



166 South Carter, Genoa City, WI 53128

Company: Dentsply Professional  
Model Tested: 761248  
Report Number: 16690  
Project Number: 4350

## Code of Federal Regulations 47 Part 15 – Radio Frequency Devices

### Subpart C – Intentional Radiators

#### Section 15.249

Operation within the bands 902 - 928 MHz,  
2400 – 2483.5 MHz, 5725 – 5875 MHz,  
and 24.0 – 24.5 GHz

THE FOLLOWING MEETS THE ABOVE TEST SPECIFICATION

Formal Name: MIDWEST ® RDH Freedom™ Cordless Prophy System  
Foot Pedal

Kind of Equipment: Transceiver

Frequency Range: 2405 - 2480 MHz

Test Configuration: Battery operated or AC Mains connected transceiver tested for intentional  
radiated emissions tabletop.

Model Number(s): 761248

Model(s) Tested: 761248

Serial Number(s): 7334-POD-1-FS-0002

Date of Tests: December 14 - 21, 2010

Test Conducted For: Dentsply Professional Division  
1301 Smile Way  
York, PA 17404, USA

**NOTICE:** "This test report relates only to the items tested and must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government". Please see the "Description of Test Sample" page listed inside of this report.

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## SIGNATURE PAGE

Report By:

A handwritten signature in black ink that reads 'Adam D. Alger'.

Adam Alger  
Test Engineer

Reviewed By:

A handwritten signature in black ink that reads 'William Stumpf'.

William Stumpf  
OATS Manager

Approved By:

A handwritten signature in black ink that reads 'Brian J. Mattson'.

Brian Mattson  
General Manager



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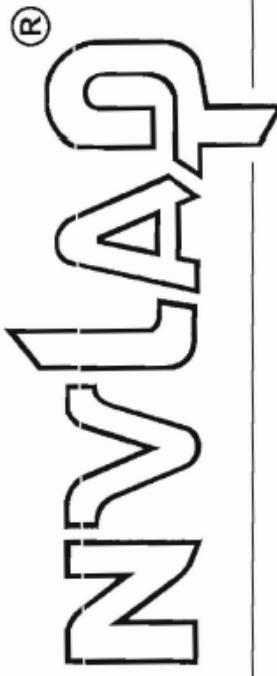
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United States Department of Commerce  
National Institute of Standards and Technology



## Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 100276-0

D.L.S. Electronic Systems, Inc.  
Wheeling, IL

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,  
listed on the Scope of Accreditation, for:

### ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.*

*This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO/ILAC-IAF Communiqué dated January 2009).*



2010-10-01 through 2011-09-30  
Effective dates

*Sally J. Bruce*  
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-26)



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## 1.0 Summary of Test Report

It was determined that the Dentsply Professional Division MIDWEST® RDH Freedom™ Cordless Prophy System Foot Pedal, Model 761248, complies with the requirements of CFR 47 Part 15 Subpart C Section 15.249.

### Subpart C Section 15.249 Applicable Technical Requirements Tested:

| Section                  | Description  | Procedure                          | Note | Compliant? |
|--------------------------|--|------------------------------------|------|------------|
| 15.215(c)                | 20 dB Emission Bandwidth                             | ANSI C63.4-2009 & ANSI C63.10-2009 | 1,2  | Yes        |
| 15.205                   | Band Edge Measurement Near a Restricted Band         | ANSI C63.4-2009 & ANSI C63.10-2009 | 1,2  | Yes        |
| 15.35(c)                 | Duty Cycle Correction for Pulsed operation           | ANSI C63.4-2009 & ANSI C63.10-2009 | 1,2  | Yes        |
| 15.249 & 15.205 / 15.209 | Field Strength of Emissions Fundamental and Spurious | ANSI C63.4-2009 & ANSI C63.10-2009 | 1,2  | Yes        |
| 15.207                   | AC Line Conducted Emissions                          | ANSI C63.4-2009 & ANSI C63.10-2009 | 3    | Yes        |

Note 1: Tested in 3 orthogonal planes.

Note 2: Radiated emission measurement.

Note 3: Supply Voltage 120 VAC 60Hz

## 2.0 Introduction

On December 14 - 21, 2010 the MIDWEST® RDH Freedom™ Cordless Prophy System Foot Pedal, Model 761248, as provided from Dentsply Professional Division was tested to the requirements of CFR 47 Part 15 Subpart C Section 15.249. To meet these requirements, the procedures contained within this report were performed by personnel of D.L.S Electronic Systems, Inc.

## 3.0 Test Facilities

D.L.S. Electronic Systems, Inc. is a full service EMC/Safety Testing Laboratory accredited to ISO 17025. NVLAP Certificate and Scope can be viewed at <http://www.dlsemc.com/certificate>. Our facilities are registered with the FCC, Industry Canada, and VCCI.

### Wisconsin Test Facility:

D.L.S. Electronic Systems, Inc.  
166 S. Carter Street  
Genoa City, Wisconsin 53128

### Wheeling Test Facility:

D.L.S. Electronic Systems, Inc.  
1250 Peterson Drive  
Wheeling, IL 60090



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#### 4.0 Description of Test Sample

##### Description:

The RDH Freedom wireless foot pedal, along with the RDH Freedom cordless prophylaxis handpiece, is used with RHD Freedom disposable prophylaxis angles to clean and polish teeth. When the user presses the foot pedal, the handpiece will rotate at a speed that is dependent of the amount of travel while pressing the foot pedal. When the foot pedal is released, the handpiece must stop.

The handpiece will display the charge status of its rechargeable battery with one LED, which can change from green to yellow to orange. It will also display the battery status of the foot pedal with another LED. A third LED displays the detection of any anomaly in the system. The foot pedal has a rechargeable Lithium-Ion battery, which charges up with an external DC power supply plugged directly into the foot pedal.

##### Type of Equipment / Frequency Range:

Foot Pedal / 2405 - 2480 MHz

##### Physical Dimensions of Equipment Under Test:

Length: 129 mm x Width: 129 mm x Height: 55 mm

##### Power Source:

90-260 VAC 50-60Hz Switching Power Supply (SL Power)  
3.7 VDC Rechargeable Lithium-Ion battery (not user serviceable)

##### Internal Frequencies:

16 MHz, 1600 kHz (switching power supply)

##### Transmit / Receive Frequencies Used For Test Purpose:

2405, 2445, 2480 MHz

##### Type of Modulation(s) / Antenna Type:

O-QPSK / Integral trace antenna

##### Description of Circuit Board(s) / Part Number:

|                                 |                |
|---------------------------------|----------------|
| Foot Pedal PCB assembly         | 763831 Rev 0.1 |
| Battery protection PCB assembly | 761267 Rev 4.0 |



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## 5.0 Test Equipment

A list of the equipment used can be found in the table below. All primary equipment was calibrated against known reference standards with a verified traceable path to NIST.

### D.L.S. Wisconsin – OATS 2 / G1 / Screen room

| Description                            | Manufacturer    | Model Number             | Serial Number | Frequency Range  | Cal Dates | Cal Due Dates |
|--|-----------------|--------------------------|---------------|------------------|-----------|---------------|
| <b>G1 Emissions 30-1000 MHz</b>        |                 |                          |               |                  |           |               |
| Receiver                               | Rohde & Schwarz | ESI 40                   | 837808/005    | 20 Hz – 40 GHz   | 7/10      | 7/11          |
| Preamplifier                           | Rohde & Schwarz | TS-PR10                  | 032001/003    | 9 kHz – 1 GHz    | 1/10      | 1/11          |
| Antenna                                | EMCO            | 3104C                    | 9810-4849     | 20 MHz – 200 MHz | 2/10      | 2/12          |
| Antenna                                | EMCO            | 3146                     | 1604          | 200 MHz – 1 GHz  | 8/10      | 8/12          |
| <b>Screen room - AC Line Conducted</b> |                 |                          |               |                  |           |               |
| LISN                                   | Solar           | 9252-50-R-24-BNC         | 961019        | 9 kHz – 30 MHz   | 7/10      | 7/11          |
| Filter- High-Pass                      | SOLAR           | 7930-120                 | 090702        | 120 kHz – 30 MHz | 1/10      | 1/11          |
| Limiter                                | Electro-Metrics | EM-7600                  | 706           | 9 kHz – 30 MHz   | 1/10      | 1/11          |
| <b>Site 2 Emissions – 1-26 GHz</b>     |                 |                          |               |                  |           |               |
| Receiver                               | Rohde & Schwarz | ESI 26                   | 837491/010    | 20 Hz – 26 GHz   | 5/10      | 5/11          |
| Filter- High-Pass                      | Q-Microwave     | 100462                   | 2             | 4.2GHz-18GHz     | 5/10      | 5/11          |
| Preamp                                 | Ciao            | CA118-4010               | 101           | 1GHz-18GHz       | 1/10      | 1/11          |
| Horn Antenna                           | EMCO            | 3115                     | 9903-5731     | 1-18GHz          | 6/09      | 6/11          |
| Preamp                                 | Miteq           | AMF-8B-180265-40-10P-H/S | 438727        | 18GHz-26GHz      | 8/10      | 8/11          |
| Horn Antenna                           | AH Systems      | SAS-574                  | 222           | 18 – 40GHz       | 5/10      | 4/12          |



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## 6.0 Test Arrangements

### Emissions Measurement Arrangement:

All radiated emission measurements were performed at D.L.S. Electronic Systems, Inc. and set up according to ANSI C63.4-2009 and ANSI C63.10-2009, unless otherwise noted. Description of procedures and measurements can be found in Appendix B – Measurement Data. See Appendix A for additional photos of the test set up.

Unless otherwise noted, the bandwidth of the measuring receiver / analyzer used during testing is shown below.

| Frequency Range   | Bandwidth (-6 dB) |
|-------------------|-------------------|
| 10 to 150 kHz     | 200 Hz            |
| 150 kHz to 30 MHz | 9 kHz             |
| 30 MHz to 1 GHz   | 120 kHz           |
| Above 1 GHz       | 1 MHz             |

## 7.0 Test Conditions

### Test Conditions recorded during test:

#### Temperature and Humidity:

65°F at 25% RH

#### Battery / Supply Voltage:

3.7 VDC / 120 VAC 60Hz

## 8.0 Modifications Made To EUT For Compliance

None noted at time of test.



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## 9.0 Additional Descriptions

Hyper-terminal was used to send commands to the radio to put the radio in special test modes. The EUT was tested in continuous transmit mode and continuous receive mode. The EUT was tested while set to channels 0, 8, and 15 (low, mid and high).

The unit transmits and receives while connected to the AC adapter or under battery power. Both configurations were tested and worst case emissions were recorded.

## 10.0 Results

Measurements were performed in accordance with ANSI C63.4-2009 and ANSI C63.10-2009. Graphical and tabular data can be found in Appendix B at the end of this report.

## 11.0 Conclusion

The MIDWEST® RDH Freedom™ Cordless Prophy System Foot Pedal, Model 761248, as provided from Dentsply Professional Division tested on December 14 - 21, 2010 **meets** the requirements of CFR 47 Part 15 Subpart C Section 15.249.



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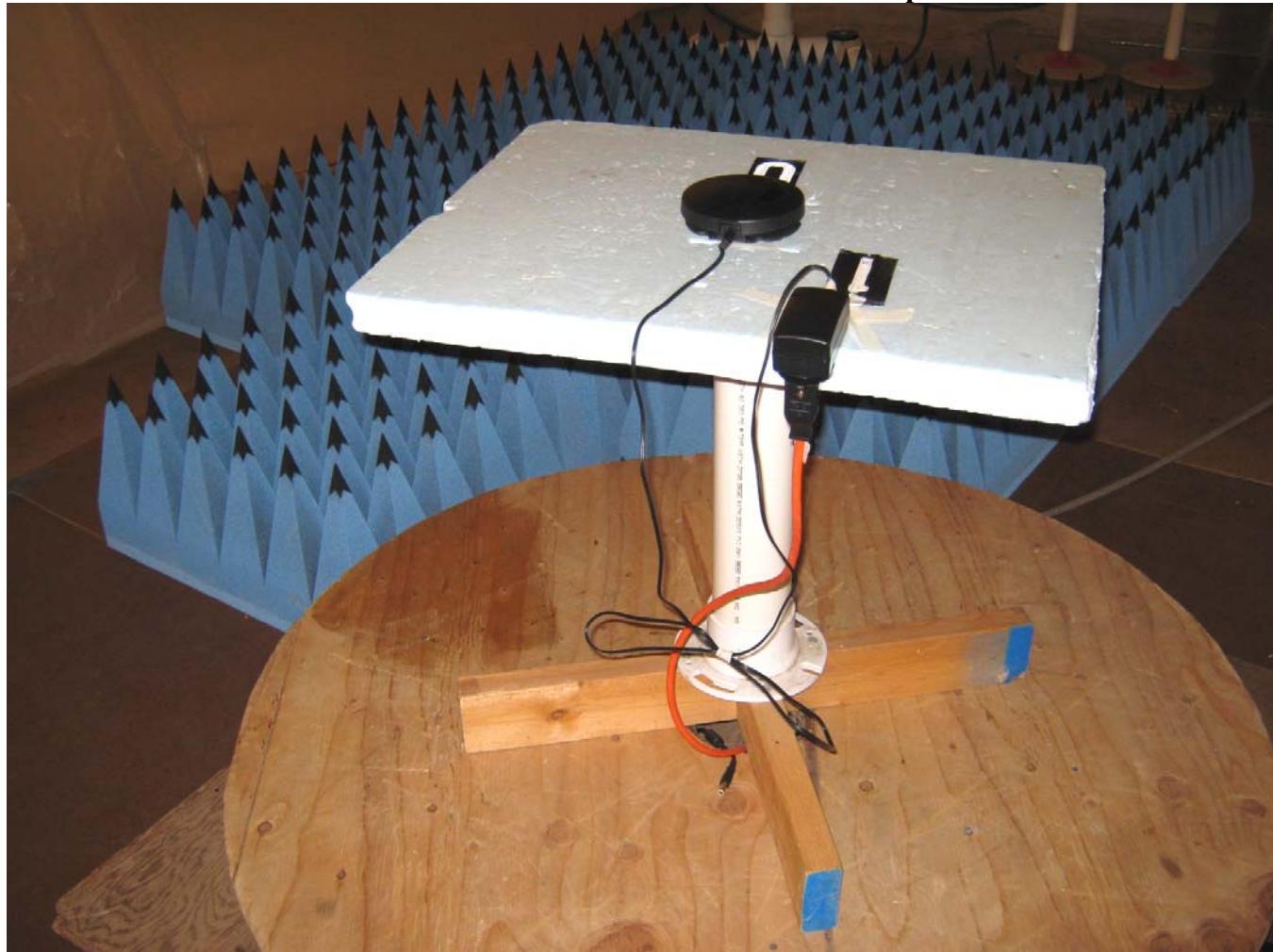
## Appendix A – Test Photos

### Photo Information and Test Setup:

Item 0: RDH Freedom Cordless Prophy Foot Pedal, Model 761248

Item 1: SL Power, Model MW170KB0502B03

### Radiated Emissions – Above 1 GHz – AC Adapter





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## Appendix A

### Radiated Emissions – Above 1 GHz – Battery Operation





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## Appendix A

### AC Line Conducted Emissions – Transmit Mode





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## Appendix B – Measurement Data

### 1.0 Emission Bandwidth – 20 dB

#### Rule Part:

Section 15.215 (c)

#### Test Procedure:

ANSI C63.4-2009 and ANSI C63.10-2009

#### Limit:

Informative

#### Results:

Compliant  
20 dB bandwidth: **2.68 MHz**

#### Sample Equation(s):

None

#### Notes:

This was a radiated emissions measurement. The maximum field strength of the emission was determined and the bandwidth was measured from the points at 20 dB down from the modulated carrier.



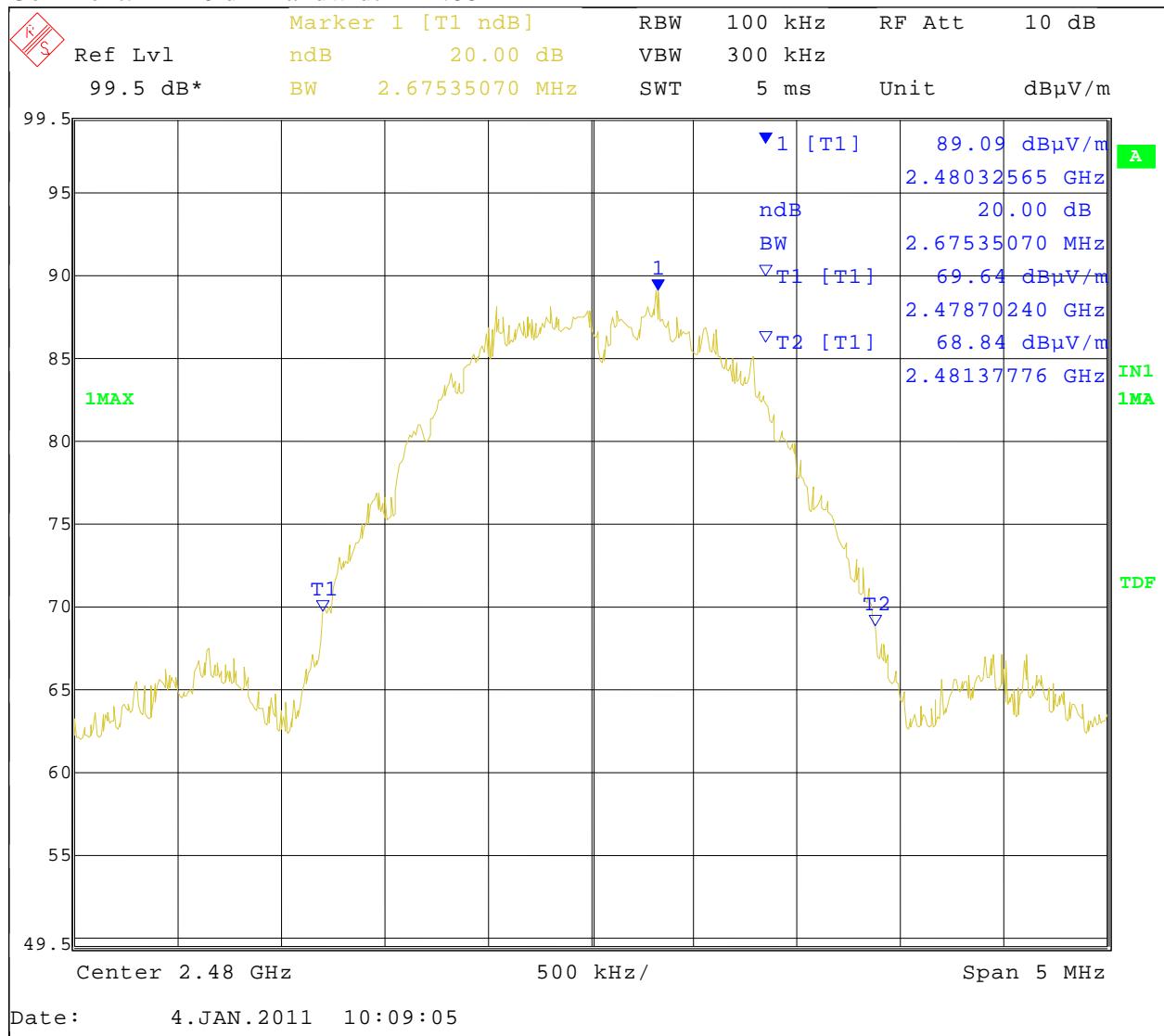
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## Appendix B

Test Date: 1-4-2010  
Company: Dentsply Professional  
EUT: Prophy Solutions Foot Pedal Model: 761248  
Test: 20 dB Bandwidth  
Operator: Cooper L.

Comment: 20 dB Bandwidth = 2.68 MHz





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## Appendix B

### 2.0 Band Edge Measurement

#### Rule Part:

15.205

#### Test Procedure:

ANSI C63.4-2009 and ANSI C63.10-2009

#### Limit:

15.205 / 15.209

#### Results:

Compliant

#### Sample Equation(s):

None

#### Notes:

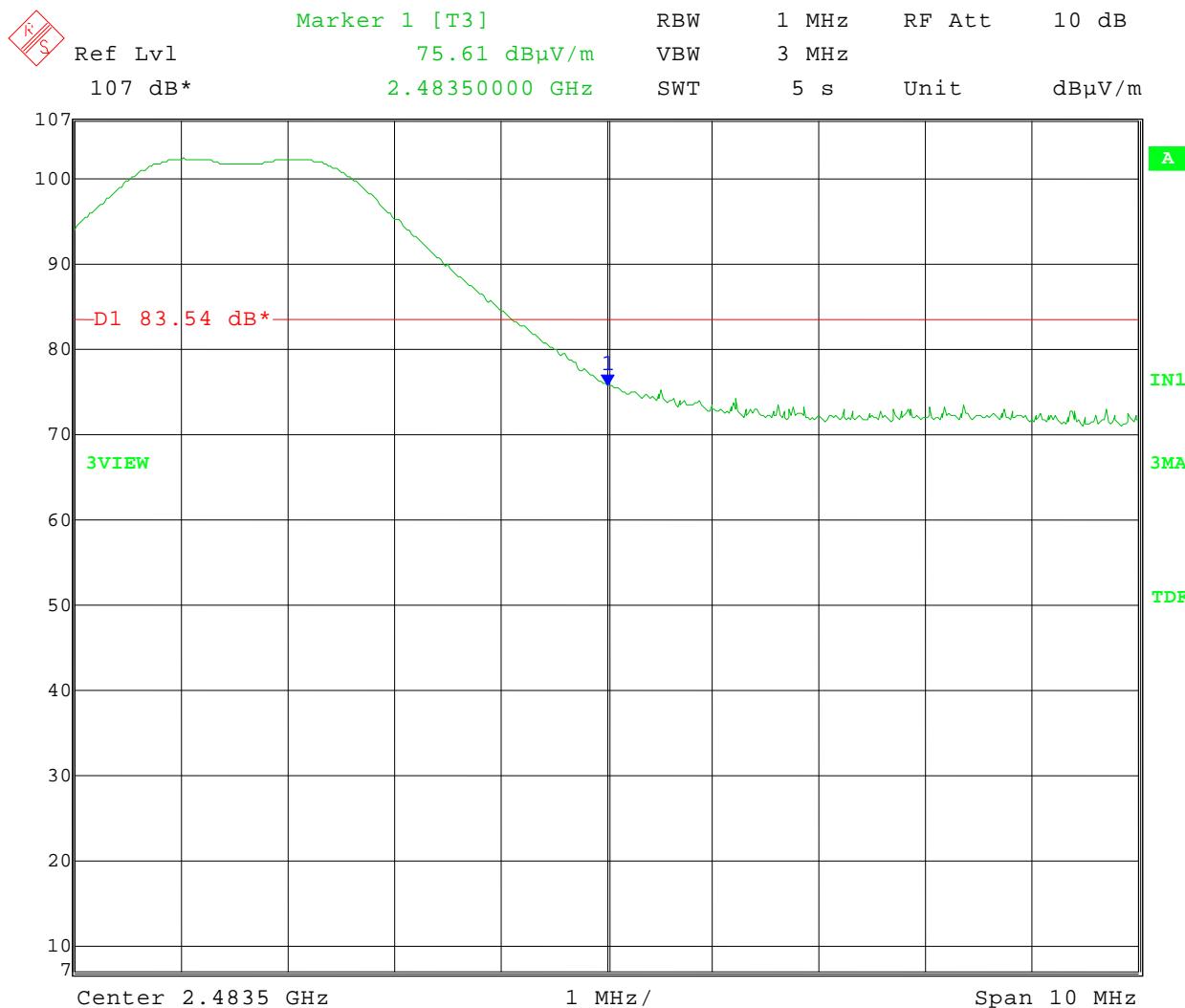
Test distance 1 meter.



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Test Date: 12-14-2010  
Company: Dentsply Professional  
EUT: Prophy Solutions foot pedal Model: 761248  
Test: Upper Band-Edge Radiated  
Rule part: FCC Part 15.249 and FCC Part 205  
Band-Edge Frequency: 2.4835 GHz  
Operator: Craig B  
Comment: High Channel: Frequency – 2.480 GHz  
Test distance: 1 meter  
Peak Limit = 83.54; Average Limit 63.54  
Measured peak level = 75.61 dBuV/m  
Measured average level = 75.61 – 20 (duty cycle correction) = 55.61 dBuV/m



Date: 14.DEC.2010 14:45:29



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## Appendix B

### 3.0 Duty Cycle Correction

#### Rule Part:

15.35 (c)

#### Test Procedure:

ANSI C63.4-2009 and ANSI C63.10-2009

#### Limit:

Informative

#### Results:

Informative

#### Sample Equation(s):

See data

#### Notes:

The unit does not transmit continuously in normal operation. Compliance is determined measuring the EUT in continuous transmit mode, and comparing the peak data, minus duty cycle correction of normal operation, to the average limit. The peak limit is still applicable without duty cycle correction.

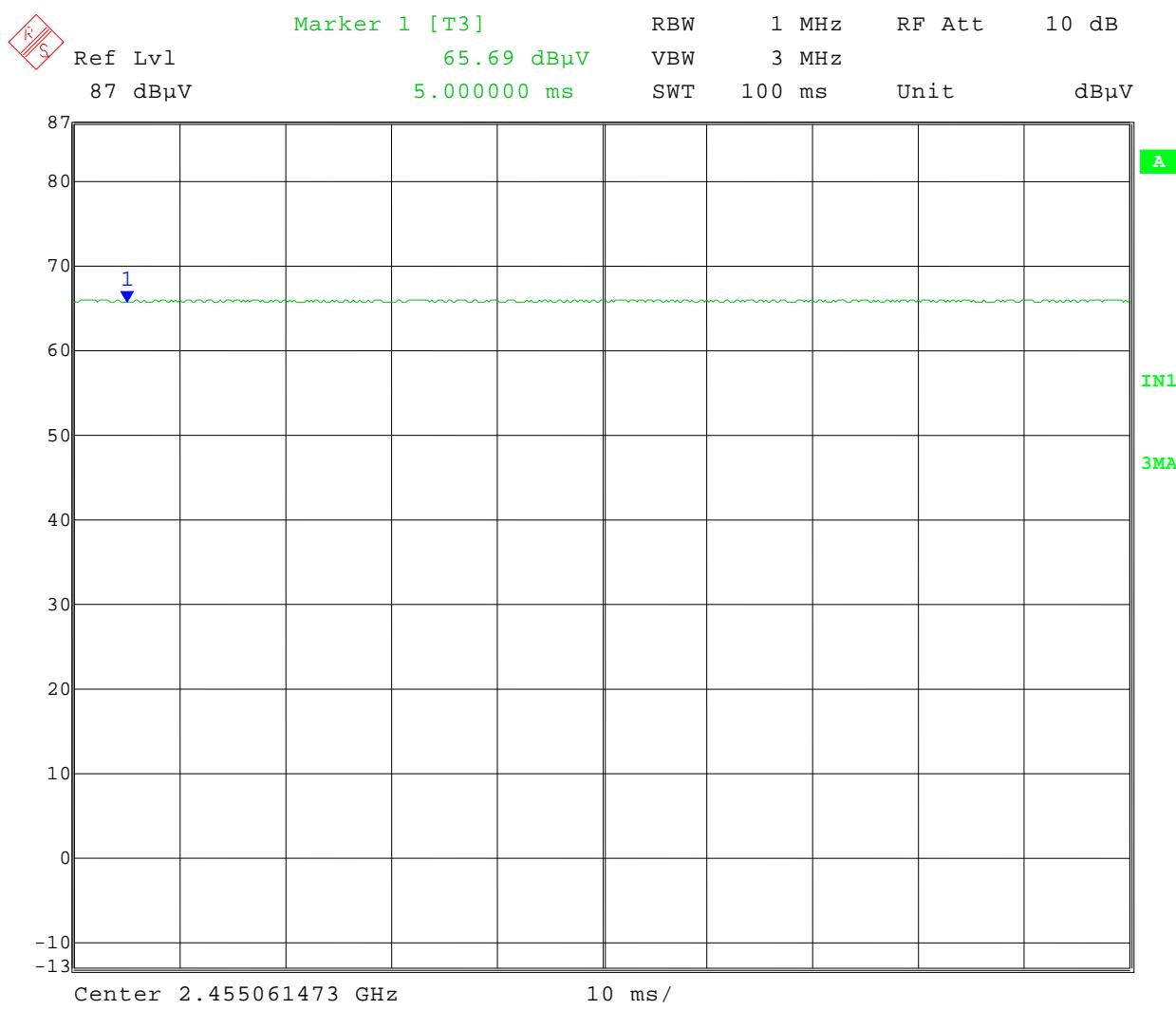


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## Appendix B

Test Date: 12-14-2010  
Company: Dentsply Professional  
EUT: Prophy Solutions footpedal Model: 761248  
Test: Duty Cycle – special mode for testing purposes  
Operator: Craig B  
  
Comment: Continuous Transmit  
Total ON time in 100 ms = 100 ms



Date: 14.DEC.2010 10:59:32



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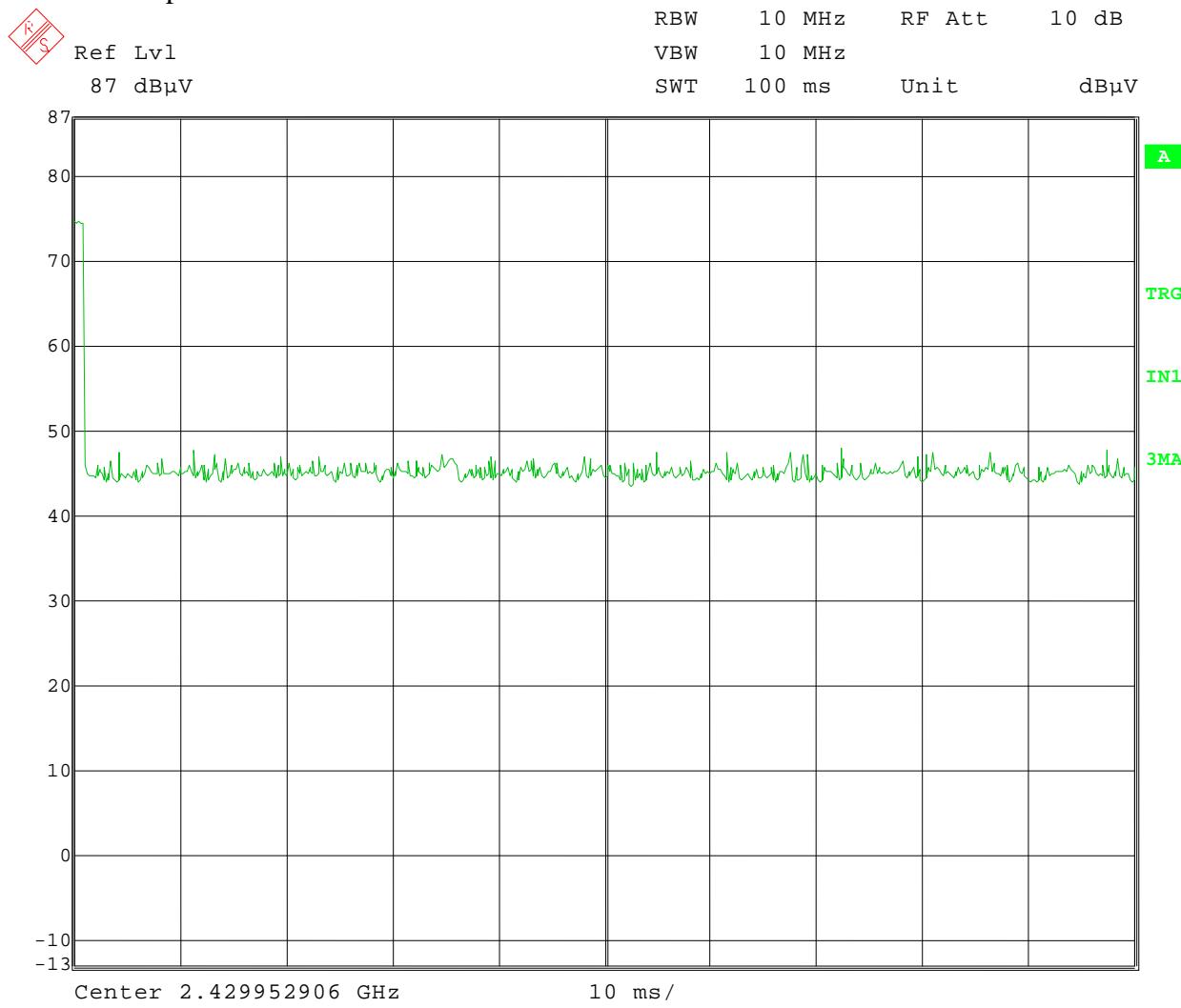
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## Appendix B

Test Date: 12-14-2010  
Company: Dentsply Professional  
EUT: Prophy Solutions footpedal Model: 761248  
Test: Duty Cycle – worst case for normal operation  
Operator: Craig B

Comment: One pulse during 100 ms: 1.112224 ms  
Duty Cycle correction =  $20 \log(1.11224/100) = -39 \text{ dB}$

100 ms sweep:



Date: 14.DEC.2010 09:41:39



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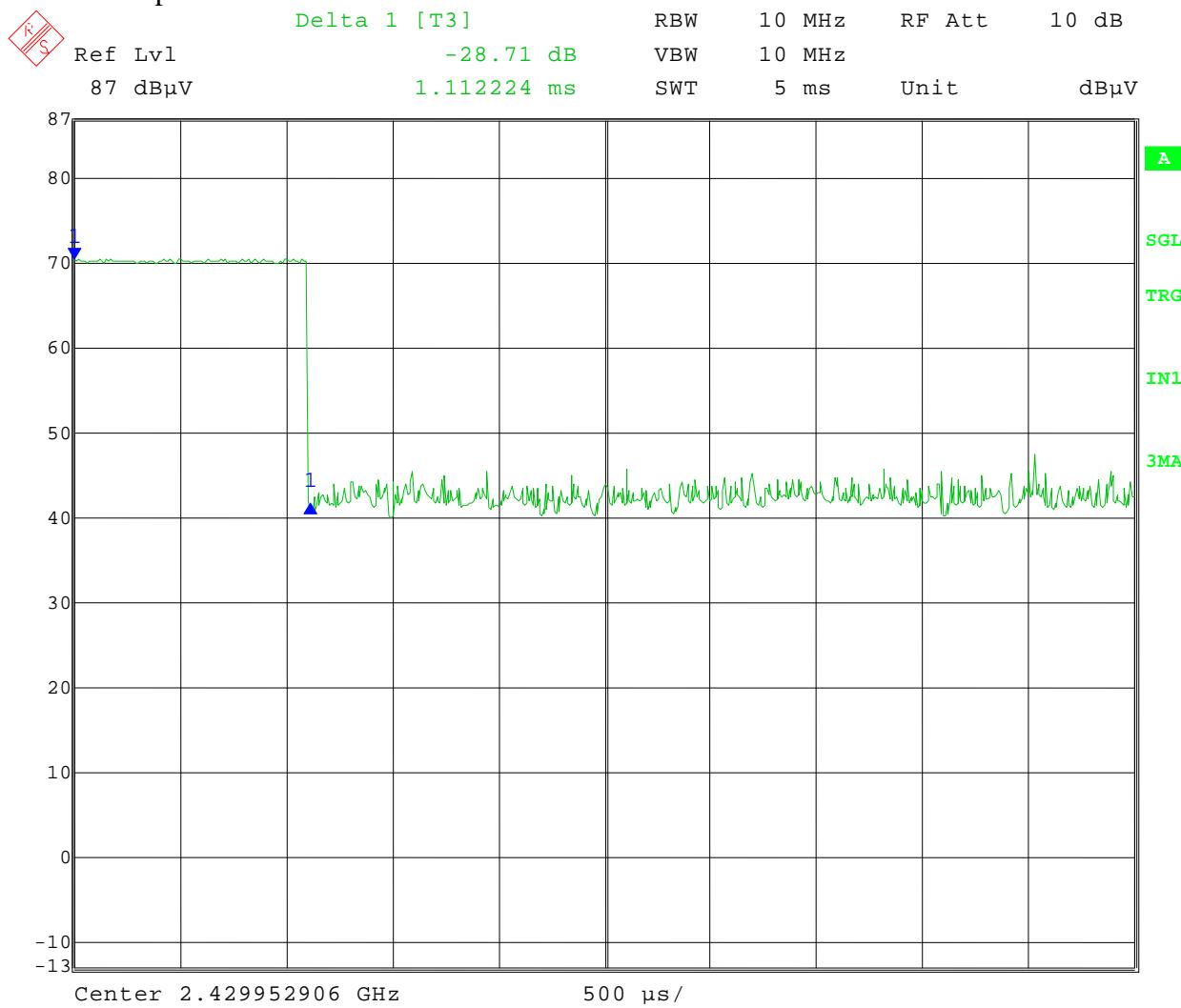
Company: Dentsply Professional  
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## Appendix B

Test Date: 12-14-2010  
Company: Dentsply Professional  
EUT: Prophy Solutions footpedal Model: 761248  
Test: Duty Cycle – worst case for normal operation  
Operator: Craig B

Comment: One pulse during 100 ms: 1.112224 ms  
Duty Cycle correction =  $20 \log(1.11224/100) = -39 \text{ dB}$

ON time of pulse:



Date: 14.DEC.2010 09:52:48



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## Appendix B

### 4.0 Field Strength of Emissions – Fundamental and Spurious

#### Rule Part:

15.249 including 15.205

#### Test Procedure:

ANSI C63.4-2009 and ANSI C63.10-2009

#### Limit:

15.249 (a)

#### Results:

Compliant

#### Sample Equation(s):

Final Corrected = Total Level - Duty Cycle Correction

Margin = Limit - Final Corrected

Level = Total Level - System Loss - Antenna Factor

#### Notes:

The EUT was tested with the AC Adapter and under battery power, the highest emission was recorded. The unit does not transmit continuously in normal operation. Compliance is determined measuring the EUT in continuous transmit mode, and comparing the peak data, minus duty cycle correction of normal operation, to the average limit. The peak limit is still applicable without duty cycle correction.



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## Radiated Fundamental and Spurious Emissions – 30 MHz to 25 GHz

Tested at a 3 Meter Distance: 30 MHz -18 GHz

Tested at a 1 Meter Distance: 18-25 GHz

EUT: Prophy Solutions foot pedal Model: 761248

Manufacturer: Dentsply Professional

Operating Condition: 65 deg F; 25% R.H.

Test Site: Site 2

Operator: Craig B

Test Specification: FCC Part 15.249

Comment: Battery Operated and with AC adapter

Date: 12-14-2010; 12-15-2010

Notes: All other emissions at least 20 dB under the limit.

All measurements were made with a peak detector.

CHANNEL: 15

| Frequency (GHz) | Measurement Type | Antenna Polarization | Level (dBuV) | Antenna Factor (dB/m) | System Loss (dB) | Total Level (dBuV/m) | Duty Cycle Correction (dB) | Final Corrected (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | EUT Angle (deg) | Comment |  |
|-----------------|------------------|----------------------|--------------|-----------------------|------------------|----------------------|----------------------------|--------------------------|----------------|-------------|--------------------|-----------------|---------|--|
| 2.480           | Max Peak         | Vertical             | 58.65        | 28.69                 | 3.1              | 90.44                | 0                          | 90.44                    | 114.00         | 23.6        | 1.1                | 300             | F       |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 70.44                    | 94.00          |             |                    |                 |         |  |
|                 | Max Peak         | Horizontal           | 64.24        | 28.69                 | 3.1              | 96.03                | 0                          | 96.03                    | 114.00         | 18.0        | 1.0                | 225             |         |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 76.03                    | 94.00          |             |                    |                 |         |  |
| 4.960           | Max Peak         | Vertical             | 55.31        | 33.25                 | -34.9            | 53.66                | 0                          | 53.66                    | 74.00          | 20.3        | 1.0                | 45              | H       |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 33.66                    | 54.00          |             |                    |                 |         |  |
|                 | Max Peak         | Horizontal           | 54.21        | 33.25                 | -34.9            | 52.56                | 0                          | 52.56                    | 74.00          | 21.4        | 1.3                | 180             |         |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 32.56                    | 54.00          |             |                    |                 |         |  |
| 7.440           | Max Peak         | Vertical             | 49.21        | 36.54                 | -30.9            | 54.85                | 0                          | 54.85                    | 74.00          | 19.2        | 1.0                | 240             | H       |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 34.85                    | 54.00          |             |                    |                 |         |  |
|                 | Max Peak         | Horizontal           | 50.46        | 36.54                 | -30.9            | 56.10                | 0                          | 56.1                     | 74.00          | 17.9        | 1.4                | 250             |         |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 36.1                     | 54.00          |             |                    |                 |         |  |



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## Radiated Fundamental and Spurious Emissions – 30 MHz to 25 GHz

Tested at a 3 Meter Distance: 30 MHz -18 GHz

Tested at a 1 Meter Distance: 18-25 GHz

**EUT:** Prophy Solutions foot pedal Model: 761248

**Manufacturer:** Dentsply Professional

**Operating Condition:** 65 deg F; 25% R.H.

**Test Site:** Site 2

**Operator:** Craig B

**Test Specification:** FCC Part 15.249

**Comment:** Battery Operated and with AC adapter

**Date:** 12-14-2010; 12-15-2010

**Notes:** All other emissions at least 20 dB under the limit.

All measurements were made with a peak detector.

**CHANNEL:** 8

| Frequency (GHz) | Measurement Type | Antenna Polarization | Level (dBuV) | Antenna Factor (dB/m) | System Loss (dB) | Total Level (dBuV/m) | Duty Cycle Correction (dB) | Final Corrected (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | EUT Angle (deg) | Comment |  |
|-----------------|------------------|----------------------|--------------|-----------------------|------------------|----------------------|----------------------------|--------------------------|----------------|-------------|--------------------|-----------------|---------|--|
| 2.445           | Max Peak         | Vertical             | 59.01        | 28.62                 | 3.1              | 90.73                | 0                          | 90.73                    | 114.00         | 23.3        | 1.1                | 290             | F       |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 70.73                    | 94.00          |             |                    |                 |         |  |
|                 | Max Peak         | Horizontal           | 65.01        | 28.62                 | 3.1              | 96.73                | 0                          | 96.73                    | 114.00         | 17.3        | 1.0                | 225             |         |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 76.73                    | 94.00          |             |                    |                 |         |  |
| 4.890           | Max Peak         | Vertical             | 55.12        | 33.09                 | -34.7            | 53.51                | 0                          | 53.51                    | 74.00          | 20.5        | 1.2                | 270             | H       |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 33.51                    | 54.00          |             |                    |                 |         |  |
|                 | Max Peak         | Horizontal           | 53.64        | 33.09                 | -34.7            | 52.03                | 0                          | 52.03                    | 74.00          | 22.0        | 1.1                | 180             |         |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 32.03                    | 54.00          |             |                    |                 |         |  |
| 7.335           | Max Peak         | Vertical             | 51.04        | 36.41                 | -31.6            | 55.85                | 0                          | 55.85                    | 74.00          | 18.2        | 1.3                | 225             | H       |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 35.85                    | 54.00          |             |                    |                 |         |  |
|                 | Max Peak         | Horizontal           | 51.53        | 36.41                 | -31.6            | 56.34                | 0                          | 56.34                    | 74.00          | 17.7        | 1.0                | 270             |         |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 36.34                    | 54.00          |             |                    |                 |         |  |
| 9.780           | Max Peak         | Vertical             | 48.55        | 37.96                 | -31.7            | 54.81                | 0                          | 54.81                    | 74.00          | 19.2        | 1.3                | 260             | H       |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 34.81                    | 54.00          |             |                    |                 |         |  |
|                 | Max Peak         | Horizontal           | 48.67        | 37.96                 | -31.7            | 54.93                | 0                          | 54.93                    | 74.00          | 19.1        | 1.0                | 290             |         |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 34.93                    | 54.00          |             |                    |                 |         |  |



166 South Carter, Genoa City, WI 53128

Company: Dentsply Professional  
Model Tested: 761248  
Report Number: 16690  
Project Number: 4350

## Radiated Fundamental and Spurious Emissions – 30 MHz to 25 GHz

Tested at a 3 Meter Distance: 30 MHz -18 GHz

Tested at a 1 Meter Distance: 18-25 GHz

EUT: Prophy Solutions foot pedal Model: 761248

Manufacturer: Dentsply Professional

Operating Condition: 65 deg F; 25% R.H.

Test Site: Site 2

Operator: Craig B

Test Specification: FCC Part 15.249

Comment: Battery Operated and with AC adapter

Date: 12-14-2010; 12-15-2010

Notes: All other emissions at least 20 dB under the limit.

All measurements were made with a peak detector.

CHANNEL: 0

| Frequency (GHz) | Measurement Type | Antenna Polarization | Level (dBuV) | Antenna Factor (dB/m) | System Loss (dB) | Total Level (dBuV/m) | Duty Cycle Correction (dB) | Final Corrected (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Height (m) | EUT Angle (deg) | Comment |  |
|-----------------|------------------|----------------------|--------------|-----------------------|------------------|----------------------|----------------------------|--------------------------|----------------|-------------|--------------------|-----------------|---------|--|
| 2.405           | Max Peak         | Vertical             | 58.88        | 28.53                 | 3.1              | 90.51                | 0                          | 90.51                    | 114.00         | 23.5        | 1.0                | 250             | F       |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 70.51                    | 94.00          |             |                    |                 |         |  |
|                 | Max Peak         | Horizontal           | 65           | 28.53                 | 3.1              | 96.63                | 0                          | 96.63                    | 114.00         | 17.4        | 1.1                | 330             |         |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 76.63                    | 94.00          |             |                    |                 |         |  |
| 4.810           | Max Peak         | Vertical             | 57.98        | 32.84                 | -34.8            | 56.02                | 0                          | 56.02                    | 74.00          | 18.0        | 1.0                | 270             | H       |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 36.02                    | 54.00          |             |                    |                 |         |  |
|                 | Max Peak         | Horizontal           | 55.05        | 32.84                 | -34.8            | 53.09                | 0                          | 53.09                    | 74.00          | 20.9        | 1.1                | 0               |         |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 33.09                    | 54.00          |             |                    |                 |         |  |
| 7.217           | Max Peak         | Vertical             | 52.49        | 35.86                 | -32.3            | 56.05                | 0                          | 56.05                    | 74.00          | 18.0        | 1.1                | 210             | H       |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 36.05                    | 54.00          |             |                    |                 |         |  |
|                 | Max Peak         | Horizontal           | 53.54        | 35.86                 | -32.3            | 57.10                | 0                          | 57.1                     | 74.00          | 16.9        | 1.1                | 225             |         |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 37.1                     | 54.00          |             |                    |                 |         |  |
| 9.620           | Max Peak         | Vertical             | 50.7         | 37.68                 | -31.9            | 56.48                | 0                          | 56.48                    | 74.00          | 17.5        | 1.2                | 330             | H       |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 36.48                    | 54.00          |             |                    |                 |         |  |
|                 | Max Peak         | Horizontal           | 50.94        | 37.68                 | -31.9            | 56.72                | 0                          | 56.72                    | 74.00          | 17.3        | 1.0                | 290             |         |  |
|                 | Average          |                      |              |                       |                  |                      | 20                         | 36.72                    | 54.00          |             |                    |                 |         |  |



166 South Carter, Genoa City, WI 53128

Company: Dentsply Professional  
Model Tested: 761248  
Report Number: 16690  
Project Number: 4350

## Appendix B

### 5.0 AC Line Conducted Emissions

#### Rule Part:

15.207

#### Test Procedure:

ANSI C63.4-2009 and ANSI C63.10-2009

#### Limit:

15.207

#### Results:

Compliant

#### Sample Equation(s):

None

#### Notes:

Tested in continuous transmit mode.

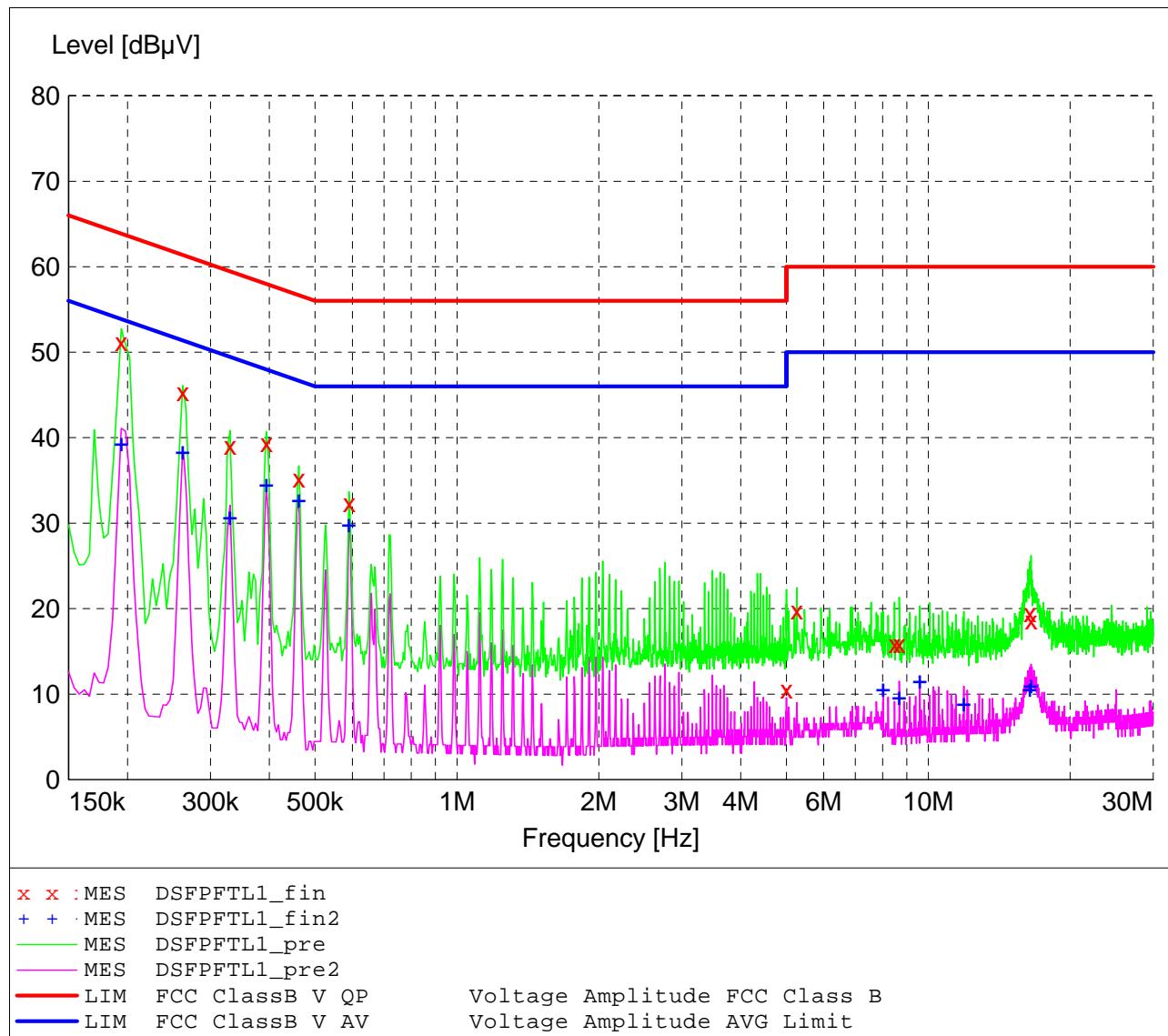
**Voltage Mains Test**

EUT: Prophy Solutions foot pedal Model: 761248  
 Manufacturer: Dentsply Professional  
 Operating Condition: 68 deg. F, 25% R.H.  
 Test Site: DLS O.F. Screenroom  
 Operator: Craig B  
 Test Specification: Line 1; Continuous Transmit mode  
 Comment: 120 V 60 Hz  
 Date: 12-16-2010

**SCAN TABLE: "Line Cond Scrn RmFin"**

| Line Conducted Emissions |                |            |           |       |         |              |
|--------------------------|----------------|------------|-----------|-------|---------|--------------|
| Start Frequency          | Stop Frequency | Step Width | Detector  | Meas. | IF Time | Transducer   |
| 9.0 kHz                  | 150.0 kHz      | 4.0 kHz    | QuasiPeak | 2.0 s | 200 Hz  | LISN DLS#128 |
| 150.0 kHz                | 30.0 MHz       | 4.0 kHz    | QuasiPeak | 2.0 s | 9 kHz   | LISN DLS#128 |

CISPR AV



**MEASUREMENT RESULT: "DSFPFTL1\_fin"**

12/16/2010 10:56AM

| Frequency<br>MHz | Level<br>dB $\mu$ V | Transd<br>dB | Limit<br>dB $\mu$ V | Margin<br>dB | Detector |
|------------------|---------------------|--------------|---------------------|--------------|----------|
| 0.194000         | 51.20               | 12.5         | 64                  | 12.7         | QP       |
| 0.262000         | 45.30               | 11.8         | 61                  | 16.1         | QP       |
| 0.330000         | 39.00               | 11.5         | 60                  | 20.5         | QP       |
| 0.394000         | 39.40               | 11.2         | 58                  | 18.6         | QP       |
| 0.462000         | 35.20               | 11.0         | 57                  | 21.5         | QP       |
| 0.590000         | 32.40               | 10.8         | 56                  | 23.6         | QP       |
| 5.000000         | 10.50               | 10.5         | 56                  | 45.5         | QP       |
| 5.260000         | 19.80               | 10.5         | 60                  | 40.2         | QP       |
| 8.480000         | 15.90               | 10.6         | 60                  | 44.1         | QP       |
| 8.680000         | 15.90               | 10.6         | 60                  | 44.1         | QP       |
| 16.440000        | 19.50               | 11.1         | 60                  | 40.5         | QP       |
| 16.520000        | 18.60               | 11.1         | 60                  | 41.4         | QP       |

**MEASUREMENT RESULT: "DSFPFTL1\_fin2"**

12/16/2010 10:56AM

| Frequency<br>MHz | Level<br>dB $\mu$ V | Transd<br>dB | Limit<br>dB $\mu$ V | Margin<br>dB | Detector |
|------------------|---------------------|--------------|---------------------|--------------|----------|
| 0.194000         | 39.40               | 12.5         | 54                  | 14.5         | CAV      |
| 0.262000         | 38.40               | 11.8         | 51                  | 13.0         | CAV      |
| 0.330000         | 30.80               | 11.5         | 50                  | 18.7         | CAV      |
| 0.394000         | 34.60               | 11.2         | 48                  | 13.4         | CAV      |
| 0.462000         | 32.80               | 11.0         | 47                  | 13.9         | CAV      |
| 0.590000         | 29.90               | 10.8         | 46                  | 16.1         | CAV      |
| 8.020000         | 10.60               | 10.6         | 50                  | 39.4         | CAV      |
| 8.680000         | 9.70                | 10.6         | 50                  | 40.3         | CAV      |
| 9.600000         | 11.60               | 10.7         | 50                  | 38.4         | CAV      |
| 11.900000        | 8.90                | 10.9         | 50                  | 41.1         | CAV      |
| 16.420000        | 10.60               | 11.1         | 50                  | 39.4         | CAV      |
| 16.520000        | 11.10               | 11.1         | 50                  | 38.9         | CAV      |

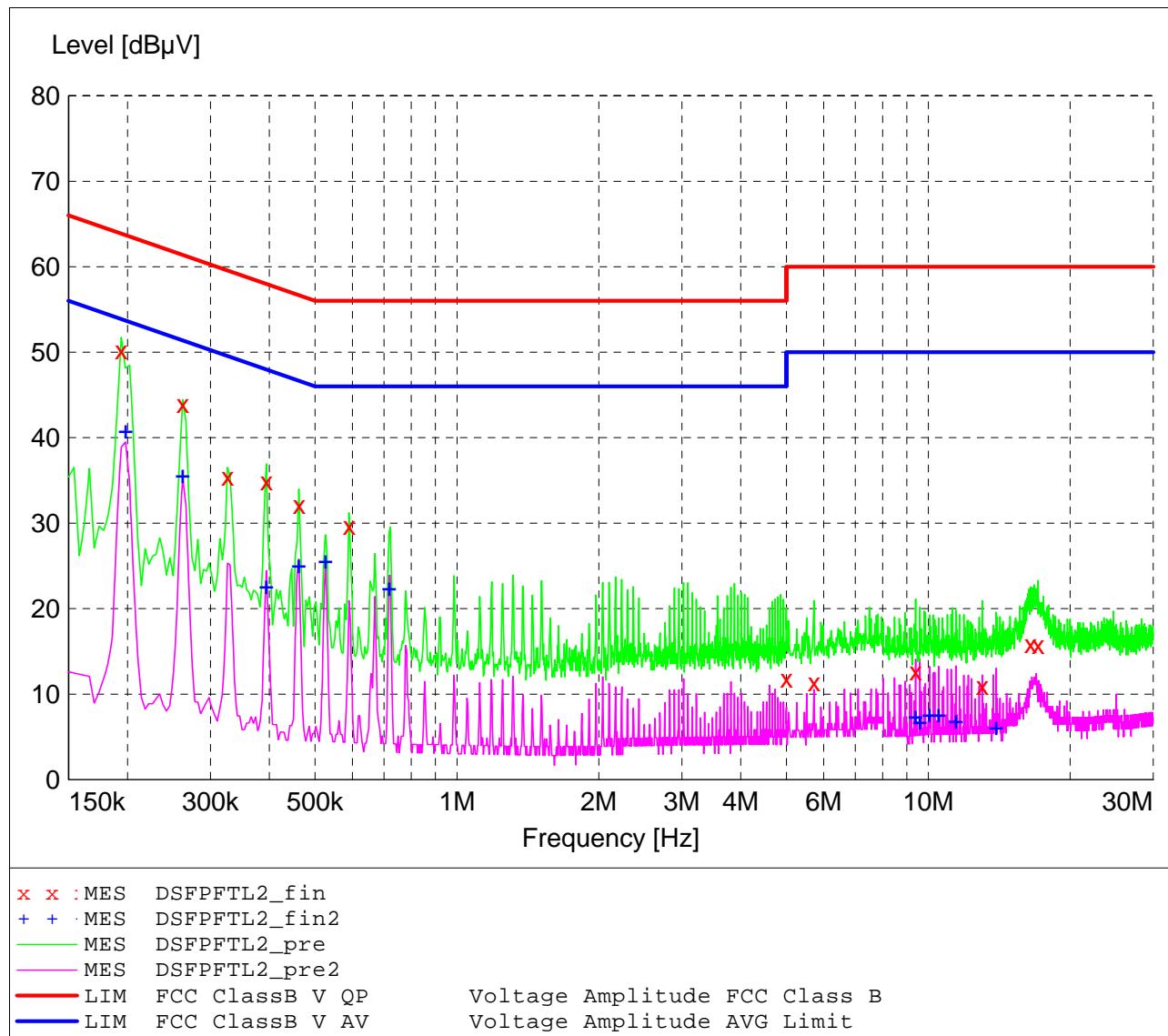
**Voltage Mains Test**

EUT: Prophy Solutions foot pedal Model: 761248  
 Manufacturer: Dentsply Professional  
 Operating Condition: 68 deg. F, 25% R.H.  
 Test Site: DLS O.F. Screenroom  
 Operator: Craig B  
 Test Specification: Line 2; Continuous Transmit mode  
 Comment: 120 V 60 Hz  
 Date: 12-16-2010

**SCAN TABLE: "Line Cond Scrn RmFin"**

| Line Conducted Emissions |                |            |           |       |         |              |
|--------------------------|----------------|------------|-----------|-------|---------|--------------|
| Start Frequency          | Stop Frequency | Step Width | Detector  | Meas. | IF Time | Transducer   |
| 9.0 kHz                  | 150.0 kHz      | 4.0 kHz    | QuasiPeak | 2.0 s | 200 Hz  | LISN DLS#128 |
| 150.0 kHz                | 30.0 MHz       | 4.0 kHz    | QuasiPeak | 2.0 s | 9 kHz   | LISN DLS#128 |

CISPR AV



**MEASUREMENT RESULT: "DSFPFTL2\_fin"**

12/16/2010 11:03AM

| Frequency<br>MHz | Level<br>dB $\mu$ V | Transd<br>dB | Limit<br>dB $\mu$ V | Margin<br>dB | Detector |
|------------------|---------------------|--------------|---------------------|--------------|----------|
| 0.194000         | 50.20               | 12.5         | 64                  | 13.7         | QP       |
| 0.262000         | 43.90               | 11.8         | 61                  | 17.5         | QP       |
| 0.326000         | 35.40               | 11.5         | 60                  | 24.2         | QP       |
| 0.394000         | 34.90               | 11.2         | 58                  | 23.1         | QP       |
| 0.462000         | 32.10               | 11.0         | 57                  | 24.6         | QP       |
| 0.590000         | 29.70               | 10.8         | 56                  | 26.3         | QP       |
| 5.000000         | 11.80               | 10.5         | 56                  | 44.2         | QP       |
| 5.720000         | 11.40               | 10.5         | 60                  | 48.6         | QP       |
| 9.400000         | 12.70               | 10.7         | 60                  | 47.3         | QP       |
| 13.020000        | 11.00               | 11.0         | 60                  | 49.0         | QP       |
| 16.480000        | 15.90               | 11.1         | 60                  | 44.1         | QP       |
| 17.100000        | 15.70               | 11.1         | 60                  | 44.3         | QP       |

**MEASUREMENT RESULT: "DSFPFTL2\_fin2"**

12/16/2010 11:03AM

| Frequency<br>MHz | Level<br>dB $\mu$ V | Transd<br>dB | Limit<br>dB $\mu$ V | Margin<br>dB | Detector |
|------------------|---------------------|--------------|---------------------|--------------|----------|
| 0.198000         | 40.90               | 12.5         | 54                  | 12.8         | CAV      |
| 0.262000         | 35.70               | 11.8         | 51                  | 15.7         | CAV      |
| 0.394000         | 22.70               | 11.2         | 48                  | 25.3         | CAV      |
| 0.462000         | 25.10               | 11.0         | 47                  | 21.6         | CAV      |
| 0.526000         | 25.60               | 10.9         | 46                  | 20.4         | CAV      |
| 0.718000         | 22.40               | 10.7         | 46                  | 23.6         | CAV      |
| 9.400000         | 7.40                | 10.7         | 50                  | 42.6         | CAV      |
| 9.600000         | 6.80                | 10.7         | 50                  | 43.2         | CAV      |
| 10.060000        | 7.60                | 10.8         | 50                  | 42.4         | CAV      |
| 10.520000        | 7.60                | 10.9         | 50                  | 42.4         | CAV      |
| 11.440000        | 6.90                | 10.9         | 50                  | 43.1         | CAV      |
| 13.940000        | 6.20                | 11.0         | 50                  | 43.8         | CAV      |



166 South Carter, Genoa City, WI 53128

Company: Dentsply Professional  
Model Tested: 761248  
Report Number: 16690  
Project Number: 4350

## END OF REPORT

| Revision # | Date       | Comments  | By |
|------------|------------|---|----|
| 1.0        | 01-13-2011 | Preliminary Release                               | AA |
| 1.1        | 01-19-2011 | Fixed page 24 (Handpiece data to Foot pedal data) | AA |
|            |            |   |    |
|            |            |   |    |
|            |            |   |    |
|            |            |   |    |