



COMPLIANCE WORLDWIDE INC. TEST REPORT 143-08R2

In Accordance with the Requirements of

Industry Canada RSS 210, Issue 7
Federal Communications Commission CFR Title 47 Part 15.249, Subpart C
Low Power License-Exempt Radio Communication Devices
Intentional Radiators

Issued to

Philips Medical Systems 3000 Minuteman Drive Andover, MA 01810 Tel: (978) 659-2800

for

Model M3815B Home Blood Pressure Monitor

FCC ID: PQCM3815B IC: 3549B-M3815B

Report Issued on July 17, 2008

Brian F. Breault

Reviewed By

Larry K. Stillings

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1. Scope

This test report certifies that the Philips Medical Systems Model M3815B Home Blood Pressure Monitor, as tested, meets the FCC Part 15, Subpart C and Industry Canada RSS 210, Issue 7 requirements. The scope of this test report is limited to the test sample provided by the client, only in as much as that sample represents other production units. If any significant changes are made to the unit, the changes shall be evaluated and a retest may be required. Original report issued 4/11/08. R1 report issued 7/11/08 includes Industry Canada information. R2 report includes Radiated Harmonics Peak data.

2. Product Details

2.1. Manufacturer: Philips Medical Systems

2.2. Model Number: M3815B **2.3. Serial Number**: 5030802944

2.4. Description: The M3815B is the next generation of Blood Pressure Unit for

Patient Telemedicine System (aka eCare). The M3815B is an OEM unit from AND technologies, model number (UA-787) which will be Philips branded. The new Blood Pressure Unit is designed to correct previous design issues inherent with the AND's UA-767 (Philips branded as M3815A). The M3815B is designed to present a cost reduction solution for PTS. The M3815B will now allow for the use of small cuffs to accommodate arm sizes (16-24 cm.) as well as medium and large duffs which were previously utilized on the M3815A. Additionally, the M3815B will be able to provide accurate blood pressure and pulse rate measurements even in the event of irregular heart intervals (mild arrhythmia). Lastly, the M3815B will utilize an electronic "bleed rate" thereby eliminating some variation in the rate of air released from the cuffs during blood pressure

measurements while attached to the M3815B.

2.5. Power Source: 6 Volts DC (4 x AA batteries)

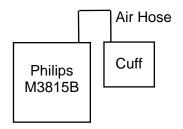
2.6. EMC Modifications: None

3. Product Configuration

3.1. Operational Characteristics & Software

For all measurements, the test sample Philips Medical Systems Model M3815B was forced into a full-time transmit mode.

3.2. Block Diagram



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4. Measurements Parameters

4.1. Measurement Equipment Used to Perform Test

| Device | Manufacturer | Model No. | Serial No. | Cal Due |
|-------------------|-----------------|-----------|------------|-----------|
| Spectrum Analyzer | Hewlett Packard | 8593E | 3829A03887 | 3/07/2009 |
| EMI Receiver | Hewlett Packard | 8546A | 3650A00360 | 3/14/2009 |
| Bilog Antenna | Com-Power | AC220 | 25509 | 8/3/2008 |
| Horn Antenna | Electro-Metrics | EM-6961 | 6337 | 8/24/2008 |

4.2. Measurement & Equipment Setup

Test Date: 3/19/2008

Test Engineer: Larry Stillings

Normal Site Temperature (15 - 35°C): 21.6

Relative Humidity (20 -75%RH): 35

Frequency Range: 30 MHz to 9.6 GHz

Measurement Distance: 3 Meters

EMI Receiver IF Bandwidth:

100 kHz - 30 MHz to 1 GHz

1 MHz - Above 1 GHz

I WINZ - Above I GHZ

EMI Receiver Avg Bandwidth: 300 kHz - 30 MHz to 1 GHz 3 MHz - Above 1 GHz

3 WILL ADOVE I GITZ

Detector Function: Peak, Quasi-Peak & Average

4.3. Measurement Procedure

Test measurements were made in accordance FCC Part 15.249, IC RSS-210 Annex II: Operation within the bands 902 - 928 MHz, 2400 - 2483.5 MHz, 5725 - 5875 MHz, and 24.0 - 24.25 GHz.

The test methods used to generate the data is this test report is in accordance with ANSI C63.4: 2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

In accordance with ANSI C63.4-2003, section 13.1.4.1, c), the device under test was rotated through three orthogonal axes to determine which attitude produced the highest emission relative to the limit. The attitude that produced the highest emission relative to the limit was used for all radiated emission measurements.





5. Measurement Summary

| Test Requirement | FCC Rule Requirement | Test Report Section | Result | Comment |
|--|----------------------------|---------------------------|-----------|-----------------------------------|
| Antenna Requirement | 15.203 | N.A | Compliant | Unit has an internal PCB antenna. |
| Radiated Field Strength of Fundamental | 15.249 (a) | 6.1 | Compliant | |
| Radiated Field Strength of Harmonics | 15.249 (a) | 6.2 | Compliant | |
| Occupied Bandwidth | IC RSS-GEN | 6.3 | Compliant | |
| 99% Bandwidth | IC RSS-GEN | 6.4 | Compliant | |
| Band Edge Measurements | 15.249 (d), 15.209 | 6.5 | Compliant | |
| Spurious Radiated Emissions | 15.249 (d), 15.209 | 6.6 | Compliant | No measurable spurious emissions. |





6. Measurement Data

6.1. Radiated Field Strength of Fundamental (15.249, Section (a)), IC RSS-210 A2.9

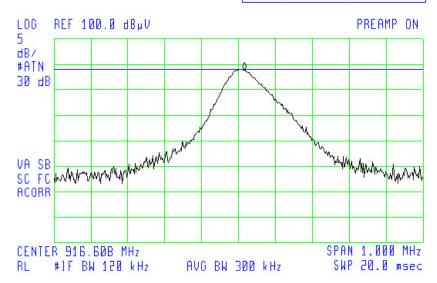
Requirement: The 3 meter field strength of the fundamental emissions from intentional radiators operated within the 902-928 MHz frequency bands shall comply with the following requirement: 50 millivolts/meter (94 dB μ V/m), quasi-peak mode measurement.

| Frequency (MHz) | Amplitude (dBμV/m) | | Q-Peak Limit | Margin (dB) | Ant Pol | Ant Ht | TT Pos | Result |
|--------------------|-----------------------|--------|-----------------|----------------|------------|-----------|-----------|--------|
| | Peak | Q-Peak | | | H/V | cm | Deg | P/F |
| 916.6 | 94.7 | 93.4 | 94.0 | -0.6 | Н | 110 | 338 | Passed |

6.1.1. Radiated Field Strength of Fundamental



FREQ 916.6 MHz PEAK 94.7 dB µV QP 93.4 dB µV AVC NOT SELECTED







6. Measurement Data (continued)

6.2. Radiated Field Strength of Harmonics (15.249, Section (a)), IC RSS-210 A2.9

Requirement: The 3 meter field strength of the harmonic emissions from intentional radiators operated within the 902-928 MHz frequency bands shall comply with the following: 500 microvolts/meter (54 dB μ V/m), average mode measurement. Peak field strength may not be greater than 20 dB above the average limit (74 dB μ V/m).

| Frequency (MHz) | Amplitude ¹ (dBµV Peak) | Peak Limit | Amplitude ¹ (dBµV Avg) | Average Limit | Margin (dB) | Ant Pol H/V | Ant Ht (cm) | TT Pos (Deg) | Result |
|---------------------|--|---------------|---|------------------|----------------|-------------|----------------|-----------------|--------|
| 1833.0 | 54.2 | 74 | 42.1 | 54 | -11.9 | V | 104 | 170 | Passed |
| 2749.8 ² | 51.9 | 74 | 37.5 | 54 | -16.5 | Noi | se Floor | | Passed |
| 3666.4 ² | 55.8 | 74 | 40.6 | 54 | -13.4 | Noi | se Floor | | Passed |
| 4583.0 ² | 57.3 | 74 | 44.7 | 54 | -9.3 | Noi | se Floor | | Passed |
| 5500.0 ² | 60.2 | 74 | 47.3 | 54 | -6.7 | Noi | se Floor | | Passed |
| 6416.0 | 64.1 | 74 | 51.3 | 54 | -2.7 | Noi | se Floor | | Passed |
| 7332.8 ² | 63.1 | 74 | 50.5 | 54 | -3.5 | Noi | se Floor | | Passed |
| 8249.4 ² | 63.2 | 74 | 48.4 | 54 | -5.6 | Noi | se Floor | | Passed |
| 9166.0 ² | 63.6 | 74 | 49.6 | 54 | -4.4 | Noi | se Floor | | Passed |

Value includes all correction factors.

Frequency falls within the restricted bands of operation. See FCC Part 15, Section 15.205 for additional information.

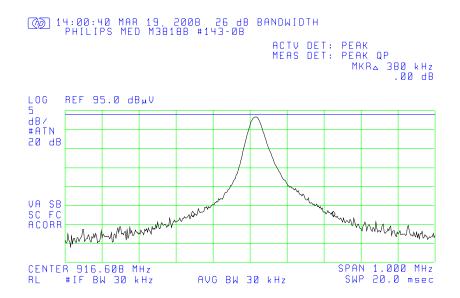




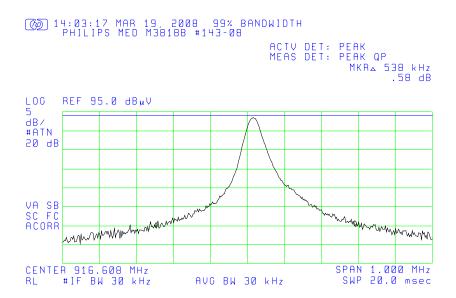
6. Measurement Data (continued)

6.3 Occupied (-26 dB) Bandwidth = 380 kHz

Requirement: The occupied bandwidth measurements on an intentional radiator shall be made in accordance with the requirements outlined in ANSI C63.4-2003. Section 13.1.7.



6.4. 99% Bandwidth = 538 kHz







6. Measurement Data (continued)

6.5. Band Edge Measurements

Requirement: Emissions radiated outside of the specified frequency band of 902

MHz to 928 MHz, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser

attenuation.

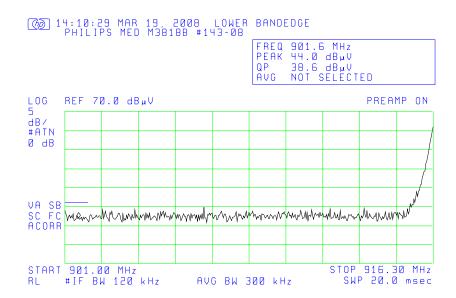
| Frequency (MHz) | Band Edge (dΒμV/m) | | Limit (dBµV/m) | Margin (dB) | Result |
|--------------------|-----------------------|------|-------------------|----------------|--------|
| | Freq MHz Q-Peak | | Q-Peak | Deg | P/F |
| 916.6 | 901.6 | 38.6 | 54 | -15.4 | Passed |
| 910.0 | 928.1 | 39.3 | 54 | -14.7 | Passed |



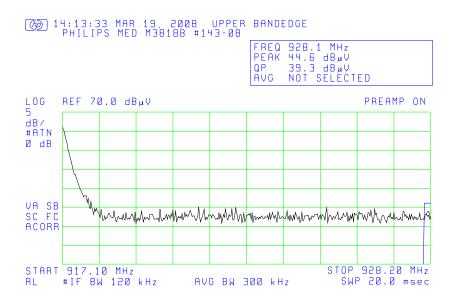


6. Measurement Data (continued)

- 6.5. Band Edge Measurements (continued)
 - 6.5.1. Measurement Results Lower Band Edge



6.5.2. Measurement Results - Upper Band Edge







6. Measurement Data (continued)

6.6. Spurious Radiated Emissions, 30 MHz to EUT 10th Harmonic (15.249, Section (d)), IC RSS-GEN

Requirement: Emissions radiated outside of the specified frequency bands, except for

harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209,

whichever is the lesser attenuation.

6.6.1. Regulatory Limit: FCC Part 209, Quasi-Peak & Average

| Frequency Range (MHz) | Distance (Meters) | Limit (dBµV/m) |
|--------------------------|----------------------|-------------------|
| 30 to 88 | 3 | 40.0 |
| 88 to 216 | 3 | 43.5 |
| 216 to 960 | 3 | 46.0 |
| Above 960 | 3 | 54.0 |

6.6.2. Measurement & Equipment Setup

Test Date: 3/28/2008
Test Engineer: Brian Breault

Site Temperature (°C): 21.0 Relative Humidity (%RH): 36

Frequency Range: 30 MHz to 1 GHz

EMI Receiver IF Bandwidth: 120 kHz EMI Receiver Avg Bandwidth: 300 kHz

Detector Functions:
Peak and Quasi-Peak
Frequency Range:
1 GHz to 10th Harmonic

EMI Receiver IF Bandwidth: 1 MHz
EMI Receiver Avg Bandwidth: 3 MHz

Detector Functions:

Antenna Height:

Measurement Distance:

Peak and Average
1 to 4 meters
3 Meters

6.6.3. Test Procedure

Test measurements were made in accordance with ANSI C63.4-2003, Standard Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronics Equipment in the Range of 9 kHz to 40 GHz.

6.6.4. Test Results

There were no measurable emissions except the emissions tabled in section 6.2.





7. Test Site Description

Compliance Worldwide is located at 357 Main Street in Sandown, New Hampshire. The test sites at Compliance Worldwide are used for conducted and radiated emissions testing in accordance with Federal Communications Commission (FCC) and Industry Canada standards. A description of the test sites is on file with the FCC (registration number 96392) and Industry Canada (file number IC 3023A-1).

The radiated emissions test site is a 3 and 10 meter enclosed open area test site (OATS). Personnel, support equipment and test equipment are located in the basement beneath the OATS ground plane.

The conducted emissions site is part of a 16' x 20' x 12' ferrite tile chamber and uses one of the walls for the vertical ground plane required by EN 55022.

Both sites are designed to test products or systems 1.5 meter W x 1.5 meter L x 2.0 meter H, floor standing or table top.