

REPORTE TÉCNICO DECRETO SUPREMO N°38/11 DEL MINISTERIO DEL MEDIO AMBIENTE

Establece Norma de Emisión de Ruidos Generados por Fuentes que Indica

FICHA DE INFORMACIÓN DE MEDICIÓN DE RUIDO

IDENTIFICACIÓN DE LA FUENTE EMISORA DE RUIDO

| | | | |
|---|--|-----------------|-------------|
| Nombre o razón social | Kurt Schmidt Ruiz, Prima Bar | | |
| RUT | 15.364.363-6 | | |
| Dirección | General Flores 51 | | |
| Comuna | Providencia | | |
| Nombre de Zona de emplazamiento (según IPT vigente) | UpEC, Uso preferentemente Equipamiento Comercial | | |
| Datum | WGS84 | Huso | 19S |
| Coordenada Norte | 6300165.45 m | Coordenada Este | 349509.36 m |

CARACTERIZACIÓN DE LA FUENTE EMISORA DE RUIDO

| | | | | |
|----------------------------|--|---|--|--|
| Actividad Productiva | <input type="checkbox"/> Industrial | <input type="checkbox"/> Agrícola | <input type="checkbox"/> Extracción | <input type="checkbox"/> Otro |
| Actividad Comercial | <input checked="" type="checkbox"/> Restaurant | <input type="checkbox"/> Taller Mecánico | <input type="checkbox"/> Local Comercial | <input checked="" type="checkbox"/> Otro |
| Actividad Esparcimiento | <input type="checkbox"/> Discoteca | <input type="checkbox"/> Recinto Deportivo | <input type="checkbox"/> Cultura | <input type="checkbox"/> Otro |
| Actividad de Servicio | <input type="checkbox"/> Religioso | <input type="checkbox"/> Salud | <input type="checkbox"/> Comunitario | <input type="checkbox"/> Otro |
| Infraestructura Transporte | <input type="checkbox"/> Terminal | <input type="checkbox"/> Taller de Transporte | <input type="checkbox"/> Estación Intermedia | <input type="checkbox"/> Otro |
| Infraestructura Sanitaria | <input type="checkbox"/> Planta de Tratamiento | <input type="checkbox"/> Relleno Sanitario | <input type="checkbox"/> Instalación de | <input type="checkbox"/> Otro |
| Infraestructura Energética | <input type="checkbox"/> Generadora | <input type="checkbox"/> Distribución Eléctrica | <input type="checkbox"/> Comunicaciones | <input type="checkbox"/> Otro |
| Faena Constructiva | <input type="checkbox"/> Construcción | <input type="checkbox"/> Demolición | <input type="checkbox"/> Reparación | <input type="checkbox"/> Otro |
| Otro (Especificar) | Extractor de restaurante nocturno | | | |

INSTRUMENTAL DE MEDICIÓN

| Identificación sonómetro | | | | | |
|--|--|--------|-----------------------------|----------|-------|
| Marca | Larson Davis | Modelo | LxT1 | N° serie | 5526 |
| Fecha de emisión Certificado de Calibración | | | 17.01.2018 | | |
| Número de Certificado de Calibración | | | SON20170088 | | |
| Identificación calibrador | | | | | |
| Marca | Larson Davis | Modelo | CAL200 | N° serie | 15291 |
| Fecha de emisión Certificado de Calibración | | | 21.12.2017 | | |
| Número de Certificado de Calibración | | | 2018000669 - 2018000666 | | |
| Ponderación en frecuencia | Filtro A | | Ponderación temporal | Slow | |
| Verificación de Calibración en Terreno | <input checked="" type="checkbox"/> Si | | <input type="checkbox"/> No | | |
| Se deberá adjuntar Certificado de Calibración Periódica Vigente para ambos instrumentos. | | | | | |

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FICHA DE INFORMACIÓN DE MEDICIÓN DE RUIDO


IDENTIFICACIÓN DEL RECEPTOR

| | | | | |
|---|--|-----------------------------|---|--------------------------------|
| Receptor N°1 | Silvia Arismenia De Lourdes Salinas Bruna | | | |
| Rut | 10.116.303-2 | | | |
| Calle | Cirujano Guzmán | | | |
| Número | 70, depto. 608 | | | |
| Comuna | Providencia | | | |
| Fono | 977665945 | | | |
| E-Mail | silviasalinasb@gmail.com | | | |
| Datum | WGS84 | Huso | 19 S | |
| Coordenada Norte | 6300179.48 m | Coordenada Este | 349525.38 m | |
| Nombre de Zona de emplazamiento | UpEC, Uso preferentemente Equipamiento Comercial | | | |
| N° de Certificado de Informaciones Previas* | | | | |
| Zonificación DS N° 38/11 MMA | <input type="checkbox"/> I | <input type="checkbox"/> II | <input checked="" type="checkbox"/> III | <input type="checkbox"/> IV |
| | | | | <input type="checkbox"/> Rural |

* Adjuntar Certificado de Informaciones Previas (Si corresponde, según consideraciones de Art. 8°, D.S. N° 38/11 MMA)

CONDICIONES DE MEDICIÓN

| | | | | |
|--|---|--|----|-------------------------------|
| Fecha medición | 17.08.18 | | | |
| Hora inicio medición | 23:30 hrs. | | | |
| Hora término medición | 23:45 hrs | | | |
| Periodo de medición | <input type="checkbox"/> 7:00 a 21:00 h | <input checked="" type="checkbox"/> 21:00 a 7:00 h | | |
| Lugar de medición | <input type="checkbox"/> Medición Interna | <input checked="" type="checkbox"/> Medición Externa | | |
| Descripción del lugar de medición | Balcón de dpto. de reclamante | | | |
| Condiciones de ventana (en caso de medición interna) | <input type="checkbox"/> Ventana Abierta | <input type="checkbox"/> Ventana Cerrada | | |
| Identificación ruido de fondo | Tránsito moderado | | | |
| Temperatura [°C] | 8 | Humedad [%] | 55 | Velocidad de viento [m/s] 1,7 |

| | | |
|--|--|--|
| Nombre y firma Inspector Ambiental (IA) | Daniel Arenas González Ingeniero de Ejecución en Sonido |  |
| Entidad Técnica de Fiscalización Ambiental | Municipalidad de Providencia | |

Nota:

- Se deberá imprimir y completar esta página para cada receptor evaluado.
- Se podrán incluir fotografías del punto donde se ubique el sonómetro para la realización de la medición.
- Los datos de Temperatura, Humedad Relativa y Velocidad de viento, corresponderá para mediciones realizadas en el exterior.

FICHA DE GEORREFERENCIACIÓN DE MEDICIÓN DE RUIDO

Croquis

Imagen Satelital



Origen de la imagen Satelital

Google Earth

Escala de la imagen Satelital

LEYENDA DE CROQUIS O IMAGEN UTILIZADA

| Datum | | WGS84 | | Huso | | 19 S | |
|---------|-----------|-------------|--------------|------------|------------------------|-------------|--------------|
| Fuentes | | | | Receptores | | | |
| Símbolo | Nombre | Coordenadas | | Símbolo | Nombre | Coordenadas | |
| E | Extractor | N | 6300165.45 m | R | Edificio de reclamante | N | 6300179.48 m |
| | | E | 349509.36 m | | | E | 349525.38 m |
| | | N | | | | N | |
| | | E | | | | E | |
| | | N | | | | N | |
| | | E | | | | E | |
| | | N | | | | N | |
| | | E | | | | E | |

Se podrán adjuntar fotografías, considerando como máximo una (1) por fuente y dos (2) por lugar de medición.

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FICHA DE MEDICIÓN DE NIVELES DE RUIDO

REGISTRO DE MEDICIÓN DE RUIDO DE FUENTE EMISORA

| | |
|---|---|
| Identificación Receptor N° | 1 |
| <input type="checkbox"/> Medición Interna (tres puntos) | <input checked="" type="checkbox"/> Medición externa (un punto) |

| | NPSeq | NPSmin | NPSmáx |
|---------|-------|--------|--------|
| Punto 1 | 57,5 | 56,2 | 59,1 |
| | 58,4 | 56,1 | 61,8 |
| | 58,2 | 56,5 | 60,2 |

| | NPSeq | NPSmin | NPSmáx |
|---------|-------|--------|--------|
| Punto 2 | | | |
| | | | |
| | | | |

| | NPSeq | NPSmin | NPSmáx |
|---------|-------|--------|--------|
| Punto 3 | | | |
| | | | |
| | | | |

REGISTRO DE RUIDO DE FONDO

| | | |
|-----------------------------------|--|-----------------------------|
| Ruido de fondo afecta la medición | <input checked="" type="checkbox"/> Si | <input type="checkbox"/> No |
| Fecha: | 18.08.18 | Hora: 00:00 hrs |

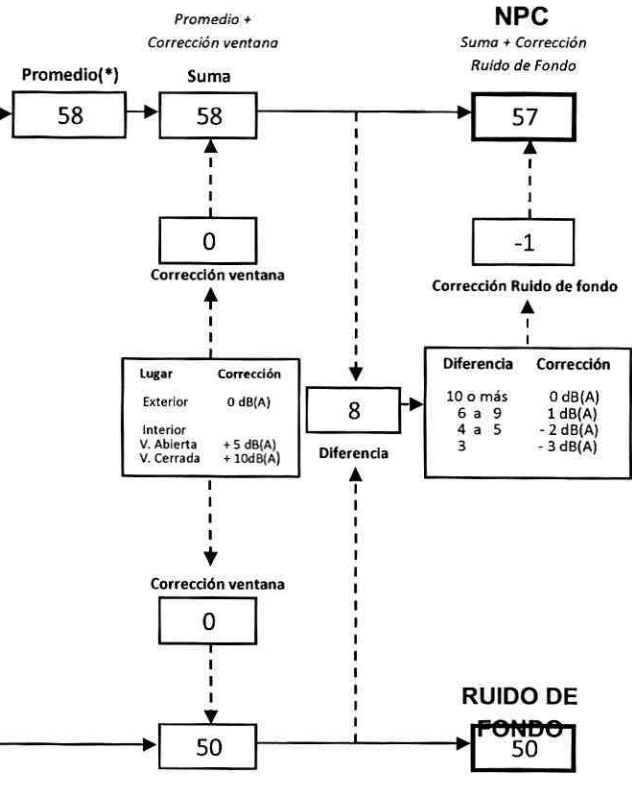
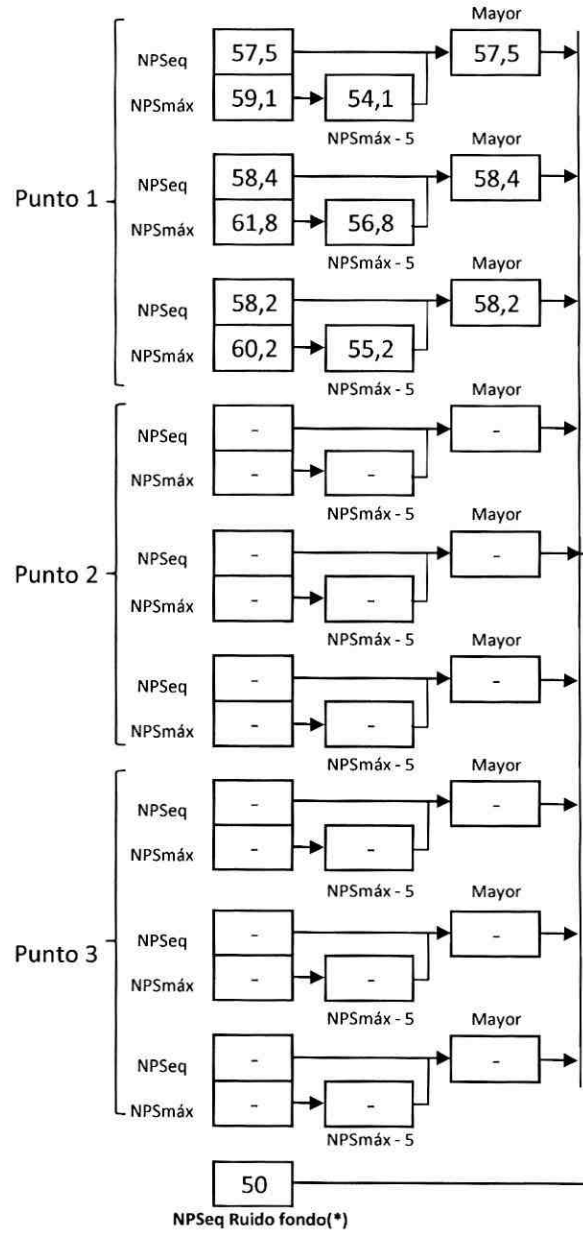
| | 5' | 10' | 15' | 20' | 25' |
|-------|----|-----|-----|-----|-----|
| NPSeq | 51 | 50 | | | |

Observaciones:

| |
|--|
| |
| |
| |

FICHA DE EVALUACIÓN DE NIVELES DE RUIDO

| Información del Receptor | |
|--------------------------------|-----------|
| Identificación del Receptor N° | 1 |
| Indicar Condiciones | |
| Medición | Exterior |
| Ventana | No Aplica |
| Modelación ISO 9613 | |
| No | |



| Lugar | Corrección |
|------------|------------|
| Exterior | 0 dB(A) |
| Interior | + 5 dB(A) |
| V. Abierta | + 5 dB(A) |
| V. Cerrada | + 10dB(A) |

| Diferencia | Corrección |
|------------|------------|
| 10 o más | 0 dB(A) |
| 6 a 9 | 1 dB(A) |
| 4 a 5 | - 2 dB(A) |
| 3 | - 3 dB(A) |

(*) Aproximar a números enteros

Calibration Certificate

Certificate Number 2018000669

Customer:
Sistemas De Instrumentacion
Concha Y Toro NO 65
Santiago-Centro
Santiago, Chile

| | | | |
|--------------------------|---|-------------------------|----------------------|
| Model Number | LxT1 | Procedure Number | D0001.8384 |
| Serial Number | 0005526 | Technician | Ron Harris |
| Test Results | Pass | Calibration Date | 17 Jan 2018 |
| Initial Condition | As Manufactured | Calibration Due | 17 Jan 2020 |
| Description | SoundTrack LxT Class 1 Class 1 Sound Level Meter Firmware Revision: 2.302 | Temperature | 23.33 °C ± 0.25 °C |
| | | Humidity | 50.7 %RH ± 2.0 %RH |
| | | Static Pressure | 87.08 kPa ± 0.13 kPa |

Evaluation Method **Tested with:** **Data reported in dB re 20 µPa.**

Larson Davis PRMLxT1, S/N 046806
PCB 377B02, S/N 177005
Larson Davis CAL200, S/N 9079
Larson Davis CAL291, S/N 0203

Compliance Standards Compliant to Manufacturer Specifications and the following standards when combined with Calibration Certificate from procedure D0001.8378:

| | |
|------------------------|----------------------------|
| IEC 60651:2001 Type 1 | ANSI S1.4-2014 Class 1 |
| IEC 60804:2000 Type 1 | ANSI S1.4 (R2006) Type 1 |
| IEC 61252:2002 | ANSI S1.11 (R2009) Class 1 |
| IEC 61260:2001 Class 1 | ANSI S1.25 (R2007) |
| IEC 61672:2013 Class 1 | ANSI S1.43 (R2007) Type 1 |

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the International System of Units (SI) through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005.

Test points marked with a \$ in the uncertainties column do not fall within this laboratory's scope of accreditation.

The quality system is registered to ISO 9001:2008.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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Correction data from Larson Davis LxT Manual for SoundTrack LxT & SoundExpert LxT, I770.01 Rev J Supporting Firmware Version 2.301, 2015-04-30

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Provo, UT 84601, United States
716-684-0001



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D0001.8406 Rev B

2018-1-17716 43 36

Certificate Number 2018000669

For 1/4" microphones, the Larson Davis ADP024 1/4" to 1/2" adaptor is used with the calibrators and the Larson Davis ADP043 1/4" to 1/2" adaptor is used with the preamplifier.

Calibration Check Frequency: 1000 Hz; Reference Sound Pressure Level: 114 dB re 20 µPa

Periodic tests were performed in accordance with procedures from IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3.

Pattern approval for IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1 successfully completed by Physikalisch-Technische Bundesanstalt (PTB) on 2007-10-09 reference number PTB-1.72-4034218.

The sound level meter submitted for testing successfully completed the periodic tests of IEC 61672-3:2013 / ANSI/ASA S1.4-2014/Part 3, for the environmental conditions under which the tests were performed. As evidence was publicly available, from an independent testing organization responsible for approving the results of pattern-evaluation tests performed in accordance with IEC 61672-2:2013 / ANSI/ASA S1.4-2014/Part 2, to demonstrate that the model of sound level meter fully conformed to the class 1 specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1; the sound level meter submitted for testing conforms to the class 1 specifications in IEC 61672-1:2013 / ANSI/ASA S1.4-2014/Part 1.

Standards Used

| Description | Cal Date | Cal Due | Cal Standard |
|--|------------|------------|--------------|
| SRS DS360 Ultra Low Distortion Generator | 2017-06-23 | 2018-06-23 | 006311 |
| Hart Scientific 2626-S Humidity/Temperature Sensor | 2017-06-11 | 2018-06-11 | 006943 |
| Larson Davis CAL200 Acoustic Calibrator | 2017-07-25 | 2018-07-25 | 007027 |
| Larson Davis Model 831 | 2017-03-01 | 2018-03-01 | 007182 |
| PCB 377A13 1/2 inch Prepolarized Pressure Microphone | 2017-03-08 | 2018-03-08 | 007185 |
| Larson Davis CAL291 Residual Intensity Calibrator | 2017-09-19 | 2018-09-19 | 007287 |

Acoustic Calibration

Measured according to IEC 61672-3:2013 10 and ANSI S1.4-2014 Part 3: 10

| Measurement | Test Result [dB] | Lower Limit [dB] | Upper Limit [dB] | Expanded Uncertainty [dB] | Result |
|-------------|------------------|------------------|------------------|---------------------------|--------|
| 1000 Hz | 114.00 | 113.80 | 114.20 | 0.14 | Pass |

Acoustic Signal Tests, C-weighting

Measured according to IEC 61672-3:2013 12 and ANSI S1.4-2014 Part 3: 12 using a comparison coupler with Unit Under Test (UUT) and reference SLM using slow time-weighted sound level for compliance to IEC 61672-1:2013 5.5; ANSI S1.4-2014 Part 1: 5.5

| Frequency [Hz] | Test Result [dB] | Expected [dB] | Lower Limit [dB] | Upper Limit [dB] | Expanded Uncertainty [dB] | Result |
|----------------|------------------|---------------|------------------|------------------|---------------------------|--------|
| 125 | -0.22 | -0.20 | -1.20 | 0.80 | 0.23 | Pass |
| 1000 | 0.18 | 0.00 | -0.70 | 0.70 | 0.23 | Pass |
| 8000 | -2.61 | -3.00 | -5.50 | -1.50 | 0.32 | Pass |

-- End of measurement results--

Self-generated Noise

Measured according to IEC 61672-3:2013 11.1 and ANSI S1.4-2014 Part 3: 11.1

| Measurement | Test Result [dB] |
|-------------|------------------|
| A-weighted | 40.63 |

-- End of measurement results--

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Calibration Certificate

Certificate Number 2017013480

Customer:
Sistemas De Instrumentacion
Concha Y Torre NO 65
Santiago-Centre
Santiago, Chile

Model Number CAL200
Serial Number 15291
Test Results PASS
Initial Condition As Manufactured
Description Larson Davis CAL200 Acoustic Calibrator

Procedure Number D0001.8386
Technician Scott Montgomery
Calibration Date 21 Dec 2017
Calibration Due 21 Dec 2019
Temperature 22 °C ± 0.3 °C
Humidity 32 %RH ± 3 %RH
Static Pressure 101.3 kPa ± 1 kPa

Evaluation Method The data is acquired by the insert voltage calibration method using the reference microphone's open circuit sensitivity. Data reported in dB re 20 µPa.

Compliance Standards Compliant to Manufacturer Specifications per D0001.8190 and the following standards:
IEC 60942:2003 ANSI S1.40-2006

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the SI through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005. Test points marked with a ‡ in the uncertainties column do not fall within this laboratory's scope of accreditation.

The quality system is registered to ISO 9001:2008.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

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Standards Used

| Description | Cal Date | Cal Due | Cal Standard |
|--|------------|------------|--------------|
| Agilent 34401A DMM | 09/06/2017 | 09/06/2018 | 001021 |
| Larson Davis Model 2900 Real Time Analyzer | 04/10/2017 | 04/10/2018 | 001051 |
| Microphone Calibration System | 08/08/2017 | 08/08/2018 | 005446 |
| 1/2" Preamplifier | 10/05/2017 | 10/05/2018 | 006506 |
| Larson Davis 1/2" Preamplifier 7-pin LEMO | 08/08/2017 | 08/08/2018 | 006507 |
| 1/2 inch Microphone - RI - 200V | 04/24/2017 | 04/24/2018 | 006510 |
| Pressure Transducer | 06/01/2017 | 06/01/2018 | 007310 |

— End of Report—

Signatory: Ron Harris

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Certificate Number 2017013480

Output Level

| Nominal Level [dB] | Pressure [kPa] | Test Result [dB] | Lower limit [dB] | Upper limit [dB] | Expanded Uncertainty [dB] | Result |
|--------------------|----------------|------------------|------------------|------------------|---------------------------|--------|
| 114 | 101.3 | 114.00 | 113.80 | 114.20 | 0.13 | Pass |
| 94 | 101.3 | 94.01 | 93.80 | 94.20 | 0.14 | Pass |

-- End of measurement results--

Frequency

| Nominal Level [dB] | Pressure [kPa] | Test Result [Hz] | Lower limit [Hz] | Upper limit [Hz] | Expanded Uncertainty [Hz] | Result |
|--------------------|----------------|------------------|------------------|------------------|---------------------------|--------|
| 94 | 101.3 | 1,000.10 | 990.00 | 1,010.00 | 0.20 | Pass |
| 114 | 101.3 | 1,000.09 | 990.00 | 1,010.00 | 0.20 | Pass |

-- End of measurement results--

Total Harmonic Distortion + Noise (THD+N)

| Nominal Level [dB] | Pressure [kPa] | Test Result [%] | Lower limit [%] | Upper limit [%] | Expanded Uncertainty [%] | Result |
|--------------------|----------------|-----------------|-----------------|-----------------|--------------------------|--------|
| 94 | 101.3 | 0.42 | 0.00 | 2.00 | 0.25 | Pass |
| 114 | 101.3 | 0.38 | 0.00 | 2.00 | 0.25 | Pass |

-- End of measurement results--

Level Change Over Pressure

Tested at: 114 dB, 23 °C, 28 %RH

| Nominal Pressure [kPa] | Pressure [kPa] | Test Result [dB] | Lower limit [dB] | Upper limit [dB] | Expanded Uncertainty [dB] | Result |
|------------------------|----------------|------------------|------------------|------------------|---------------------------|--------|
| 101.3 | 101.1 | 0.00 | -0.30 | 0.30 | 0.04 ‡ | Pass |
| 92.0 | 92.0 | 0.00 | -0.30 | 0.30 | 0.04 ‡ | Pass |
| 108.0 | 108.0 | -0.02 | -0.30 | 0.30 | 0.04 ‡ | Pass |
| 83.0 | 83.2 | -0.01 | -0.30 | 0.30 | 0.04 ‡ | Pass |
| 74.0 | 74.1 | -0.06 | -0.30 | 0.30 | 0.04 ‡ | Pass |
| 65.0 | 65.1 | -0.14 | -0.30 | 0.30 | 0.04 ‡ | Pass |

-- End of measurement results--

Frequency Change Over Pressure

Tested at: 114 dB, 23 °C, 28 %RH

| Nominal Pressure [kPa] | Pressure [kPa] | Test Result [Hz] | Lower limit [Hz] | Upper limit [Hz] | Expanded Uncertainty [Hz] | Result |
|------------------------|----------------|------------------|------------------|------------------|---------------------------|--------|
| 108.0 | 108.0 | 0.00 | -10.00 | 10.00 | 0.20 ‡ | Pass |
| 101.3 | 101.1 | 0.00 | -10.00 | 10.00 | 0.20 ‡ | Pass |
| 92.0 | 92.0 | 0.00 | -10.00 | 10.00 | 0.20 ‡ | Pass |
| 83.0 | 83.2 | -0.01 | -10.00 | 10.00 | 0.20 ‡ | Pass |
| 74.0 | 74.1 | -0.01 | -10.00 | 10.00 | 0.20 ‡ | Pass |
| 65.0 | 65.1 | -0.02 | -10.00 | 10.00 | 0.20 ‡ | Pass |

-- End of measurement results--

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D0001 8410 Rev. A

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Certificate Number 2017013480

Total Harmonic Distortion + Noise (THD+N) Over Pressure

Tested at: 114 dB, 23 °C, 28 %RH

| Nominal Pressure [kPa] | Pressure [kPa] | Test Result [%] | Lower limit [%] | Upper limit [%] | Expanded Uncertainty [%] | Result |
|------------------------|----------------|-----------------|-----------------|-----------------|--------------------------|--------|
| 108.0 | 108.0 | 0.39 | 0.00 | 2.00 | 0.25 ‡ | Pass |
| 101.3 | 101.1 | 0.38 | 0.00 | 2.00 | 0.25 ‡ | Pass |
| 92.0 | 92.0 | 0.37 | 0.00 | 2.00 | 0.25 ‡ | Pass |
| 83.0 | 83.2 | 0.36 | 0.00 | 2.00 | 0.25 ‡ | Pass |
| 74.0 | 74.1 | 0.36 | 0.00 | 2.00 | 0.25 ‡ | Pass |
| 65.0 | 65.1 | 0.36 | 0.00 | 2.00 | 0.25 ‡ | Pass |

-- End of measurement results--

Signatory: Scott Montgomery

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Provo, UT 84601, United States
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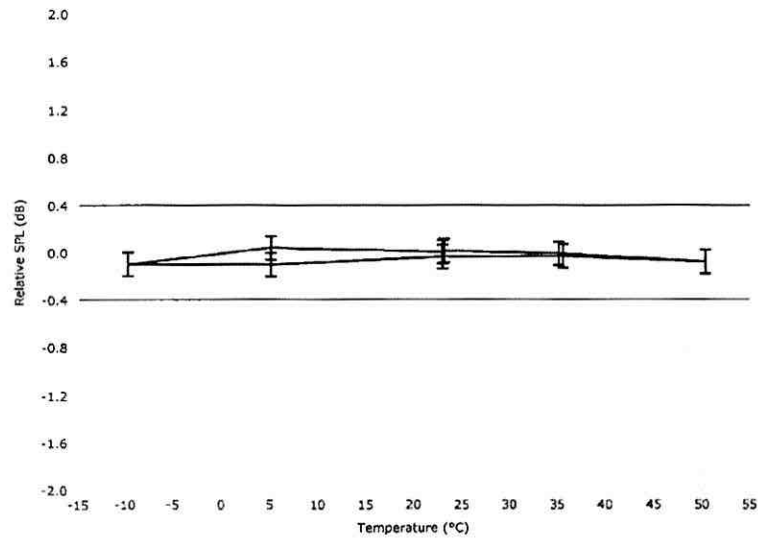


Model CAL200 Relative SPL vs. Temperature

Larson Davis Model CAL200 Serial Number: 15291

Model CAL200 Relative SPL vs. Temperature at 50% RH.
A 2559 Mic (SN: 2995) with a PRM902 Preamp (SN: 5726), station 19 was used to check the levels.

Test Date: 05 Dec 2017 17:42:11



0.1dB expanded uncertainty at ~95% confidence level (k=2)

Sequence File: CAL200.SEQ

Test Location: Larson Davis, a division of PCB Piezotronics, Inc.
1681 West 820 North, Provo, Utah 84601
Tel: 716 684-0001 www.LarsonDavis.com

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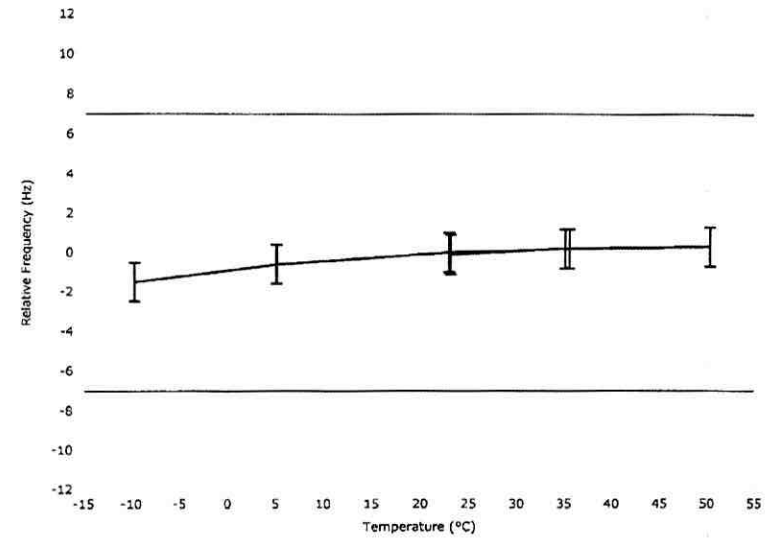


Model CAL200 Relative Frequency vs. Temperature

Larson Davis Model CAL200 Serial Number: 15291

Model CAL200 Relative Frequency vs. Temperature at 50% RH.
A 2559 Mic (SN: 2995) with a PRM902 Preamp (SN: 5726), station 19 was used to check the levels.

Test Date: 05 Dec 2017 17:42:11



1.0 Hz expanded uncertainty at ~95% confidence level (k=2)

Sequence File: CAL200.SEQ

Test Location: Larson Davis, a division of PCB Piezotronics, Inc.
1681 West 820 North, Provo, Utah 84601
Tel: 716 684-0001 www.LarsonDavis.com

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