FCC ID PER PART 15.231
EMI MEASUREMENT AND TEST REPORT

For

Global DME, Inc.

619 Martin Ave. #6,
Rohnert Park, CA 94928

FCC ID: PHNTXW01

March 6, 2001

This Report Concerns:	**Equipment Type:**
☒ Original Report	Wireless Nurse Call Emergency Response

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Test Date: February 2, 2001

Reviewed By:

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1 - GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

The *Global DME, Inc.'s* model *TXW01* or the "EUT" as referred to in this report is a 314.97 MHz periodic wireless nurse call which measures 1.5" L x 2" W x 0.5" H.

1.2 Objective

This certification report is prepared on behalf of *Global DME, Inc.* in accordance with Part 2, Subpart J, and Part 15, Subparts A, B, and C of the Federal Communication Commissions rules.

The objective of the manufacturer is to demonstrate compliance with FCC rules, Part 15, sec 231 for bandwidth requirements.

1.3 Related Submittal(s)/Grant(s)

No Related Submittals

1.4 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4 –1992, 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. All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory, Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

1.5 Test Facility

The Open Area Test site used by Bay Area Compliance Laboratory Corporation to collect radiated and conducted emission measurement data is located in the back parking lot of the building at 230 Commercial Street, Suite 2, Sunnyvale, California, USA.

Test site at Bay Area Compliance Laboratory Corporation has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports has been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997 and Article 8 of the VCCI regulations on December 25, 1997. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-1992.

The Federal Communications Commission and Voluntary Control Council for Interference has the reports on file and is listed under FCC file 31040/SIT 1300F2 and VCCI Registration No.: C-674 and R-657. The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratory Corporation is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program

(NVLAP). The scope of the accreditation covers the FCC Method - 47 CFR Part 15 - Digital Devices, IEC/CISPR 22: 1993, and AS/NZS 3548: Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment test methods under NVLAP Lab Code 200167-0.

1.6 Test Equipment List

Manufacturer	Description	Model	Serial Number	Cal. Due Date
HP	Spectrum Analyzer	8568B	2610A02165	12/6/01
HP	Spectrum Analyzer	8593B	2919A00242	12/20/01
HP	Amplifier	8349B	2644A02662	12/20/01
HP	Quasi-Peak Adapter	85650A	917059	12/6/01
HP	Amplifier	8447E	1937A01046	12/6/01
A.H. System	Horn Antenna	SAS0200/571	261	12/27/01
Com-Power	Log Periodic Antenna	AL-100	16005	11/2/01
Com-Power	Biconical Antenna	AB-100	14012	11/2/01
Solar Electronics	LISN	8012-50-R-24-BNC	968447	12/28/01
Com-Power	LISN	LI-200	12208	12/20/01
Com-Power	LISN	LI-200	12005	12/20/01
BACL	Data Entry Software	DES1	0001	12/20/01

1.7 Equipment Under Test (EUT)

Manufacturer	Description	Model	Serial Number	FCC ID
Global DME, Inc.	Wireless Nurse Call	TXW01	N/A	PHNTXW01

2 - SYSTEM TEST CONFIGURATION

2.1 Justification

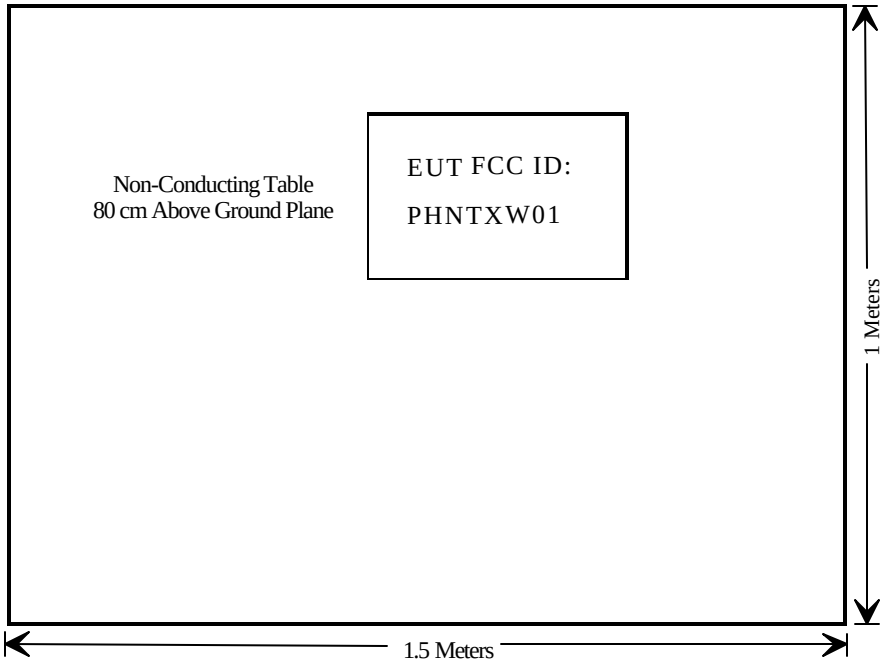
The EUT was configured for testing in a typical fashion (as normally used in a typical application).

The final qualification test was performed with the EUT operating at normal mode.

2.2 Block Diagram

Appendix A contains a copy of the EUT's block diagram as reference.

2.3 Test Setup Block Diagram



2.4 Equipment Modifications

No modification(s) was made by BACL Corp. to ensure the EUT to comply with the applicable limits.

3 - CONDUCTED EMISSIONS TEST DATA

Not applicable because of battery operation.

4 - RADIATED EMISSION DATA

4.1 EUT Setup

The radiated emission tests were performed in the open area 3-meter test site, using the setup accordance with the ANSI C63.4 - 1992. The specification used was the FCC Subpart C limits.

The spacing between the peripherals was 10 cm.

External I/O cables are draped over edge of test table or bundled when necessary.

4.2 Spectrum Analyzer Setup

According to FCC Rules, 47 CFR 15, the EUT was tested to 1000 MHz.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

Start Frequency	30 MHz
Stop Frequency	1000 MHz
Sweep Speed	Auto
IF Bandwidth	100 KHz
Video Bandwidth	1 MHz
Quasi-Peak Adapter Bandwidth	120 kHz
Quasi-Peak Adapter Mode	Normal
Resolution Bandwidth	1MHz

4.3 Test Procedure

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT is compliant with all installation combination.

All data was recorded in the peak detection mode. Quasi-peak readings performed only when an emission was found to be marginal (less than -4 dBµV), and are distinguished with a "**QP**" in the data table.

The EUT was operating at normal to represent worst case results during final qualification test. Therefore, this configuration was used for final test data recorded in the table(s) listed under section 4.7 of this report.

4.4 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dBµV means the emission is 7dBµV below the maximum limit for Class B. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – FCC Subpart C Limit

4.5 Summary of Test Results

According to the final data in section 4.6, the EUT complied with the FCC 15.231 standards and these test results are deemed satisfactory evidence of compliance with Regulations, and had the worst margin of:

-13.6 dBmV (Average) at **314.97 MHz** in the **Horizontal** polarization for Normal operating mode, **30 to 1000MHz, 3 meters.**

4.6 Radiated Emissions Test Result Data

4.6.1 Final Test Data for Normal Operating Mode, 30 to 1000 MHz, 3 meters.

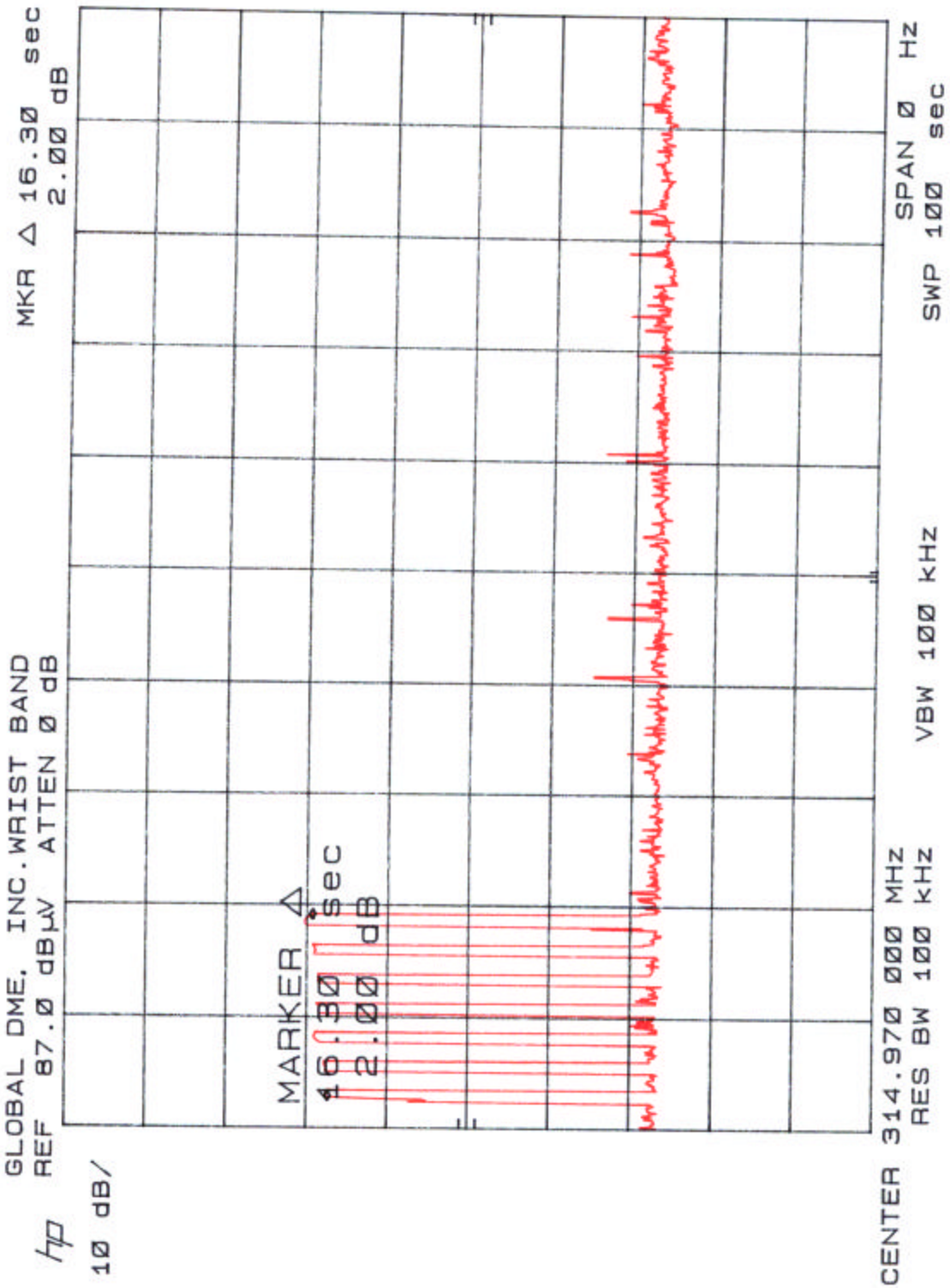
INDICATED		TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC 15.231	
Freqency MHz	Ampl. dBmV/m	Angle Degree	Height Meter	Polar H/ V	Antenna dBmV/m	Cable dB	Amp. dB	Corr. Ampl. dBmV/m	Limit dBmV/m	Margin dB
314.97	65.2(A)	0	1.0	H	15.9	3.7	22.4	62.4	76	-13.6
314.97	90.8(A)	30	1.2	V	15.9	3.7	22.4	58.0	76	-18.0
629.96	32.4	30	1.0	V	20.2	3.1	21.4	34.3	56	-21.7
629.96	29.5	0	1.2	H	20.2	3.1	21.4	31.4	56	-24.6
944.66	22.5	90	1.2	H	20.4	3.7	22.7	27.9	56	-28.1
314.97	70(P)	0	1.0	H	15.9	3.7	22.4	62.4	96	-33.6
314.97	69(P)	30	1.2	V	15.9	3.7	22.4	58.0	96	-38.0

Note: ‘A’ stands for “average” and ‘P’ stands for “Quasi Peak”.

5 –FCC 15.231 (a) Test Result

FCC Rules Part 15 Sec 15.231(a) (4), intentional radiators which are employed for radio control purposes during emergencies involving fire, security, and safety of life, when activated to signal an alarm, may operate during the pendency of the alarm condition.

The plot(s) is presented hereinafter as reference.


GLOBAL DME, INC.WRIST BAND
REF 87.Ø dBµV ATTEN Ø dB
10 dB/
MKR Δ 16.30 sec
2.ØØ dB
MARKER Δ
16.30 sec
2.ØØ dB
CENTER 314.97Ø ØØØ MHz
RES BW 1ØØ kHz
VBW 1ØØ kHz
SPAN Ø Hz
SWP 1ØØ sec

6 – Measurement of Bandwidth

6.1 Test Objective/Requirement

FCC 15 Rules Section 15.231(c), the bandwidth of the emission shall be no wider than 0.25% of the enter frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20dB down from the modulated carrier.

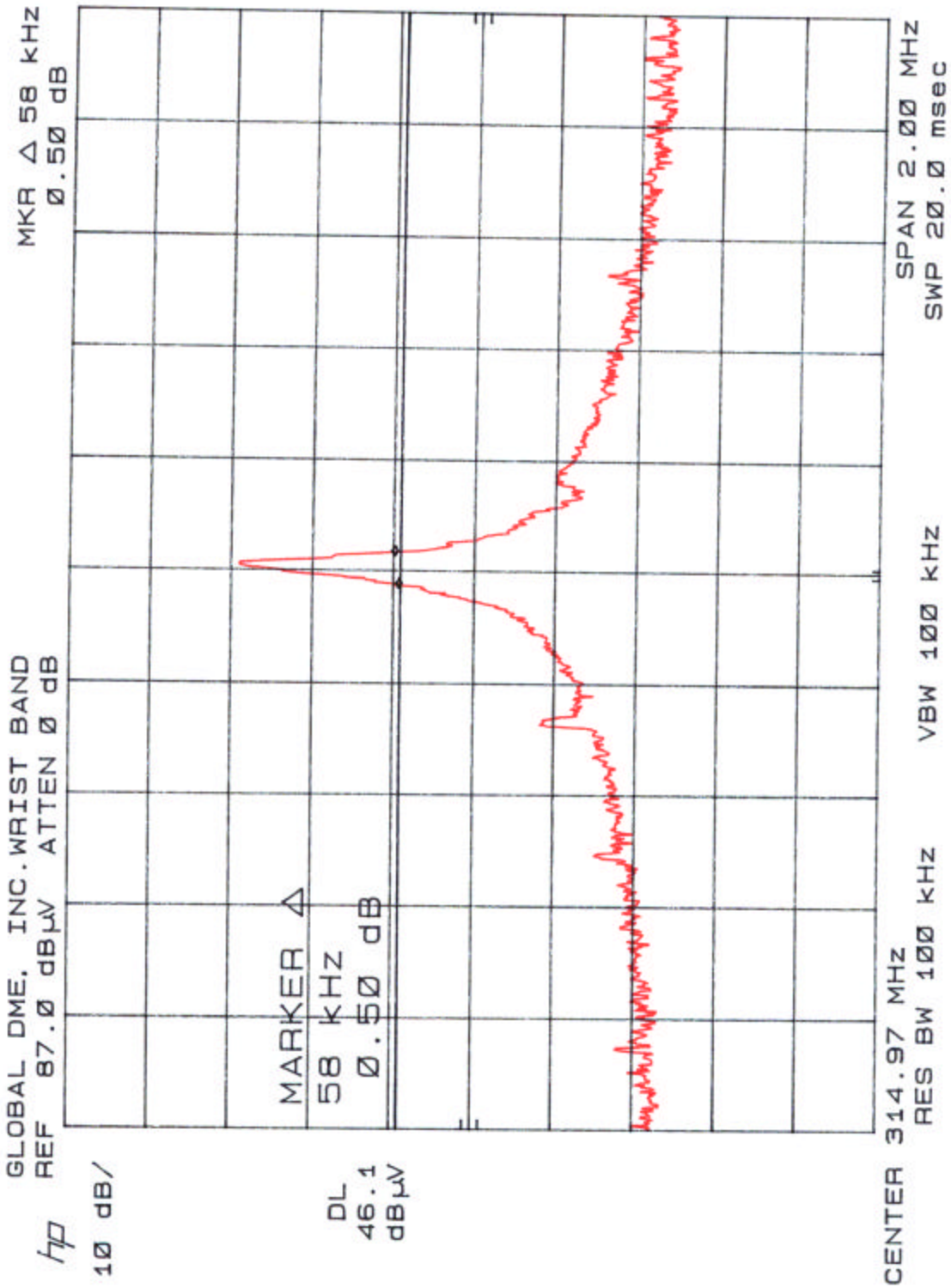
6.2 Test Summary

Center Frequency: ----------70 MHz < 314.97 MHz < 900 MHz
Bandwidth of the Emission: ----------58 KHz < 0.25% x 314.97 MHz

Test Result: Passed.

6.3 Plot(s) of Bandwidth of the Emission

The plot(s) of bandwidth of the emission is presented hereinafter as reference.


GLOBAL DME, INC.WRIST BAND
REF 87.0 dBµV ATTEN 0 dB
10 dB/
MKR Δ 58 kHz
0.50 dB
MARKER Δ
58 kHz
0.50 dB
DL
46.1
dBµV
CENTER 314.97 MHz
RES BW 100 kHz
VBW 100 kHz
SPAN 2.00 MHz
SWP 20.0 msec

7 – Battery Requirement

The EUT test was performed using a new battery according to FCC Rules, Sec 15.231 (d).

Appendix A – AGENCY AUTHORIZATION LETTER