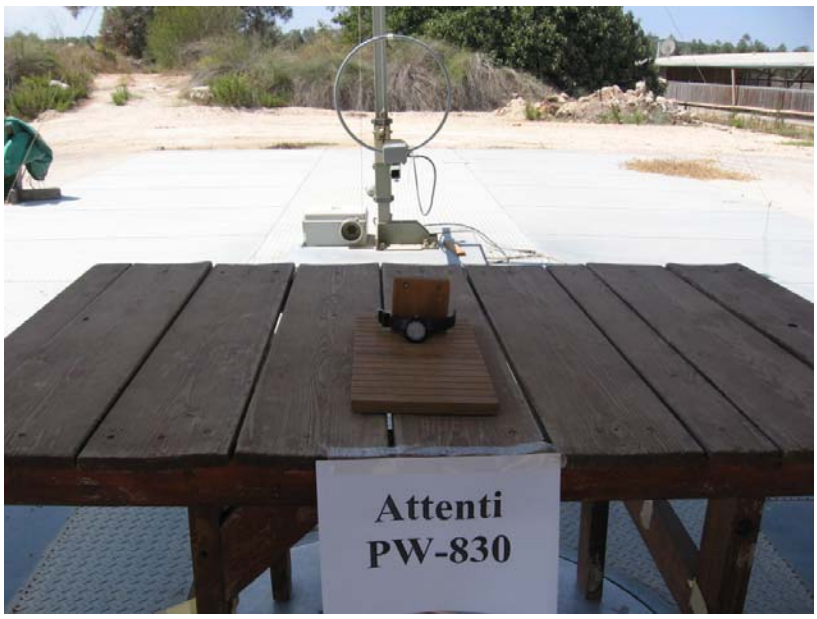


Figure 2. Radiated Emission Test 9 kHz – 30 MHz

Figure 3. Radiated Emission Test 30 -4500 MHz

4. Average Factor Calculation

1. Burst duration = 6.25msec
2. Time between bursts = >100 msec.
3. $$\text{Average Factor} = 20\log\left[\frac{\text{burst duration}}{100\text{msec}}\right]$$

$$\text{Average Factor} = 20\log\left[\frac{6.25}{100}\right] = -24.1dB$$

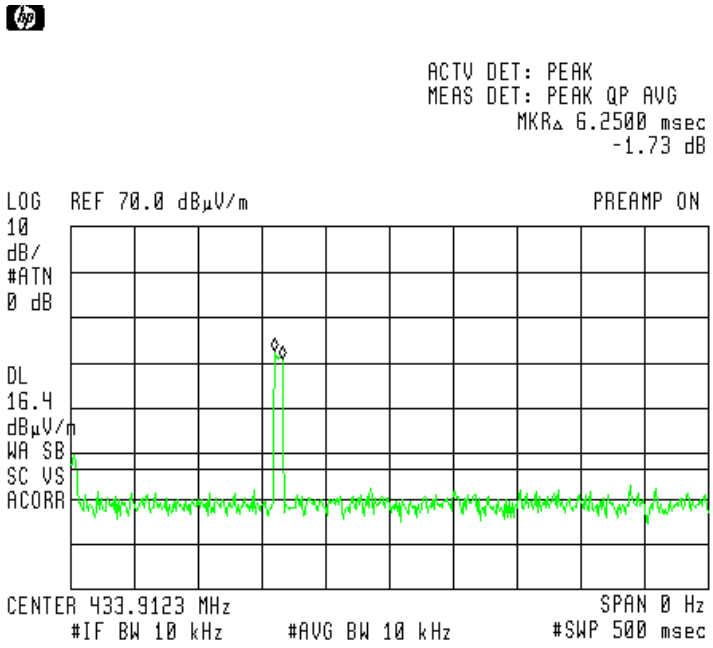


Figure 4. Burst Duration = 6.25msec

4.1 Test Instrumentation Used

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	HP	85422E	3906A00276	November 10, 2009	1 Year
Antenna Bioconical	ARA	85420E	3705A00248	November 10, 2009	1 year

5. Periodic Operation

5.1 Specification

F.C.C., Part 15, Subpart C, Section 15.231(a)

5.2 Requirements

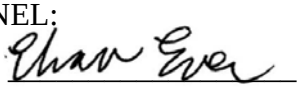
Requirement	Rationale	Verdict
Continuous transmissions are not permitted.	See *Figure 5* and *Figure 6*	Complies
A manually operated transmitter shall be deactivated within not more than 5 seconds after releasing the switch.	See *Figure 6* and *Figure 7*	Complies
An automatically operated transmitter shall cease operation within 5 seconds after activation.	See *Figure 5* and *Figure 6*	Complies
Periodic transmissions at regular predetermined intervals are not permitted.	N/A	Complies
Polling or supervised transmissions to determine system integrity of transmitter used in security or safety applications shall not exceed more than 2 seconds per hour.	See *Figure 5* and *Figure 6*	Complies

5.3 Results

JUDGEMENT: Passed

The EUT met the FCC Part 15, Subpart C, Section 15.231(a) specification requirements.

TEST PERSONNEL:

Tester Signature:  Date: 02/09/2010

Typed/Printed Name: E. Ever

Periodic Operation

E.U.T Description	Personal Watcher
Type	PW-830-2
Serial Number:	Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(a)

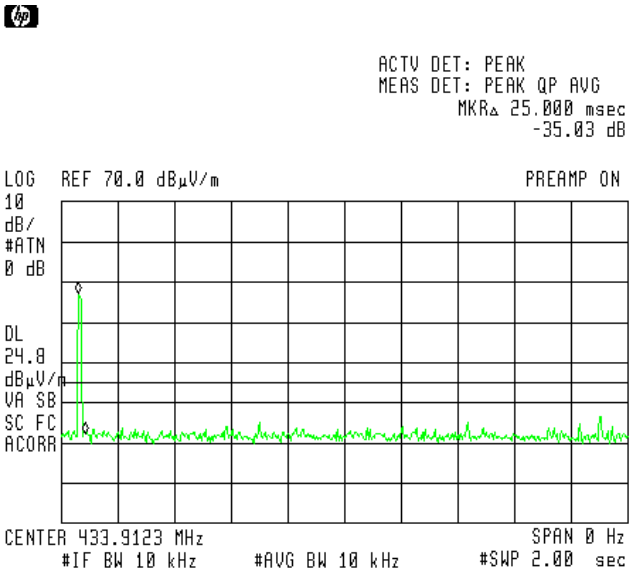


Figure 5. System Integrity Pulse Width

Periodic Operation

E.U.T Description	Personal Watcher
Type	PW-830-2
Serial Number:	Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(a)

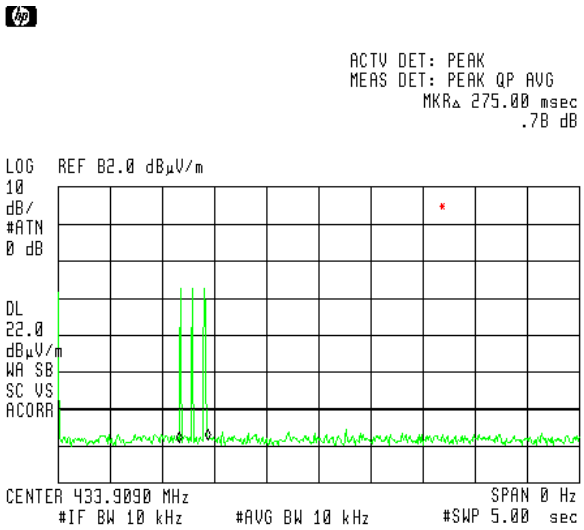


Figure 6. Manual Transmission (on and off)

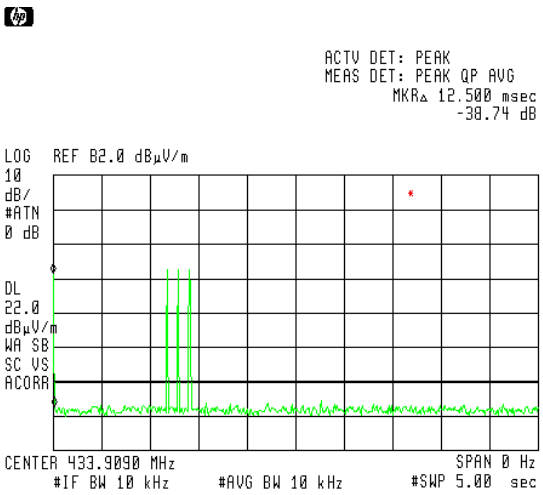


Figure 7. Manual Transmission (on and off)

Total Transmission = 287.5 msec.

6. Field Strength of Fundamental

6.1 Test Specification

F.C.C., Part 15, Subpart C, Section 15.231(b)

6.2 Test Procedure

The E.U.T. operation mode and test set-up are as described in Section 3.

The E.U.T. was placed on a non-conductive table, 0.8 meters above the O.A.T.S. ground plane.
The EMI receiver was set to the E.U.T. Fundamental Frequency (433.91 MHz) and Peak Detection.
The turntable and antenna mast were adjusted for maximum level reading on the EMI receiver.
The measurement was performed for vertical and horizontal polarizations of the test antenna.

The average result is:

Peak Level(dBµV/m) + E.U.T. Duty Cycle Factor, in 100msec time window (dB)

6.3 Results

JUDGEMENT: Passed by 8.5 dB

The EUT met the FCC Part 15, Subpart C, Section 15.231(b) specification requirements.

The details of the highest emissions are given in *Figure 8* to *Figure 10*.

TEST PERSONNEL:

Tester Signature: Date: 19/08/10

Typed/Printed Name: E. Ever

Field Strength of Fundamental

E.U.T Description	Personal Watcher
Type	PW-830-2
Serial Number:	Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(b)

Antenna Polarization: Horizontal/Vertical

Test Distance: 3 meters Detector: Peak

Freq. (MHz)	Pol. V/H	Peak Reading (dBµV/m)	Average Factor (dB)	Average Result (dBµV/m)	Average Specification (dBµV/m)	Margin (dB)
433.91	H	91.4	-24.1	67.3	75.8	-8.5
433.91	V	91.1	-24.1	67.0	75.8	-8.8

Figure 8. Field Strength of Fundamental. Antenna Polarization: HORIZONTAL/VERTICAL. Detector: Peak

Notes:

1. Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.
2. “Peak Reading.” (dBµV/m) included the “Correction Factors”.
3. “Correction Factors” (dB) = Test Antenna Correction Factor (dB) + Cable Loss.
4. “Average Factor = 20 log [(burst duration/100msec]= 20 log [(6.25/100)]= -24.1dB
5. “Average Result” (dBµV/m) = Peak Reading (dBµV/m) + Average Factor (dB)

Field Strength of Fundamental

E.U.T Description	Personal Watcher
Type	PW-830-2
Serial Number:	Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(b)

Antenna Polarization: Horizontal

Test Distance: 3 meters Detector: Peak

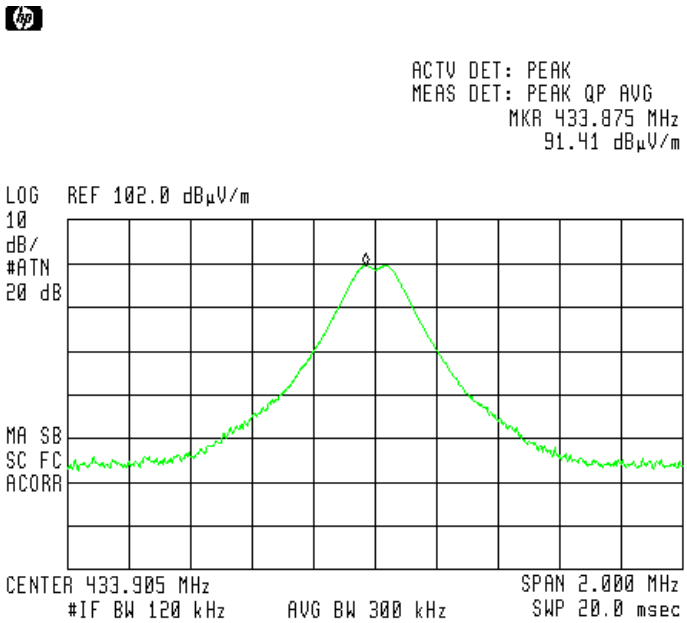


Figure 9. Average Factor Calculation

"Average Factor = 20 log [(burst duration/100msec] = 20 log [(6.25/100)] = -24.1 dB

Field Strength of Fundamental

E.U.T Description	Personal Watcher
Type	PW-830-2
Serial Number:	Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(b)

Antenna Polarization: Horizontal

Test Distance: 3 meters Detector: Peak

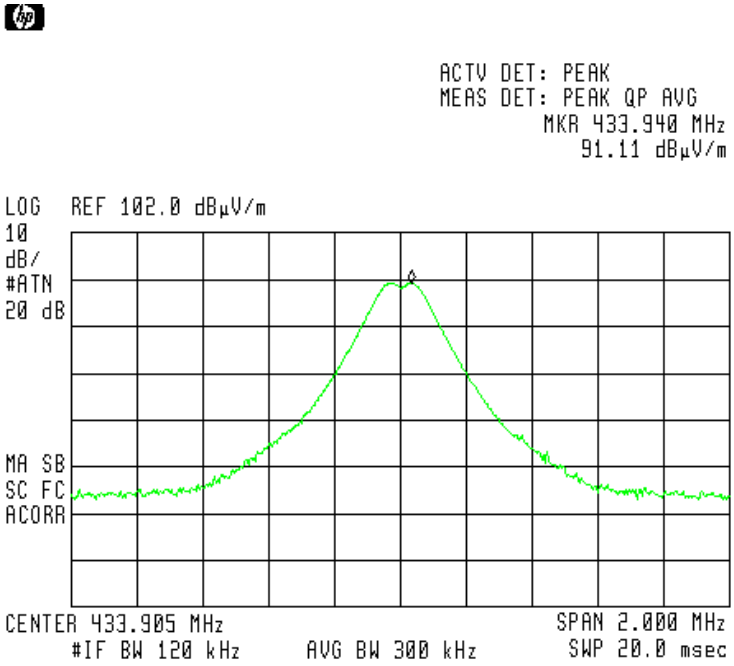


Figure 10. Average Factor Calculation

"Average Factor = 20 log [(burst duration/100msec] = 20 log [(6.25/100)] = -24.1 dB

6.4 Test Instrumentation Used, Field Strength of Fundamental

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	HP	85422E	3906A00276	November 10, 2009	1 year
RF Section	HP	85420E	3705A00248	November 10, 2009	1 year
Antenna Log Periodic	ARA	LPD-2010/A	1038	March 24, 2010	1 year
Antenna Mast	ARA	AAM-4A	1001	N/A	N/A
Turntable	ARA	ART-1001/4	1001	N/A	N/A
Mast & Table Controller	ARA	ACU-2/5	1001	N/A	N/A
Printer	HP	LaserJet 2200	JPKGC19982	N/A	N/A

7. Radiated Emission, 9 kHz – 30 MHz

7.1 Test Specification

9 kHz-30 MHz, FCC, Part 15, Subpart C, Section 209

7.2 Test Procedure

The E.U.T. operation mode and test set-up are as described in Section 2.

A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The configuration tested is shown in Figure 1.

The frequency range 9 kHz-30 MHz was scanned.

The emissions were measured using a computerized EMI receiver complying to CISPR 16 requirements. The specification limits and applicable correction factors are loaded to the receiver via a 3.5" floppy disk.

In the frequency range 9 kHz-30MHz, the loop antenna was rotated on its vertical axis. The antenna height (center of loop) was 1 meter at a distance of 3 meters.

The E.U.T. was operated at the frequency of 433.88 MHz. This frequency was measured using a peak detector.

7.3 Results

JUDGEMENT: PASSED

The EUT met the requirements of the FCC Part 15, Subpart C specification.

No signals were detected in the frequency range of 9 kHz – 30 MHz.

TEST PERSONNEL:

Tester Signature: E. Ever Date: 19/08/10

Typed/Printed Name: E. Ever

7.4 Test Instrumentation Used, Radiated Measurements

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	HP	85422E	3906A00276	November 10, 2009	1 year
RF Section	HP	85420E	3705A00248	November 10, 2009	1 year
Active Loop Antenna	EMCO	6502	9506-2950	October 19, 2009	1 year
Antenna Mast	ARA	AAM-4A	1001	N/A	N/A
Turntable	ARA	ART-1001/4	1001	N/A	N/A
Mast & Table Controller	ARA	ACU-2/5	1001	N/A	N/A

7.5 Field Strength Calculation

The field strength is calculated directly by the EMI Receiver software, and a "Correction Factors" data disk, using the following equation:

$$FS = RA + AF + CF$$

FS: Field Strength [dBμv/m]
RA: Receiver Amplitude [dBμv]
AF: Receiving Antenna Correction Factor [dB/m]
CF: Cable Attenuation Factor [dB]

Example: FS = 30.7 dBμV (RA) + 14.0 dB (AF) + 0.9 dB (CF) = 45.6 dBμV

No external pre-amplifiers are used.

8. Spurious Radiated Emission, 30 – 4500 MHz

8.1 Test Specification

30 – 4500 MHz, F.C.C., Part 15, Subpart C

8.2 Test Procedure

The E.U.T. operation mode and test set-up are as described in Section 3.
See Section 3.1 Justification of the System Test Configuration concerning the E.U.T. orientation for this test.
A preliminary measurement to characterize the E.U.T was performed inside the shielded room at a distance of 3 meters, using peak detection mode and broadband antennas. The preliminary measurements produced a list of the highest emissions. The E.U.T was then transferred to the open site, and placed on a remote-controlled turntable. The E.U.T was placed on a non-metallic table, 0.8 meters above the ground. The configuration tested is shown in *Figure 1*.
The signals from the list of the highest emissions were verified and the list was updated accordingly.
The levels of the emissions within the frequency ranges of the restricted bands (Section 15.205 of FCC Part 15) were compared to the limits of the table in Section 15.209 (a), General Requirements.

The emissions were measured using a computerized EMI receiver complying to CISPR 16 requirements. The specification limits and applicable correction factors are loaded to the receiver via a 3.5" floppy disk.

In the frequency range 2.9 – 4.5 GHz, a spectrum analyzer including a low noise amplifier was used. The test distance was 3 meters. During peak measurements, the I.F. bandwidth was 1 MHz, and video bandwidth 3 MHz. During average measurements, the I.F. bandwidth was 1 MHz and video bandwidth was 100 Hz.

The readings were maximized by adjusting the antenna height between 1-4 meters, the turntable azimuth between 0-360°, and the antenna polarization. Verification of the E.U.T emissions was based on the following methods: turning the E.U.T on and off; using a frequency span less than 10 MHz; observation of the signal level during turntable rotation. (Background noise is not affected by the rotation of the E.U.T.)

The emissions were measured at a distance of 3 meters.

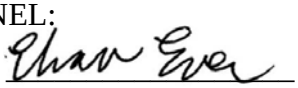
8.3 Results

JUDGEMENT: Passed by 23.9 dB

The EUT met the requirements of the F.C.C. Part 15, Subpart C specification.

The margin between the emission level and the specification limit was 23.9 dB in the worst case at the frequency of 1301.83 MHz, vertical polarization.

TEST PERSONNEL:

Tester Signature:  Date: 02/09/10

Typed/Printed Name: E. Ever

Radiated Emission

E.U.T Description Personal Watcher
Type PW-830-2
Serial Number: Not Designated

Specification: FCC Part 15, Subpart C

Antenna Polarization: Horizontal/Vertical Frequency range: 30 MHz to 4.5 GHz
Antenna: 3 meters distance Detector: Peak

Freq. (MHz)	Pol. V/H	Peak Reading (dBµV/m)	Average Factor (dB)	Average Result (dBµV/m)	Average Specification (dBµV/m)	Margin (dB)
1301.83	H	54.2	-24.1	30.1	54.0	-23.9
1301.83	V	51.3	-24.1	43.7	54.0	-27.2

Figure 11. Radiated Emission. Antenna Polarization: VERTICAL, HORIZONTAL

Notes:

1. Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.
2. "Peak Reading." (dBµV/m) included the "Correction Factors".
3. "Correction Factors" (dB) = Test Antenna Correction Factor (dB) + Cable Loss.
4. "Average Factor = 20 log [(burst duration/100msec]= 20 log [(6.25/100)]= -24.1dB
5. "Average Result" (dBµV/m) = Peak Reading (dBµV/m) + Average Factor (dB)

8.4 Test Instrumentation Used, Radiated Measurements

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	HP	85422E	3906A00276	November 10, 2009	1 year
RF Section	HP	85420E	3705A00248	November 10, 2009	1 year
Low Noise Amplifier	DBS MICROWAVE	LNA-DBS-0411N313	013	January 13, 2010	1 Year
Spectrum Analyzer	HP	8592L	3826A01204	March 14, 2010	1 Year
Antenna Bioconical	ARA	BCD 235/B	1041	August 03, 2009	1 year
Antenna Log Periodic	ARA	LPD-2010/A	1038	March 24, 2010	1 year
Antenna-Log Periodic	A.H.System	SAS-200/511	253	January 29, 2009	2 year
Antenna Mast	ARA	AAM-4A	1001	N/A	N/A
Turntable	ARA	ART-1001/4	1001	N/A	N/A
Mast & Table Controller	ARA	ACU-2/5	1001	N/A	N/A
Printer	HP	LaserJet 2200	JPKGC19982	N/A	N/A

9. Bandwidth

9.1 Test Specification

FCC Part 15, Subpart C: Section 15.231(c)

9.2 Test procedure

The transmitter unit operated with normal modulation. The spectrum analyzer was set to 30 kHz resolution BW and center frequency of the transmitter fundamental. The spectrum bandwidth of the transmitter unit was measured and recorded. The BW was measured at 20 dBc points.

The EUT was set up as shown in *Figure 1*, and its proper operation was checked. The transmitter occupied bandwidth was measured with the EMI receiver as frequency delta between reference points on the modulation envelope.

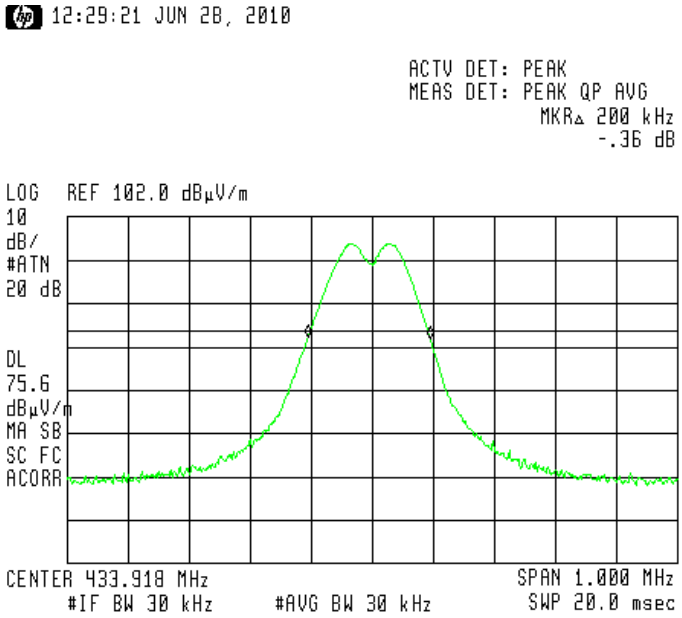


Figure 12 Bandwidth Reading (20 dBc)

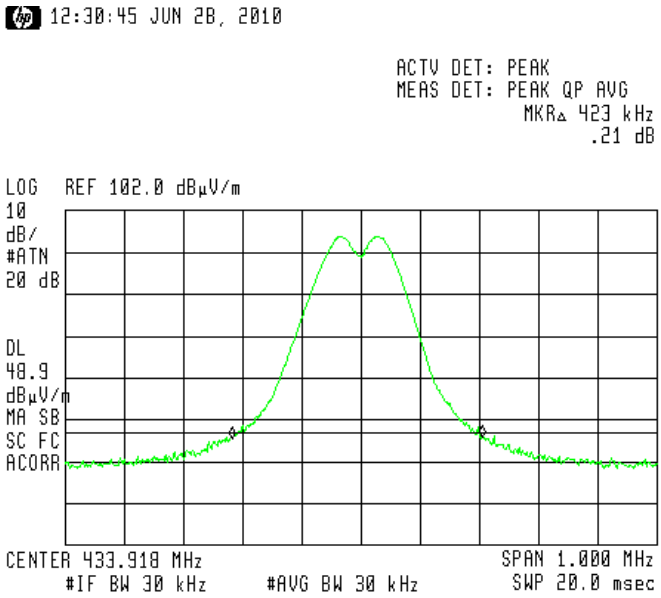


Figure 13 Bandwidth at 99% (Not required for the FCC)

9.3 Results

E.U.T Description: Personal Watcher
Model: PW-830-2
Serial Number: Not Designated
Specification: F.C.C. Part 15, Subpart C: (15.231(c))

20 dBc Bandwidth Reading (kHz)	Specification (1) (kHz)	Margin (kHz)
200	1084	884

Figure 14 Bandwidth

JUDGEMENT: Passed by 884 kHz

TEST PERSONNEL:
Tester Signature: Date: 02/09/10
Typed/Printed Name: E. Ever

(1) 0.25% of the E.U.T. fundamental frequency, Section 15.231(c).

9.4 Test Equipment Used.

Bandwidth

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	HP	85422E	3906A00276	November 10, 2009	1 year
RF Section	HP	85420E	3705A00248	November 10, 2009	1 year
Antenna Log Periodic	ARA	LPD-2010/A	1038	March 24, 2010	1 year
Antenna Mast	ARA	AAM-4A	1001	N/A	N/A
Turntable	ARA	ART-1001/4	1001	N/A	N/A
Mast & Table Controller	ARA	ACU-2/5	1001	N/A	N/A
Printer	HP	LaserJet 2200	JPKGC19982	N/A	N/A

Figure 15 Test Equipment Used

10. 11. APPENDIX A - CORRECTION FACTORS

10.1 Correction factors for CABLE

from EMI receiver to test antenna at 3 meter range.

FREQUENCY (MHz)	CORRECTION FACTOR (dB)
10.0	0.3
20.0	0.6
30.0	0.8
40.0	0.9
50.0	1.1
60.0	1.2
70.0	1.3
80.0	1.4
90.0	1.6
100.0	1.7
150.0	2.0
200.0	2.3
250.0	2.7
300.0	3.1
350.0	3.4
400.0	3.7
450.0	4.0
500.0	4.3
600.0	4.7
700.0	5.3
800.0	5.9
900.0	6.3
1000.0	6.7

FREQUENCY (MHz)	CORRECTION FACTOR (dB)
1200.0	7.3
1400.0	7.8
1600.0	8.4
1800.0	9.1
2000.0	9.9
2300.0	11.2
2600.0	12.2
2900.0	13.0

NOTES:

1. The cable type is RG-214.

2. The overall length of the cable is 27 meters.

3. The above data is located in file 27MO3MO.CBL on the disk marked "Radiated Emission Tests EMI Receiver".

10.2 Correction factors for CABLE

from EMI receiver to test antenna at 3 meter range.

FREQUENCY (GHz)	CORRECTION FACTOR (dB)
1.0	1.2
2.0	1.6
3.0	2.0
4.0	2.4
5.0	3.0
6.0	3.4
7.0	3.8
8.0	4.2
9.0	4.6
10.0	5.0
12.0	5.8

NOTES:

1. The cable type is RG-8.

2. The overall length of the cable is 10 meters.

10.3 Correction factors for CABLE

from spectrum analyzer to test antenna above 2.9 GHz

FREQUENCY (GHz)	CORRECTION FACTOR (dB)	FREQUENCY (GHz)	CORRECTION FACTOR (dB)
1.0	1.9	14.0	9.1
2.0	2.7	15.0	9.5
3.0	3.5	16.0	9.9
4.0	4.2	17.0	10.2
5.0	4.9	18.0	10.4
6.0	5.5	19.0	10.7
7.0	6.0	20.0	10.9
8.0	6.5	21.0	11.2
9.0	7.0	22.0	11.6
10.0	7.5	23.0	11.9
11.0	7.9	24.0	12.3
12.0	8.3	25.0	12.6
13.0	8.7	26.0	13.0

NOTES:

1. The cable type is SUCOFLEX 104 E manufactured by SUHNER.

2. The cable is used for measurements above 2.9 GHz.

3. The overall length of the cable is 10 meters.

10.4 Correction factors for LOG PERIODIC ANTENNA

Type LPD 2010/A
at 3 and 10 meter ranges.

Distance of 3 meters

FREQUENCY (MHz)	AFE (dB/m)
200.0	9.1
250.0	10.2
300.0	12.5
400.0	15.4
500.0	16.1
600.0	19.2
700.0	19.4
800.0	19.9
900.0	21.2
1000.0	23.5

Distance of 10 meters

FREQUENCY (MHz)	AFE (dB/m)
200.0	9.0
250.0	10.1
300.0	11.8
400.0	15.3
500.0	15.6
600.0	18.7
700.0	19.1
800.0	20.2
900.0	21.1
1000.0	23.2

NOTES:

1. *Antenna serial number is 1038.*
2. *The above lists are located in file number 38M3O.ANT for a 3 meter range, and file number 38M100.ANT for a 10 meter range.*
3. *The files mentioned above are located on the disk marked "Radiated Emission Test EMI Receiver".*

10.5 Correction factors for LOG PERIODIC ANTENNA

Type SAS-200/511
at 3 meter range.

FREQUENCY (GHz)	ANTENNA FACTOR (dB)
1.0	24.9
1.5	27.8
2.0	29.9
2.5	31.2
3.0	32.8
3.5	33.6
4.0	34.3
4.5	35.2
5.0	36.2
5.5	36.7
6.0	37.2
6.5	38.1

FREQUENCY (GHz)	ANTENNA FACTOR (dB)
7.0	38.6
7.5	39.2
8.0	39.9
8.5	40.4
9.0	40.8
9.5	41.1
10.0	41.7
10.5	42.4
11.0	42.5
11.5	43.1
12.0	43.4
12.5	44.4
13.0	44.6

NOTES:

1. *Antenna serial number is 253.*
2. *The above lists are located in file number SAS3M0.ANT for a 3 meter range.*
3. *The files mentioned above are located on the disk marked "Antenna Factors".*

10.6 Correction factors for BICONICAL ANTENNA

Type BCD-235/B, at 3 meter range

FREQUENCY (MHz)	AFE (dB/m)
20.0	19.4
30.0	14.8
40.0	11.9
50.0	10.2
60.0	9.1
70.0	8.5
80.0	8.9
90.0	9.6
100.0	10.3
110.0	11.0
120.0	11.5
130.0	11.7
140.0	12.1
150.0	12.6
160.0	12.8
170.0	13.0
180.0	13.5
190.0	14.0
200.0	14.8
210.0	15.3
220.0	15.8
230.0	16.2
240.0	16.6
250.0	17.6
260.0	18.2
270.0	18.4
280.0	18.7
290.0	19.2
300.0	19.9
310	20.7
320	21.9
330	23.4
340	25.1
350	27.0

NOTES:

1. Antenna serial number is 1041.

2. The above list is located in file 19BC10M1.ANT on the disk marked "Radiated Emissions Tests EMI Receiver".

10.7 Correction factors for ACTIVE LOOP ANTENNA

Model 6502
S/N 9506-2950

FREQUENCY	Magnetic Antenna Factor	Electric Antenna Factor
(MHz)	(dB)	(dB)
.009	-35.1	16.4
.010	-35.7	15.8
.020	-38.5	13.0
.050	-39.6	11.9
.075	-39.8	11.8
.100	-40.0	11.6
.150	-40.0	11.5
.250	-40.0	11.6
.500	-40.0	11.5
.750	-40.1	11.5
1.000	-39.9	11.7
2.000	-39.5	12.0
3.000	-39.4	12.1
4.000	-39.7	11.9
5.000	-39.7	11.8
10.000	40.2	11.3
15.000	-40.7	10.8
20.000	-40.5	11.0
25.000	-41.3	10.2
30.000	42.3	9.2