

Scantek, Inc.

CALIBRATION LABORATORY

ISO 17025: 2005, ANSI/NCSL Z540:1994 Part 1
ACCREDITED by NVLAP (an ILAC MRA signatory)

NVLAP[®]
CALIBRATION
NVLAP Lab Code: 200625-0

Calibration Certificate No.37498

Instrument: **Sound Level Meter**
Model: **943B**
Manufacturer: **Svantek**
Serial number: **8365**
Tested with: **Microphone MI17 s/n 321**

Type (class): **2**
Customer: **Subsecretaria de Salud Publica**
Tel/Fax: **722335342 /**

Date Calibrated: **12/14/2016** Cal Due:

Status:	Received	Sent
In tolerance:	X	X
Out of tolerance:		
See comments:		

Contains non-accredited tests: ☐ Yes ☒ No

Calibration service: ☐ Basic ☒ Standard

Address: **calle Bueras N° 555, Rancagua**

Tested in accordance with the following procedures and standards:
Calibration of Sound Level Meters, Scantek Inc., Rev. 6/26/2015
SLM & Dosimeters – Acoustical Tests, Scantek Inc., Rev. 7/6/2011

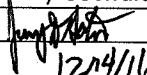
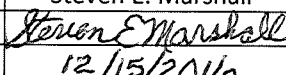
Instrumentation used for calibration: Nor-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence	Cal. Due
				Cal. Lab / Accreditation	
483B-Norsonic	SME Cal Unit	31061	Jul 27, 2016	Scantek, Inc./ NVLAP	Jul 27, 2017
DS-360-SRS	Function Generator	88077	Sep 15, 2016	ACR Env./ A2LA	Sep 15, 2018
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Sep 15, 2016	ACR Env./ A2LA	Sep 15, 2017
HM30-Thommen	Meteo Station	1040170/39633	Nov 1, 2016	ACR Env./ A2LA	Nov 1, 2017
PC Program 1019 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.	-
1251-Norsonic	Calibrator	30878	Nov 10, 2016	Scantek, Inc./ NVLAP	Nov 10, 2017
4226-Brüel&Kjær	Multifunction calibrator	2305103	Jul 25, 2016	Scantek, Inc./ NVLAP	Jul 25, 2017

Instrumentation and test results are traceable to SI (International System of Units) through standards maintained by NIST (USA) and NPL (UK).

Environmental conditions:

Temperature (°C)	Barometric pressure (kPa)	Relative Humidity (%)
22.5	100.25	40.7

Calibrated by:	Jeremy Gotwalt	Authorized signatory:	Steven E. Marshall
Signature		Signature	
Date	12/14/16	Date	12/15/2016

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This Calibration Certificate or Test Reports shall not be used to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the federal government.
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Results summary: Device complies with following clauses of mentioned specifications:

CLAUSES ¹ FROM IEC/ANSI STANDARDS REFERENCED IN PROCEDURES:	RESULT ^{2,3}	EXPANDED UNCERTAINTY (coverage factor 2) [dB]
INDICATION AT THE CALIBRATION CHECK FREQUENCY - IEC61672-3 ED.2 CLAUSE 10	Passed	0.15
SELF-GENERATED NOISE - IEC 61672-3 ED.2 CLAUSE 11	Passed	0.3
FREQUENCY WEIGHTINGS: A NETWORK - IEC 61672-3 ED.2.0 CLAUSE 13	Passed	0.2
FREQUENCY WEIGHTINGS: C NETWORK - IEC 61672-3 ED.2.0 CLAUSE 13	Passed	0.2
FREQUENCY WEIGHTINGS: Z NETWORK - IEC 61672-3 ED.2.0 CLAUSE 13	Passed	0.2
FREQUENCY AND TIME WEIGHTINGS AT 1 KHZ IEC 61672-3 ED.2.0 CLAUSE 14	Passed	0.2
LEVEL LINEARITY ON THE REFERENCE LEVEL RANGE - IEC 61672-3 ED.2 CLAUSE 16	Passed	0.25
LEVEL LINEARITY INCLUDING THE LEVEL RANGE CONTROL - IEC 61672-3 ED.2.0 CLAUSE 17	Passed	0.25
TONEBURST RESPONSE - IEC 61672-3 ED.2.0 CLAUSE 18	Passed	0.3
PEAK C SOUND LEVEL - IEC 61672-3 ED.2.0 CLAUSE 19	Passed	0.35
OVERLOAD INDICATION - IEC 61672-3 ED.2.0 CLAUSE 20	Passed	0.25
HIGH LEVEL STABILITY TEST - IEC 61672-3 ED.2.0 CLAUSE 21	Passed	0.1
LONG TERM STABILITY TEST - IEC 61672-3 ED.2.0 CLAUSE 15	Passed	0.1
FILTER TEST 1/OCTAVE: RELATIVE ATTENUATION - IEC 61260, CLAUSE 4.4 & #5.3	Passed	0.25
FILTER TEST 1/3OCTAVE: RELATIVE ATTENUATION - IEC 61260, CLAUSE 4.4 & #5.3	Passed	0.25
ACOUSTICAL TEST OF A FREQUENCY WEIGHTING - IEC 61672-3 ED.1 CLAUSE 11	Passed	See test report

1 The results of this calibration apply only to the instrument type with serial number identified in this report.

2 Parameters are certified at actual environmental conditions.

3 The tests marked with (*) are not covered by the current NVLAP accreditation.

Comments: The sound level meter submitted for testing has successfully completed the class 2 periodic tests of IEC 61672-3, for the environmental conditions under which the tests were performed. However, No general statement or conclusion can be made about conformance of the sound level meter to the full requirements of IEC 61672-1 because evidence was not publicly available, from an independent testing organization responsible for pattern approvals, to demonstrate that the model of sound level meter fully conforms to the requirements of IEC 61672-1:2002, and because the periodic tests of IEC 61672-3 cover only a limited subset of the specifications in IEC 61672-1.

Note: The instrument was tested for the parameters listed in the table above, using the test methods described in the listed standards. All tests were performed around the reference conditions. The test results were compared with the manufacturer's or with the standard's specifications, whichever are larger. Compliance with any standard cannot be claimed based solely on the periodic tests.

Tests made with the following attachments to the instrument:

Microphone: Svantek MI17 s/n 321 for acoustical test
Preamplifier: Svantek
Other: none
Accompanying acoustical calibrator: Svantek SV 30A s/n 7923
Windscreen: none

Measured Data: in Test Report # 37498 of 11 pages.

Place of Calibration: Scantek, Inc.
6430 Dobbin Road, Suite C
Columbia, MD 21045 USA

Ph/Fax: 410-290-7726/ -9167
callab@scantekinc.com

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6430 Dobbin Rd., Suite C, Columbia, MD 21045
Ph: 410-290-7726 eMail: callab@scantekinc.com

Test Report No.:37498

Manufacturer: Svantek
Instrument type: 943B
Serial no: 8365
Customer: Subsecretaria de Salud Publica
Department:
Order No:
Contact Person: Patricio Muñoz Anders
Address: calle Bueras N° 555, Rancagua

Environmental conditions:
Pressure: 100.25
Temperature: 22.5
Relative humidity: 40.7

Supervisor Steven E. Marshall
Engineer Jeremy Gotwalt
Date: 12/14/2016

Measurement Results:

Indication at the calibration check frequency - IEC61672-3 Ed.2 Clause 10

Reference Calibrator: WSC4 - NOR1251-30878
Reference calibrator level: 114.00
Before calibration:
 Environmental corrections: 0.00
 Other corrections: 0.00
 Notional level: 114.00
Reference calibrator level before calibration: 113.7
After calibration:
 Environmental corrections: 0.00
 Other corrections: 0.00
 Notional level: 114.00
Reference calibrator level after calibration: 114.0
Associated Calibrator: Svantek - SV 30A - 7923
Associated calibrator level: 114.07
Initial level check:
 Environmental corrections: 0.00
 Other corrections: 0.00
 Notional level: 114.07
Indicated level: 113.8
Final level statement:
 Environmental corrections after calibration: 0.00
 Other corrections: 0.00
 Notional level: 114.07
Indicated level after calibration: 114.1
This value shall be used for adjusting the sound level meter in the future.
Test Passed

Self-generated noise - IEC 61672-3 Ed.2 Clause 11

Network	Level (dB)	Max (dB)	Uncert. (dB)	Result	Comment
A	9.9	20.0	0.3	P	Equivalent capacity
C	9.9	26.0	0.3	P	Equivalent capacity
Test Passed					

Acoustical test of a frequency weighting - IEC 61672-3 Ed.2.0 Clause 12

A-Weighted results: free field response

Frequency	Response	Tol.	Uncert.	Result	
	(dB)	(dB)	(dB)		
125 Hz	0.1	1.5	-1.5	0.1	P
1 kHz	0.0	1.0	-1.0	0.1	P
4 kHz	2.2	3.0	-3.0	0.2	P
8 kHz	3.4	5.0	-5.0	0.4	P

Test Passed

The overall frequency response of the sound level meter and

Acoustical test of a frequency weighting - IEC 61672-3 Ed.2.0 Clause 12

microphone response has shown to conform with the requirements in IEC 61672-3 for a class 2 sound level meter.

Frequency response test using multi frequency calibrator.

Sources for correction data:

Calibrator levels and uncertainty: Scantek - SCL

Microphone field corrections and uncertainty:

Case reflections and uncertainty:

Wind screen corrections and uncertainty:

Tabular information

Calibrator = WSC4 at 94dB

txtMFCL125 = 94.07

txtMFCLU125 = 0.11

txtSU125 = 0.20

txtM125_1 = 78.4

txtM125_2 = 78.4

txtM125_3 = 78.4

txtMFCL1k = 94.07

txtMFCLU1k = 0.11

txtSU1k = 0.15

txtM1k_1 = 94.4

txtM1k_2 = 94.4

txtM1k_3 = 94.4

txtMFCL4k = 94.02

txtMFCLU4k = 0.11

txtSU4k = 0.40

txtM4k_1 = 96.6

txtM4k_2 = 96.6

txtM4k_3 = 96.6

txtMFCL8k = 93.88

txtMFCLU8k = 0.14

txtSU8k = 0.50

txtM8k_1 = 93.2

txtM8k_2 = 93.2

txtM8k_3 = 93.2

txtSLM125 = 78.4

txtNC125 = 16.1

txtSLMU125 = 0.1

txtMic125 = 0.0

txtMicU125 = 0.05

txtCR125 =

txtCRU125 =

txtWS125 =

txtWSU125 =

txtSLM1k = 94.4

txtNC1k = 0

txtSLMU1k = 0.1

txtMFCL1k = 94.07

txtMFCLU1k = 0.11

txtMic1k = 0.0

txtMicU1k = 0.1

txtCR1k =

txtCRU1k =

txtWS1k =

txtWSU1k =

txtSLM4k = 96.6

txtNC4k = -1.0

txtSLMU4k = 0.1

txtMFCL4k = 94.02

txtMFCLU4k = 0.11

txtMic4k = 0.97
txtMicU4k = 0.2
txtCR4k =
txtCRU4k =
txtWS4k =
txtWSU4k =
txtSLM8k = 93.2
txtNC8k = 1.1
txtSLMU8k = 0.1
txtMFCL8k = 93.88
txtMFCLU8k = 0.14
txtMic8k = 3.3
txtMicU8k = 0.4
txtCR8k =
txtCRU8k =
txtWS8k =
txtWSU8k =

Frequency weightings: A Network - IEC 61672-3 Ed.2.0 Clause 13

Freq	Ref.	Meas.	Tol.		Uncert.	Dev.	Result
(Hz)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	
63.1	92.0	92.1	2.0	-2.0	0.2	0.1	P
125.9	92.0	92.0	1.5	-1.5	0.2	0.0	P
251.2	92.0	92.0	1.5	-1.5	0.2	0.0	P
501.2	92.0	92.0	1.5	-1.5	0.2	0.0	P
1000.0	92.0	92.0	1.0	-1.0	0.2	0.0	P
1995.3	92.0	92.0	2.0	-2.0	0.2	0.0	P
3981.1	92.0	92.0	3.0	-3.0	0.2	0.0	P
7943.3	92.0	92.2	5.0	-5.0	0.2	0.2	P
Test Passed							

Frequency weightings: C Network - IEC 61672-3 Ed.2.0 Clause 13

Freq	Ref.	Meas.	Tol.		Uncert.	Dev.	Result
(Hz)	Level (dB)	Value (dB)	(dB)	(dB)	(dB)	(dB)	
63.1	92.0	92.1	2.0	-2.0	0.2	0.1	P
125.9	92.0	92.1	1.5	-1.5	0.2	0.1	P
251.2	92.0	92.0	1.5	-1.5	0.2	0.0	P
501.2	92.0	92.1	1.5	-1.5	0.2	0.1	P
1000.0	92.0	92.0	1.0	-1.0	0.2	0.0	P
1995.3	92.0	92.0	2.0	-2.0	0.2	0.0	P
3981.1	92.0	92.1	3.0	-3.0	0.2	0.1	P
7943.3	92.0	92.2	5.0	-5.0	0.2	0.2	P
Test Passed							

Frequency weightings: Z Network - IEC 61672-3 Ed.2.0 Clause 13

Freq	Ref.	Meas.	Tol.		Uncert.	Dev.	Result
(Hz)	Level	Value	(dB)	(dB)	(dB)	(dB)	
63.1	92.0	92.1	2.0	-2.0	0.2	0.1	P
125.9	92.0	92.1	1.5	-1.5	0.2	0.1	P
251.2	92.0	92.0	1.5	-1.5	0.2	0.0	P
501.2	92.0	92.0	1.5	-1.5	0.2	0.0	P
1000.0	92.0	92.0	1.0	-1.0	0.2	0.0	P
1995.3	92.0	92.0	2.0	-2.0	0.2	0.0	P
3981.1	92.0	92.0	3.0	-3.0	0.2	0.0	P
7943.3	92.0	92.0	5.0	-5.0	0.2	0.0	P
Test Passed							

Frequency and time weightings at 1 kHz IEC 61672-3 Ed.2.0 Clause 14

Weightings		Ref.	Measured	Tol.		Uncert.	Dev.	Result
Time	Netw	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	
Fast	A	94.0	94.0	0.1	-0.1	0.2	0.0	P
Fast	C	94.0	94.0	0.1	-0.1	0.2	0.0	P
Fast	Z	94.0	94.0	0.1	-0.1	0.2	0.0	P
Fast	Flat	94.0	94.0	0.1	-0.1	0.2	0.0	P
Slow	A	94.0	94.0	0.1	-0.1	0.2	0.0	P
Leq	A	94.0	94.0	0.1	-0.1	0.2	0.0	P
SEL	A	104.0	104.0	0.1	-0.1	0.2	0.0	P
Test Passed								

Level linearity on the reference level range - IEC 61672-3 Ed.2 Clause 16

Ref.	Measured	Tol.		Uncert.	Dev.	Result
(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	
Full scale setting: 130dB						
The following measurements are SPL measurements						
Measured at 31.5 Hz						
84.0	84.0	1.1	-1.1	0.25	0.0	P
89.0	89.0	1.1	-1.1	0.25	0.0	P
93.6	93.6	1.1	-1.1	0.25	0.0	P
94.6	94.6	1.1	-1.1	0.25	0.0	P
95.6	95.6	1.1	-1.1	0.25	0.0	P
96.6	96.6	1.1	-1.1	0.25	0.0	P
97.6	97.6	1.1	-1.1	0.25	0.0	P
84.0	84.0	1.1	-1.1	0.25	0.0	P
79.0	79.0	1.1	-1.1	0.25	0.0	P
74.0	74.0	1.1	-1.1	0.25	0.0	P
69.0	69.0	1.1	-1.1	0.25	0.0	P
64.0	64.0	1.1	-1.1	0.25	0.0	P
59.0	59.0	1.1	-1.1	0.25	0.0	P
54.0	54.0	1.1	-1.1	0.25	0.0	P
51.0	50.9	1.1	-1.1	0.25	-0.1	P
50.0	49.9	1.1	-1.1	0.25	-0.1	P
49.0	48.9	1.1	-1.1	0.25	-0.1	P
48.0	47.9	1.1	-1.1	0.25	-0.1	P

Level linearity on the reference level range - IEC 61672-3 Ed.2 Clause 16

Level linearity on the reference level						
Ref. (dB)	Measured (dB)	Tol. (dB)	Uncert. (dB)	Dev. (dB)	Result	
47.0	46.8	1.1	-1.1	0.25	-0.2	P
Measured at 1 kHz						
94.0	94.0	1.1	-1.1	0.25	0.0	P
99.0	98.9	1.1	-1.1	0.25	-0.1	P
104.0	103.9	1.1	-1.1	0.25	-0.1	P
109.0	108.9	1.1	-1.1	0.25	-0.1	P
114.0	113.9	1.1	-1.1	0.25	-0.1	P
119.0	118.9	1.1	-1.1	0.25	-0.1	P
124.0	123.9	1.1	-1.1	0.25	-0.1	P
129.0	128.9	1.1	-1.1	0.25	-0.1	P
133.0	132.9	1.1	-1.1	0.25	-0.1	P
134.0	133.9	1.1	-1.1	0.25	-0.1	P
135.0	134.9	1.1	-1.1	0.25	-0.1	P
136.0	135.9	1.1	-1.1	0.25	-0.1	P
137.0	137.0	1.1	-1.1	0.25	0.0	P
94.0	94.0	1.1	-1.1	0.25	0.0	P
89.0	88.9	1.1	-1.1	0.25	-0.1	P
84.0	83.9	1.1	-1.1	0.25	-0.1	P
79.0	78.9	1.1	-1.1	0.25	-0.1	P
74.0	73.9	1.1	-1.1	0.25	-0.1	P
69.0	68.9	1.1	-1.1	0.25	-0.1	P
64.0	63.9	1.1	-1.1	0.25	-0.1	P
59.0	58.9	1.1	-1.1	0.25	-0.1	P
54.0	53.9	1.1	-1.1	0.25	-0.1	P
51.0	50.8	1.1	-1.1	0.25	-0.2	P
50.0	49.8	1.1	-1.1	0.25	-0.2	P
49.0	48.7	1.1	-1.1	0.25	-0.3	P
48.0	47.7	1.1	-1.1	0.25	-0.3	P
47.0	46.7	1.1	-1.1	0.25	-0.3	P
Measured at 8 kHz						
94.0	94.0	1.1	-1.1	0.25	0.0	P
99.0	99.0	1.1	-1.1	0.25	0.0	P
104.0	103.9	1.1	-1.1	0.25	-0.1	P
109.0	109.0	1.1	-1.1	0.25	0.0	P
114.0	114.0	1.1	-1.1	0.25	0.0	P
119.0	119.0	1.1	-1.1	0.25	0.0	P
124.0	124.0	1.1	-1.1	0.25	0.0	P
129.0	129.0	1.1	-1.1	0.25	0.0	P
131.9	131.9	1.1	-1.1	0.25	0.0	P
132.9	132.9	1.1	-1.1	0.25	0.0	P
133.9	133.9	1.1	-1.1	0.25	0.0	P
134.9	134.9	1.1	-1.1	0.25	0.0	P
135.9	135.9	1.1	-1.1	0.25	0.0	P
94.0	94.0	1.1	-1.1	0.25	0.0	P
89.0	89.0	1.1	-1.1	0.25	0.0	P
84.0	84.0	1.1	-1.1	0.25	0.0	P
79.0	78.9	1.1	-1.1	0.25	-0.1	P
74.0	74.0	1.1	-1.1	0.25	0.0	P
69.0	69.0	1.1	-1.1	0.25	0.0	P
64.0	64.0	1.1	-1.1	0.25	0.0	P
59.0	59.0	1.1	-1.1	0.25	0.0	P
54.0	54.0	1.1	-1.1	0.25	0.0	P
51.0	51.1	1.1	-1.1	0.25	0.1	P
50.0	50.1	1.1	-1.1	0.25	0.1	P
49.0	49.1	1.1	-1.1	0.25	0.1	P
48.0	48.1	1.1	-1.1	0.25	0.1	P
47.0	47.1	1.1	-1.1	0.25	0.1	P

Level linearity on the reference level range - IEC 61672-3 Ed.2 Clause 16

Ref.	Measured	Tol.	Uncert.	Dev.	Result
(dB)	(dB)	(dB)	(dB)	(dB)	

Test Passed

Level linearity including the level range control - IEC 61672-3 Ed.2.0 Clause 17

Full Scale	Ref.	Measured	Tol.	Uncert.	Dev.	Result
(dB)	Value	Value	Value	(dB)	(dB)	
	(dB)	(dB)	(dB)			

Measured at 1 kHz

The following measurements are SPL measurements

Measuring the reference level on the available ranges.

130	94.0	94.0	1.1	0.25	0.0	P
105	94.0	93.9	1.1	0.25	-0.1	P

Measuring 5 dB below full scale on all available ranges.

130	125.0	124.9	1.1	0.25	-0.1	P
105	100.0	99.9	1.1	0.25	-0.1	P

Test Passed

Toneburst response - IEC 61672-3 Ed.2.0 Clause 18

Burst type	Ref.	Measured	Tol.	Uncert.	Dev.	Result
	(dB)	(dB)	(dB)	(dB)	(dB)	
Fast 200 mSec	134.0	134.0	1.0	-1.0	0.3	0.0 P
Fast 2.0 mSec	117.0	117.0	1.0	-2.5	0.3	0.0 P
Fast 0.25 mSec	108.0	107.9	1.5	-5.0	0.3	-0.1 P
Slow 200 mSec	127.6	127.6	1.0	-1.0	0.3	0.0 P
Slow 2.0 mSec	108.0	108.0	1.0	-5.0	0.3	0.0 P
SEL 200 mSec	128.0	128.0	1.0	-1.0	0.3	0.0 P
SEL 2.0 mSec	108.0	108.0	1.0	-2.5	0.3	0.0 P
SEL 0.25 mSec	99.0	98.9	1.8	-5.0	0.3	-0.1 P

Test Passed

Peak C sound level - IEC 61672-3 Ed.2.0 Clause 19

Pulse Type	Pulse Freq.	Ref. RMS	Ref. Peak	Measured Value	Tol.	Uncert.	Dev.	Result
	(Hz)	(dB)	(dB)	(dB)	(+/-dB)	(dB)	(dB)	
1 cycle	8k	126.0	129.4	129.3	3.0	0.35	-0.1	P
Pos 1/2 cycle	500	129.0	131.4	130.9	2.0	0.35	-0.5	P
Neg 1/2 cycle	500	129.0	131.4	130.9	2.0	0.35	-0.5	P

Test Passed

Overload indication - IEC 61672-3 Ed.2.0 Clause 20

	Measured (dB)	Tol. (+/-dB)	Uncert. (dB)	Result
Level difference of positive and negative pulses:	0.0	1.5	0.25	P
Positive 1/2 cycle 4 kHz. Overload occurred at:	138.6			
Negative 1/2 cycle 4 kHz. Overload occurred at:	138.6			
Test Passed				

High level stability test - IEC 61672-3 Ed.2.0 Clause 21

Test signal:	Sine wave at 1 kHz				
Initial level	Final level	Diff.	Tol. value	Uncert.	Result
(dB)	(dB)	(dB)	(dB)	(dB)	
136.0	136.0	0.0	0.3	0.1	P
Test Passed					

Long term stability test - IEC 61672-3 Ed.2.0 Clause 15

Test signal:	Sine wave at 1 kHz				
Time interval	StartLevel	StopLevel	Difference	Tolerance	Result
(mm:SS)	(dB)	(dB)	(dB)	(dB)	
26:05	94.0	94.0	0.0	0.3	P
Test Passed					

Filter Test 1/1octave: Relative attenuation - IEC 61260, Clause 4.4 & #5.3

Test 1/1 octave filter X= 3 fexact=8000.000Hz class 1				
Nominal	Measured	LoLim	HiLim	Result
f[Hz]	L[dB]	[dB]	[dB]	[P/F]
500.000	14.7	0.0	58.0	P
1000.00	14.7	0.0	67.0	P
2000.00	59.6	0.0	86.0	P
4000.00	100.5	0.0	110.5	P
5656.85	125.0	123.0	126.0	P
6168.84	127.6	126.7	128.3	P
6727.17	128.0	127.4	128.3	P
7336.03	128.0	127.6	128.3	P
8000.00	128.0	127.7	128.3	P
8724.06	128.0	127.6	128.3	P
9513.66	128.0	127.4	128.3	P
10374.7	127.6	126.7	128.3	P
11313.7	125.0	123.0	126.0	P
16000.0	87.5	0.0	110.5	P
32000.0	29.1	0.0	86.0	P
64000.0	31.6	0.0	67.0	P
128000	19.6	0.0	58.0	P
Test 1/1 octave filter X= 4 fexact=16000.000Hz class 1				
Nominal	Measured	LoLim	HiLim	Result

Filter Test 1/1octave: Relative attenuation - IEC 61260, Clause 4.4 & #5.3

f[Hz]	L[dB]	[dB]	[dB]	[P/F]
1000.00	14.7	0.0	58.0	P
2000.00	14.7	0.0	67.0	P
4000.00	51.8	0.0	86.0	P
8000.00	94.9	0.0	110.5	P
11313.7	125.0	123.0	126.0	P
12337.7	127.9	126.7	128.3	P
13454.3	128.0	127.4	128.3	P
14672.1	128.0	127.6	128.3	P
16000.0	128.0	127.7	128.3	P
17448.1	128.0	127.6	128.3	P
19027.3	128.0	127.4	128.3	P
20749.4	128.0	126.7	128.3	P
22627.4	125.3	123.0	126.0	P
32000.0	54.5	0.0	110.5	P
64000.0	23.2	0.0	86.0	P
128000	14.7	0.0	67.0	P
200000	34.3	0.0	58.0	P

Test Passed

Filter Test 1/3octave: Relative attenuation - IEC 61260, Clause 4.4 & #5.3

Test 1/3 octave filter X= 12 fexact=16000.000Hz class 1

Nominal	Measured	LoLim	HiLim	Result
f[Hz]	L[dB]	[dB]	[dB]	[P/F]
2944.02	42.1	0.0	58.0	P
5212.50	66.2	0.0	67.0	P
8479.30	84.5	0.0	86.0	P
12349.0	106.8	0.0	110.5	P
14254.4	125.0	123.0	126.0	P
14709.1	127.7	126.7	128.3	P
15152.4	127.9	127.4	128.3	P
15583.0	127.9	127.6	128.3	P
16000.0	128.0	127.7	128.3	P
16428.1	127.9	127.6	128.3	P
16895.0	127.9	127.4	128.3	P
17404.2	128.0	126.7	128.3	P
17959.4	125.0	123.0	126.0	P
20730.4	88.9	0.0	110.5	P
30191.2	34.7	0.0	86.0	P
49112.7	28.6	0.0	67.0	P
86955.9	14.7	0.0	58.0	P

Test 1/3 octave filter X= 13 fexact=20158.737Hz class 1

Nominal	Measured	LoLim	HiLim	Result
f[Hz]	L[dB]	[dB]	[dB]	[P/F]
3709.24	30.9	0.0	58.0	P
6567.33	43.5	0.0	67.0	P
10683.2	54.8	0.0	86.0	P
15558.8	94.4	0.0	110.5	P
17959.4	125.0	123.0	126.0	P
18532.3	127.9	126.7	128.3	P
19090.8	128.0	127.4	128.3	P
19633.4	128.0	127.6	128.3	P
20158.7	128.0	127.7	128.3	P
20698.2	128.0	127.6	128.3	P
21286.4	127.8	127.4	128.3	P

Filter Test 1/3octave: Relative attenuation - IEC 61260, Clause 4.4 & #5.3

21927.9	127.5	126.7	128.3	P
22627.4	125.3	123.0	126.0	P
26118.7	68.0	0.0	110.5	P
38038.5	35.4	0.0	86.0	P
61878.2	30.9	0.0	67.0	P
109558	32.2	0.0	58.0	P

Test Passed
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