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Report On

FCC and Industry Canada Testing of the
Laerdal Medical AS CPRmeter 2
In accordance with FCC CFR 47 Part 15B and ICES-003

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FCC ID: QHQ-801002
IC: 20263-801002

Document 75932076 Report 02 Issue 1

February 2016



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Authorised Signatory

DATED

18 February 2016

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC CFR 47 Part 15B and ICES-003. The sample tested was found to comply with the requirements defined in the applied rules.

Test Engineer(s);

G Lawler





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SECTION 1

REPORT SUMMARY

FCC and Industry Canada Testing of the
Laerdal Medical AS CPRmeter 2
In accordance with FCC CFR 47 Part 15B and ICES-003



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1.1 INTRODUCTION

The information contained in this report is intended to show the verification of FCC and Industry Canada Testing of the Laerdal Medical AS CPRmeter 2 to the requirements of FCC CFR 47 Part 15B and ICES-003.

Objective	To perform FCC and Industry Canada Testing to determine the Equipment Under Test's (EUT's) compliance with the Test Specification, for the series of tests carried out.
Manufacturer	Laerdal Medical AS
Model Number(s)	CPRmeter2
Serial Number(s)	C88396-0057
Number of Samples Tested	1
Test Specification/Issue/Date	FCC CFR 47 Part 15B (2014) ICES-003 (2012)
Incoming Release Date	Declaration of Build Status 18 February 2016
Disposal Reference Number Date	Held Pending Disposal Not Applicable Not Applicable
Order Number Date	PTP 23 September 2015
Start of Test	19 October 2015
Finish of Test	20 October 2015
Name of Engineer(s)	G Lawler
Related Document(s)	ANSI C63.4 (2014)



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1.2 BRIEF SUMMARY OF RESULTS

A brief summary of the tests carried out in accordance with FCC CFR 47 Part 15B and ICES-003 is shown below.

Section	Specification Clause		Test Description	Result	Comments/Base Standard
	Part 15B	ICES-003			
Idle					
2.1	15.109	6.2	Radiated Emissions	Pass	



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1.3 DECLARATION OF BUILD STATUS

MAIN EUT	
MANUFACTURING DESCRIPTION	MEDICAL EQUIPMENT
MANUFACTURER	LAERDAL MEDICAL AS
TYPE	CPRmeter 2
PART NUMBER	801-002xx
SERIAL NUMBER	
HARDWARE VERSION	
SOFTWARE VERSION	
TRANSMITTER FREQUENCY OPERATING RANGE (MHz)	2400-2483.5
RECEIVER FREQUENCY OPERATING RANGE (MHz)	N/A
COUNTRY OF ORIGIN	NORWAY
INTERMEDIATE FREQUENCIES	
EMISSION DESIGNATOR(S): (i.e. G1D, GXW)	
MODULATION TYPES: (i.e. GMSK, QPSK)	
HIGHEST INTERNALLY GENERATED FREQUENCY	
OUTPUT POWER (W or dBm)	
FCC ID	QHQ-801002
INDUSTRY CANADA ID	20263-801002
TECHNICAL DESCRIPTION (a brief description of the intended use and operation)	The CPRmeter 2 with Q-CPR® technology is a small, lightweight device powered by a replaceable battery. The device is intended for use by responders who have been trained in CPR and use of the CPRmeter 2. The CPRmeter 2 is used as a guide in administering cardiopulmonary resuscitation (CPR) to a suspected sudden cardiac arrest (SCA) victim at least 8 years old. The CPRmeter 2 has Bluetooth Smart functionality for uploading event data to an external device. Bluetooth can also be used to stream live CPR performance data during training.
BATTERY/POWER SUPPLY	
MANUFACTURING DESCRIPTION	STANDARD CONSUMABLES
MANUFACTURER	NOT SPECIFIED
TYPE	AAA/LR03
PART NUMBER	
VOLTAGE	1.5
COUNTRY OF ORIGIN	
MODULES (if applicable)	
MANUFACTURING DESCRIPTION	
MANUFACTURER	
TYPE	
POWER	
FCC ID	
COUNTRY OF ORIGIN	
INDUSTRY CANADA ID	
EMISSION DESIGNATOR	
DHSS/FHSS/COMBINED OR OTHER	
ANCILLARIES (if applicable)	
MANUFACTURING DESCRIPTION	
MANUFACTURER	
TYPE	
PART NUMBER	
SERIAL NUMBER	
COUNTRY OF ORIGIN	

Signature

Date

Declaration of Build Status Serial Number

Hefin Evans

18 February 2016

75932076



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1.4 PRODUCT INFORMATION

1.4.1 Technical Description

The Equipment Under Test (EUT) was a Laerdal Medical AS CPRmeter 2. A full technical description can be found in the manufacturer's documentation.

1.5 TEST CONDITIONS

For all tests the EUT was set up in accordance with the relevant test standard and to represent typical operating conditions. Tests were applied with the EUT situated in a shielded enclosure.

The EUT was powered from a 5 V DC supply.

FCC Measurement Facility Registration Number
90987 Octagon House, Fareham Test Laboratory

Industry Canada Company Address Code
IC2932B-1 Octagon House, Fareham Test Laboratory

1.6 DEVIATIONS FROM THE STANDARD

No deviations from the applicable test standard were made during testing.

1.7 MODIFICATION RECORD

Modification 0 - No modifications were made to the test sample during testing.



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SECTION 2

TEST DETAILS

FCC and Industry Canada Testing of the
Laerdal Medical AS CPRmeter 2
In accordance with FCC CFR 47 Part 15B and ICES-003



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2.1 RADIATED EMISSIONS

2.1.1 Specification Reference

FCC CFR 47 Part 15B, Clause 15.109
ICES-003, Clause 6.2

2.1.2 Equipment Under Test and Modification State

CPRmeter2 S/N: C88396-0057 - Modification State 0

2.1.3 Date of Test

19 October 2015 & 20 October 2015

2.1.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.1.5 Test Procedure

The test was performed in accordance with ANSI C63.4-2014, clause 8

Remarks

All final measurements were assessed against the Class B emission limits in Clause 15.109 of FCC CFR 47 FCC Part 15 and ICES-003 Clause 6.2.

2.1.6 Environmental Conditions

Ambient Temperature	20.3 - 20.6°C
Relative Humidity	37.0 - 43.0%



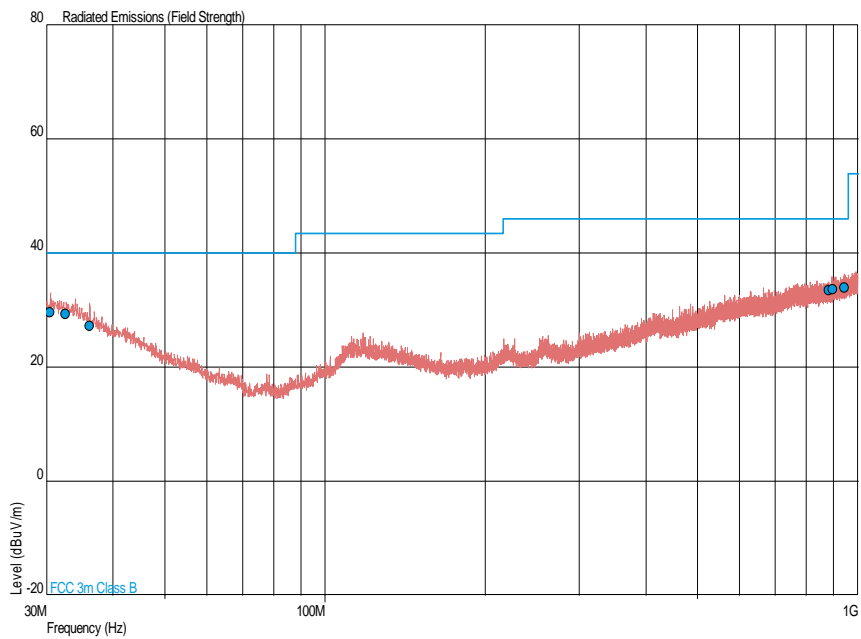
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2.1.7 Test Results

Idle, 30 MHz to 1 GHz Results

Frequency (MHz)	Quasi-Peak Level (dBµV/m)	Quasi-Peak Level (µV/m)	Quasi-Peak Margin (dµV/m)	Quasi-Peak Margin (µV/m)	Angle (°)	Height (m)	Polarisation
30.437	29.7	32.0	-10.3	-68.0	180	1.00	Horizontal
32.619	29.3	31.6	-10.7	-68.4	0	1.00	Vertical
36.111	27.2	31.3	-12.8	-68.7	270	1.00	Vertical
882.145	33.5	46.8	-12.5	-153.2	180	1.00	Horizontal
897.326	33.7	50.7	-12.3	-149.3	0	1.00	Horizontal
941.946	33.9	51.9	-12.1	-148.1	0	1.00	Horizontal

Idle, 30 MHz to 1 GHz Plot





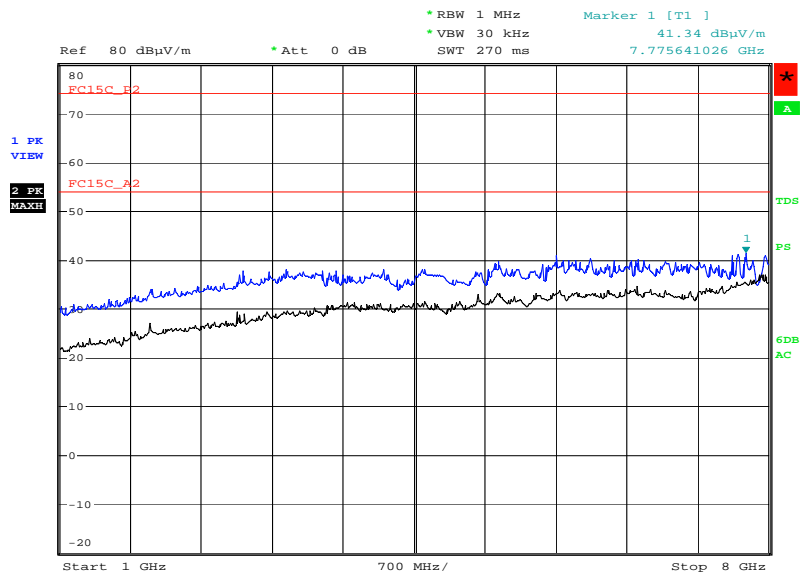
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Idle, 1 GHz to 13 GHz Results

Frequency (GHz)	Antenna Polarisation	Antenna Height (cm)	EUT Arc (degrees)	Final Peak (dBµV/m)	Final Average (dBµV/m)
*					

* No emissions were detected within 10 dB of the limit.

Idle, 1 GHz to 8 GHz Plot

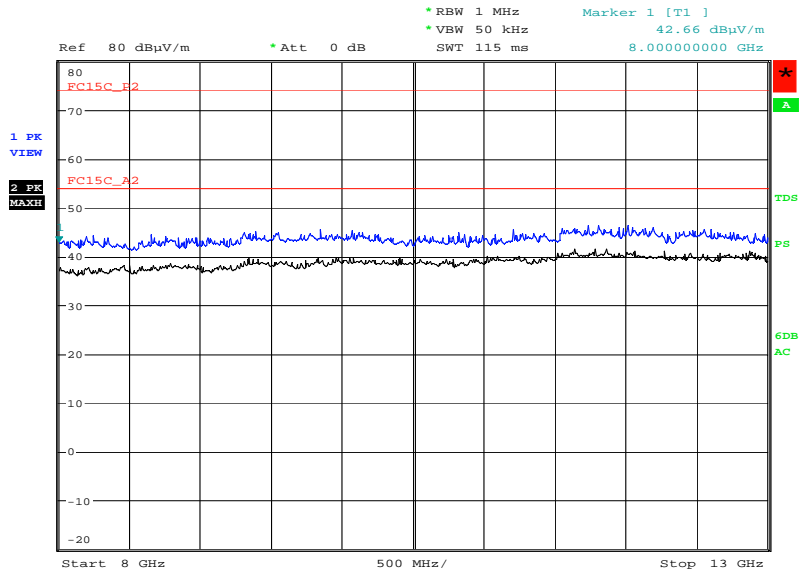


Date: 19.OCT.2015 22:53:22



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Idle, 8 GHz to 13 GHz Plot



Date: 19.OCT.2015 22:26:05



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SECTION 3

TEST EQUIPMENT USED



3.1 TEST EQUIPMENT USED

List of absolute measuring and other principal items of test equipment.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Section 2.1 - Radiated Emissions					
Antenna (Double Ridge Guide, 1GHz-18GHz)	EMCO	3115	234	12	29-Apr-2016
Antenna (Bilog)	Schaffner	CBL6143	287	24	3-Feb-2016
Pre-Amplifier	Phase One	PS04-0086	1533	12	30-Jul-2016
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Hygrometer	Rotronic	A1	2138	12	3-Dec-2015
Multimeter	Iso-tech	IDM101	2417	12	29-Sep-2016
Amplifier (1 - 8GHz)	Phase One	PS06-0060	3175	12	11-Aug-2016
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	27-Oct-2015
9m RF Cable (N Type)	Rhophase	NPS-2303-9000-NPS	3791	-	TU
Tilt Antenna Mast	maturu GmbH	TAM 4.0-P	3916	-	TU
Mast Controller	maturu GmbH	NCD	3917	-	TU
2m K-Type Cable (Rx)	Scott Cables	KPS-1501-2000-KPS	4527	-	TU
0.5m SMA Cable (Rx)	Scott Cables	SLSLL18-SMSM-00.50M	4528	6	19-Feb-2016

TU – Traceability Unscheduled



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3.2 MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:-

Test Discipline	MU
Radiated Emissions	30MHz to 1GHz: ± 5.1 dB 1GHz to 40GHz: ± 6.3 dB



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SECTION 4

ACCREDITATION, DISCLAIMERS AND COPYRIGHT



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4.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT



This report relates only to the actual item/items tested.

Our UKAS Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our UKAS Accreditation.

Results of tests not covered by our UKAS Accreditation Schedule are marked NUA
(Not UKAS Accredited).

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