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### **ACOUSTIC TEST REPORT, WTG S29**

Version 01

# Amherst Island Wind Project Amherst Island, ON

Report Number: 01800287.003
Project Number: 01800287

Prepared for:

Windlectric Inc. 354 Davis Road Oakville, ON L6J 2X1

Prepared by

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Checked by

Ian R. Bonsma, PEng

December 14, 2018

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Template QF 510-01 V07











### **VERSION CONTROL**

Version	Date	Version Description
01	December 14, 2018	Original Report





### **EXECUTIVE SUMMARY**

Howe Gastmeier Chapnik Limited ("HGC Engineering") was retained by Windlectric Inc. to complete an Acoustic Noise test in accordance with IEC 61400-11 of wind turbine generator WTG S29, part of the Amherst Island Wind Project, located on Amherst Island, Ontario. The measurements were completed on December 6, 2018.

HGC Engineering has assessed the acoustic emissions of Wind Turbine Generator S29, a Siemens SWT-3.2-113 wind turbine, rated at 2772 kW, in accordance with IEC 61400-11:2012 (CAN/CSA-C61400-11:13). A summary of the acoustic results are provided in the following tables:

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5*	11*	11.5*	12*	12.5*
Sound Power Level LwA,K in dB(A)	102.0	103.6	104.1	104.4	104.3	104.2	103.7	103.7	104.0	103.6	103.6
Tonal Audibility, ΔL <sub>ak</sub> in dB:	<-3.0	-1.9	-0.8	-0.4	-0.6	-1.8	<-3.0	<-3.0	<-3.0	<-3.0	-2.0
Total Uncertainty u <sub>LWA,k</sub> in dB:	0.9	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.8

<sup>\*</sup> Above *allowed range* of power curve.

10 m Height Wind Speed [m/s]	6	7*	8*
Sound Power Level L <sub>WA,k</sub> in dB(A):	104.5	104.3	104
Total Uncertainty u <sub>LWA,k</sub> in dB:	0.7	0.7	0.8

<sup>\*</sup> Above *allowed range* of power curve.





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### 1 INTRODUCTION

Howe Gastmeier Chapnik Limited ("HGC Engineering") was retained by Windlectric Inc. to complete sound level measurements (Emission Audit) of Wind Turbine Generator S29 ("WTG S29") in order to determine the sound power level of the turbine. The turbine is part of the Amherst Island Wind Project which includes 26 Siemens wind turbines of various generation capacities, each with a hub height of 99.5 m, with an overall project nameplate capacity of 74.3 MW. Measurements were completed on December 6, 2018. Figure 1 shows the location of the wind turbine generator.

This report summarizes measurements that were completed in accordance with IEC Standard 61400-11 "Wind turbine generator systems – Part 11: Acoustic Noise Measurement Techniques". The CAN/CSA-C61400-11:13 standard is an adoption without modification of the identically titled IEC Standard IEC 61400-11:2012 [1].

### 2 WIND TURBINE GENERATOR

The wind turbine generator is manufactured by Siemens and is the SWT-3.2-113 model, rated at 2772 kW with a rotor diameter of 113 m and a hub height of 99.5 m. This turbine is an upwind, pitch controlled, horizontal axis wind turbine with three blades. Specific details of the wind turbine generator are included in Table 1.





**Table 1: Wind Turbine Generator Characteristics** 

Wind Turbine							
Manufacturer			Siemens				
Model Number	SWT 3.2-113						
Serial Number			S29				
Hub Height			99.5 m				
Tower Type (lattice or tube)			Tubular				
Horizontal Distance from Rotor Centre to Tower Axis			5.5 m				
Rotor Diameter			113 m				
Speed (constant or variable)			Variable				
	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s		
Pitch Angle		(	Confidentia	1			
Rotational Speed		(	Confidentia	1			
Rated Power Output			2772 kW				
Control Software Version			133.0.0.6				
Rotor Details							
Rotor Control Devices		P	itch Contro	ol			
Presence of Votex Generators, Stall Strips Trailing Edges	V	ortex Gen	erators and	Dino Tail	s		
Blade Type			B55				
Serial Number		В	: 55024880 : 55034150 : 55034380	1			
Gearbox							
Manufacturer		N/A	– Direct D	rive			
Model Number		N/A	– Direct D	rive			
Serial Number		N/A	– Direct D	rive			
Generator							
Manufacturer	Siemens						
Model Number	DD22_02						
Serial Number	5100229927						
UTM Coordinates							
Easting			359562				
Northing	4889909						





The electrical power curve utilized for the sound level measurements is shown in Figure 2. From the supplied power curve, 85% of maximum electrical power is reached at 2356 kW or at a hub height wind speed of 9.5 m/s. The required minimum wind speeds for reporting is from 0.8 to 1.3 times the wind speed at 85% electrical power which is 7.5 to 12.5 m/s for this wind turbine.

### 3 TEST ENVIRONMENT

WTG S29 is part of the Amherst Island Wind Project located on Amherst Island, Ontario. Figure 1 shows the specific location of WTG S29. The surrounding land is used mainly for livestock grazing and includes gently rolling terrain. The area surrounding WTG S29 included agriculture fields with short grass. The sound level measurement location was in an area with recently grazed grass.

There are a number of additional wind turbine generators located in the vicinity of the test turbine. WTG S01 is located approximately 530 m to the southwest. Additional turbines are located more than 850 m away. WTG S01, part of the Amherst Island Wind Project, was parked during the testing of WTG S29.

The sound level measurement location was established at 156 m from the base of the turbine. This distance was determined utilizing the reference distance calculation provided in IEC 61400;  $R_0 = H + D/2 \pm 20\%$  where H is the hub height and D is the rotor diameter. An  $R_I$  distance of 192 m was determined for this test using the equation:

$$R_1 = \sqrt{(D_1 + D_2 + D_3)^2 + H_{hub}^2}$$

Where  $D_I$  is the distance from turbine base to the microphone (156 m),  $D_2$  is the tower radius (2.15 m),  $D_3$  is the distance from rotor to tower axis (5.5 m) and  $H_{hub}$  is the hub height (99.5 m). Photos of the sound level measurement location, the test turbine, and wind mast location are included under Appendix A.

### 4 INSTRUMENTATION AND SETUP

A Wolfel RoBin measurement system was utilized to complete the IEC measurements. Sound pressure level measurements and recordings were completed utilizing a 01 dB DUO Smart Noise







Monitor. The microphone was mounted on a one metre diameter board with a primary and secondary windscreen. A standard Bruel & Kjaer 3" wind screen (half) was used on the microphone as well as a secondary Bruel & Kjaer UA-2133 wind screen. The influence of the secondary windscreen is shown in Table 2. The acoustic influence of the secondary windscreen contributes approximately 0.2 dBA to the overall sound level and the sound levels have been corrected herein.

Table 2: Frequency Dependent Influence for UA-2133 Windscreen

Frequency [Hz]	SPL Influence [dB]	Frequency [Hz]	SPL Influence [dB]
100	-0.07	1600	-0.3
125	0.06	2000	-0.03
160	0.01	2500	-0.12
200	0.18	3150	-0.25
250	-0.03	4000	-0.73
315	-0.25	5000	-0.5
400	-0.26	6300	-0.03
500	-0.18	8000	-0.99
630	0.04	10000	-0.77
800	-0.14	12500	-0.75
1000	-0.44	16000	-1.23
1250	-0.14	20000	-0.59

The RoBin and DUO systems were time synchronized prior to the start of the measurements (within 1 second).

For the measurements, the electrical power, rotor RPM, azimuth and hub height wind speeds were provided by the customer as analogue signals and were directly connected into the RoBin system.

Wind speed and direction at 10 m height were measured utilizing a Vaisala ultrasonic anemometer while a Reinhardt DFT485 sensor was utilized to measure air pressure, temperature and air humidity. Table 3 shows the weather conditions during the measurement periods.







**Table 3: Weather Conditions** 

	Decembe	er 6, 2018			
	Start of Test	End of Test			
Air Temperature (°C)	0	2			
Air Pressure (hPa)	1005	1003			
Relative Humidity [%]	85	73			
Sky Condition	Overcast				
Range of Wind Direction (°)	285 to 300				

The measurement equipment and the relevant calibration information are shown in Table 4.

**Table 4: Instrumentation** 

Instrumentation	Manufacturer / Model / Serial Number	Calibration Date
Measurement System	Wolfel / RoBin / ROBIN.00.0003	NA
Sound Level Meter	01 dB-Metravib / DUO / 12023	March 2, 2018
Microphone	GRAS / 40CD / 224382	March 2, 2018
Anemometer	Vaisala / WMT701 / J3920012	August 21, 2018
Air Pressure / Temperature and Humidity	Reinhardt / DFT485 / 1027951	August 29, 2018
Acoustic Calibrator	Bruel & Kjaer / 4231 / 3010241	March 1, 2018
Primary Wind Screen	Bruel & Kjaer	NA
Secondary Wind Screen and Ground Board	Bruel & Kjaer / UA 2133	NA
Noisy Software	Wolfel / Noisy Version 2018	NA

Correct calibration of the acoustic instrumentation was verified using an acoustic calibrator manufactured by Brüel & Kjær. Verification of calibration status was carried out at the start and end of the measurement period and when the microphone was disconnected from the sound level meter. Calibration certificates for the test equipment are provided in Appendix B. Unless indicated otherwise, the same equipment was utilized during the entire test period.

During testing, the anemometer was located 279 m west of the turbine at 10 m above grade.

The standard roughness length applicable for this site is 0.05 given the surrounding farmland with some vegetation.







Sound level measurements were completed with the turbine operational and with the turbine parked. Significant interfering sound from road traffic, aircraft, bird calls, local agricultural activity, etc. was not included in the analyzed data for either the turbine on or off condition. The microphone position was maintained to be within +/- 15° of the downwind direction through visual inspection and the recording of the azimuth position. Downwind directions ranged between 285° and 300°.

### 4.1 TYPE B UNCERTAINTIES

The uncertainty components of Type B are provided in Table 5. Additional one-third octave Type B uncertainty components for the instrument and wind screen insertion loss can be provided upon request. These uncertainty components are provided by the instrument manufacturers.

**Table 5: Type B Uncertainty Components** 

Component	Value
Calibration, $u_{\text{B1}}$	0.2 dB
Instrument, $u_{\rm B2}$	0.2 - 0.5 dB
Board, $u_{\rm B3}$	0.3 dB
Wind screen insertion loss, $u_{\rm B4}$	0.1 - 0.5 dB
Distance and Direction, u <sub>B5</sub>	0.1 dB
Air Absorption, $u_{B6}$	0.2 dB
Weather Conditions, <i>u</i> <sub>B7</sub>	0.5 dB
Wind Speed, Measured, u <sub>B8</sub>	0.7 m/s
Wind Speed Derived, <i>u</i> <sub>B8</sub>	0.3 m/s
Wind Speed, Power Curve, <i>u</i> <sub>B9</sub>	0.2 m/s

The uncertainty associated with the electrical power transducer (derived wind speed,  $u_{\rm B8}$ ) has been increased to 0.3 m/s as the electrical power signal was provided by the manufacturer. The manufacturer has indicated a measurement chain uncertainty of 1% on the measured electrical power, which corresponds to approximately 0.05 m/s. An increase of 0.1 m/s, over the typical standard uncertainty, has been included for the derived wind speed uncertainty.







### 5 MEASUREMENTS AND RESULTS

Sound level measurements were conducted of WTG S29 on December 6, 2018, between 9:00 and 15:30. Temperature and other weather characteristics are reported in Table 3 above.

The data points where the turbine was operating at or below the allowed power curve range are identified as the *allowed range* (intervals on the electrical power curve where no duplicated values exist and the slope of the power curve including the uncertainty is positive). For data within the *allowed range* of the electrical power curve the wind speed ( $V_{P,n}$ ) is determined. The average value of the ratio between the derived wind speed from the electrical power curve and the measured nacelle wind speed ( $V_{\text{nac,m}}$ ),  $k_{\text{nac}}$  is determined.  $k_{\text{nac}} = \frac{V_{\text{nac,n}}}{V_{\text{nac,m}}}$ . For this data set the  $k_{\text{nac}}$  value of 0.92 was applied to the measured nacelle wind speed to derive the normalized wind speed outside the allowed range.

For background noise measurements, the measured 10 m wind speed  $(V_{Z,m})$  and the wind speed derived from the power curve  $V_{P,n}$  are utilized to determine  $k_Z$ .  $k_Z = \frac{V_{P,n}}{V_{Z,m}}$ . For this data set, the  $k_Z$  value of 1.4, was applied to the measured 10 m wind speed  $(V_{Z,m})$  to derive the normalised wind speed at hub height  $(V_{B,n})$  during background noise measurements.

Figure 3 shows the sound pressure level at the measurement location versus the hub height wind speed. Blue circles represent sound level data points collected with the turbine operating in the allowed range, above this point the sound levels are shown as black squares. Magenta triangles indicate data points of the background sound level (turbine off).

Figure 4 shows the measured total noise versus electrical power. Figure 5 plots the wind speed determined from the electrical power curve  $(V_p)$  relative to the measured nacelle wind speed  $(V_{nac,m})$  and 10 m met mast wind speed  $(V_{z,m})$ .

Table 6 summarizes the analysis of the measured results.







**Table 6: Sound Level Data** 

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5*	11*	11.5*	12*	12.5*
Collected Data Points, Total	48	49	59	71	89	50	73	106	56	36	23
Collected Data Points, Background	13	23	26	55	44	46	52	54	20	23	20
Average Wind Speed, $V_K$ [m/s]	7.5	8.0	8.5	9.0	9.5	9.9	10.5	10.9	11.5	12.0	12.5
Total Noise, $L_{V,T}$ , in $dB(A)$	51.8	53.3	53.8	54.0	53.9	53.9	53.4	53.4	53.7	53.3	53.4
Background Noise, L <sub>V,B</sub> in dB(A)	41.5	41.9	41.7	41.7	42.2	41.6	41.9	42.1	42.4	42.6	42.1
Difference T-B, dB(A)	10.3	11.4	12.0	12.2	11.7	12.2	11.5	11.3	11.3	10.8	11.3
Corrected L <sub>Aeq</sub> , in dB(A)	51.4	53.0	53.5	53.7	53.6	53.6	53.1	53.1	53.3	52.9	53.1

<sup>\*</sup> Above *allowed range* of power curve.

Table 6 shows that at least 180 measurements were collected for both total noise and background noise and at least 10 measurements or data points are included in the analysis for each wind speed bin for total noise, as required by IEC 61400-11.

Table 7 shows the calculated sound level data, the resulting sound power levels, tonality and measurement uncertainty at hub height, while Table 8 shows the apparent sound power levels at a reference height of 10 m. Figure 6 presents the apparent sound power level at the integer wind speeds.

Table 7: Apparent Sound Power Level of WTG S29 at Hub Height

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5*	11*	11.5*	12*	12.5*
Corrected L <sub>Aeq</sub> , in dB(A)	51.4	53.0	53.5	53.7	53.6	53.6	53.1	53.1	53.3	52.9	53.1
Sound Power Level L <sub>WA,K</sub> in dB(A)	102.0	103.6	104.1	104.4	104.3	104.2	103.7	103.7	104.0	103.6	103.6
Tonal Audibility, $\Delta L_{ak}$ in dB:	<-3.0	-1.9	-0.8	-0.4	-0.6	-1.8	<-3.0	<-3.0	<-3.0	<-3.0	-2.0
Total Uncertainty u <sub>LWA,k</sub> in dB:	0.9	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.8

<sup>\*</sup> Above *allowed range* of power curve.







Table 8: Apparent Sound Power Level at 10 m Height

10 m Height Wind Speed [m/s]	6	7*	8*	
Sound Power Level L <sub>WA,k</sub> in dB(A):	104.5	104.3	104	
Total Uncertainty u <sub>LWA,k</sub> in dB:	0.7	0.7	0.8	

<sup>\*</sup> Above *allowed range* of power curve.

A table and plot of the sound pressure spectrum in third octaves for each integer wind speed are included under Appendix C.

The tonality assessment indicates no tonal audibility greater than or equal to 0 dB. The average narrowband spectra used in the tonality assessment are included under Appendix D.

### 6 CONCLUSIONS

The measurements and analysis, performed in accordance with the methods prescribed in IEC Standard 61400-11:2012 indicate that the sound power level of WTG S29, rated at 2772 kW and part of the Amherst Island Wind Project, has the following sound power levels:

**Table 9: Sound Power Level Summary** 

Hub Height Wind Speed [m/s]	7.5	8	8.5	9	9.5	10	10.5*	11*	11.5*	12*	12.5*
Sound Power Level L <sub>WA,K</sub> in dB(A)	102.0	103.6	104.1	104.4	104.3	104.2	103.7	103.7	104.0	103.6	103.6
Tonal Audibility, ΔLak in dB:	<-3.0	-1.9	-0.8	-0.4	-0.6	-1.8	<-3.0	<-3.0	<-3.0	<-3.0	-2.0
Total Uncertainty u <sub>LWA,k</sub> in dB:	0.9	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.8

<sup>\*</sup> Above *allowed range* of power curve.

The sound levels presented above are relevant for Siemens SWT-3.2-113 turbine WTG S29 given the environmental conditions and the operating parameters of the turbine during the testing periods.





### **REFERENCES**

- 1. International Electrotechnical Commission, 61400-11:2012 *Wind turbine generator systems Part 11: Acoustic noise measurement techniques*.
- 2. Google Maps Aerial Imagery, Internet Application: maps.google.com





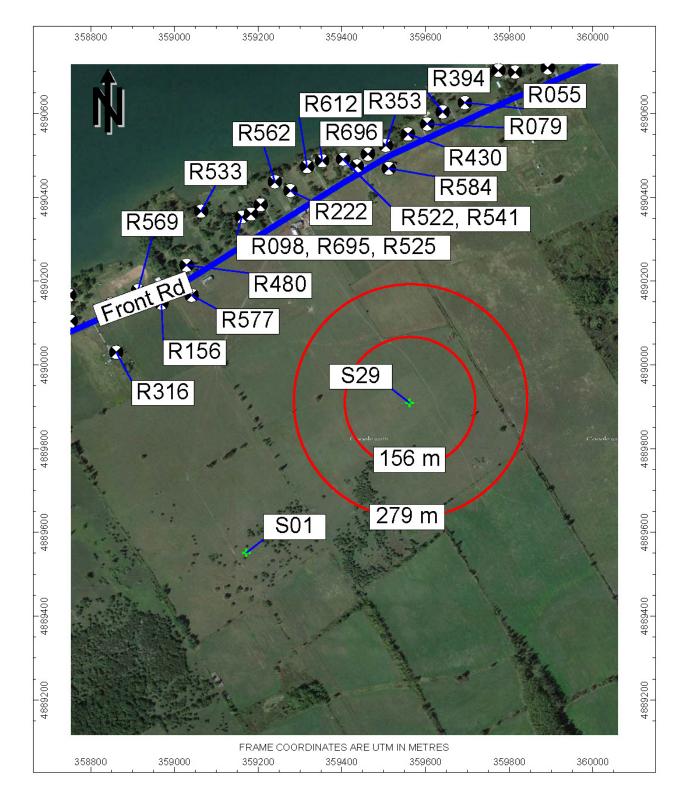


Figure 1 - Location of Test Turbine S29







Figure 2: Reference Electrical Power Curve WTG S29, 2772 kW, Amherst Island Wind Project, Ontario

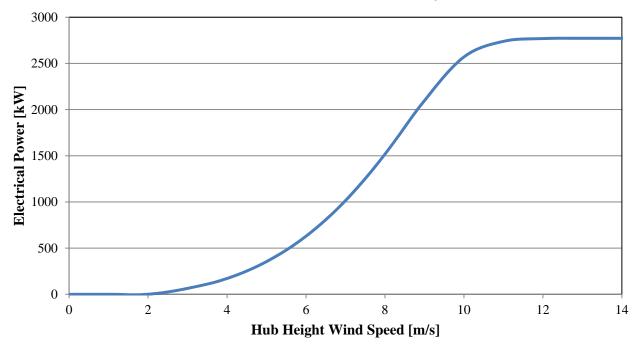






Figure 3: Acoustic Noise Measurements of the Wind Turbine Generator WTG S29, 2772 kW, Amherst Island Wind Project, Ontario

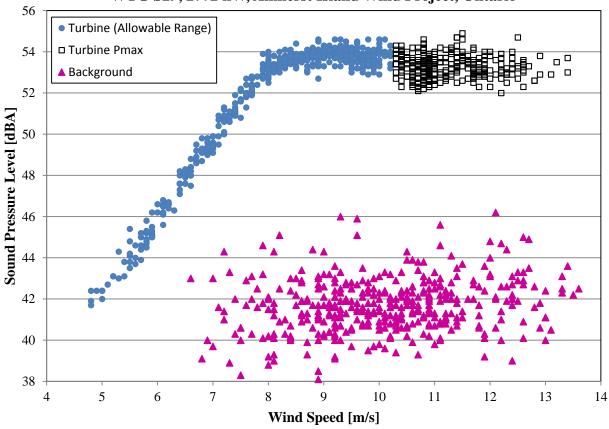






Figure 4: Total Sound Level [dBA] vs. Electrical Power [kW] WTG S29, 2772 kW, Amherst Island Wind Project, Ontario 56 54 Total Sound Pressure Level [dBA] 52 50 48 46 42 40 500 1000 1500 2000 0 2500 3000 3500 **Electrical Power [kW]** 







Figure 5: Measured Wind Speed (Nacelle and 10 m) vs. Derived Wind Speed

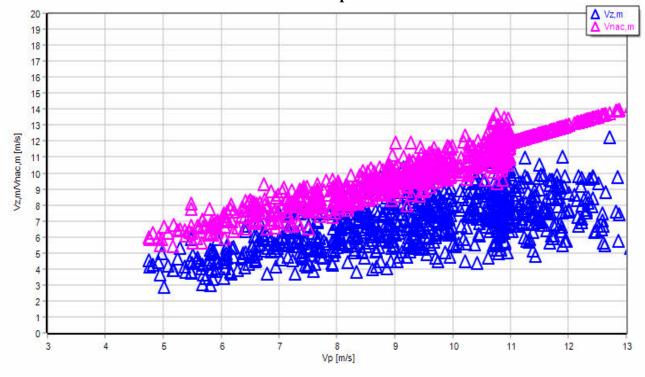
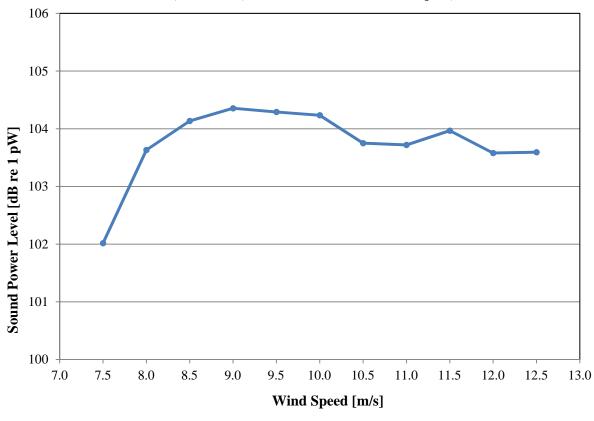






Figure 6: Apparent Sound Power Level vs. Wind Speed WTG S29, 2772 kW, Amherst Island Wind Project, Ontario





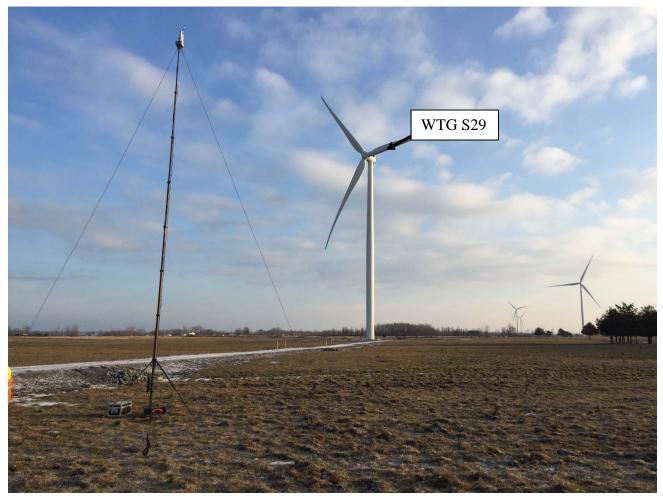


# APPENDIX A: LOCATION PHOTOS









Meteorological Tower Location - December 6, 2018







Sound Level Measurement Location - December 6, 2018











Sound Level Microphone on Board - December 6, 2018











Photos of Sound Level Meter and Meteorological Tower Taken from the Base of WTG S29
- December 6, 2018





# APPENDIX B: CALIBRATION CERTIFICATES







## Scantek, Inc. CALIBRATION LABORATORY

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



## Calibration Certificate No.4021776

Instrument:

**Acoustical Calibrator** 

4231

Model:

**Brüel and Kjær** Manufacturer: 3010241

Serial number:

Class (IEC 60942):

Barometer type: Barometer s/n:

Customer:

Tel/Fax:

905-826-4044 /

**HGC Engineering** 

Date Calibrated: 3/1/2018 Cal Due:

Status:

Address:

In tolerance:

Out of tolerance: See comments:

Contains non-accredited tests: \_\_\_Yes X No

6 Mar 18

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2000 Argentia Road, Plaza One

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X

Suite 203

Mississauga, Ontario, Canada L5N 1P7

### Tested in accordance with the following procedures and standards:

Calibration of Acoustical Calibrators, Scantek Inc., Rev. 10/1/2010

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

		241	0.1.0.1.	Traceability evidence	Cal. Due	
Instrument - Manufacturer	Description	S/N	Cal. Date	Cal. Lab / Accreditation		
483B-Norsonic	SME Cal Unit	31061	Jul 28, 2017	Scantek, Inc./ NVLAP	Jul 28, 2018	
DS-360-SRS	Function Generator	88077	Sep 15, 2016	ACR Env./ A2LA	Sep 15, 2018	
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Sep 20, 2017	ACR Env./ A2LA	Sep 20, 2018	
HM30-Thommen	Meteo Station	1040170/39633	Oct 25, 2017	ACR Env./ A2LA	Oct 25, 2018	
140-Norsonic	Real Time Analyzer	1403978	Mar 22, 2017	Scantek, Inc. / NVLAP	Mar 22, 2018	
PC Program 1018 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.		
4192-Brüel&Kjær	Microphone	2854675	Nov 11, 2017	Scantek, Inc. / NVLAP	Nov 11, 2018	
1203-Norsonic	Preamplifier	92268	Oct 18, 2017	Scantek, Inc./ NVLAP	Oct 18, 2018	

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

Calibrated by:	Jeremy Gotwalt	Authorized signatory:	Steven E. Marshall
Signature	Mater	Signature	Stowen E Marshall
Date	3/1/18	Date	3/3/2018

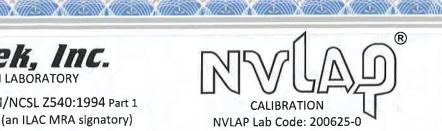
Calibration Certificates or Test Reports shall not be reproduced, except in full, without written approval of the laboratory. This Calibration Certificate or Test Reports shall not be used to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the federal government.

Document stored as: Z:\Calibration Lab\Cal 2018\BNK4231\_3010241\_M1.doc

Page 1 of 2

### Scantek, Inc.

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



### Calibration Certificate No.40222

Instrument:

Microphone

Model:

40CD **GRAS** 

224382

Manufacturer:

Serial number:

Composed of:

Customer:

Tel/Fax:

**HGC Engineering** 905-826-4044/

Date Calibrated: 3/2/2018

Status:

Address:

In tolerance:

Received

X

Out of tolerance:

See comments:

Contains non-accredited tests: \_\_Yes X No

2000 Argentia Road, Plaza One

Suite 203

Mississauga, Ontario, Canada L5N 1P7

6 Mar 2018

Sent

### Tested in accordance with the following procedures and standards:

Calibration of Measurement Microphones, Scantek, Inc., Rev. 2/25/2015

#### Instrumentation used for calibration: N-1504 Norsonic Test System:

Instrument - Manufacturer	Description	S/N	Cal. Date	Traceability evidence Cal. Lab / Accreditation	Cal. Due
483B-Norsonic	SME Cal Unit	31061	Jul 28, 2017	Scantek, Inc./ NVLAP	Jul 28, 2018
DS-360-SRS	Function Generator	88077	Sep 15, 2016	ACR Env./ A2LA	Sep 15, 2018
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Sep 20, 2017	ACR Env./ A2LA	Sep 20, 2018
HM30-Thommen	Meteo Station	1040170/39633	Oct 25, 2017	ACR Env./ A2LA	Oct 25, 2018
PC Program 1017 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.	
1253-Norsonic	Calibrator	28326	Nov 10, 2017	Scantek, Inc./ NVLAP	Nov 10, 2018
1203-Norsonic	Preamplifier	92268	Oct 18, 2017	Scantek, Inc./ NVLAP	Oct 18, 2018
4180-Brüel&Kjær	Microphone	2246115	Oct 24, 2017	DANAK / DPLA	Oct 24, 2019

### Instrumentation and test results are traceable to SI - BIPM through standards maintained by NPL (UK) and NIST (USA)

Calibrated by:	Jeremy Gotwalt	Authorized signatory:	Steven E Marshall
Signature	Jens 4 Seton	Signature (	Steven & Marshall
Date	01 3/2/18	Date	3/3/2018

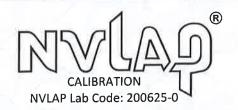
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## Scantek, Inc. CALIBRATION LABORATORY

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



## Calibration Certificate No.40221 Mar 2018

Instrument:

Sound Level Meter

Date Calibrated: 3/2/2018

Cal Due:

Model:

Duo

Status: In tolerance: Received Sent Х

Manufacturer: Serial number: 01dB 12023

Out of tolerance:

Tested with:

Microphone 40CD s/n 224382

See comments:

Preamplifier PRE21 s/n 16862

Contains non-accredited tests: Yes X No

Type (class): Customer:

**HGC Engineering** 

Address:

Calibration service: \_\_\_ Basic X Standard 2000 Argentia Road, Plaza One

X

Tel/Fax:

905-826-4044 /

Suite 203

Mississauga, Ontario, Canada L5N 1P7

### 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:

		0.401	0.1.0.1.	Traceability evidence	Cal. Due	
Instrument - Manufacturer	Description	S/N	Cal. Date	Cal. Lab / Accreditation		
483B-Norsonic	SME Cal Unit	31061	Jul 28, 2017	Scantek, Inc./ NVLAP	Jul 28, 2018	
DS-360-SRS	Function Generator	88077	Sep 15, 2016	ACR Env./ A2LA	Sep 15, 2018	
34401A-Agilent Technologies	Digital Voltmeter	MY47011118	Sep 20, 2017	ACR Env./ A2LA	Sep 20, 2018	
HM30-Thommen	Meteo Station	1040170/39633	Oct 25, 2017	ACR Env./ A2LA	Oct 25, 2018	
PC Program 1019 Norsonic	Calibration software	v.6.1T	Validated Nov 2014	Scantek, Inc.	- 4	
1251-Norsonic	Calibrator	30878	Nov 10, 2017	Scantek, Inc./ NVLAP	Nov 10, 2018	

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 (%)
22.8	98.91	40.0

Calibrated by:	Jeremy Gotwalt	Authorized signatory:	Steven E. Marshall
Signature	Level Grand	Signature	Steven, EMbishall
Date	1 3/2/18	Date	3/3/2018

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## REINHARDT

System- und Messelectronic GmbH

### Kalibrierzertifikat

Calibration Certificate

Typ/Gegenstand Type/Object DFT-485

Hersteller *Manufacturer*  **REINHARDT** System- und Messelectronic GmbH

Seriennummer Serial Number

1027951

Inventarnummer Inventory Number

....

Auftraggeber Customer

**HGC** Engineering

2000 Argentia Road, Plaza 1, Suite 203 Mississauga, ON L5N 1P7 - CANADA Dieser Kalibrierschein dokumentiert die Rückführung auf nationale Normale zur Darstellung der Einheiten in Übereinstimmung mit dem Internationalen Einheitensystem (SI).

Sie wurde in Übereinstimmung mit den Normen DIN EN ISO 9000ff und DIN ISO 10012 durchgeführt.

Für die Einhaltung einer angemessenen Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich.

This calibration certficate documents the traceability to national standards which realize the units of measurement according to the International System of Units (SI).

The calibration is performed according to the standards DIN EN ISO 9000ff and DIN ISO 10012.

The user is obliged to have the object recalibrated at appropriate intervals.

Kalibrierdatum

Date of Calibration

29/08/2017

Nächste Kalibrierung in 24 Monaten Recalibration in months

Prüfer

person in charge

Harald Stiegelmaver

Unterschrift

Messeinrichtungen measuring equipment

Referenz Reference	Bezeichnung Name	Rückführung Traceability	Zertifikat-Nr. Certificate No.	Rekalibrierung Recalibration	Seriennummer Serial Number
Klimakammer/ Climatic Chamber	Weiss SB111 Typ 1005				95032
Multimeter/ Multimeter	Keithley 2000		40000	00/00/0040	070000
Temperaturreferenz/ Temperature Reference	PT100 Typ W60/1, 1/10 DIN	FGQControl	403902	02/08/2018	0760839
Feuchtereferenz/ Humidity Reference	DFT 485	REINHARDT	F29992	09/09/2018	1030885
Druck/ Pressure Transmitter	Digiquarz 1030A	TESTO	D11481	02/09/2018	30840
Windgeschwindigkeit/ Wind Speed Sensor	WDS 55	REINHARDT	S16091	02/09/2018	1031069
Pyranometer/ Pyranometer	Kipp & Zonen CM11	Kipp & Zonen	014334850731	08/09/2018	112383

## REINHARDT

### System- und Messelectronic GmbH

Kalibrierprotokoll / Calibration Protocol ( ) Sensoren und Wetterstationen / Sensors and Weather Stations

Sensor/Wetterstation Sensor/Weather Station	DFT-485			
<b>Seriennummer</b> Serial Number	1027951	Seriennumme Serial Number		V1.7
<b>Abgleichnummer</b> Calibration Number	025	<b>Datum</b> Date	29/08/2017	
Firmware-Version Firmware Version	1.40	<b>Prüfer</b> Calibrated by	Harald Stiegelmaye	r

						ABWE	ICHUNG	/ DEVIATION					
at	Temperatur Temperature	Pres	uck ssure ei/at		u <b>chte</b> midity	Globalstrahlung Global Radiation Offset	Wind- richtung Wind Direction	Windgeschwin digkeit Wind Speed	Zusatz Sensor 1 Additional Sensor 1	Zusatz Sensor 2 Additional Sensor 2	Zusatz Sensor 3 Additional Sensor 3	at	TD
	[° C]	[° C] [hPa]		,	%]	[W/m²]	0–360° [°]	[km/h]	1 1	( )	t 1	[mV]	[ °C ]
	[ 0]	900		20 %	n.A.*	[**////		į.uy	10			2000	, , ,
-28.0°C	0.0	1000	-0.3	50 %	n.A. *	-						4000	+2.4
		1100		70 %	n.A. *							6000	
		900	444	20 %	n.A.*							2000	
0.0 °C	-0.1	1000	+0.1	50 %	n.A. *							4000	+1.9
		1100	ופשענו	70 %	n.A.							6000	
		900		20 %	-2.2							2000	
5.0 °C	-0.2	1000	+0.1	50 %	-1.0							4000	+1.7
		1100		70 %	-1.9							6000	
		900		20 %	-1.9							2000	)
10.0 °C	1000	0.0	50 %	-0.8							4000	+1.7	
		1100		70 %	-1.6							6000	
		900	+0.1	20 %	-0.1							2000	
25.0 °C	-0.2	1000	+0.1	50 %	+0.9							4000	+1.3
		1100	+0.2	70 %	+0.1							6000	
		900		20 %	-1.4							2000	
30.0 °C	-0.1	1000	+0.1	50 %	-0.3							4000	+1.2
		1100	(4(4)4	70 %	-1.2							6000	
		900		20 %	-1.6							2000	
40.0 °C	-0.1	1000	0,2	50 %	-0.7							4000	+1.0
		1100		70 %	-1.3							6000	
		900		20 %	-1.1							2000	
50.0 °C	-0.1	1000	+0.1	50 %	-0.4							4000	+0.8
		1100		70 %	-0.9							6000	
Precipita Die Wind	tion Senso geschwind	r [mm igkeit	ı], cali t wurd	brated le bei	l with 1 15 km/h	0 ml Wasser: n 00 ml water: m n und 25 °C ger eets the specif	ax. deviat orüft.	ion +/-0.5 mm	1		nein/no		



141 Leroy Road · Williston, VT 05495 · USA

Tel 802.316.4368 · Fax 802.735.9106 · www.sohwind.com

### CERTIFICATE FOR CALIBRATION OF SONIC ANEMOMETER

Certificate number: 17.US1.07294

Date of issue: August 21, 2017

**Type:** Vaisala WMT700 with ROBIN Transmitter

Serial number: J3920012

Manufacturer: Vaisala, Oyj, Pl 26, FIN-00421 Helsinki, Finland

Client: HGC Engineering, 2000 Argentia Road, Plaza One, Suite 203, Mississauga, ON L5N 1P7, Canada

Anemometer received: August 21, 2017

Anemometer calibrated: August 21, 2017

Calibrated by: EJF

Procedure: MEASNET, IEC 61400-12-1:2017 Annex F

Certificate prepared by: EJF

Approved by: Calibration engineer, EJF

Calibration equation obtained:  $v \text{ [m/s]} = 1.01170 \cdot f \text{ [m/s]} + 0.00386$ 

Standard uncertainty, slope: 0.00185

Standard uncertainty, offset: 5.16622

Coefficient of correlation:  $\rho = 0.999981$ 

Absolute maximum deviation: 0.047 m/s at 9.126 m/s

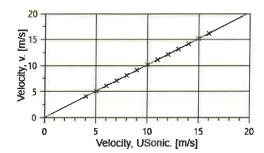
Barometric pressure: 1006.9 hPa

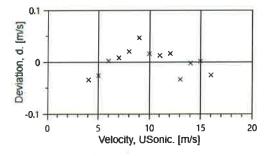
Covariance: -0.0000350 (m/s)<sup>2</sup>/m/s

Relative humidity: 54.7%

Avg. Direction Output: 179.4

F				J		I	
Succession	Velocity	Tempera	ature in	Wind	Anemometer	Deviation,	Uncertainty
	pressure, q.	wind tunnel	d.p. box	velocity, v.	Output, f.	d.	u <sub>c</sub> (k=2)
	[Pa]	[°C]	[°C]	[m/s]	[m/s]	[m/s]	[m/s]
2	9.49	25.6	28.0	4.033	4.0170	-0.034	0.024
4	14.82	25.7	28.0	5.042	5.0059	-0.026	0.025
6	21.48	25.7	28.0	6.070	5.9940	0.002	0.027
8	29.26	25.8	28.0	7.085	6.9913	0.008	0.030
10	38.27	25.8	28.0	8.103	7.9860	0.020	0.033
12	48.54	25.8	28.0	9.126	8.9707	0.047	0.036
13-last	59.87	25.8	28.0	10.136	9.9990	0.016	0.039
11	72.17	25.8	28.0	11.129	10.9840	0.012	0.042
9	86.19	25.8	28.0	12.162	12.0010	0.016	0.045
7	100.79	25.7	28.0	13.151	13.0287	-0.034	0.048
5	117.04	25.7	28.0	14.172	14.0067	-0.003	0.051
3	134.00	25.7	28.0	15.163	14.9827	0.001	0.054
1-first	152.26	25.6	28.0	16.162	15.9963	-0.026	0.057











# APPENDIX C: OCTAVE BAND SOUND LEVEL RESULTS







100.0 95.0 90.0 Sound Power Level [dBA] 85.0 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 30.0 40 20 63 1000 1250 100 125 160 200 250 800 1600 2500 400 500 630 **Third Octave Frequency [Hz]** 

Bin 7.5: 1/3 Spectra Sound Power in dB(A)

Bin 7.5: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	58.9	63.7	68.0	71.9	75.6	84.4	80.9	82.4	86.9	87.1	86.2	89.6	89.3	88.8
U <sub>C</sub>	1.0	1.0	1.0	1.0	1.0	0.9	1.6	1.6	0.8	0.8	0.9	0.8	0.9	0.9
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	89.2	91.8	92.2	91.4	91.1	90.3	90.7	92.3	86.7	82.5	77.7	70.7	62.1	[55]
Uc	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.9	1.0	1.3	1.7

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).







100.0 95.0 90.0 Sound Power Level [dBA] 85.0 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 30.0 40 100 125 160 250 315 1000 1250 400 500 800 1600 2000 2500 20 63 80 **Third Octave Frequency [Hz]** 

**Bin 8: 1/3 Spectra Sound Power in dB(A)** 

Bin 8: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	60.2	65.3	69.6	73.4	77.1	84.3	86.4	85.3	88.8	90.6	87.3	90.5	90.4	90.3
Uc	0.9	1.0	1.0	1.0	0.9	0.9	1.0	1.1	0.8	0.7	0.9	0.8	0.8	0.8
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	90.8	93.4	93.9	93.3	92.8	92.1	90.8	93.7	89.2	83.6	78.9	71.8	63.3	[55.4]
Uc	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.9	0.9	1.1	1.7

<sup>[ ]</sup> Total Noise less than 3 dB greater than background (3 dB correction applied).







100.0 95.0 90.0 Sound Power Level [dBA] 85.0 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 30.0 40 100 125 160 250 315 400 500 1000 1600 2000 20 63 80 200 Third Octave Frequency [Hz]

**Bin 8.5: 1/3 Spectra Sound Power in dB(A)** 

Bin 8.5: 1/3 Spectra Sound Power in dB(A)														
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	60.5	65.9	69.9	73.8	77.4	84.1	87.5	85.8	88.7	92.0	88.0	91.0	90.9	90.9
Uc	0.9	1.0	1.0	1.0	0.9	0.9	1.0	0.8	0.8	0.7	0.9	0.8	0.8	0.8
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	91.3	93.9	94.3	93.8	93.2	92.7	91.0	93.9	90.1	84.1	79.4	72.6	63.9	[55.5]
Uc	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.9	0.9	1.1	1.7

[ ] Total Noise less than 3 dB greater than background (3 dB correction applied).







100.0 95.0 90.0 Sound Power Level [dBA] 85.0 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 30.0 250 400 500 40 63 80 100 630 1000 1600 2000 50 125 160 200 **Third Octave Frequency [Hz]** 

Bin 9: 1/3 Spectra Sound Power in dB(A)

			i	Bin 9: 1/3	Spectra	Sound	Power	in dB(A	<b>.</b> )					
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	61.2	66.8	70.4	74.3	78.0	84.6	88.5	85.5	89.2	92.8	88.9	91.7	91.4	91.3
Uc	1.0	1.0	1.0	1.0	0.9	0.9	0.9	1.0	0.8	0.7	0.9	0.8	0.8	0.8
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	91.4	94.1	94.4	93.8	93.2	92.6	91.0	93.8	90.1	84.4	79.5	72.7	64.0	[55.5]
Uc	0.8	0.8	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.8	1.0	1.0	1.2	1.7







100.0 95.0 90.0 Sound Power Level [dBA] 85.0 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 30.0 40 100 125 200 250 315 400 200 630 1000 1250 4000 63 160 800 1600 2000 5000 **Third Octave Frequency [Hz]** 

Bin 9.5: 1/3 Spectra Sound Power in dB(A)

			В	in 9.5: 1/	3 Spectra	a Sound	d Power	r in dB(	۹)					
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	61.2	67.2	70.2	74.1	77.7	84.4	87.8	84.8	89.6	92.6	89.1	91.7	91.2	91.1
UC	1.0	1.0	1.0	1.0	0.9	0.9	1.0	1.1	0.8	0.7	0.9	0.8	0.9	0.8
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	91.3	93.9	94.2	93.7	93.1	92.6	91.2	94.0	90.3	84.6	79.8	73.1	64.5	[55.7]
UC	0.8	0.8	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.8	0.9	1.0	1.1	1.7







100.0 95.0 90.0 Sound Power Level [dBA] 85.0 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 30.0 100 125 315 400 1250 40 63 80 200 250 500 630 800 1000 1600 2000 3150 160 Third Octave Frequency [Hz]

Bin 10: 1/3 Spectra Sound Power in dB(A)

			В	3in 10: 1/3	3 Spectra	Sound	Power	in dB(	A)					
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	60.9	67.5	69.9	73.6	77.4	83.9	87.2	85.9	89.2	92.1	89.3	91.8	91.3	91.0
Uc	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.8	0.7	0.7	0.8	0.7	0.8	0.8
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	91.2	93.7	94.0	93.6	93.0	92.5	91.2	94.4	90.5	84.5	79.7	72.9	64.4	[55.7]
Uc	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.9	0.9	1.1	1.6







100.0 95.0 90.0 Sound Power Level [dBA] 85.0 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 30.0 100 40 80 200 250 400 500 630 1000 1250 1600 2000 2500 50 125 160 Third Octave Frequency [Hz]

Bin 10.5: 1/3 Spectra Sound Power in dB(A)

			Bi	n 10.5: 1	/3 Spectr	a Soun	d Powe	r in dB(	A)					
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	60.7	67.3	69.6	73.5	77.0	83.6	85.6	84.4	89.0	90.8	88.8	91.1	90.6	90.4
Uc	0.9	0.9	1.0	0.9	0.9	0.9	1.0	1.0	0.8	0.7	0.8	0.8	0.8	0.8
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	90.6	93.2	93.7	93.3	93.0	92.3	91.2	93.9	89.6	84.2	79.4	72.6	64.2	[55.7]
Uc	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.9	0.9	1.1	1.7

<sup>[ ]</sup> Total Noise less than 3 dB greater than background (3 dB correction applied).







100.0 95.0 90.0 Sound Power Level [dBA] 85.0 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 30.0 40 20 200 250 315 400 500 630 1000 1250 1600 2000 2500 80 100 125 160 63 Third Octave Frequency [Hz]

Bin 11: 1/3 Spectra Sound Power in dB(A)

			В	3in 11: 1/3	3 Spectra	Sound	Power	in dB(A	<b>A)</b>					
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	60.4	68.3	69.3	73.2	76.7	82.7	85.5	85.0	87.8	91.0	88.7	90.4	90.1	89.7
Uc	0.9	0.9	0.9	0.9	0.9	0.8	1.0	0.8	0.7	0.7	0.8	0.8	0.8	0.8
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	90.1	93.0	93.6	93.6	93.4	92.9	91.3	94.1	89.7	84.1	79.2	72.3	64.1	[55.9]
Uc	0.7	0.7	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.9	0.9	1.0	1.6

<sup>[ ]</sup> Total Noise less than 3 dB greater than background (3 dB correction applied).







100.0 95.0 90.0 Sound Power Level [dBA] 85.0 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 30.0 40 20 200 250 315 400 500 630 1000 1250 1600 2000 2500 80 100 125 160 63 Third Octave Frequency [Hz]

Bin 11.5: 1/3 Spectra Sound Power in dB(A)

			Bi	n 11.5: 1	/3 Spectr	a Soun	d Powe	r in dB(	A)					
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	60.8	69.9	69.9	73.7	77.3	82.0	86.8	84.8	87.4	91.0	88.5	90.4	89.9	89.7
Uc	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0	0.8	0.8	0.9	0.9	0.9	0.9
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	90.3	93.2	93.9	94.0	94.0	93.6	91.6	94.1	90.2	84.3	79.3	72.4	64.1	[55.7]
Uc	0.8	0.8	0.7	0.7	0.7	0.7	0.8	0.7	0.8	0.8	1.0	1.0	1.2	1.7







100.0 95.0 90.0 Sound Power Level [dBA] 85.0 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 30.0 40 100 125 160 200 250 315 200 1250 400 1000 1600 2000 50 80 Third Octave Frequency [Hz]

**Bin 12: 1/3 Spectra Sound Power in dB(A)** 

			В	sin 12: 1/:	3 Spectra	Sound	Power	in dB(	A)					
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	60.9	70.1	70.0	73.8	77.2	82.1	86.9	82.9	87.3	90.9	88.5	90.0	89.5	89.2
Uc	1.0	0.9	0.9	1.0	0.9	0.9	1.0	1.7	0.8	0.7	0.8	0.8	0.9	0.9
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	89.6	92.6	93.5	93.6	93.9	93.4	91.5	93.3	89.3	84.1	78.8	72.1	64.0	[56.2]
Uc	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.9	0.9	1.1	1.7

<sup>[ ]</sup> Total Noise less than 3 dB greater than background (3 dB correction applied).







100.0 95.0 90.0 Sound Power Level [dBA] 85.0 80.0 75.0 70.0 65.0 60.0 55.0 50.0 45.0 40.0 35.0 30.0 31.5 40 100 125 160 200 250 400 630 800 1000 1600 2000 2500 4000 20 63 80 Third Octave Frequency [Hz]

Bin 12.5: 1/3 Spectra Sound Power in dB(A)

			Bi	n 12.5: 1	/3 Spectr	a Soun	d Powe	r in dB(	A)					
Frequency[Hz]	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400
Laeq	60.7	70.7	69.8	73.8	77.2	81.8	87.7	83.0	86.8	91.0	88.6	90.1	89.3	88.9
Uc	1.0	0.9	1.0	1.0	1.0	0.9	0.9	1.5	0.8	0.7	0.8	0.8	0.9	0.9
Frequency[Hz]	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
Laeq	89.1	92.4	93.4	93.7	94.2	93.7	91.8	92.9	89.2	84.4	78.8	72.1	63.9	[55.7]
Uc	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.9	1.0	1.2	1.7







## APPENDIX D: TONALITY ASSESSMENT







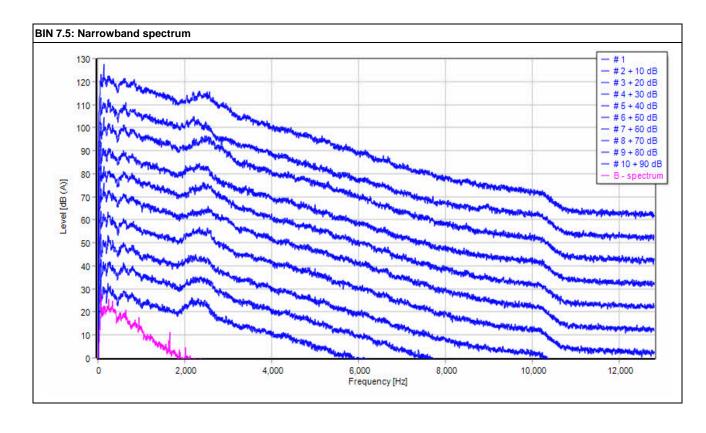
DIN 7.5. Taxada		-1 - 4 !	_									
BIN 7.5: Tonal c	Frequen		delta f	<u> </u>		T	<del></del>		dL <sub>tn,j,k</sub>	La		dL <sub>a,j,k</sub>
	[Hz]	СУ	[Hz]	L <sub>pn,avg,j</sub> [dB]	,K	L <sub>pt,j,k</sub> [dB]	L <sub>pn,j,k</sub> [dB]		[dB]	[dB]		[dB]
dL <sub>t1,1,7.5</sub> :	62.5		3.13	25.1		36.1	38.2		-2.1	-2.0		-0.1
dL <sub>t1,2,7.5</sub> :	65.6		3.13	25.6		32.7	38.7		-6.0	-2.0		-4.0
dL <sub>t1,3,7.5</sub> :	62.5		3.13	25.5		36.0	38.6		-2.7	-2.0		-0.7
dL <sub>t1,4,7.5</sub> :	65.6		3.13	27.5		33.7	40.6		-6.9	-2.0		-4.9
dL <sub>t1,6,7.5</sub> :	68.8		3.13	27.1		33.5	40.2		-6.7	-2.0		-4.7
dL <sub>t1,7,7.5</sub> :	65.6		3.13	26.1		34.2	39.3		-5.0	-2.0		-3.0
dL <sub>t1,8,7.5</sub> :	68.8		3.13	26.0		32.1	39.2		-7.1	-2.0		-5.1
dL <sub>t1,9,7.5</sub> :	62.5		3.13	26.1		34.4	39.3		-4.9	-2.0		-2.9
dL <sub>t1,14,7.5</sub> :	65.6		3.13	25.8		33.9	38.9		-5.0	-2.0		-3.0
dL <sub>t1,15,7.5</sub> :	65.6		3.13	26.5		34.3	39.7		-5.4	-2.0		-3.4
dL <sub>t1,16,7.5</sub> :	68.8		3.13	26.1		33.7	39.3		-5.6	-2.0		-3.6
dL <sub>t1,17,7.5</sub> :	68.8		3.13	26.7		33.4	39.9		-6.5	-2.0		-4.4
dL <sub>t1,18,7.5</sub> :	65.6		3.13	26.6		34.6	39.7		-5.1	-2.0		-3.1
dL <sub>t1,21,7.5</sub> :	68.8		3.13	26.8		33.7	39.9		-6.2	-2.0		-4.2
dL <sub>t1,26,7.5</sub> :	65.6		3.13	26.3		36.1	39.4		-3.3	-2.0		-1.3
dL <sub>t1,27,7.5</sub> :	65.6		3.13	26.3		33.5	39.5		-6.0	-2.0		-4.0
dL <sub>t1,28,7.5</sub> : dL <sub>t1,29,7.5</sub> :	65.6 65.6		3.13 3.13	24.7 24.9		34.5 34.4	37.9 38.1		-3.4 -3.6	-2.0 -2.0		-1.4 -1.6
dL <sub>t1,29,7.5</sub> : dL <sub>t1,30,7.5</sub> :	62.5		3.13	25.5		35.7	38.7		-3.0	-2.0		-1.0
dL <sub>t1,30,7.5</sub> : dL <sub>t1,31,7.5</sub> :	65.6	<del>-  </del>	3.13	25.5		33.1	37.2	-	-3.0 -4.1	-2.0		-1.0
dL <sub>t1,31,7.5</sub> : dL <sub>t1,32,7.5</sub> :	68.8		3.13	26.8		34.5	39.9		-5.4	-2.0		-3.4
dL <sub>t1,32,7.5</sub> :	65.6		3.13	26.5		33.3	39.6		-6.3	-2.0		-4.3
dL <sub>t1,34,7.5</sub> :	68.8		3.13	26.2		34.1	39.4		-5.3	-2.0		-3.3
dL <sub>t1,40,7.5</sub> :	65.6		3.13	26.6		35.0	39.8		-4.8	-2.0		-2.8
dL <sub>t1,41,7.5</sub> :	65.6		3.13	26.5		32.7	39.7		-6.9	-2.0		-4.9
dL <sub>t1,42,7.5</sub> :	65.6		3.13	25.9		33.4	39.0		-5.7	-2.0		-3.7
dL <sub>t1,43,7.5</sub> :	68.8		3.13	26.5		32.9	39.6		-6.7	-2.0		-4.7
dL <sub>t1,44,7.5</sub> :	65.6		3.13	26.7		34.4	39.8		-5.5	-2.0		-3.5
dL <sub>t1,45,7.5</sub> :	65.6		3.13	26.3		33.3	39.4		-6.2	-2.0		-4.2
dL <sub>t2,23,7.5</sub> :	100.0		3.13	30.4		40.8	43.7		-2.9	-2.0		-0.9
dL <sub>t2,24,7.5</sub> :	87.5		3.13	30.0		41.4	43.3		-2.0	-2.0		0.0
dL <sub>t2,25,7.5</sub> :	84.4		3.13	28.8		36.5	42.1		-5.6	-2.0		-3.6
dL <sub>t3,10,7.5</sub> :	134.4		3.13	30.8		37.4	44.1		-6.8	-2.0		-4.8
dL <sub>t3,15,7.5</sub> :	134.4		3.13	29.7		36.3	43.0		-6.8	-2.0		-4.7
dL <sub>t3,16,7.5</sub> : dL <sub>t3,29,7.5</sub> :	134.4 128.1		3.13 3.13	29.3 28.3		36.4 34.4	42.6 41.6		-6.1 -7.2	-2.0 -2.0		-4.1 -5.2
dL <sub>t3,29,7.5</sub> :	134.4		3.13	29.8		36.0	43.1		-7.2	-2.0		-5.0
dL <sub>t3,40,7.5</sub> :	134.4		3.13	30.2		36.3	43.5		-7.2	-2.0		-5.2
BIN 7.5: Tonal c	1											
Spectrum	f <sub>T</sub>	dL <sub>tn,j,k</sub>	u - Compac   f <sub>T</sub>	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$			1			
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]				+		
1	62.5	-2.1										
2	65.6	-6.0										
3	62.5	-2.7										
4	65.6	-6.9										
5												
6	68.8	-6.7										
7	65.6	-5.0										
8	68.8	-7.1								1		
9	62.5	-4.9			124.4		ļ			1		+
10					134.4	-6.8	-			<del>                                     </del>		
11 12										1		-
13							<u> </u>		-	1		+
13	65.6	-5.0					<b> </b>		-	1		+
15	65.6	-5.4			134.4	-6.8	<b>-</b>		-	+	-	+
16	68.8	-5.6			134.4	-6.1	t			†		
17	68.8	-6.5										
18	65.6	-5.1					<u> </u>			1	1	
19												
20		-										
21	68.8	-6.2										
22												
23			100.0	-2.9								
24			87.5	-2.0								
25			84.4	-5.6						1		
26	65.6	-3.3					<b></b>			1		
27	65.6	-6.0					<u> </u>					
28	65.6	-3.4			400.4	7.0						+
29	65.6	-3.6			128.1	-7.2	1		1	1	1	1





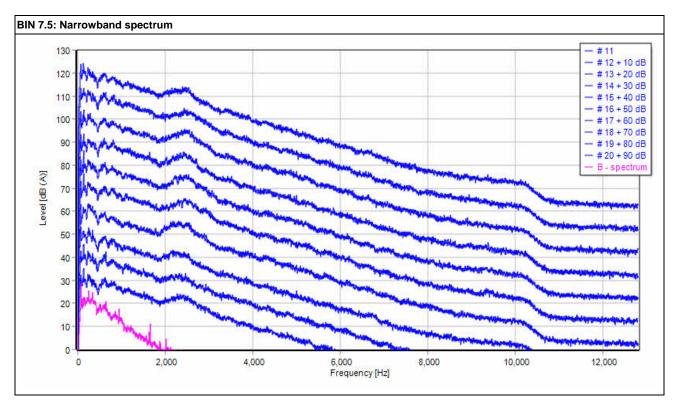


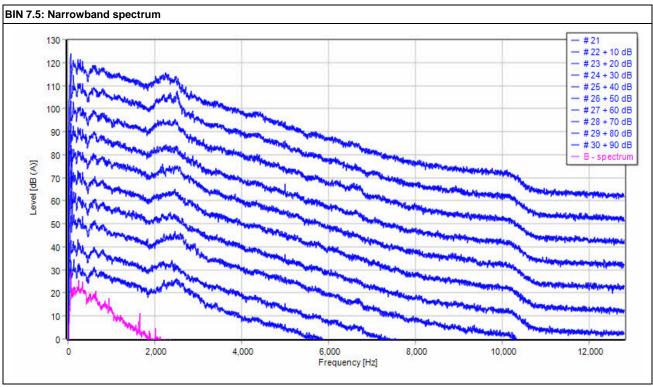
30	62.5	-3.0							
31	65.6	-4.1							
32	68.8	-5.4			134.4	-7.0			
33	65.6	-6.3							
34	68.8	-5.3							
35									
36									
37									
38									
39									
40	65.6	-4.8			134.4	-7.2			
41	65.6	-6.9							
42	65.6	-5.7							
43	68.8	-6.7							
44	65.6	-5.5							
45	65.6	-6.2							
46									
47									
48									
ft[Hz]   dLk[dB]	64.7	-6.8	99.4	-11.4	134.3	-11.8			
L <sub>a</sub> [dB]		-2.0		-2.0		-2.0			
dL <sub>a,k</sub> [dB]		-4.8		-9.3		-9.8			
K <sub>TN</sub> [dB]		0		0		0			

















BIN 8: Tonal co	omponents determi							
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	La	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
dL <sub>t1,1,8</sub> :	68.8	3.13	26.8	33.3	40.0	-6.7	-2.0	-4.7
dL <sub>t1,2,8</sub> :	71.9	3.13	28.1	36.3	41.4	-5.1	-2.0	-3.1
dL <sub>t1,3,8</sub> :	71.9	3.13	28.8	37.6	42.1	-4.5	-2.0	-2.5
dL <sub>t1,6,8</sub> :	68.8	3.13	27.2	36.1	40.3	-4.3	-2.0	-2.3
dL <sub>t1,7,8</sub> :	68.8	3.13	27.0	36.6	40.2	-3.5	-2.0	-1.5
dL <sub>t1,8,8</sub> :	68.8	3.13	27.6	34.4	40.7	-6.3	-2.0	-4.3
dL <sub>t1,9,8</sub> :	68.8	3.13	25.9	38.5	39.1	-0.6	-2.0	1.5
dL <sub>t1,10,8</sub> :	71.9	3.13	28.6	39.6	41.9	-2.2	-2.0	-0.2
dL <sub>t1,11,8</sub> :	68.8	3.13	27.9	36.8	41.0	-4.2	-2.0	-2.2
dL <sub>t1,12,8</sub> :	68.8	3.13	27.6	36.8	40.8	-4.0	-2.0	-2.0
dL <sub>t1,13,8</sub> :	68.8	3.13	27.3	36.2	40.4	-4.2	-2.0	-2.2
dL <sub>t1,15,8</sub> :	71.9 71.9	3.13	28.0	37.8	41.3 39.8	-3.5	-2.0 -2.0	-1.5 -2.3
dL <sub>t1,18,8</sub> :	68.8	3.13 3.13	26.5 27.2	35.5 34.1	39.8 40.4	-4.3 -6.3	-2.0 -2.0	-2.3 -4.3
dL <sub>t1,19,8</sub> : dL <sub>t1,20,8</sub> :	68.8	3.13	27.2	34.0	40.3	-6.3	-2.0	-4.3
dL <sub>t1,20,8</sub> :	87.5	3.13	29.5	43.6	42.7	0.9	-2.0	2.9
dL <sub>t1,21,8</sub> . dL <sub>t1,22,8</sub> :	84.4	3.13	29.2	40.4	42.4	-2.1	-2.0	0.0
dL <sub>t1,22,8</sub> . dL <sub>t1,23,8</sub> :	71.9	3.13	27.3	37.0	40.6	-3.5	-2.0	-1.5
dL <sub>t1,24,8</sub> :	68.8	3.13	27.5	34.7	40.6	-6.0	-2.0	-3.9
dL <sub>t1,24,8</sub> : dL <sub>t1,25,8</sub> :	68.8	3.13	28.9	36.9	42.0	-5.1	-2.0	-3.1
dL <sub>t1,25,8</sub> : dL <sub>t1,26,8</sub> :	68.8	3.13	28.6	36.4	41.7	-5.3	-2.0	-3.3
dL <sub>t1,25,8</sub> :	71.9	3.13	27.7	37.4	41.0	-3.6	-2.0	-1.6
dL <sub>t1,28,8</sub> :	71.9	3.13	28.0	36.5	41.3	-4.8	-2.0	-2.8
dL <sub>t1,29,8</sub> :	71.9	3.13	29.4	37.7	42.6	-4.9	-2.0	-2.9
dL <sub>t1,30,8</sub> :	71.9	3.13	29.6	38.8	42.9	-4.0	-2.0	-2.0
dL <sub>t1,31,8</sub> :	71.9	3.13	28.7	41.2	42.0	-0.8	-2.0	1.2
dL <sub>t1,32,8</sub> :	68.8	3.13	29.7	35.8	42.9	-7.1	-2.0	-5.1
dL <sub>t1,33,8</sub> :	68.8	3.13	28.5	36.8	41.6	-4.9	-2.0	-2.9
dL <sub>t1,34,8</sub> :	87.5	3.13	32.9	42.8	46.2	-3.4	-2.0	-1.4
dL <sub>t1,35,8</sub> :	71.9	3.13	31.4	37.8	44.6	-6.8	-2.0	-4.8
dL <sub>t1,37,8</sub> :	68.8	3.13	27.5	35.6	40.7	-5.0	-2.0	-3.0
dL <sub>t1,38,8</sub> :	68.8	3.13	27.7	34.7	40.9	-6.1	-2.0	-4.1
dL <sub>t1,39,8</sub> :	68.8	3.13	27.1	35.6	40.2	-4.7	-2.0	-2.7
dL <sub>t1,40,8</sub> :	71.9	3.13	27.3	40.3	40.6	-0.3	-2.0	1.7
dL <sub>t1,41,8</sub> :	68.8	3.13	27.3	39.7	40.4	-0.7	-2.0	1.3
dL <sub>t1,42,8</sub> :	71.9	3.13	27.5	38.6	40.8	-2.2	-2.0	-0.2
dL <sub>t1,43,8</sub> :	68.8	3.13	26.9	36.3	40.0	-3.7	-2.0	-1.7
dL <sub>t1,44,8</sub> :	71.9	3.13	27.3	38.0	40.6	-2.6	-2.0	-0.6
dL <sub>t1,45,8</sub> :	71.9	3.13	29.5	38.7	42.8	-4.0	-2.0	-2.0
dL <sub>t1,47,8</sub> :	68.8	3.13	28.4	36.9	41.5	-4.7	-2.0	-2.7
dL <sub>t1,48,8</sub> :	71.9	3.13	27.9	35.2	41.2	-6.0	-2.0	-4.0
dL <sub>t2,16,8</sub> :	96.9	3.13	30.9	45.7	44.2	1.5	-2.0	3.5
dL <sub>t2,17,8</sub> :	93.8	3.13	30.7	44.0	44.0	0.1	-2.0	2.1
dL <sub>t2,21,8</sub> :	87.5	3.13	29.5	43.6	42.7	0.9	-2.0	2.9
dL <sub>t2,22,8</sub> :	84.4	3.13	29.2	40.4	42.4	-2.1	-2.0	0.0
dL <sub>t2,34,8</sub> :	87.5	3.13	32.9	42.8	46.2	-3.4	-2.0	-1.4
dL <sub>t3,1,8</sub> :	137.5	3.13	30.1	36.3	43.4	-7.1	-2.0	-5.1
dL <sub>t3,2,8</sub> :	140.6	3.13	30.3	36.6	43.6	-6.9	-2.0	-4.9
dL <sub>t3,3,8</sub> :	140.6	3.13	31.3	41.9	44.6	-2.7	-2.0	-0.7
dL <sub>t3,4,8</sub> :	140.6	3.13	30.5	39.0	43.8	-4.8	-2.0	-2.8
dL <sub>t3,5,8</sub> :	140.6	3.13	30.2	40.8	43.5	-2.7	-2.0	-0.7
dL <sub>t3,6,8</sub> :	140.6	3.13	30.3	37.4	43.5	-6.1	-2.0	-4.1
dL <sub>t3,7,8</sub> :	140.6 140.6	3.13 3.13	29.6 29.2	39.7 40.0	42.9 42.5	-3.2 -2.5	-2.0 -2.0	-1.1 -0.5
dL <sub>t3,9,8</sub> : dL <sub>t3,11,8</sub> :	140.6	3.13	29.8	40.0	43.1	1.3	-2.0 -2.0	3.4
	140.6	3.13	29.6	44.4	43.1	1.5	-2.0 -2.0	3.4
dL <sub>t3,12,8</sub> : dL <sub>t3,13,8</sub> :	140.6	3.13	29.9	40.5	43.1	-2.7	-2.0 -2.0	-0.7
dL <sub>t3,13,8</sub> : dL <sub>t3,15,8</sub> :	140.6	3.13	30.0	42.5	43.1	-0.9	-2.0 -2.0	1.1
dL <sub>t3,15,8</sub> . dL <sub>t3,18,8</sub> :	140.6	3.13	30.1	38.5	43.4	-4.9	-2.0	-2.9
dL <sub>t3,18,8</sub> . dL <sub>t3,19,8</sub> :	137.5	3.13	29.9	39.3	43.2	-3.9	-2.0	-1.8
dL <sub>t3,19,8</sub> : dL <sub>t3,20,8</sub> :	134.4	3.13	29.9	41.0	43.2	-2.1	-2.0	-0.1
dL <sub>t3,20,8</sub> : dL <sub>t3,21,8</sub> :	140.6	3.13	30.4	44.2	43.7	0.4	-2.0	2.4
dL <sub>t3,21,8</sub> : dL <sub>t3,22,8</sub> :	140.6	3.13	30.9	42.7	44.2	-1.5	-2.0	0.5
dL <sub>t3,22,8</sub> :	140.6	3.13	29.5	43.5	42.8	0.7	-2.0	2.7
dL <sub>t3,24,8</sub> :	140.6	3.13	30.0	41.9	43.3	-1.4	-2.0	0.7
dL <sub>t3,25,8</sub> :	140.6	3.13	31.3	40.3	44.6	-4.2	-2.0	-2.2
dL <sub>t3,26,8</sub> :	140.6	3.13	31.6	37.7	44.9	-7.2	-2.0	-5.2
dL <sub>t3,27,8</sub> :	140.6	3.13	30.6	41.9	43.9	-2.0	-2.0	0.1
dL <sub>t3,33,8</sub> :	140.6	3.13	31.6	43.5	44.9	-1.4	-2.0	0.6
	. 10.0	3.13	33.6	40.6	46.9	-6.2	-2.0	-4.2







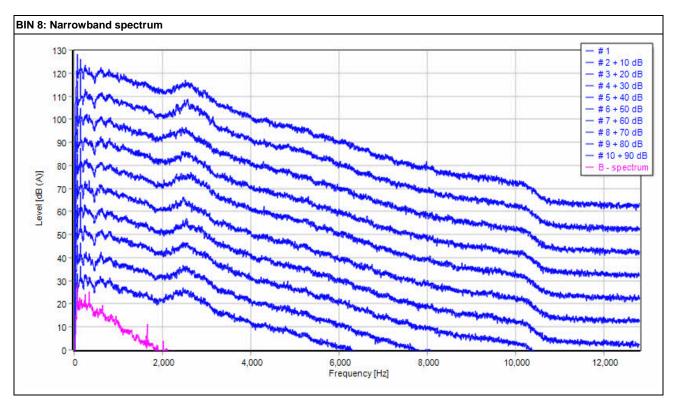
dL <sub>t3,36,8</sub> :	140.6	3.13	33.6	44.5	46.9	-2.4	-2.0	-0.4
dL <sub>t3,37,8</sub> :	140.6	3.13	31.0	40.6	44.3	-3.6	-2.0	-1.6
dL <sub>t3,38,8</sub> :	137.5	3.13	31.0	41.3	44.3	-3.0	-2.0	-1.0
dL <sub>t3,39,8</sub> :	140.6	3.13	31.1	40.5	44.4	-3.8	-2.0	-1.8
dL <sub>t3,40,8</sub> :	143.8	3.13	30.6	39.4	43.9	-4.6	-2.0	-2.6
dL <sub>t3,41,8</sub> :	140.6	3.13	31.0	40.8	44.2	-3.4	-2.0	-1.4
dL <sub>t3,42,8</sub> :	140.6	3.13	30.7	39.2	44.0	-4.8	-2.0	-2.7
dL <sub>t3,44,8</sub> :	140.6	3.13	31.3	37.7	44.6	-6.9	-2.0	-4.9
dL <sub>t3,46,8</sub> :	140.6	3.13	31.2	40.7	44.5	-3.8	-2.0	-1.8
dL <sub>t3,47,8</sub> :	140.6	3.13	31.5	42.6	44.8	-2.1	-2.0	-0.1
dL <sub>t3,49,8</sub> :	140.6	3.13	32.2	40.9	45.5	-4.6	-2.0	-2.6
dL <sub>t4,48,8</sub> :	325.0	3.13	30.0	37.4	43.6	-6.2	-2.1	-4.0

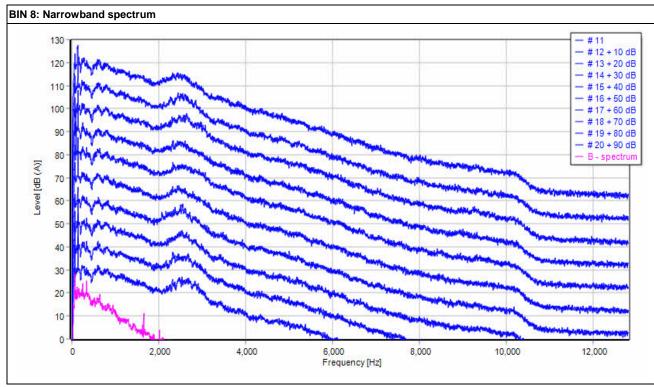
Spectrum	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$			
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]			
1	68.8	-6.7			137.5	-7.1					
2	71.9	-5.1			140.6	-6.9					
3	71.9	-4.5			140.6	-2.7					
4					140.6	-4.8					
5					140.6	-2.7					1
6	68.8	-4.3			140.6	-2. <i>1</i> -6.1					
7											
	68.8	-3.5			140.6	-3.2					
8	68.8	-6.3									
9	68.8	-0.6			140.6	-2.5					
10	71.9	-2.2									
11	68.8	-4.2			140.6	1.3					
12	68.8	-4.0			140.6	1.5					
13	68.8	-4.2			140.6	-2.7					
14											
15	71.9	-3.5			140.6	-0.9					1
16			96.9	1.5					1		1
17			93.8	0.1					1	1	1
18	71.9	-4.3			140.6	-4.9			+	+	1
19	68.8	-6.3			137.5	-3.9			+	+	1
20	68.8	-6.3			134.4	-3.9 -2.1			+	+	1
21	87.5	0.9	87.5	0.9	140.6	0.4					
22	84.4	-2.1	84.4	-2.1	140.6	-1.5					
23	71.9	-3.5			140.6	0.7					
24	68.8	-6.0			140.6	-1.4					
25	68.8	-5.1			140.6	-4.2					
26	68.8	-5.3			140.6	-7.2					
27	71.9	-3.6			140.6	-2.0					
28	71.9	-4.8									
29	71.9	-4.9									
30	71.9	-4.0									
31	71.9	-0.8									
32										-	
	68.8	-7.1									
33	68.8	-4.9			140.6	-1.4					
34	87.5	-3.4	87.5	-3.4							
35	71.9	-6.8			140.6	-6.2					
36					140.6	-2.4					
37	68.8	-5.0			140.6	-3.6					
38	68.8	-6.1			137.5	-3.0					
39	68.8	-4.7			140.6	-3.8					
40	71.9	-0.3			143.8	-4.6					
41	68.8	-0.7			140.6	-3.4					1
42	71.9	-2.2			140.6	-4.8			İ	Ì	
43	68.8	-3.7							1		1
44	71.9	-2.6			140.6	-6.9			+	+	1
45	71.9	-4.0				-0.9			+	+	
									+	+	1
46					140.6	-3.8			+	-	1
47	68.8	-4.7			140.6	-2.1					
48	71.9	-6.0					325.0	-6.2			1
49					140.6	-4.6					
lz]   dL <sub>k</sub> [dB]	70.9	-4.3	96.2	-8.6	139.5	-4.0	325.0	-13.2			
L <sub>a</sub> [dB]		-2.0		-2.0		-2.0		-2.1			
dL <sub>a,k</sub> [dB]		-2.3		-6.6		-1.9	İ	-11.1	İ	1	1
K <sub>TN</sub> [dB]		0		0.0		0	<b> </b>	0	+	+	<del>                                     </del>







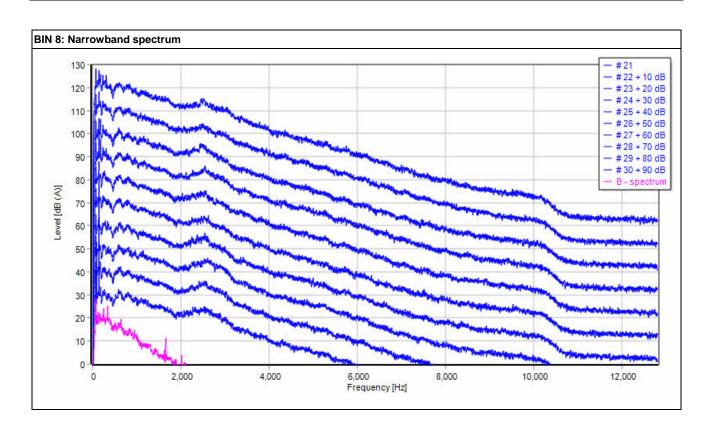
















Birt old: Torial	components deter							
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	La	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
dL <sub>t1,1,8.5</sub> :	71.9	3.13	27.7	38.5	41.0	-2.5	-2.0	-0.5
dL <sub>t1,2,8.5</sub> :	71.9	3.13	27.1	38.6	40.3	-1.7	-2.0	0.3
dL <sub>t1,3,8.5</sub> :	71.9	3.13	27.5	39.7	40.8	-1.1	-2.0	0.9
dL <sub>t1,4,8.5</sub> :	71.9	3.13	27.1	37.8	40.4	-2.6	-2.0	-0.6
dL <sub>t1,5,8.5</sub> :	71.9	3.13	27.0	38.4	40.3	-1.9	-2.0	0.1
dL <sub>t1,6,8.5</sub> :	71.9	3.13	28.3	39.2	41.6	-2.4	-2.0	-0.4
dL <sub>t1,7,8.5</sub> :	71.9	3.13	26.7	39.2	39.9	-0.8	-2.0	1.3
dL <sub>t1,8,8.5</sub> :	71.9	3.13	27.7	37.5	41.0	-3.5	-2.0	-1.5
dL <sub>t1,9,8.5</sub> :	68.8	3.13	28.8	37.5	41.9	-4.4	-2.0	-2.4
dL <sub>t1,10,8.5</sub> :	71.9	3.13	28.3	37.7	41.6	-3.8	-2.0	-1.8
dL <sub>t1,10,8.5</sub> :	71.9	3.13	26.9	37.5	40.2	-2.8	-2.0	-0.8
	71.9	3.13	27.8	39.4	41.1	-1.7	-2.0	0.3
dL <sub>t1,12,8.5</sub> :								
dL <sub>t1,13,8.5</sub> :	71.9	3.13	28.2	37.0	41.5	-4.4	-2.0	-2.4
dL <sub>t1,14,8.5</sub> :	71.9	3.13	28.8	36.6	42.1	-5.6	-2.0	-3.6
dL <sub>t1,15,8.5</sub> :	71.9	3.13	29.0	37.3	42.3	-5.0	-2.0	-3.0
dL <sub>t1,16,8.5</sub> :	71.9	3.13	28.4	36.7	41.7	-5.1	-2.0	-3.1
dL <sub>t1,17,8.5</sub> :	71.9	3.13	29.1	39.3	42.4	-3.1	-2.0	-1.1
dL <sub>t1,18,8.5</sub> :	71.9	3.13	26.5	39.3	39.8	-0.5	-2.0	1.5
dL <sub>t1,19,8.5</sub> :	71.9	3.13	28.4	38.8	41.7	-2.9	-2.0	-0.9
dL <sub>t1,20,8.5</sub> :	71.9	3.13	28.5	39.3	41.8	-2.5	-2.0	-0.5
dL <sub>t1,21,8.5</sub> :	71.9	3.13	28.8	37.3	42.1	-4.8	-2.0	-2.8
dL <sub>t1,23,8.5</sub> :	71.9	3.13	27.9	40.8	41.2	-0.4	-2.0	1.6
dL <sub>t1,25,8.5</sub> :	71.9	3.13	27.9	39.4	41.1	-1.7	-2.0	0.3
dL <sub>t1,26,8.5</sub> :	71.9	3.13	28.1	39.3	41.4	-2.1	-2.0	-0.1
dL <sub>t1,27,8.5</sub> :	71.9	3.13	28.7	40.1	42.0	-1.9	-2.0	0.1
dL <sub>t1,30,8.5</sub> :	71.9	3.13	29.7	40.1	43.0	-2.9	-2.0	-0.9
dL <sub>t1,30,8.5</sub> :	71.9	3.13	27.8	36.1	41.0	-5.0	-2.0	-3.0
	71.9	3.13	27.6	37.1	40.9	-3.8	-2.0	-1.8
dL <sub>t1,32,8.5</sub> :					40.9	-2.0	-2.0	0.0
dL <sub>t1,33,8.5</sub> :	71.9	3.13	27.4	38.7				
dL <sub>t1,34,8.5</sub> :	71.9	3.13	28.1	38.5	41.3	-2.9	-2.0	-0.8
dL <sub>t1,35,8.5</sub> :	71.9	3.13	28.3	37.8	41.6	-3.8	-2.0	-1.8
dL <sub>t1,36,8.5</sub> :	71.9	3.13	28.9	39.8	42.2	-2.4	-2.0	-0.4
dL <sub>t1,37,8.5</sub> :	71.9	3.13	29.6	39.0	42.9	-3.8	-2.0	-1.8
dL <sub>t1,38,8.5</sub> :	71.9	3.13	28.6	38.1	41.9	-3.9	-2.0	-1.8
dL <sub>t1,40,8.5</sub> :	71.9	3.13	29.6	36.0	42.9	-6.9	-2.0	-4.9
dL <sub>t1,41,8.5</sub> :	71.9	3.13	29.5	38.0	42.8	-4.8	-2.0	-2.8
dL <sub>t1,42,8.5</sub> :	71.9	3.13	27.2	37.6	40.5	-3.0	-2.0	-1.0
dL <sub>t1,43,8,5</sub> :	71.9	3.13	27.4	38.0	40.7	-2.8	-2.0	-0.7
dL <sub>t1,44,8.5</sub> :	71.9	3.13	27.0	38.9	40.3	-1.4	-2.0	0.6
dL <sub>t1,45,8.5</sub> :	71.9	3.13	29.1	39.9	42.4	-2.4	-2.0	-0.4
dL <sub>t1,46,8.5</sub> :	68.8	3.13	28.4	35.0	41.6	-6.6	-2.0	-4.6
dL <sub>t1,47,8.5</sub> :	71.9	3.13	27.9	36.6	41.2	-4.6	-2.0	-2.6
dL <sub>t1,48,8.5</sub> :	71.9	3.13	28.4	37.8	41.7	-3.9	-2.0	-1.9
	71.9	3.13	29.7	38.3	43.0	-4.7	-2.0	-2.7
dL <sub>t1,49,8.5</sub> :	71.9	3.13	29.7	38.1	43.0	-4.7	-2.0	-2.7 -2.5
dL <sub>t1,50,8.5</sub> :								
dL <sub>t1,51,8.5</sub> :	68.8	3.13	29.7	37.1	42.8	-5.7	-2.0	-3.7
dL <sub>t1,52,8.5</sub> :	71.9	3.13	29.5	39.2	42.8	-3.6	-2.0	-1.6
dL <sub>t1,53,8.5</sub> :	71.9	3.13	29.4	38.3	42.7	-4.4	-2.0	-2.4
dL <sub>t1,54,8.5</sub> :	71.9	3.13	29.7	40.0	43.0	-3.0	-2.0	-1.0
dL <sub>t1,55,8.5</sub> :	71.9	3.13	29.4	38.1	42.7	-4.5	-2.0	-2.5
dL <sub>t1,56,8.5</sub> :	71.9	3.13	28.2	38.8	41.5	-2.7	-2.0	-0.7
dL <sub>t1,57,8.5</sub> :	71.9	3.13	29.0	37.3	42.3	-5.1	-2.0	-3.0
dL <sub>t1,59,8.5</sub> :	71.9	3.13	30.4	36.6	43.7	-7.1	-2.0	-5.1
dL <sub>t2,1,8.5</sub> :	143.8	3.13	30.6	41.0	43.9	-2.9	-2.0	-0.9
dL <sub>t2,2,8.5</sub> :	143.8	3.13	29.6	39.5	42.9	-3.4	-2.0	-1.4
dL <sub>t2,3,8.5</sub> :	143.8	3.13	30.5	37.9	43.8	-5.8	-2.0	-3.8
dL <sub>t2,4,8.5</sub> :	143.8	3.13	29.8	41.0	43.1	-2.0	-2.0	0.0
dL <sub>t2,5,8.5</sub> :	143.8	3.13	30.2	41.5	43.5	-2.0	-2.0	0.0
dL <sub>t2,6,8.5</sub> :	143.8	3.13	30.7	39.0	44.0	-5.0	-2.0	-3.0
dL <sub>12,7,8.5</sub> :	143.8	3.13	29.6	44.7	42.9	1.8	-2.0	3.8
dL <sub>12,8,8.5</sub> :	140.6	3.13	30.4	40.3	43.6	-3.3	-2.0	-1.3
dL <sub>12,9,8.5</sub> :	140.6	3.13	31.3	40.6	44.6	-4.0	-2.0	-2.0
dL <sub>12,9,8.5</sub> . dL <sub>12,10.8.5</sub> :	143.8	3.13	30.2	40.0	43.5	-3.5	-2.0	-1.5
- 1 -7	140.6	3.13	29.7	41.1	43.0			0.1
dL <sub>t2,11,8.5</sub> :						-1.9	-2.0	
dL <sub>t2,12,8.5</sub> :	143.8	3.13	30.2	41.2	43.5	-2.4	-2.0	-0.4
dL <sub>t2,13,8.5</sub> :	140.6	3.13	30.3	43.4	43.6	-0.2	-2.0	1.8
dL <sub>t2,14,8.5</sub> :	140.6	3.13	30.8	43.7	44.1	-0.4	-2.0	1.7
dL <sub>t2,15,8.5</sub> :	140.6	3.13	30.9	44.5	44.2	0.3	-2.0	2.3
dL <sub>t2,16,8.5</sub> :	140.6	3.13	30.6	41.1	43.9	-2.8	-2.0	-0.7
	143.8	3.13	31.4	43.0	44.7	-1.7	-2.0	0.3







dL <sub>12,18,8.5</sub> :	143.8	3.13	30.2	41.0	43.5	-2.4	-2.0	-0.4
dL <sub>12,19,8.5</sub> :	140.6	3.13	31.2	39.4	44.5	-5.1	-2.0	-3.1
dL <sub>12,20,8.5</sub> :	143.8	3.13	30.9	40.3	44.2	-3.9	-2.0	-1.9
dL <sub>12,21,8.5</sub> :	140.6	3.13	30.9	43.7	44.2	-0.5	-2.0	1.5
dL <sub>12,22,8.5</sub> :	140.6	3.13	31.5	43.9	44.8	-0.9	-2.0	1.1
dL <sub>t2,23,8.5</sub> :	140.6	3.13	31.5	42.5	44.8	-2.3	-2.0	-0.3
dL <sub>12,24,8.5</sub> :	140.6	3.13	30.5	44.6	43.7	0.8	-2.0	2.9
dL <sub>12,25,8.5</sub> :	143.8	3.13	30.5	39.7	43.8	-4.1	-2.0	-2.1
dL <sub>t2,26,8.5</sub> :	143.8	3.13	30.3	43.6	43.6	0.0	-2.0	2.0
dL <sub>t2,27,8.5</sub> :	143.8	3.13	31.3	44.0	44.6	-0.5	-2.0	1.5
dL <sub>t2,28,8.5</sub> :	134.4	3.13	31.4	41.7	44.7	-3.0	-2.0	-1.0
dL <sub>t2,30,8.5</sub> :	140.6	3.13	32.2	41.1	45.5	-4.4	-2.0	-2.4
dL <sub>t2,31,8.5</sub> :	140.6	3.13	31.3	40.8	44.5	-3.8	-2.0	-1.7
dL <sub>t2,32,8.5</sub> :	140.6	3.13	31.2	42.7	44.5	-1.8	-2.0	0.2
dL <sub>t2,33,8.5</sub> :	143.8	3.13	31.5	42.4	44.8	-2.4	-2.0	-0.4
dL <sub>t2,34,8.5</sub> :	140.6	3.13	31.2	40.8	44.5	-3.7	-2.0	-1.7
dL <sub>t2,35,8.5</sub> :	143.8	3.13	31.4	39.6	44.7	-5.1	-2.0	-3.1
dL <sub>t2,36,8.5</sub> :	143.8	3.13	31.4	42.3	44.7	-2.4	-2.0	-0.4
dL <sub>t2,37,8.5</sub> :	140.6	3.13	32.4	40.1	45.7	-5.6	-2.0	-3.6
dL <sub>t2,38,8.5</sub> :	140.6	3.13	31.7	41.7	44.9	-3.3	-2.0	-1.2
dL <sub>t2,39,8.5</sub> :	140.6	3.13	32.7	41.6	46.0	-4.4	-2.0	-2.3
dL <sub>t2,40,8.5</sub> :	140.6	3.13	32.6	42.9	45.9	-3.0	-2.0	-1.0
dL <sub>t2,42,8.5</sub> :	140.6	3.13	30.8	41.0	44.1	-3.1	-2.0	-1.1
dL <sub>t2,43,8.5</sub> :	143.8	3.13	30.8	39.5	44.1	-4.6	-2.0	-2.6
dL <sub>t2,44,8.5</sub> :	143.8	3.13	30.4	39.4	43.7	-4.3	-2.0	-2.3
dL <sub>t2,45,8.5</sub> :	143.8	3.13	31.8	45.1	45.0	0.1	-2.0	2.1
dL <sub>t2,46,8.5</sub> :	140.6	3.13	32.2	42.2	45.5	-3.3	-2.0	-1.3
dL <sub>t2,47,8.5</sub> :	140.6	3.13	31.1	38.8	44.4	-5.6	-2.0	-3.6
dL <sub>t2,48,8.5</sub> :	143.8	3.13	31.8	41.3	45.1	-3.8	-2.0	-1.7
dL <sub>12,49,8.5</sub> :	140.6	3.13	32.5	39.9	45.7	-5.8	-2.0	-3.8
dL <sub>t2,50,8.5</sub> :	143.8	3.13	32.8	44.6	46.1	-1.5	-2.0	0.5
dL <sub>t2,51,8.5</sub> :	140.6	3.13	33.0	42.1	46.3	-4.2	-2.0	-2.2
dL <sub>t2,52,8.5</sub> :	140.6	3.13	32.2	39.8	45.5	-5.7	-2.0	-3.7
dL <sub>t2,53,8.5</sub> :	140.6	3.13	32.9	42.3	46.2	-3.9	-2.0	-1.9
dL <sub>t2,54,8.5</sub> :	143.8	3.13	32.5	43.1	45.8	-2.8	-2.0	-0.7
dL <sub>t2,55,8.5</sub> :	140.6	3.13	32.6	42.7	45.9	-3.2	-2.0	-1.2
dL <sub>t2,56,8.5</sub> :	140.6	3.13	31.7	41.1	45.0	-3.8	-2.0	-1.8
dL <sub>t2,57,8.5</sub> :	143.8	3.13	31.7	40.7	45.0	-4.3	-2.0	-2.3
dL <sub>t2,58,8.5</sub> :	140.6	3.13	33.6	41.6	46.9	-5.3	-2.0	-3.3
dL <sub>t3,31,8.5</sub> :	309.4	3.13	30.5	37.9	44.1	-6.2	-2.1	-4.0
dL <sub>t3,38,8.5</sub> :	309.4	3.13	30.5	38.8	44.1	-5.2	-2.1	-3.1

BIN 8.5: Tonal co	mponents	determine	d - Compac						
Spectrum	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$			
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]			
1	71.9	-2.5	143.8	-2.9					
2	71.9	-1.7	143.8	-3.4					
3	71.9	-1.1	143.8	-5.8					
4	71.9	-2.6	143.8	-2.0					
5	71.9	-1.9	143.8	-2.0					
6	71.9	-2.4	143.8	-5.0					
7	71.9	-0.8	143.8	1.8					
8	71.9	-3.5	140.6	-3.3			_		
9	68.8	-4.4	140.6	-4.0					
10	71.9	-3.8	143.8	-3.5					
11	71.9	-2.8	140.6	-1.9					
12	71.9	-1.7	143.8	-2.4					
13	71.9	-4.4	140.6	-0.2					
14	71.9	-5.6	140.6	-0.4					
15	71.9	-5.0	140.6	0.3					
16	71.9	-5.1	140.6	-2.8					
17	71.9	-3.1	143.8	-1.7					
18	71.9	-0.5	143.8	-2.4					
19	71.9	-2.9	140.6	-5.1					
20	71.9	-2.5	143.8	-3.9					
21	71.9	-4.8	140.6	-0.5					
22			140.6	-0.9					
23	71.9	-0.4	140.6	-2.3					
24			140.6	0.8					
25	71.9	-1.7	143.8	-4.1					
26	71.9	-2.1	143.8	0.0					
27	71.9	-1.9	143.8	-0.5					



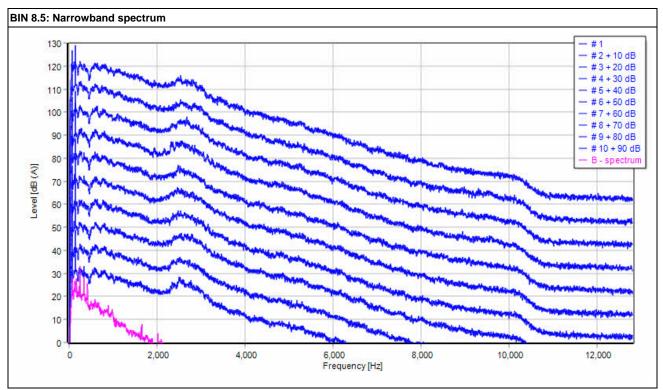


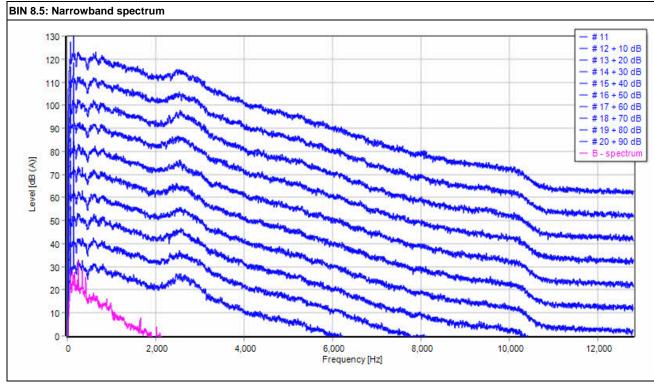


28			134.4	-3.0					
29									
30	71.9	-2.9	140.6	-4.4					
31	71.9	-5.0	140.6	-3.8	309.4	-6.2			
32	71.9	-3.8	140.6	-1.8					
33	71.9	-2.0	143.8	-2.4					
34	71.9	-2.9	140.6	-3.7					
35	71.9	-3.8	143.8	-5.1					
36	71.9	-2.4	143.8	-2.4					
37	71.9	-3.8	140.6	-5.6					
38	71.9	-3.9	140.6	-3.3	309.4	-5.2			
39			140.6	-4.4					
40	71.9	-6.9	140.6	-3.0					
41	71.9	-4.8							
42	71.9	-3.0	140.6	-3.1					
43	71.9	-2.8	143.8	-4.6					
44	71.9	-1.4	143.8	-4.3					
45	71.9	-2.4	143.8	0.1					
46	68.8	-6.6	140.6	-3.3					
47	71.9	-4.6	140.6	-5.6					
48	71.9	-3.9	143.8	-3.8					
49	71.9	-4.7	140.6	-5.8					
50	71.9	-4.5	143.8	-1.5					
51	68.8	-5.7	140.6	-4.2					
52	71.9	-3.6	140.6	-5.7					
53	71.9	-4.4	140.6	-3.9					
54	71.9	-3.0	143.8	-2.8					
55	71.9	-4.5	140.6	-3.2					
56	71.9	-2.7	140.6	-3.8					
57	71.9	-5.1	143.8	-4.3					
58			140.6	-5.3					
59	71.9	-7.1							
$f_t[Hz] \mid dL_k[dB]$	71.7	-3.6	142.0	-2.8	309.4	-12.9			
L <sub>a</sub> [dB]		-2.0		-2.0		-2.1			
$dL_{a,k}[dB]$		-1.6		-0.8		-10.8			
K <sub>TN</sub> [dB]		0		0		0			





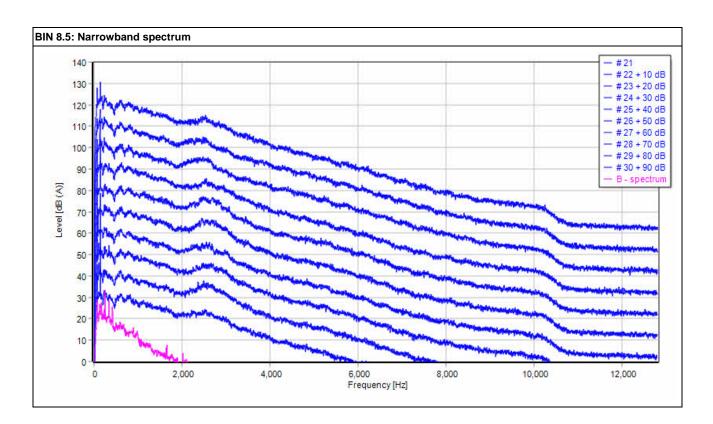
















	omponents determi							
	Frequency	delta f	L <sub>pn,avg,j,k</sub>	L <sub>pt,j,k</sub>	L <sub>pn,j,k</sub>	dL <sub>tn,j,k</sub>	La	dL <sub>a,j,k</sub>
al .	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
dL <sub>t1,1,9</sub> :	71.9	3.13	27.4	37.5	40.7	-3.2	-2.0	-1.2
dL <sub>t1,2,9</sub> :	71.9 71.9	3.13	26.9 26.2	39.2 38.3	40.2 39.5	-1.0 -1.2	-2.0 -2.0	1.0 0.8
dL <sub>t1,3,9</sub> :	71.9	3.13 3.13		38.4	40.1	-1.7		0.8
dL <sub>t1,4,9</sub> : dL <sub>t1,5,9</sub> :	71.9	3.13	26.8 26.8	39.7	40.1	-0.4	-2.0 -2.0	1.6
	71.9	3.13	27.4	39.1	40.7	-1.6	-2.0	0.4
dL <sub>t1,6,9</sub> : dL <sub>t1,7,9</sub> :	68.8	3.13	28.3	36.5	41.5	-5.0	-2.0	-3.0
dL <sub>t1,7,9</sub> . dL <sub>t1,8,9</sub> :	71.9	3.13	28.3	40.9	41.6	-0.7	-2.0	1.3
dL <sub>t1,8,9</sub> :	71.9	3.13	28.4	39.9	41.7	-1.8	-2.0	0.2
dL <sub>t1,11,9</sub> :	71.9	3.13	28.4	40.4	41.7	-1.3	-2.0	0.7
dL <sub>t1,12,9</sub> :	71.9	3.13	27.8	39.1	41.1	-2.1	-2.0	-0.1
dL <sub>t1,12,9</sub> :	71.9	3.13	29.7	37.1	43.0	-6.0	-2.0	-4.0
dL <sub>t1,14,9</sub> :	71.9	3.13	26.9	38.7	40.2	-1.5	-2.0	0.5
dL <sub>t1,15,9</sub> :	71.9	3.13	27.2	37.3	40.5	-3.2	-2.0	-1.2
dL <sub>t1,16,9</sub> :	71.9	3.13	28.2	40.8	41.4	-0.6	-2.0	1.4
dL <sub>t1,17,9</sub> :	71.9	3.13	27.5	39.7	40.7	-1.0	-2.0	1.0
dL <sub>t1,18,9</sub> :	71.9	3.13	28.8	39.0	42.1	-3.0	-2.0	-1.0
dL <sub>t1,19,9</sub> :	68.8	3.13	28.1	34.8	41.2	-6.4	-2.0	-4.4
dL <sub>t1,21,9</sub> :	71.9	3.13	28.7	40.7	42.0	-1.3	-2.0	0.7
dL <sub>t1,22,9</sub> :	71.9	3.13	26.6	39.4	39.8	-0.5	-2.0	1.5
dL <sub>t1,23,9</sub> :	71.9	3.13	27.3	39.3	40.6	-1.3	-2.0	0.7
dL <sub>t1,24,9</sub> :	71.9	3.13	29.4	39.7	42.7	-3.0	-2.0	-1.0
dL <sub>t1,25,9</sub> :	71.9	3.13	29.4	39.1	42.7	-3.6	-2.0	-1.6
dL <sub>t1,26,9</sub> :	71.9	3.13	29.4	38.9	42.6	-3.7	-2.0	-1.7
dL <sub>t1,28,9</sub> :	71.9	3.13	29.7	40.7	43.0	-2.3	-2.0	-0.3
dL <sub>t1,29,9</sub> :	71.9	3.13	28.2	38.2	41.5	-3.3	-2.0	-1.3
dL <sub>t1,30,9</sub> :	71.9	3.13	29.5	38.3	42.8	-4.6	-2.0	-2.5
dL <sub>t1,31,9</sub> :	71.9	3.13	27.1	39.4	40.4	-1.0	-2.0	1.0
dL <sub>t1,32,9</sub> :	71.9	3.13	28.8	39.7	42.1	-2.4	-2.0	-0.4
dL <sub>t1,33,9</sub> :	71.9	3.13	28.9	40.0	42.2	-2.2	-2.0	-0.2
dL <sub>t1,34,9</sub> :	68.8	3.13	27.9	35.9	41.1	-5.2	-2.0	-3.2
dL <sub>t1,35,9</sub> :	71.9	3.13	29.2	41.0	42.5	-1.5	-2.0	0.5
dL <sub>t1,36,9</sub> :	71.9	3.13	29.8	41.6	43.0	-1.4	-2.0	0.6
dL <sub>t1,37,9</sub> :	71.9	3.13	30.3	39.5	43.6	-4.1	-2.0	-2.1
dL <sub>t1,38,9</sub> :	71.9	3.13	29.1	40.3	42.4	-2.2	-2.0	-0.2
dL <sub>t1,39,9</sub> :	71.9	3.13	29.7	41.0	43.0	-2.0	-2.0	0.0
dL <sub>t1,40,9</sub> :	71.9	3.13	29.5	39.0	42.8	-3.8	-2.0	-1.8
dL <sub>t1,41,9</sub> :	71.9	3.13	28.6	39.4	41.9	-2.5	-2.0	-0.5
dL <sub>t1,42,9</sub> :	71.9	3.13	30.1	38.1	43.4	-5.2	-2.0	-3.2
dL <sub>t1,43,9</sub> :	71.9	3.13	29.6	40.2	42.9	-2.7	-2.0	-0.6
dL <sub>t1,44,9</sub> :	71.9	3.13	29.4	40.8	42.7	-1.9	-2.0	0.1
dL <sub>t1,45,9</sub> :	71.9	3.13	29.3	40.3	42.6	-2.3	-2.0	-0.3
dL <sub>t1,46,9</sub> :	71.9	3.13	29.5	40.9	42.8	-1.9	-2.0	0.1
dL <sub>t1,47,9</sub> :	71.9	3.13	30.4	38.5	43.7	-5.2	-2.0	-3.2
dL <sub>t1,48,9</sub> :	71.9	3.13	27.8	39.9	41.1	-1.2	-2.0	0.9
dL <sub>t1,49,9</sub> :	71.9	3.13	28.6	40.0	41.9	-1.9	-2.0	0.1
dL <sub>t1,50,9</sub> :	71.9	3.13	26.8	40.1	40.1	0.0	-2.0	2.0
dL <sub>t1,51,9</sub> :	71.9	3.13	27.5	39.8	40.8	-1.0	-2.0	1.0 0.7
dL <sub>t1,52,9</sub> :	71.9	3.13	28.5	40.6	41.8 42.0	-1.3 -5.2	-2.0	
dL <sub>t1,53,9</sub> :	71.9 71.9	3.13	28.7 28.8	36.7 40.2	42.0 42.1		-2.0 -2.0	-3.2
dL <sub>t1,54,9</sub> : dL <sub>t1,55,9</sub> :	71.9	3.13 3.13	27.4	39.8	42.1	-1.9 -0.9	-2.0 -2.0	0.1 1.1
dL <sub>t1,55,9</sub> : dL <sub>t1,56,9</sub> :	71.9	3.13	28.3	38.8	41.6	-0.9	-2.0 -2.0	-0.8
dL <sub>t1,56,9</sub> : dL <sub>t1,57,9</sub> :	71.9	3.13	28.6	37.6	41.9	-4.3	-2.0 -2.0	-0.8
dL <sub>t1,57,9</sub> :	71.9	3.13	29.6	38.4	42.9	-4.5	-2.0	-2.5 -2.5
dL <sub>t1,58,9</sub> :	71.9	3.13	29.5	40.2	42.8	-2.6	-2.0	-2.5
dL <sub>t1,59,9</sub> :	68.8	3.13	30.0	37.9	43.1	-5.3	-2.0	-3.3
dL <sub>t1,62,9</sub> :	71.9	3.13	29.9	38.2	43.2	-5.0	-2.0	-3.0
dL <sub>t1,62,9</sub> . dL <sub>t1,63,9</sub> :	71.9	3.13	28.5	40.5	41.8	-1.3	-2.0	0.7
dL <sub>t1,65,9</sub> :	68.8	3.13	29.5	37.8	42.6	-4.9	-2.0	-2.9
dL <sub>t1,66,9</sub> :	71.9	3.13	31.1	39.2	44.4	-5.2	-2.0	-3.2
dL <sub>t1,67,9</sub> :	71.9	3.13	29.6	38.7	42.9	-4.2	-2.0	-2.2
dL <sub>t1,68,9</sub> :	71.9	3.13	30.2	39.0	43.5	-4.5	-2.0	-2.5
dL <sub>t1,70,9</sub> :	71.9	3.13	30.0	40.8	43.3	-2.5	-2.0	-0.5
dL <sub>t1,71,9</sub> :	71.9	3.13	29.0	37.2	42.3	-5.1	-2.0	-3.1
dL <sub>t2,10,9</sub> :	96.9	3.13	27.9	43.6	41.2	2.3	-2.0	4.4
dL <sub>t2,10,9</sub> :	103.1	3.13	28.3	44.4	41.6	2.8	-2.0	4.8
dL <sub>t3,1,9</sub> :	143.8	3.13	30.2	42.3	43.5	-1.2	-2.0	0.9
dL <sub>t3,1,9</sub> :	140.6	3.13	30.2	43.7	43.5	0.2	-2.0	2.2
	170.0	0.10	30.0	44.4	43.3	U.Z	۷.٠	۷.۷







					•	,	,	,
dL <sub>t3,4,9</sub> :	140.6	3.13	30.0	44.4	43.3	1.1	-2.0	3.1
dL <sub>t3,5,9</sub> :	143.8	3.13	30.2	42.8	43.5	-0.7	-2.0	1.4
dL <sub>t3,6,9</sub> :	143.8	3.13	30.4	41.7	43.7	-2.0	-2.0	0.1
dL <sub>t3,7,9</sub> :	140.6	3.13	30.7	45.2	44.0	1.2	-2.0	3.3
dL <sub>t3,8,9</sub> :	143.8	3.13	30.9	42.9	44.2	-1.3	-2.0	0.7
dL <sub>t3,9,9</sub> :	140.6	3.13	31.4	41.3	44.7	-3.4	-2.0	-1.4
dL <sub>t3,10,9</sub> :	143.8	3.13	30.1	45.8	43.4 44.2	2.4	-2.0	4.5 2.9
dL <sub>t3,11,9</sub> :	143.8 140.6	3.13 3.13	30.9 30.6	45.0 43.4	43.9	0.8 -0.4	-2.0 -2.0	1.6
dL <sub>t3,12,9</sub> :	140.6	3.13	31.8	44.2	45.1	-0.4	-2.0	1.1
dL <sub>t3,13,9</sub> : dL <sub>t3,14,9</sub> :	140.6	3.13	30.3	41.4	43.6	-2.2	-2.0	-0.1
dL <sub>t3,14,9</sub> : dL <sub>t3,15,9</sub> :	140.6	3.13	30.6	41.1	43.9	-2.9	-2.0	-0.1
dL <sub>t3,15,9</sub> : dL <sub>t3,16,9</sub> :	143.8	3.13	31.1	45.0	44.4	0.6	-2.0	2.6
dL <sub>t3,17,9</sub> :	143.8	3.13	30.4	43.6	43.7	-0.1	-2.0	1.9
dL <sub>t3,18,9</sub> :	140.6	3.13	31.9	40.5	45.2	-4.7	-2.0	-2.7
dL <sub>t3,19,9</sub> :	137.5	3.13	31.4	37.7	44.6	-7.0	-2.0	-5.0
dL <sub>t3,21,9</sub> :	140.6	3.13	32.1	41.3	45.4	-4.1	-2.0	-2.1
dL <sub>t3,22,9</sub> :	140.6	3.13	30.7	44.9	44.0	0.8	-2.0	2.9
dL <sub>t3,23,9</sub> :	143.8	3.13	30.7	42.7	44.0	-1.3	-2.0	0.7
dL <sub>t3,24,9</sub> :	143.8	3.13	32.1	39.0	45.4	-6.5	-2.0	-4.5
dL <sub>t3,25,9</sub> :	140.6	3.13	32.6	40.8	45.9	-5.1	-2.0	-3.0
dL <sub>t3,26,9</sub> :	140.6	3.13	32.8	40.8	46.1	-5.3	-2.0	-3.3
dL <sub>t3,27,9</sub> :	140.6	3.13	31.5	43.2	44.8	-1.6	-2.0	0.4
dL <sub>t3,28,9</sub> :	143.8	3.13	33.0	43.9	46.3	-2.4	-2.0	-0.4
dL <sub>t3,29,9</sub> :	140.6	3.13	31.3	44.9	44.6	0.3	-2.0	2.3
dL <sub>t3,30,9</sub> :	140.6	3.13	32.4	42.1	45.7	-3.6	-2.0	-1.6
dL <sub>t3,31,9</sub> :	140.6	3.13	30.9	43.1	44.2	-1.1	-2.0	0.9
dL <sub>t3,32,9</sub> :	143.8	3.13	32.3	43.5	45.6	-2.1	-2.0	-0.1
dL <sub>t3,33,9</sub> :	143.8	3.13	32.2	45.4	45.5	-0.1	-2.0	1.9
dL <sub>t3,34,9</sub> :	140.6	3.13	31.7	42.5	45.0	-2.5	-2.0	-0.5
dL <sub>t3,35,9</sub> :	143.8	3.13	32.4	46.9	45.7	1.2	-2.0	3.2
dL <sub>t3,36,9</sub> :	143.8	3.13	32.7	44.5	46.0	-1.5	-2.0	0.5
dL <sub>t3,37,9</sub> :	140.6	3.13	33.1	42.9	46.4	-3.5	-2.0	-1.5
dL <sub>t3,38,9</sub> :	140.6	3.13	32.3	40.9	45.6	-4.6	-2.0	-2.6
dL <sub>t3,39,9</sub> :	143.8	3.13	32.5	41.5	45.8	-4.3	-2.0	-2.2
dL <sub>t3,40,9</sub> :	140.6	3.13	32.6	42.7	45.9	-3.1	-2.0	-1.1
dL <sub>t3,41,9</sub> : dL <sub>t3,42,9</sub> :	143.8 140.6	3.13 3.13	31.4 32.9	41.9 42.2	44.6 46.2	-2.7 -4.0	-2.0 -2.0	-0.7 -2.0
dL <sub>t3,42,9</sub> :	140.6	3.13	32.5	41.1	45.8	-4.0	-2.0	-2.0 -2.7
dL <sub>t3,43,9</sub> . dL <sub>t3,45,9</sub> :	140.6	3.13	32.9	43.8	46.1	-2.3	-2.0	-0.3
dL <sub>t3,45,9</sub> :	143.8	3.13	32.4	41.6	45.7	-4.1	-2.0	-2.0
dL <sub>t3,47,9</sub> :	140.6	3.13	33.3	40.5	46.6	-6.1	-2.0	-4.1
dL <sub>t3,49,9</sub> :	143.8	3.13	31.5	42.0	44.8	-2.8	-2.0	-0.8
dL <sub>t3,50,9</sub> :	140.6	3.13	30.7	40.4	44.0	-3.6	-2.0	-1.6
dL <sub>t3,51,9</sub> :	140.6	3.13	31.2	40.0	44.5	-4.5	-2.0	-2.5
dL <sub>t3.52.9</sub> :	140.6	3.13	31.5	42.4	44.8	-2.4	-2.0	-0.4
dL <sub>t3,53,9</sub> :	140.6	3.13	32.0	44.1	45.3	-1.2	-2.0	0.8
dL <sub>t3,54,9</sub> :	140.6	3.13	32.1	42.0	45.4	-3.3	-2.0	-1.3
dL <sub>t3,55,9</sub> :	140.6	3.13	31.4	41.7	44.7	-3.0	-2.0	-1.0
dL <sub>t3,57,9</sub> :	140.6	3.13	32.2	40.4	45.5	-5.1	-2.0	-3.0
dL <sub>t3,58,9</sub> :	140.6	3.13	32.8	42.5	46.1	-3.6	-2.0	-1.6
dL <sub>t3,59,9</sub> :	140.6	3.13	32.2	41.6	45.5	-3.9	-2.0	-1.9
dL <sub>t3,60,9</sub> :	137.5	3.13	31.8	40.7	45.1	-4.4	-2.0	-2.4
dL <sub>t3,61,9</sub> :	140.6	3.13	32.7	40.6	46.0	-5.4	-2.0	-3.4
dL <sub>t3,62,9</sub> :	140.6	3.13	33.8	41.1	47.1	-6.0	-2.0	-4.0
dL <sub>t3,64,9</sub> :	140.6	3.13	34.2	41.0	47.5	-6.5	-2.0	-4.5
dL <sub>t3,65,9</sub> :	140.6	3.13	32.7	41.6	46.0	-4.3	-2.0	-2.3
dL <sub>t3,66,9</sub> :	140.6	3.13	33.8	39.9	47.1	-7.2	-2.0	-5.2
dL <sub>t3,67,9</sub> :	140.6	3.13	32.8	41.8	46.1	-4.3	-2.0	-2.3
dL <sub>t3,68,9</sub> :	140.6	3.13	33.5	41.6	46.8	-5.2	-2.0	-3.2
dL <sub>t3,69,9</sub> :	140.6	3.13	32.9	44.3	46.2	-1.8	-2.0	0.2
dL <sub>t3,70,9</sub> :	143.8	3.13	33.2	43.5	46.5	-3.0	-2.0	-0.9
dL <sub>t3,71,9</sub> :	140.6	3.13	32.7	41.9	46.0	-4.0	-2.0	-2.0
dL <sub>t4,44,9</sub> :	175.0 175.0	3.13 3.13	33.1 33.3	40.6 40.0	46.4 46.6	-5.8 -6.6	-2.0 -2.0	-3.8 -4.6
dL <sub>t4,63,9</sub> :	309.4	3.13	30.4	38.2	46.6	-5.8	-2.0 -2.1	-4.6 -3.6
dL <sub>t5,22,9</sub> : dL <sub>t5,25,9</sub> :	309.4	3.13	31.8	38.8	45.4	-6.6	-2.1	-3.6 -4.5
dL <sub>t5,25,9</sub> . dL <sub>t5,50,9</sub> :	325.0	3.13	30.7	37.0	44.3	-7.3	-2.1	-4.5 -5.2
	325.0	3.13	32.3	38.9	45.9	-7.0	-2.1	-4.9
dL <sub>t5,62,9</sub> :	ა∠ა.∪	3.13	3∠.3	30.9	40.8	-7.0	-2.1	-4.9







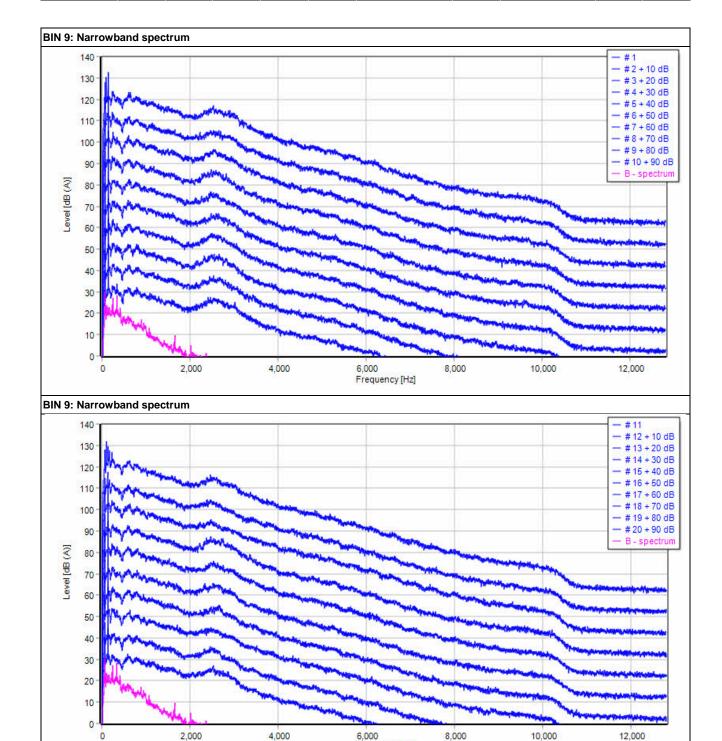
BIN 9: Tonal con	nnonents de	etermined -	- Compact								
Spectrum	f <sub>T</sub>	dL <sub>tn,j,k</sub>	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	
1	71.9	-3.2			143.8	-1.2					
2	71.9	-1.0			140.6	0.2					
3	71.9	-1.2			140.6	1.1					
5	71.9 71.9	-1.7 -0.4			140.6 143.8	1.1 -0.7					
6	71.9	-1.6			143.8	-0.7					
7	68.8	-5.0			140.6	1.2					
8	71.9	-0.7			143.8	-1.3					
9	71.9	-1.8			140.6	-3.4					
10			96.9	2.3	143.8	2.4					
11	71.9	-1.3			143.8	0.8					
12	71.9	-2.1			140.6	-0.4					
13	71.9	-6.0			140.6	-0.9					
14	71.9	-1.5			140.6	-2.2					
15	71.9	-3.2			140.6	-2.9					
16	71.9	-0.6			143.8	0.6					
17	71.9	-1.0			143.8	-0.1					
18 19	71.9 68.8	-3.0 -6.4			140.6 137.5	-4.7 -7.0					
20		-0.4	103.1	2.8	137.5	-7.0					
21	71.9	-1.3			140.6	-4.1					
22	71.9	-0.5			140.6	0.8			309.4	-5.8	
23	71.9	-1.3			143.8	-1.3					
24	71.9	-3.0			143.8	-6.5					
25	71.9	-3.6			140.6	-5.1			309.4	-6.6	
26	71.9	-3.7			140.6	-5.3					
27					140.6	-1.6					
28	71.9	-2.3			143.8	-2.4					
29	71.9	-3.3			140.6	0.3					
30	71.9	-4.6			140.6	-3.6					
31	71.9	-1.0			140.6	-1.1					
32	71.9	-2.4			143.8	-2.1					
33	71.9	-2.2			143.8	-0.1					
34 35	68.8 71.9	-5.2			140.6 143.8	-2.5 1.2					
36	71.9	-1.5 -1.4			143.8	-1.5					
37	71.9	-4.1			140.6	-3.5					
38	71.9	-2.2			140.6	-4.6					
39	71.9	-2.0			143.8	-4.3					
40	71.9	-3.8			140.6	-3.1					
41	71.9	-2.5			143.8	-2.7					
42	71.9	-5.2			140.6	-4.0					
43	71.9	-2.7			140.6	-4.7					
44	71.9	-1.9					175.0	-5.8			
45	71.9	-2.3			140.6	-2.3					
46	71.9	-1.9			143.8	-4.1					
47 48	71.9 71.9	-5.2 -1.2			140.6	-6.1 					
49	71.9	-1.2 -1.9			143.8	-2.8					
50	71.9	0.0			140.6	-3.6			325.0	-7.3	
51	71.9	-1.0			140.6	-4.5				-7.5	
52	71.9	-1.3			140.6	-2.4					
53	71.9	-5.2			140.6	-1.2					
54	71.9	-1.9			140.6	-3.3					
55	71.9	-0.9			140.6	-3.0					
56	71.9	-2.8									
57	71.9	-4.3			140.6	-5.1					
58	71.9	-4.5			140.6	-3.6					
59	71.9	-2.6			140.6	-3.9					
60	 60 0	 E 2			137.5	-4.4					
61 62	68.8 71.9	-5.3 -5.0			140.6	-5.4			225 O	 -7.0	
63	71.9	-5.0 -1.3			140.6	-6.0 	175.0	-6.6	325.0	-7.0	
64	71.9	-1.3			140.6	-6.5	1/5.0	-0.0			
65	68.8	-4.9			140.6	-4.3					
66	71.9	-5.2			140.6	-7.2					
67	71.9	-4.2			140.6	-4.3					
68	71.9	-4.5			140.6	-5.2					
69					140.6	-1.8					
70	71.9	-2.5			143.8	-3.0					







71	71.9	-5.1			140.6	-4.0					
$f_t[Hz] \mid dL_k[dB]$	71.7	-2.8	97.0	-10.2	141.7	-2.4	175.0	-12.9	309.9	-12.7	
L <sub>a</sub> [dB]		-2.0		-2.0		-2.0		-2.0		-2.1	
$dL_{a,k}[dB]$		-0.8		-8.2		-0.4		-10.9		-10.6	
K <sub>TN</sub> [dB]		0		0		0		0		0	

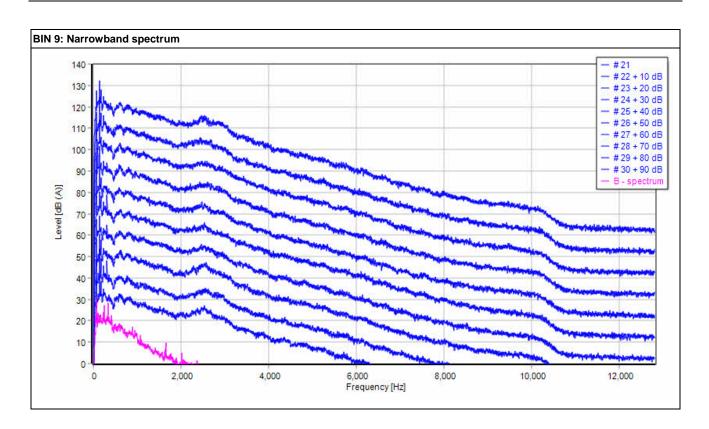


Frequency [Hz]













	components deteri		1	1	1	dl		dl
	Frequency [Hz]	delta f	L <sub>pn,avg,j,k</sub>	L <sub>pt,j,k</sub> [dB]	L <sub>pn,j,k</sub> [dB]	dL <sub>tn,j,k</sub> [dB]	L <sub>a</sub> [dB]	dL <sub>a,j,k</sub> [dB]
dL <sub>t1,1,9.5</sub> :	71.9	[ <b>Hz]</b> 3.13	[dB] 28.4	38.7	<u>[авј</u> 41.7	-3.0	-2.0	-1.0
dL <sub>t1,2,9.5</sub> :	71.9	3.13	27.9	36.9	41.7	-4.3	-2.0	-1.0
dL <sub>t1,2,9.5</sub> :	71.9	3.13	27.6	39.3	40.9	-1.6	-2.0	0.4
dL <sub>t1,4,9.5</sub> :	68.8	3.13	27.9	39.1	41.1	-2.0	-2.0	0.0
dL <sub>t1,5,9.5</sub> :	71.9	3.13	27.2	40.8	40.5	0.3	-2.0	2.4
dL <sub>t1,6,9.5</sub> :	71.9	3.13	28.8	38.4	42.1	-3.7	-2.0	-1.7
dL <sub>t1,8,9.5</sub> :	71.9	3.13	27.1	40.6	40.4	0.2	-2.0	2.2
dL <sub>t1,9,9.5</sub> :	71.9	3.13	26.2	39.6	39.5	0.0	-2.0	2.0
dL <sub>t1,10,9.5</sub> :	68.8	3.13	27.0	38.7	40.2	-1.4	-2.0	0.6
dL <sub>t1,11,9.5</sub> :	71.9	3.13	27.2	39.8	40.5	-0.6	-2.0	1.4
dL <sub>t1,12,9.5</sub> :	71.9	3.13	27.4	40.0	40.7	-0.7	-2.0	1.3
dL <sub>t1,14,9.5</sub> :	71.9	3.13	28.7	38.6	42.0	-3.3	-2.0	-1.3
dL <sub>t1,15,9.5</sub> :	68.8	3.13	25.8	37.9	39.0	-1.1	-2.0	0.9
dL <sub>t1,16,9.5</sub> :	68.8	3.13	27.3	37.8	40.5	-2.7	-2.0	-0.7
dL <sub>t1,17,9.5</sub> :	71.9	3.13	27.3	40.4	40.5	-0.2	-2.0	1.8
dL <sub>t1,18,9.5</sub> :	71.9	3.13	27.6	40.0	40.9	-0.9	-2.0	1.1
dL <sub>t1,19,9.5</sub> :	71.9	3.13	28.9	38.4	42.2	-3.7	-2.0	-1.7
dL <sub>t1,20,9.5</sub> :	68.8	3.13	28.5	34.8	41.7	-6.9	-2.0	-4.9
dL <sub>t1,21,9.5</sub> :	68.8	3.13	27.9	34.4	41.1	-6.7	-2.0	-4.7
dL <sub>t1,24,9.5</sub> :	71.9	3.13	28.8	41.2	42.1	-0.9	-2.0	1.1
dL <sub>t1,25,9.5</sub> :	71.9	3.13	27.5	39.2	40.8	-1.6	-2.0	0.4
dL <sub>t1,26,9.5</sub> :	71.9	3.13	27.6	40.3	40.9	-0.5	-2.0	1.5
dL <sub>t1,27,9.5</sub> :	71.9	3.13	29.6	39.1	42.8	-3.8	-2.0	-1.8
dL <sub>t1,29,9.5</sub> :	71.9	3.13	30.4	39.2	43.7	-4.5	-2.0	-2.5
dL <sub>t1,30,9.5</sub> :	84.4	3.13	30.5	38.9	43.7	-4.8	-2.0	-2.8
dL <sub>t1,31,9.5</sub> :	71.9	3.13	30.9	37.5	44.2	-6.7	-2.0	-4.7
dL <sub>t1,32,9.5</sub> :	68.8	3.13	29.5	36.0	42.7	-6.7	-2.0	-4.7
dL <sub>t1,33,9.5</sub> :	71.9	3.13	29.1	40.6	42.4	-1.8	-2.0	0.2
dL <sub>t1,34,9.5</sub> :	71.9	3.13	29.5	41.1	42.8	-1.8	-2.0	0.3
dL <sub>t1,35,9.5</sub> :	71.9	3.13	28.0	39.9	41.3	-1.5	-2.0	0.5
dL <sub>t1,36,9.5</sub> :	71.9	3.13	28.6	40.4	41.9	-1.4	-2.0	0.6
dL <sub>t1,37,9.5</sub> :	71.9	3.13	29.3	40.3	42.6	-2.3	-2.0	-0.3
dL <sub>t1,39,9.5</sub> :	71.9	3.13	29.1	39.6	42.4	-2.8	-2.0	-0.8
dL <sub>t1,40,9.5</sub> :	71.9	3.13	27.6	40.1	40.9	-0.8	-2.0	1.2
dL <sub>t1,41,9.5</sub> :	71.9	3.13	27.9	40.8	41.2	-0.4	-2.0	1.6
dL <sub>t1,42,9.5</sub> :	71.9	3.13	27.2	36.0	40.5	-4.5	-2.0	-2.5
dL <sub>t1,43,9.5</sub> :	71.9	3.13	29.0	38.2	42.3	-4.2	-2.0	-2.2
dL <sub>t1,44,9.5</sub> :	71.9	3.13	29.2	40.0	42.4	-2.5	-2.0	-0.5
dL <sub>t1,45,9.5</sub> :	68.8	3.13	30.2	36.4	43.4	-7.0	-2.0	-5.0
dL <sub>t1,46,9.5</sub> :	71.9	3.13	28.5	37.7	41.8	-4.1	-2.0	-2.1
dL <sub>t1,47,9.5</sub> :	68.8	3.13	28.2	36.4	41.4	-5.0	-2.0	-3.0
dL <sub>t1,48,9.5</sub> :	71.9 68.8	3.13 3.13	29.5 27.8	37.7 37.7	42.8 41.0	-5.1 -3.2	-2.0 -2.0	-3.1 -1.2
dL <sub>t1,49,9.5</sub> :	71.9	3.13		36.8	42.0	-5.2	-2.0	-3.2
dL <sub>t1,50,9.5</sub> :	71.9	3.13	28.7 29.7	38.6	42.0	-5.2 -4.3	-2.0	-3.2
dL <sub>t1,53,9.5</sub> :	71.9	3.13	29.9	39.7	43.2	-3.5	-2.0	-2.3 -1.5
dL <sub>t1,54,9.5</sub> :	71.9				42.9			0.2
dL <sub>t1,55,9.5</sub> : dL <sub>t1,56,9.5</sub> :	71.9	3.13 3.13	29.6 30.5	41.1 39.1	42.9	-1.8 -4.6	-2.0 -2.0	-2.6
dL <sub>t1,56,9.5</sub> :	71.9	3.13	28.1	39.6	41.4	-1.8	-2.0	0.2
dL <sub>t1,57,9.5</sub> :	71.9	3.13	29.5	41.0	42.8	-1.8	-2.0	0.2
dLt1,58,9.5:	71.9	3.13	29.4	40.4	42.7	-2.3	-2.0	-0.3
Lt1,59,9.5:	71.9	3.13	29.1	36.9	42.4	-2.5 -5.5	-2.0	-3.5
dL <sub>t1,61,9.5</sub> :	71.9	3.13	28.6	40.2	41.9	-1.6	-2.0	0.4
dL <sub>t1,62,9.5</sub> :	71.9	3.13	29.0	41.1	42.3	-1.0	-2.0	0.8
dL <sub>t1,63,9.5</sub> :	71.9	3.13	29.9	37.4	43.2	-5.8	-2.0	-3.8
dL <sub>t1.64.9.5</sub> :	71.9	3.13	27.6	40.2	40.9	-0.7	-2.0	1.3
dL <sub>t1.65.9.5</sub> :	71.9	3.13	28.1	36.4	41.4	-5.1	-2.0	-3.1
L <sub>t1,66,9.5</sub> :	71.9	3.13	27.6	40.5	40.9	-0.3	-2.0	1.7
L <sub>t1,67,9.5</sub> :	71.9	3.13	27.4	37.5	40.7	-3.3	-2.0	-1.2
L <sub>t1,68,9.5</sub> :	68.8	3.13	28.7	35.2	41.8	-6.6	-2.0	-4.6
Lt1,69,9.5:	71.9	3.13	29.4	40.7	42.7	-2.0	-2.0	0.0
dL <sub>t1,70,9.5</sub> :	71.9	3.13	29.3	39.6	42.6	-3.0	-2.0	-1.0
Lt1,71,9.5:	68.8	3.13	27.9	35.0	41.1	-6.1	-2.0	-4.1
dL <sub>t1,73,9.5</sub> :	71.9	3.13	30.0	38.3	43.3	-4.9	-2.0	-2.9
dL <sub>t1,74,9.5</sub> :	71.9	3.13	29.3	39.3	42.6	-3.3	-2.0	-1.3
dL <sub>t1,75,9.5</sub> :	71.9	3.13	28.6	37.9	41.8	-3.9	-2.0	-1.9
dL <sub>t1,76,9.5</sub> :	71.9	3.13	28.8	38.8	42.1	-3.3	-2.0	-1.2
dL <sub>t1,77,9.5</sub> :	68.8	3.13	29.0	35.9	42.2	-6.3	-2.0	-4.3
dL <sub>t1,79,9.5</sub> :	68.8	3.13	29.0	39.5	42.2	-2.7	-2.0	-0.6
	71.9	3.13	29.7	37.1	43.0	-5.8	-2.0	-3.8







dL <sub>t1,81,9.5</sub> :	71.9	3.13	30.2	38.4	43.5	-5.0	-2.0	-3.0
dL <sub>t1,82,9.5</sub> :	71.9	3.13	30.8	39.2	44.1	-4.8	-2.0	-2.8
dL <sub>t1,83,9.5</sub> :	68.8	3.13	28.2	35.6	41.3	-5.7	-2.0	-3.7
dL <sub>t1,84,9.5</sub> :	71.9	3.13	29.1	38.4	42.4	-4.0	-2.0	-2.0
dL <sub>t1,85,9.5</sub> :	71.9	3.13	29.2	36.8	42.5	-5.7	-2.0	-3.7
dL <sub>t1,86,9.5</sub> :	71.9	3.13	28.2	37.3	41.5	-4.2	-2.0	-2.2
dL <sub>t1,87,9.5</sub> :	71.9	3.13	28.4	39.3	41.6	-2.4	-2.0	-0.4
dL <sub>t1,88,9.5</sub> :	68.8	3.13	28.1	37.5	41.2	-3.7	-2.0	-1.7
dL <sub>t1,89,9.5</sub> :	71.9	3.13	27.6	38.4	40.9	-2.5	-2.0	-0.5
dL <sub>t2,23,9.5</sub> :	93.8	3.13	27.7	45.2	41.0	4.2	-2.0	6.2
dL <sub>12,30,9.5</sub> :	84.4	3.13	30.5	38.9	43.7	-4.8	-2.0	-2.8
dL <sub>t3,1,9.5</sub> :	143.8	3.13	31.3	42.4	44.6	-2.1	-2.0	-0.1
dL <sub>t3,2,9.5</sub> :	140.6	3.13	31.0	44.0	44.3	-0.3	-2.0	1.7
dL <sub>t3,3,9.5</sub> :	143.8	3.13	30.0	44.7	43.2	1.5	-2.0	3.5
dL <sub>t3,4,9.5</sub> :	140.6	3.13	30.8	44.9	44.1	0.8	-2.0	2.8
dL <sub>t3,5,9.5</sub> :	143.8	3.13	29.8	45.8	43.1	2.7	-2.0	4.8
dL <sub>t3,6,9.5</sub> :	140.6	3.13	31.3	44.9	44.6	0.3	-2.0	2.3
dL <sub>t3,7,9.5</sub> :	140.6	3.13	32.2	45.5	45.5	0.0	-2.0	2.0
dL <sub>t3,8,9.5</sub> :	140.6	3.13	30.2	45.5	43.5	2.0	-2.0	4.0
dL <sub>t3,9,9.5</sub> :	140.6	3.13	30.0	44.8	43.3	1.6	-2.0	3.6
dL <sub>t3,10,9.5</sub> :	140.6	3.13	30.4	44.8	43.7	1.2	-2.0	3.2
dL <sub>13,11,9.5</sub> :	140.6	3.13	30.8	46.1	44.1	2.0	-2.0	4.0
dL <sub>13,12,9.5</sub> :	140.6	3.13	31.2	45.2	44.5	0.7	-2.0	2.8
dL <sub>t3,13,9.5</sub> :	140.6	3.13	32.2	39.0	45.5	-6.5	-2.0	-4.5
dL <sub>13,14,9.5</sub> :	140.6	3.13	31.5	43.1	44.8	-1.7	-2.0	0.3
dL <sub>13,15,9.5</sub> :	140.6	3.13	30.4	43.3	43.6	-0.4	-2.0	1.7
dL <sub>t3.16.9.5</sub> :	140.6	3.13	30.9	44.3	44.2	0.1	-2.0	2.1
dL <sub>13,17,9.5</sub> :	140.6	3.13	30.8	43.4	44.1	-0.7	-2.0	1.3
dL <sub>t3,18,9.5</sub> :	140.6	3.13	31.2	41.1	44.5	-3.4	-2.0	-1.4
dL <sub>t3,19,9.5</sub> :	140.6	3.13	31.6	44.6	44.9	-0.3	-2.0	1.7
dL <sub>t3,20,9.5</sub> :	137.5	3.13	31.7	43.0	45.0	-2.0	-2.0	0.1
dL <sub>t3,22,9.5</sub> :	140.6	3.13	33.0	46.0	46.3	-0.3	-2.0	1.7
dL <sub>t3,24,9.5</sub> :	140.6	3.13	32.1	39.6	45.4	-5.8	-2.0	-3.8
dL <sub>t3,25,9.5</sub> :	140.6	3.13	31.4	43.2	44.7	-1.5	-2.0	0.5
dL <sub>t3,26,9.5</sub> :	140.6	3.13	31.2	44.4	44.5	-0.1	-2.0	1.9
dL <sub>t3,27,9.5</sub> :	143.8	3.13	32.1	42.5	45.3	-2.9	-2.0	-0.8
dL <sub>t3,28,9.5</sub> :	140.6	3.13	32.9	46.1	46.2	-0.2	-2.0	1.9
dL <sub>t3,29,9.5</sub> :	140.6	3.13	33.5	42.4	46.8	-4.4	-2.0	-2.4
dL <sub>t3,30,9.5</sub> :	137.5	3.13	32.2	42.8	45.5	-2.7	-2.0	-0.7
dL <sub>t3,31,9.5</sub> :	140.6	3.13	33.4	41.1	46.7	-5.6	-2.0	-3.6
dL <sub>t3,32,9.5</sub> :	137.5	3.13	32.3	40.4	45.6	-5.2	-2.0	-3.2
dL <sub>t3,33,9.5</sub> :	140.6	3.13	32.7	42.1	46.0	-3.9	-2.0	-1.9
dL <sub>t3,34,9.5</sub> :	143.8	3.13	32.4	43.8	45.6	-1.9	-2.0	0.2
dL <sub>t3,35,9.5</sub> :	140.6	3.13	31.9	42.7	45.2	-2.5	-2.0	-0.5
dL <sub>t3,36,9.5</sub> :	140.6	3.13	32.3	40.0	45.6	-5.6	-2.0	-3.6
dL <sub>t3,37,9.5</sub> :	140.6	3.13	32.8	39.7	46.1	-6.5	-2.0	-4.4
dL <sub>t3,39,9.5</sub> :	140.6	3.13	32.4	42.6	45.7	-3.1	-2.0	-1.1
dL <sub>t3,40,9.5</sub> :	140.6	3.13	31.6	41.2	44.9	-3.7	-2.0	-1.7
dL <sub>t3,41,9.5</sub> :	140.6	3.13	31.7	40.4	45.0	-4.5	-2.0	-2.5
dL <sub>t3,42,9.5</sub> :	140.6	3.13	30.8	41.9	44.1	-2.2	-2.0	-0.2
dL <sub>t3,43,9.5</sub> :	140.6	3.13	32.1	42.5	45.3	-2.9	-2.0	-0.9
dL <sub>t3,44,9.5</sub> :	143.8	3.13	32.1	41.3	45.4	-4.1	-2.0	-2.1
dL <sub>t3,45,9.5</sub> :	140.6	3.13	33.2	39.3	46.5	-7.2	-2.0	-5.2
dL <sub>t3,46,9.5</sub> :	140.6	3.13	31.8	41.9	45.1	-3.2	-2.0	-1.2
dL <sub>t3,47,9.5</sub> :	140.6	3.13	32.8	39.4	46.0	-6.7	-2.0	-4.6
dL <sub>t3,48,9.5</sub> :	140.6	3.13	33.0	41.6	46.3	-4.7	-2.0	-2.7
dL <sub>t3,49,9.5</sub> :	140.6	3.13	31.6	42.9	44.9	-2.0	-2.0	0.1
dL <sub>t3,50,9.5</sub> :	140.6	3.13	32.6	41.8	45.9	-4.1	-2.0	-2.1
dL <sub>t3,51,9.5</sub> :	134.4	3.13	31.6	42.1	44.9	-2.8	-2.0	-0.8
dL <sub>t3,52,9.5</sub> :	137.5	3.13	32.1	42.9	45.4	-2.5	-2.0	-0.5
dL <sub>t3,53,9.5</sub> :	140.6	3.13	32.8	40.3	46.1	-5.8	-2.0	-3.8
dL <sub>t3,54,9.5</sub> :	140.6	3.13	32.8	39.7	46.1	-6.4	-2.0	-4.4
dL <sub>t3,55,9.5</sub> :	143.8	3.13	32.8	43.2	46.1	-2.8	-2.0	-0.8
dL <sub>t3,56,9.5</sub> :	140.6	3.13	33.7	39.8	47.0	-7.2	-2.0	-5.2
dL <sub>t3,57,9.5</sub> :	140.6	3.13	33.1	40.9	46.4	-5.4	-2.0	-3.4
dL <sub>t3,58,9.5</sub> :	143.8	3.13	32.7	46.2	46.0	0.3	-2.0	2.3
1411	140.6	3.13	32.0 31.5	41.5	45.3	-3.7	-2.0	-1.7
dL <sub>t3,60,9.5</sub> :			31 5	38.6	44.8	-6.2	-2.0	-4.2
dL <sub>t3,61,9.5</sub> :	140.6	3.13			4			
dL <sub>t3,61,9.5</sub> : dL <sub>t3,62,9.5</sub> :	143.8	3.13	32.2	42.8	45.5	-2.6	-2.0	-0.6
dL <sub>t3,61,9.5</sub> : dL <sub>t3,62,9.5</sub> : dL <sub>t3,63,9.5</sub> :	143.8 140.6	3.13 3.13	32.2 32.6	42.8 42.1	45.9	-3.9	-2.0	-1.9
dL <sub>13,61,9.5</sub> : dL <sub>13,62,9.5</sub> : dL <sub>13,63,9.5</sub> : dL <sub>13,64,9.5</sub> :	143.8 140.6 140.6	3.13 3.13 3.13	32.2 32.6 31.0	42.8 42.1 40.9	45.9 44.3	-3.9 -3.5	-2.0 -2.0	-1.9 -1.4
dL <sub>t3,61,9.5</sub> : dL <sub>t3,62,9.5</sub> : dL <sub>t3,63,9.5</sub> :	143.8 140.6	3.13 3.13	32.2 32.6	42.8 42.1	45.9	-3.9	-2.0	-1.9







all .	4.40.0	0.40	04.7	44.0	45.0	0.7	0.0	4.0
dL <sub>t3,67,9.5</sub> :	140.6	3.13	31.7	44.2	45.0	-0.7	-2.0	1.3
dL <sub>t3,68,9.5</sub> :	140.6	3.13	32.0	41.5	45.3	-3.8	-2.0	-1.8
dL <sub>t3,69,9.5</sub> :	140.6	3.13	32.2	42.1	45.5	-3.4	-2.0	-1.4
dL <sub>t3,70,9.5</sub> :	143.8	3.13	33.1	39.8	46.3	-6.6	-2.0	-4.6
dL <sub>t3,72,9.5</sub> :	137.5	3.13	32.3	41.1	45.6	-4.5	-2.0	-2.5
dL <sub>t3,73,9.5</sub> :	140.6	3.13	33.1	41.8	46.4	-4.7	-2.0	-2.7
dL <sub>t3,74,9.5</sub> :	143.8	3.13	32.4	42.4	45.7	-3.3	-2.0	-1.3
dL <sub>t3,75,9.5</sub> :	140.6	3.13	32.8	42.6	46.1	-3.5	-2.0	-1.5
dL <sub>t3,76,9.5</sub> :	143.8	3.13	32.4	39.9	45.7	-5.8	-2.0	-3.8
dL <sub>t3,77,9.5</sub> :	140.6	3.13	32.6	42.6	45.9	-3.3	-2.0	-1.2
dL <sub>t3,78,9.5</sub> :	140.6	3.13	33.0	39.6	46.3	-6.7	-2.0	-4.7
dL <sub>t3,79,9.5</sub> :	140.6	3.13	32.9	40.2	46.2	-6.0	-2.0	-4.0
dL <sub>t3,80,9.5</sub> :	140.6	3.13	33.6	41.2	46.9	-5.7	-2.0	-3.7
dL <sub>t3,81,9.5</sub> :	140.6	3.13	33.5	40.3	46.8	-6.5	-2.0	-4.4
dL <sub>t3,82,9.5</sub> :	143.8	3.13	33.3	42.6	46.6	-4.0	-2.0	-2.0
dL <sub>t3,83,9.5</sub> :	140.6	3.13	31.4	40.2	44.7	-4.5	-2.0	-2.5
dL <sub>t3,84,9.5</sub> :	140.6	3.13	31.9	39.8	45.2	-5.5	-2.0	-3.4
dL <sub>t3,85,9.5</sub> :	140.6	3.13	32.4	42.8	45.7	-2.8	-2.0	-0.8
dL <sub>t3,86,9.5</sub> :	140.6	3.13	31.6	41.6	44.9	-3.3	-2.0	-1.3
dL <sub>t3,87,9.5</sub> :	140.6	3.13	31.6	40.9	44.9	-4.0	-2.0	-2.0
dL <sub>t3,88,9.5</sub> :	140.6	3.13	32.0	42.1	45.3	-3.1	-2.0	-1.1
dL <sub>t3,89,9.5</sub> :	140.6	3.13	31.5	41.1	44.8	-3.7	-2.0	-1.7
dL <sub>t4,71,9.5</sub> :	175.0	3.13	31.0	42.5	44.3	-1.8	-2.0	0.2
dL <sub>t5,61,9.5</sub> :	325.0	3.13	30.8	38.6	44.4	-5.7	-2.1	-3.6
dL <sub>t5,75,9.5</sub> :	325.0	3.13	31.8	38.6	45.4	-6.7	-2.1	-4.6

aLt5,75,9.5:	325.0	)	3.13	31.8		38.b	45.4	•	-6.7	-2.1	-4.6
BIN 9.5: Tonal c	omponents	determine	d - Compac	t							
Spectrum	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	
1	71.9	-3.0			143.8	-2.1					
2	71.9	-4.3			140.6	-0.3					
3	71.9	-1.6			143.8	1.5					
4	68.8	-2.0			140.6	0.8					
5	71.9	0.3			143.8	2.7					
6	71.9	-3.7			140.6	0.3					
7					140.6	0.0					
8	71.9	0.2			140.6	2.0					
9	71.9	0.0			140.6	1.6					
10	68.8	-1.4			140.6	1.2					
11	71.9	-0.6			140.6	2.0					
12	71.9	-0.7			140.6	0.7					
13					140.6	-6.5					
14	71.9	-3.3			140.6	-1.7					
15	68.8	-1.1			140.6	-0.4					
16	68.8	-2.7			140.6	0.1					
17	71.9	-0.2			140.6	-0.7					
18	71.9	-0.9			140.6	-3.4					
19	71.9	-3.7			140.6	-0.3					
20	68.8	-6.9			137.5	-2.0					
21	68.8	-6.7									
22					140.6	-0.3					
23			93.8	4.2							
24	71.9	-0.9			140.6	-5.8					
25	71.9	-1.6			140.6	-1.5					
26	71.9	-0.5			140.6	-0.1					
27	71.9	-3.8			143.8	-2.9					
28					140.6	-0.2					
29	71.9	-4.5			140.6	-4.4					
30	84.4	-4.8	84.4	-4.8	137.5	-2.7					
31	71.9	-6.7			140.6	-5.6					
32	68.8	-6.7			137.5	-5.2					
33	71.9	-1.8			140.6	-3.9					
34	71.9	-1.8			143.8	-1.9					
35	71.9	-1.5			140.6	-2.5					
36	71.9	-1.4			140.6	-5.6					
37	71.9	-2.3			140.6	-6.5					
38											
39	71.9	-2.8			140.6	-3.1					
40	71.9	-0.8			140.6	-3.7					
41	71.9	-0.4			140.6	-4.5					
42	71.9	-4.5			140.6	-2.2					
43	71.9	-4.2			140.6	-2.9					
44	71.9	-2.5			143.8	-4.1					
45	68.8	-7.0			140.6	-7.2					1



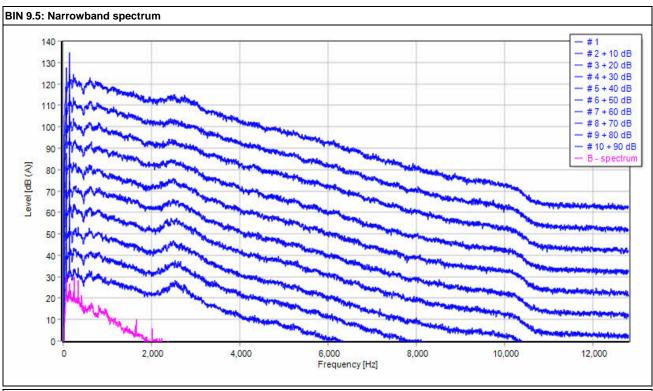


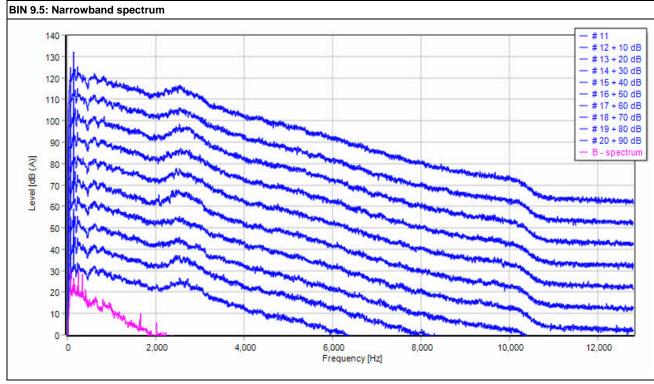


46	71.9	-4.1			140.6	-3.2						
47	68.8	-5.0			140.6	-6.7						
48	71.9	-5.1			140.6	-4.7						
49	68.8	-3.2			140.6	-2.0						
50	71.9	-5.2			140.6	-4.1						
51					134.4	-2.8						
52					137.5	-2.5						
53	71.9	-4.3			140.6	-5.8						
54	71.9	-3.5			140.6	-6.4						
55	71.9	-1.8			143.8	-2.8						
56	71.9	-4.6			140.6	-7.2						
57	71.9	-1.8			140.6	-5.4						
58	71.9	-1.8			143.8	0.3						
59	71.9	-2.3										
60	71.9	-5.5			140.6	-3.7						
61	71.9	-1.6			140.6	-6.2			325.0	-5.7		
62	71.9	-1.2			143.8	-2.6						
63	71.9	-5.8			140.6	-3.9						
64	71.9	-0.7			140.6	-3.5						
65	71.9	-5.1			140.6	-3.2						
66	71.9	-0.3			143.8	-3.7						
67	71.9	-3.3			140.6	-0.7						
68	68.8	-6.6			140.6	-3.8						
69	71.9	-2.0			140.6	-3.4						
70	71.9	-3.0			143.8	-6.6						
71	68.8	-6.1					175.0	-1.8				
72					137.5	-4.5						
73	71.9	-4.9			140.6	-4.7						
74	71.9	-3.3			143.8	-3.3						
75	71.9	-3.9			140.6	-3.5			325.0	-6.7		
76	71.9	-3.3			143.8	-5.8						
77	68.8	-6.3			140.6	-3.3						
78					140.6	-6.7						
79	68.8	-2.7			140.6	-6.0						
80	71.9	-5.8			140.6	-5.7						
81	71.9	-5.0			140.6	-6.5						
82	71.9	-4.8			143.8	-4.0						
83	68.8	-5.7			140.6	-4.5						
84	71.9	-4.0			140.6	-5.5						
85	71.9	-5.7			140.6	-2.8						
86	71.9	-4.2			140.6	-3.3						
87	71.9	-2.4			140.6	-4.0						
88	68.8	-3.7			140.6	-3.1						
89	71.9	-2.5			140.6	-3.7						
f <sub>t</sub> [Hz]   dL <sub>k</sub> [dB]	71.5	-3.3	93.7	-11.0	141.1	-2.6	175.0	-12.8	325.0	-13.2		
	,	-2.0	00	-2.0		-2.0		-2.0	020.0	-2.1		
dL <sub>a,k</sub> [dB]		-1.3		-9.0		-0.6		-10.7		-11.1		
K <sub>TN</sub> [dB]		0		0.0		0.0		0	1	0		
. CIN[GD]		v							l		l	





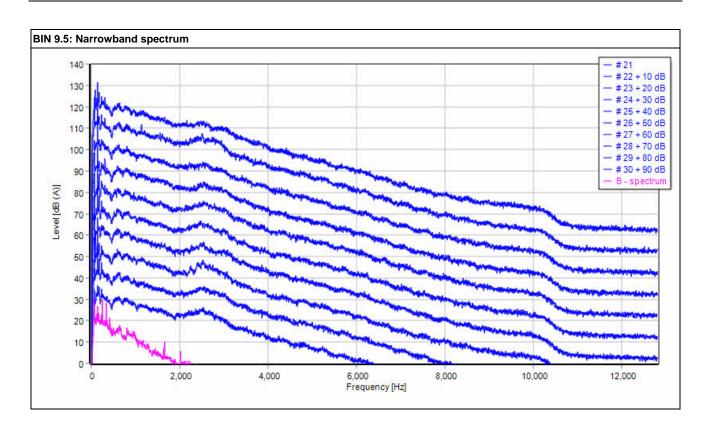
















BIN 10: Tonal C	omponents deter							
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	La	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
dL <sub>t1,1,10</sub> :	71.9	3.13	28.1	39.7	41.4	-1.7	-2.0	0.3
dL <sub>t1,2,10</sub> :	71.9	3.13	29.2	40.4	42.5	-2.2	-2.0	-0.2
dL <sub>t1,3,10</sub> :	71.9	3.13	26.7	39.4	40.0	-0.6	-2.0	1.4
dL <sub>t1,4,10</sub> :	71.9	3.13	27.4	40.9	40.7	0.2	-2.0	2.3
dL <sub>t1,5,10</sub> :	71.9	3.13	27.9	38.9	41.2	-2.2	-2.0	-0.2
dL <sub>t1,6,10</sub> :	71.9	3.13	28.6	42.1	41.9	0.2	-2.0	2.2
dL <sub>t1,7,10</sub> :	71.9	3.13	27.2	35.4	40.5	-5.1	-2.0	-3.1
dL <sub>t1,10,10</sub> :	71.9	3.13	28.3	38.4	41.6	-3.2	-2.0	-1.2
dL <sub>t1,12,10</sub> :	68.8	3.13	28.2	35.2	41.3	-6.2	-2.0	-4.1
dL <sub>t1,13,10</sub> :	71.9	3.13	28.7	40.2	42.0	-1.8	-2.0	0.2
dL <sub>t1,14,10</sub> :	71.9	3.13	29.1	39.5	42.4	-2.9	-2.0	-0.9
dL <sub>t1,16,10</sub> :	71.9	3.13	30.1	38.3	43.4	-5.1	-2.0	-3.0
dL <sub>t1,17,10</sub> :	68.8	3.13	26.9	38.0	40.1	-2.0	-2.0	0.0
dL <sub>t1,18,10</sub> :	71.9	3.13	29.7	38.0	43.0	-5.0	-2.0	-3.0
dL <sub>t1,19,10</sub> :	71.9	3.13	29.5 28.5	39.1 39.7	42.8 41.8	-3.7 -2.1	-2.0 -2.0	-1.6 -0.1
dL <sub>t1,21,10</sub> :	71.9 71.9	3.13 3.13	27.8	39.7	41.6	-2.1	-2.0	0.1
dL <sub>t1,23,10</sub> : dL <sub>t1,24,10</sub> :	71.9	3.13	27.0	38.6	40.3	-1.9	-2.0	0.1
	71.9	3.13	28.1	40.1	40.3	-1.4	-2.0	0.6
dL <sub>t1,25,10</sub> : dL <sub>t1,26,10</sub> :	71.9	3.13	27.9	38.4	41.4	-1.4	-2.0	-0.7
dL <sub>t1,26,10</sub> . dL <sub>t1,27,10</sub> :	71.9	3.13	25.7	39.0	39.0	0.0	-2.0	2.0
dL <sub>t1,27,10</sub> . dL <sub>t1,28,10</sub> :	71.9	3.13	27.4	37.4	40.7	-3.3	-2.0	-1.3
dL <sub>t1,28,10</sub> : dL <sub>t1,29,10</sub> :	68.8	3.13	27.9	36.8	41.1	-4.3	-2.0	-2.3
dL <sub>t1,32,10</sub> :	71.9	3.13	27.4	38.0	40.7	-2.7	-2.0	-0.7
dL <sub>t1,34,10</sub> :	68.8	3.13	28.4	35.1	41.6	-6.5	-2.0	-4.5
dL <sub>t1,37,10</sub> :	71.9	3.13	27.9	35.8	41.1	-5.3	-2.0	-3.3
dL <sub>t1,38,10</sub> :	71.9	3.13	28.8	36.9	42.1	-5.2	-2.0	-3.2
dL <sub>t1,39,10</sub> :	68.8	3.13	28.3	35.6	41.5	-5.9	-2.0	-3.9
dL <sub>t1,41,10</sub> :	71.9	3.13	27.4	37.9	40.7	-2.8	-2.0	-0.8
dL <sub>t1,42,10</sub> :	71.9	3.13	30.0	40.2	43.3	-3.1	-2.0	-1.1
dL <sub>t1,43,10</sub> :	71.9	3.13	28.4	39.5	41.7	-2.2	-2.0	-0.2
dL <sub>t1,45,10</sub> :	71.9	3.13	28.1	40.3	41.4	-1.1	-2.0	0.9
dL <sub>t1,46,10</sub> :	68.8	3.13	28.7	36.7	41.8	-5.1	-2.0	-3.1
dL <sub>t1,47,10</sub> :	71.9	3.13	28.4	37.0	41.6	-4.6	-2.0	-2.6
dL <sub>t1,49,10</sub> :	71.9	3.13	27.9	38.1	41.2	-3.1	-2.0	-1.1
dL <sub>t1,50,10</sub> :	71.9	3.13	27.4	38.1	40.7	-2.6	-2.0	-0.6
dL <sub>t2,33,10</sub> :	100.0	3.13	30.8	44.3	44.1	0.3	-2.0	2.3
dL <sub>t2,36,10</sub> :	106.3	3.13	28.5	38.9	41.8	-3.0	-2.0	-1.0
$dL_{t3,1,10}$ :	140.6	3.13	31.0	41.3	44.3	-3.0	-2.0	-1.0
dL <sub>t3,2,10</sub> :	140.6	3.13	31.7	41.8	45.0	-3.2	-2.0	-1.2
dL <sub>t3,3,10</sub> :	140.6	3.13	30.8	41.7	44.1	-2.4	-2.0	-0.4
dL <sub>t3,4,10</sub> :	140.6	3.13	32.0	44.6	45.3	-0.7	-2.0	1.3
dL <sub>t3,5,10</sub> :	140.6	3.13	31.3	40.7	44.6	-3.9	-2.0	-1.9
dL <sub>t3,6,10</sub> :	140.6	3.13	31.8	40.0	45.1	-5.1	-2.0	-3.1
dL <sub>t3,7,10</sub> :	140.6	3.13	31.0	39.2	44.3	-5.1	-2.0	-3.1
dL <sub>t3,8,10</sub> :	140.6	3.13	32.3	40.3	45.6	-5.3	-2.0	-3.2
dL <sub>t3,9,10</sub> :	137.5	3.13	31.1	38.7	44.4	-5.7	-2.0	-3.7
dL <sub>t3,10,10</sub> :	140.6	3.13	32.3	42.4	45.6	-3.2	-2.0	-1.2
dL <sub>t3,11,10</sub> :	140.6	3.13	33.1	43.1	46.4	-3.4	-2.0	-1.4
dL <sub>t3,12,10</sub> :	137.5	3.13	31.4	40.0	44.7	-4.7	-2.0	-2.7
dL <sub>t3,13,10</sub> :	140.6	3.13	31.8	42.6	45.0	-2.4	-2.0	-0.4
dL <sub>t3,14,10</sub> :	143.8	3.13	32.0	42.8	45.3	-2.5	-2.0	-0.5
dL <sub>t3,16,10</sub> :	140.6	3.13	33.1	40.2	46.4	-6.2	-2.0	-4.1
dL <sub>13,17,10</sub> :	140.6 140.6	3.13	31.3	42.8 40.0	44.6	-1.8	-2.0	0.2
dL <sub>t3,18,10</sub> :	140.6	3.13 3.13	32.5 32.1	40.0 48.0	45.8 45.4	-5.8 2.6	-2.0 -2.0	-3.7 4.7
dL <sub>t3,19,10</sub> : dL <sub>t3,20,10</sub> :	137.5	3.13	32.1	48.0	45.4 45.0	-4.1	-2.0 -2.0	-2.1
dL <sub>t3,20,10</sub> : dL <sub>t3,21,10</sub> :	140.6	3.13	31.7	41.0	45.0 45.4	-4.1 -4.4	-2.0 -2.0	-2.1 -2.3
dL <sub>t3,21,10</sub> . dL <sub>t3,22,10</sub> :	140.6	3.13	32.7	41.4	46.0	-4.4	-2.0	-2.6
dL <sub>t3,22,10</sub> :	140.6	3.13	31.9	42.3	45.2	-2.9	-2.0	-0.9
dL <sub>t3,23,10</sub> : dL <sub>t3,24,10</sub> :	140.6	3.13	31.9	40.1	45.2	-5.1	-2.0	-3.1
dL <sub>t3,24,10</sub> : dL <sub>t3,25,10</sub> :	140.6	3.13	32.1	44.1	45.4	-1.3	-2.0	0.7
dL <sub>t3,25,10</sub> : dL <sub>t3,26,10</sub> :	140.6	3.13	31.8	41.5	45.1	-3.6	-2.0	-1.6
dL <sub>t3,26,10</sub> :	140.6	3.13	29.9	43.5	43.2	0.4	-2.0	2.4
	140.6	3.13	30.9	44.4	44.2	0.4	-2.0	2.2
	1 70.0		31.6	39.8	44.9	-5.1	-2.0	-3.1
dL <sub>t3,28,10</sub> :	140 6	3.13						
dL <sub>t3,28,10</sub> : dL <sub>t3,29,10</sub> :	140.6 137.5	3.13 3.13						
dL <sub>t3,28,10</sub> : dL <sub>t3,29,10</sub> : dL <sub>t3,34,10</sub> :	137.5	3.13	31.3	40.7	44.6	-3.8	-2.0	-1.8
dL <sub>t3,28,10</sub> : dL <sub>t3,29,10</sub> :								





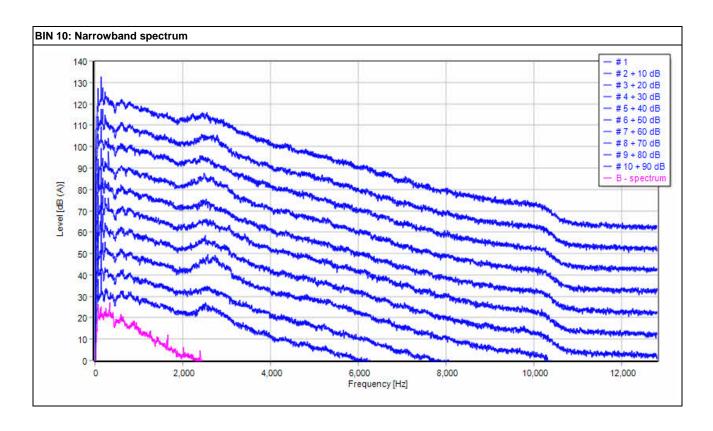


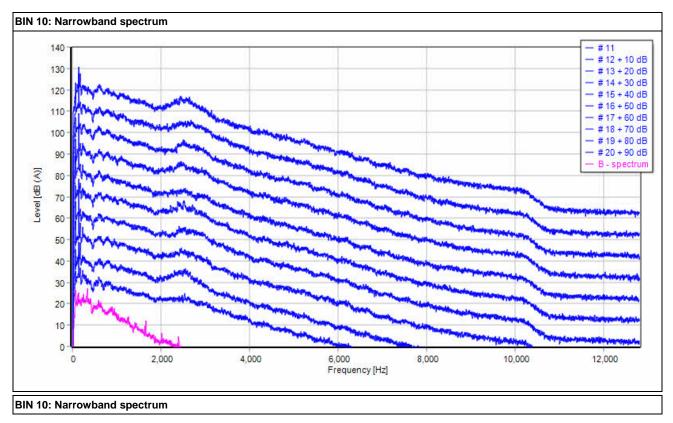
dL <sub>t3,39,10</sub> :	137.5	3.13	32.7	40.5	46.0	-5.5	-2.0	-3.4
dL <sub>t3,41,10</sub> :	140.6	3.13	31.6	42.9	44.9	-2.0	-2.0	0.0
dL <sub>t3,42,10</sub> :	143.8	3.13	33.6	44.1	46.9	-2.8	-2.0	-0.8
dL <sub>t3,43,10</sub> :	143.8	3.13	31.7	42.4	45.0	-2.6	-2.0	-0.6
dL <sub>t3,45,10</sub> :	143.8	3.13	32.2	43.1	45.5	-2.4	-2.0	-0.4
dL <sub>t3,47,10</sub> :	140.6	3.13	31.8	39.1	45.1	-6.0	-2.0	-3.9
dL <sub>t3,48,10</sub> :	140.6	3.13	32.4	41.6	45.6	-4.0	-2.0	-2.0
dL <sub>t3,49,10</sub> :	140.6	3.13	31.6	41.6	44.9	-3.3	-2.0	-1.3
dL <sub>t4,30,10</sub> :	175.0	3.13	32.5	40.7	45.7	-5.1	-2.0	-3.0
dL <sub>t4,32,10</sub> :	175.0	3.13	31.2	43.7	44.5	-0.8	-2.0	1.2
dL <sub>t4,35,10</sub> :	175.0	3.13	31.6	38.5	44.9	-6.4	-2.0	-4.4
dL <sub>t5,7,10</sub> :	309.4	3.13	30.5	37.7	44.0	-6.3	-2.1	-4.2
dL <sub>t5,32,10</sub> :	325.0	3.13	29.8	36.0	43.3	-7.3	-2.1	-5.2
dL <sub>t5,44,10</sub> :	325.0	3.13	31.9	40.1	45.4	-5.3	-2.1	-3.2

pectrum	f⊤	$dL_{tn,j,k}$	f <sub>T</sub>	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	
1	71.9	-1.7			140.6	-3.0					
2	71.9	-2.2			140.6	-3.2					
3	71.9	-0.6			140.6	-2.4					
4	71.9	0.2			140.6	-0.7					
5	71.9	-2.2			140.6	-3.9					
6	71.9	0.2			140.6	-5.1					
7	71.9	-5.1			140.6	-5.1			309.4	-6.3	
8					140.6	-5.3					
9					137.5	-5.7					
10	71.9	-3.2			140.6	-3.2					
11					140.6	-3.4					
12	68.8	-6.2			137.5	-4.7					
13	71.9	-1.8			140.6	-2.4					
14	71.9	-2.9			143.8	-2.5					
15		-2.3				-2.5					
16	71.9	-5.1			140.6	-6.2					
17	68.8	-2.0			140.6	-1.8					
18	71.9	-2.0 -5.0			140.6	-5.8					
19	71.9	-3.7			143.8	2.6					
20	71.9	-3.7			137.5	-4.1					
21	71.9	-2.1			140.6	-4.1 -4.4					
	71.9	-2.1				-4.4					
22					140.6						
23	71.9	-1.9			140.6	-2.9					
24	71.9	-1.7			140.6	-5.1					
25	71.9	-1.4			140.6	-1.3					
26	71.9	-2.7			140.6	-3.6					
27	71.9	0.0			140.6	0.4					
28	71.9	-3.3			140.6	0.2					
29	68.8	-4.3			140.6	-5.1					
30							175.0	-5.1			
31											
32	71.9	-2.7					175.0	-0.8	325.0	-7.3	
33			100.0	0.3							
34	68.8	-6.5			137.5	-3.8					
35							175.0	-6.4			
36			106.3	-3.0	140.6	-6.9					
37	71.9	-5.3			140.6	-1.3					
38	71.9	-5.2			140.6	-4.7					
39	68.8	-5.9			137.5	-5.5					
40											
41	71.9	-2.8			140.6	-2.0					
42	71.9	-3.1			143.8	-2.8					
43	71.9	-2.2			143.8	-2.6					
44									325.0	-5.3	
45	71.9	-1.1			143.8	-2.4					
46	68.8	-5.1									
47	71.9	-4.6			140.6	-6.0					
48					140.6	-4.0					
49	71.9	-3.1			140.6	-3.3					
50	71.9	-2.6									
z]   dL <sub>k</sub> [dB]	71.5	-3.9	100.1	-11.2	140.6	-3.8	175.0	-11.5	310.0	-12.6	
L <sub>a</sub> [dB]		-2.0		-2.0		-2.0		-2.0		-2.1	
La <sub>[dB]</sub>		-1.9		-9.2		-1.8		-9.5	1	-10.4	
K <sub>TN</sub> [dB]	<b>†</b>	0		0		0		0.0		0	





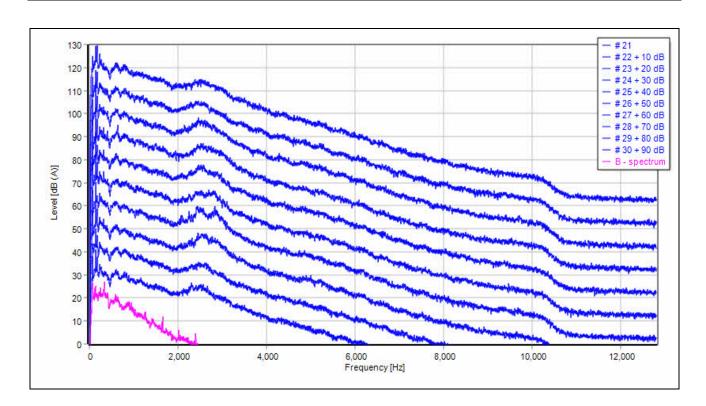
















BIN 10.5: Tona	al components dete		•	•	1	1	,	•
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	La	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
dL <sub>t1,1,10.5</sub> :	71.9	3.13	28.6	36.4	41.9	-5.4	-2.0	-3.4
dL <sub>t1,2,10.5</sub> :	71.9	3.13	28.8	37.0	42.1	-5.1	-2.0	-3.1
dL <sub>t1,3,10.5</sub> :	75.0	3.13	29.1	36.8	42.4	-5.6	-2.0	-3.6
dL <sub>t1,4,10.5</sub> :	68.8	3.13	27.0	36.9	40.2	-3.3	-2.0	-1.3
dL <sub>t1,5,10.5</sub> :	68.8	3.13	27.2	35.4	40.4	-5.0	-2.0	-3.0
dL <sub>t1,6,10.5</sub> :	68.8	3.13	27.8	34.1	41.0	-6.9	-2.0	-4.9
dL <sub>t1,7,10.5</sub> :	68.8	3.13	28.5	36.8	41.6	-4.9	-2.0	-2.9
dL <sub>t1,8,10.5</sub> :	71.9	3.13	27.7	34.9	41.0	-6.2	-2.0	-4.1
dL <sub>t1,9,10.5</sub> :	84.4	3.13	27.6	38.5	40.8	-2.3	-2.0	-0.3
dL <sub>t1,14,10.5</sub> :	68.8	3.13	29.0	36.9	42.1	-5.2	-2.0	-3.2
dL <sub>t1,15,10.5</sub> :	68.8	3.13	28.5	35.7	41.7	-6.0	-2.0	-4.0
dL <sub>t1,16,10.5</sub> :	68.8	3.13	26.9	36.2	40.1	-3.9	-2.0	-1.9
dL <sub>t1,17,10.5</sub> :	68.8	3.13	27.8	36.3	40.9	-4.6	-2.0	-2.6
dL <sub>t1,18,10.5</sub> :	71.9	3.13	26.8	37.8	40.1	-2.3	-2.0	-0.3
dL <sub>t1,19,10.5</sub> :	71.9	3.13	29.4	39.7	42.7	-2.9	-2.0	-0.9
dL <sub>t1,21,10.5</sub> :	71.9	3.13	28.1	34.5	41.4	-6.9	-2.0	-4.9
dL <sub>t1,22,10.5</sub> :	71.9	3.13	29.6	37.3	42.9	-5.5	-2.0	-3.5
dL <sub>t1,23,10.5</sub> :	68.8	3.13	25.9	33.8	39.1	-5.3	-2.0	-3.3
dL <sub>t1,25,10.5</sub> :	68.8	3.13	27.3	34.6	40.5	-5.9	-2.0	-3.9
dL <sub>t1,26,10.5</sub> :	68.8 68.8	3.13 3.13	26.9 27.5	35.5 35.9	40.1 40.6	-4.6 -4.7	-2.0 -2.0	-2.6 -2.7
dL <sub>t1,27,10.5</sub> :	68.8		27.5	35.9 34.7	40.6 41.7	-4. <i>1</i> -7.0	-2.0 -2.0	-2. <i>1</i> -5.0
dL <sub>t1,28,10.5</sub> :	68.8	3.13 3.13	28.5	34.7 36.1	41.7	-7.0 -4.9	-2.0	-5.0 -2.9
dL <sub>t1,30,10.5</sub> : dL <sub>t1,31,10.5</sub> :	68.8	3.13	25.4	36.1	38.6	-4.9 -0.9	-2.0 -2.0	-2.9 1.1
dL <sub>t1,31,10.5</sub> : dL <sub>t1,32,10.5</sub> :	68.8	3.13	24.0	33.7	37.1	-3.4	-2.0	-1.4
dL <sub>t1,32,10.5</sub> : dL <sub>t1,33,10.5</sub> :	68.8	3.13	25.1	35.1	38.2	-3.1	-2.0	-1.4
dL <sub>t1,33,10.5</sub> :	68.8	3.13	25.6	36.9	38.7	-1.9	-2.0	0.1
dL <sub>t1,35,10.5</sub> :	68.8	3.13	26.1	35.1	39.3	-4.2	-2.0	-2.2
dL <sub>t1,36,10.5</sub> :	68.8	3.13	27.7	33.8	40.9	-7.1	-2.0	-5.1
dL <sub>t1,38,10.5</sub> :	68.8	3.13	28.2	34.9	41.3	-6.4	-2.0	-4.4
dL <sub>t1,42,10.5</sub> :	68.8	3.13	28.4	34.5	41.5	-7.0	-2.0	-5.0
dL <sub>t1,42,10.5</sub> :	71.9	3.13	28.8	39.3	42.1	-2.8	-2.0	-0.8
dL <sub>t1,44,10.5</sub> :	68.8	3.13	25.8	37.4	38.9	-1.5	-2.0	0.5
dL <sub>t1,45,10.5</sub> :	68.8	3.13	25.3	37.1	38.4	-1.3	-2.0	0.7
dL <sub>t1,46,10.5</sub> :	68.8	3.13	28.4	34.6	41.5	-7.0	-2.0	-5.0
dL <sub>t1,47,10.5</sub> :	68.8	3.13	27.5	35.3	40.6	-5.4	-2.0	-3.4
dL <sub>t1,48,10.5</sub> :	68.8	3.13	27.3	35.6	40.5	-4.9	-2.0	-2.9
dL <sub>t1,50,10.5</sub> :	71.9	3.13	31.0	37.0	44.3	-7.2	-2.0	-5.2
dL <sub>t1,51,10.5</sub> :	68.8	3.13	28.5	35.5	41.7	-6.1	-2.0	-4.1
dL <sub>t1,52,10.5</sub> :	68.8	3.13	27.1	36.4	40.3	-3.8	-2.0	-1.8
dL <sub>t1,53,10.5</sub> :	71.9	3.13	28.6	35.4	41.9	-6.5	-2.0	-4.5
dL <sub>t1,54,10.5</sub> :	68.8	3.13	26.7	35.1	39.9	-4.8	-2.0	-2.8
dL <sub>t1,55,10,5</sub> :	68.8	3.13	26.5	36.2	39.6	-3.5	-2.0	-1.4
dL <sub>t1.56.10.5</sub> :	68.8	3.13	27.6	37.3	40.8	-3.5	-2.0	-1.5
dL <sub>t1,58,10.5</sub> :	68.8	3.13	27.8	34.4	40.9	-6.5	-2.0	-4.5
dL <sub>t1,59,10.5</sub> :	71.9	3.13	28.8	36.6	42.1	-5.5	-2.0	-3.5
dL <sub>t1,60,10.5</sub> :	68.8	3.13	28.6	35.6	41.8	-6.1	-2.0	-4.1
dL <sub>t1,64,10.5</sub> :	68.8	3.13	26.0	36.1	39.2	-3.1	-2.0	-1.1
dL <sub>t1,65,10.5</sub> :	68.8	3.13	25.8	37.8	38.9	-1.1	-2.0	0.9
dL <sub>t1,66,10.5</sub> :	71.9	3.13	30.9	37.2	44.2	-7.0	-2.0	-5.0
dL <sub>t1,70,10.5</sub> :	71.9	3.13	28.8	35.6	42.1	-6.5	-2.0	-4.5
dL <sub>t1,71,10.5</sub> :	71.9	3.13	28.6	37.7	41.9	-4.2	-2.0	-2.2
dL <sub>t1,72,10.5</sub> :	71.9	3.13	28.8	35.2	42.1	-6.9	-2.0	-4.9
dL <sub>t2,1,10.5</sub> :	140.6	3.13	32.1	41.9	45.4	-3.5	-2.0	-1.5
dL <sub>t2,3,10.5</sub> :	140.6	3.13	32.0	39.1	45.3	-6.2	-2.0	-4.2
dL <sub>t2,5,10.5</sub> :	140.6	3.13	30.4	41.0	43.7	-2.7	-2.0	-0.7
dL <sub>t2,8,10.5</sub> :	140.6	3.13	30.7	43.7	44.0	-0.3	-2.0	1.7
dL <sub>t2,10,10.5</sub> :	137.5	3.13	31.9	41.7	45.2	-3.4	-2.0	-1.4
dL <sub>t2,11,10.5</sub> :	140.6	3.13	30.5	41.6	43.8	-2.2	-2.0	-0.2
dL <sub>t2,12,10.5</sub> :	134.4	3.13	31.0	41.2	44.3	-3.1	-2.0	-1.1
dL <sub>t2,13,10.5</sub> :	134.4	3.13	31.7	40.5	45.0	-4.5	-2.0	-2.5
dL <sub>t2,14,10.5</sub> :	137.5	3.13	31.9	40.3	45.2	-5.0	-2.0	-2.9
dL <sub>t2,15,10.5</sub> :	137.5	3.13	30.9	37.9	44.2	-6.3	-2.0	-4.3
dL <sub>t2,18,10.5</sub> :	140.6	3.13	30.5	39.6	43.8	-4.2	-2.0	-2.2
dL <sub>t2,19,10.5</sub> :	140.6	3.13	32.9	41.5	46.2	-4.7	-2.0	-2.7
dL <sub>t2,20,10.5</sub> :	140.6	3.13	32.7	41.8	46.0	-4.2	-2.0	-2.2
dL <sub>t2,21,10.5</sub> :	140.6	3.13	31.6	43.3	44.9	-1.6	-2.0	0.4
dL <sub>t2,22,10.5</sub> :	140.6	3.13	32.9	41.7	46.2	-4.5	-2.0	-2.4
dL <sub>t2,24,10.5</sub> :	140.6	3.13	31.6	40.7	44.9	-4.3	-2.0	-2.2
dL <sub>t2,25,10.5</sub> :	137.5	3.13	30.8	37.4	44.1	-6.7	-2.0	-4.7







dL <sub>t2,27,10.5</sub> :	137.5	3.13	30.5	41.1	43.8	-2.7	-2.0	-0.7
dL <sub>t2,28,10.5</sub> :	137.5	3.13	31.1	40.3	44.4	-4.1	-2.0	-2.0
dL <sub>t2,29,10.5</sub> :	134.4	3.13	31.4	43.7	44.7	-1.0	-2.0	1.0
dL <sub>t2,30,10.5</sub> :	137.5	3.13	31.6	43.5	44.9	-1.4	-2.0	0.6
dL <sub>t2,30,10.5</sub> :	137.5	3.13	28.9	40.2	42.2	-2.0	-2.0	0.0
	137.5	3.13	28.9	41.5	42.2	-0.7	-2.0	1.4
dL <sub>t2,33,10.5</sub> :	137.5	3.13	29.7	42.0	43.0	-1.0	-2.0	1.0
dL <sub>t2,34,10.5</sub> :	140.6	3.13	31.1	38.3	44.4	-6.1	-2.0	-4.0
dL <sub>t2,36,10.5</sub> :								
dL <sub>t2,37,10.5</sub> :	140.6	3.13	32.3	39.3	45.6	-6.3	-2.0	-4.3
dL <sub>t2,41,10.5</sub> :	137.5	3.13	32.5	40.6	45.8	-5.2	-2.0	-3.1
dL <sub>t2,42,10.5</sub> :	140.6	3.13	31.6	39.9	44.9	-5.0	-2.0	-3.0
dL <sub>t2,43,10.5</sub> :	140.6	3.13	32.4	43.3	45.7	-2.4	-2.0	-0.4
dL <sub>t2,46,10.5</sub> :	137.5	3.13	31.6	38.0	44.9	-6.9	-2.0	-4.8
dL <sub>t2,49,10.5</sub> :	140.6	3.13	31.3	39.8	44.6	-4.8	-2.0	-2.8
dL <sub>t2,53,10.5</sub> :	140.6	3.13	32.1	41.7	45.4	-3.6	-2.0	-1.6
dL <sub>t2,54,10.5</sub> :	137.5	3.13	30.2	42.2	43.5	-1.3	-2.0	0.8
dL <sub>t2,55,10.5</sub> :	140.6	3.13	30.8	38.6	44.1	-5.5	-2.0	-3.5
dL <sub>12,57,10.5</sub> :	140.6	3.13	30.7	41.9	44.0	-2.1	-2.0	-0.1
dL <sub>12,59,10.5</sub> :	140.6	3.13	32.0	39.6	45.3	-5.6	-2.0	-3.6
dL <sub>t2,60,10.5</sub> :	137.5	3.13	31.2	39.8	44.5	-4.7	-2.0	-2.6
dL <sub>12,62,10.5</sub> :	137.5	3.13	32.1	38.9	45.4	-6.5	-2.0	-4.5
dL <sub>t2,63,10.5</sub> :	140.6	3.13	33.9	40.5	47.2	-6.7	-2.0	-4.7
dL <sub>t2,64,10.5</sub> :	137.5	3.13	30.0	37.8	43.3	-5.5	-2.0	-3.5
dL <sub>t2,65,10.5</sub> :	137.5	3.13	29.9	40.0	43.2	-3.2	-2.0	-1.2
dL <sub>t2,67,10.5</sub> :	140.6	3.13	32.9	43.5	46.2	-2.7	-2.0	-0.7
dL <sub>t2,68,10.5</sub> :	137.5	3.13	32.3	40.4	45.6	-5.2	-2.0	-3.2
dL <sub>t2,70,10.5</sub> :	140.6	3.13	32.1	39.0	45.4	-6.5	-2.0	-4.4
dL <sub>t2,71,10.5</sub> :	140.6	3.13	31.8	40.7	45.1	-4.3	-2.0	-2.3
dL <sub>t2,72,10.5</sub> :	140.6	3.13	32.0	38.4	45.3	-6.9	-2.0	-4.9
dL <sub>t2,73,10.5</sub> :	140.6	3.13	31.8	38.7	45.1	-6.4	-2.0	-4.4
dL <sub>t3,4,10.5</sub> :	175.0	3.13	30.8	39.8	44.1	-4.3	-2.0	-2.2
dL <sub>t3,9,10.5</sub> :	175.0	3.13	31.5	38.3	44.8	-6.6	-2.0	-4.5
dL <sub>t3,16,10.5</sub> :	175.0	3.13	30.3	39.6	43.6	-4.0	-2.0	-2.0
dL <sub>t3,26,10.5</sub> :	175.0	3.13	31.5	38.2	44.8	-6.5	-2.0	-4.5
dL <sub>t3,31,10.5</sub> :	175.0	3.13	30.9	39.8	44.1	-4.4	-2.0	-2.3
dL <sub>t3,35,10.5</sub> :	175.0	3.13	30.7	40.7	44.0	-3.2	-2.0	-1.2
dL <sub>t3,38,10.5</sub> :	175.0	3.13	31.6	40.0	44.9	-4.9	-2.0	-2.9
dL <sub>t3,44,10.5</sub> :	175.0	3.13	29.9	42.3	43.2	-0.8	-2.0	1.2
dL <sub>t3,45,10.5</sub> :	175.0	3.13	29.0	42.0	42.3	-0.2	-2.0	1.8
dL <sub>t3,47,10.5</sub> :	175.0	3.13	31.2	38.4	44.5	-6.1	-2.0	-4.1
dL <sub>t3,48,10.5</sub> :	175.0	3.13	30.8	39.7	44.1	-4.3	-2.0	-2.3
dL <sub>t3,52,10.5</sub> :	175.0	3.13	31.9	39.3	45.2	-5.9	-2.0	-3.9
dL <sub>t3,56,10.5</sub> :	175.0	3.13	31.1	39.3	44.4	-5.1	-2.0	-3.1
dL <sub>t4,15,10.5</sub> :	309.4	3.13	28.8	36.8	42.4	-5.5	-2.1	-3.4
dL <sub>t4,16,10.5</sub> :	309.4	3.13	28.9	35.4	42.4	-7.0	-2.1	-4.9
dL <sub>t4,51,10.5</sub> :	325.0	3.13	29.4	37.3	43.0	-5.7	-2.1	-3.5
,01,10.0-								

Spectrum	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$		
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]		
1	71.9	-5.4	140.6	-3.5						
2	71.9	-5.1								
3	75.0	-5.6	140.6	-6.2						
4	68.8	-3.3			175.0	-4.3				
5	68.8	-5.0	140.6	-2.7						
6	68.8	-6.9								
7	68.8	-4.9								
8	71.9	-6.2	140.6	-0.3						
9	84.4	-2.3			175.0	-6.6				
10			137.5	-3.4						
11			140.6	-2.2						
12			134.4	-3.1						
13			134.4	-4.5						
14	68.8	-5.2	137.5	-5.0						
15	68.8	-6.0	137.5	-6.3			309.4	-5.5		
16	68.8	-3.9			175.0	-4.0	309.4	-7.0		
17	68.8	-4.6								
18	71.9	-2.3	140.6	-4.2						
19	71.9	-2.9	140.6	-4.7						
20			140.6	-4.2						
21	71.9	-6.9	140.6	-1.6						
22	71.9	-5.5	140.6	-4.5						





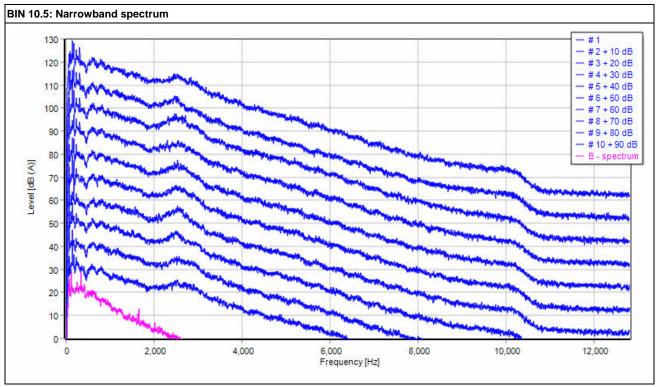


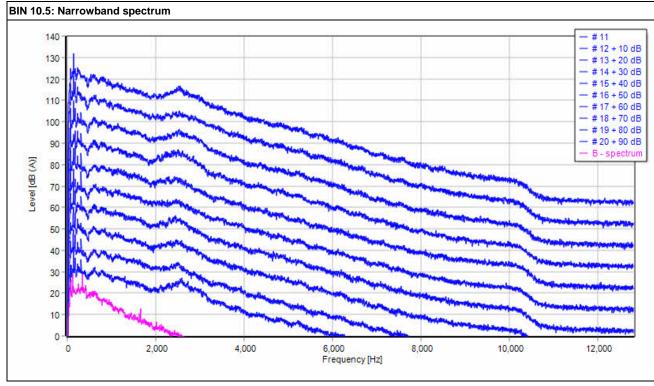
23	68.8	-5.3									
24			140.6	-4.3							
25	68.8	-5.9	137.5	-6.7							
26	68.8	-4.6			175.0	-6.5					
27	68.8	-4.7	137.5	-2.7							
28	68.8	-7.0	137.5	-4.1							
29			134.4	-1.0							
30	68.8	-4.9	137.5	-1.4							
31	68.8	-0.9			175.0	-4.4					
32	68.8	-3.4	137.5	-2.0							
33	68.8	-3.1	137.5	-0.7							
34	68.8	-1.9	137.5	-1.0							
35	68.8	-4.2			175.0	-3.2					
36	68.8	-7.1	140.6	-6.1							
37			140.6	-6.3							
38	68.8	-6.4		-0.5	175.0	-4.9					
39		-0.4							<del>                                     </del>	<del>                                     </del>	
40									<del>                                     </del>	<del>                                     </del>	
41			137.5	-5.2					<del>                                     </del>	<del>                                     </del>	
42			140.6	-5.2 -5.0							
	68.8	-7.0							-	-	
43	71.9	-2.8	140.6	-2.4	175.0				-	-	
44	68.8	-1.5				-0.8					
45	68.8	-1.3			175.0	-0.2					
46	68.8	-7.0	137.5	-6.9							
47	68.8	-5.4			175.0	-6.1					
48	68.8	-4.9			175.0	-4.3					
49			140.6	-4.8							
50											
	71.9	-7.2									
51	68.8	-6.1					325.0	-5.7			
51 52	68.8 68.8	-6.1 -3.8			 175.0	 -5.9	325.0	-5.7 			
51 52 53	68.8 68.8 71.9	-6.1 -3.8 -6.5	 140.6	  -3.6	175.0 	 -5.9 	325.0	-5.7 			
51 52 53 54	68.8 68.8 71.9 68.8	-6.1 -3.8 -6.5 -4.8	 140.6 137.5	 -3.6 -1.3	175.0 	 -5.9 	325.0	-5.7 			
51 52 53 54 55	68.8 68.8 71.9 68.8 68.8	-6.1 -3.8 -6.5 -4.8 -3.5	 140.6 137.5 140.6	 -3.6 -1.3 -5.5	175.0  	 -5.9  	325.0   	-5.7   			
51 52 53 54 55 56	68.8 68.8 71.9 68.8 68.8	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5	140.6 137.5 140.6	 -3.6 -1.3 -5.5	175.0 	 -5.9 	325.0  	-5.7  			
51 52 53 54 55 56 57	68.8 68.8 71.9 68.8 68.8	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5	140.6 137.5 140.6  140.6	 -3.6 -1.3 -5.5 	175.0   175.0	 -5.9    -5.1	325.0	-5.7    			
51 52 53 54 55 56 57 58	68.8 68.8 71.9 68.8 68.8 68.8	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5  -6.5	140.6 137.5 140.6  140.6	 -3.6 -1.3 -5.5  -2.1	 175.0    175.0	 -5.9    -5.1	325.0    	-5.7   			
51 52 53 54 55 56 57 58 59	68.8 68.8 71.9 68.8 68.8 68.8  68.8 71.9	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -3.5 -6.5 -5.5	140.6 137.5 140.6  140.6  140.6	 -3.6 -1.3 -5.5  -2.1  -5.6	175.0   175.0	 -5.9    -5.1	325.0	-5.7    			
51 52 53 54 55 56 57 58 59 60	68.8 68.8 71.9 68.8 68.8 68.8  68.8 71.9	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -3.5  -6.5 -5.5 -6.1	140.6 137.5 140.6  140.6  140.6 137.5	 -3.6 -1.3 -5.5  -2.1  -5.6 -4.7	175.0   175.0  175.0	 -5.9   -5.1  	325.0	-5.7     			
51 52 53 54 55 56 57 58 59 60 61	68.8 68.8 71.9 68.8 68.8 68.8  68.8 71.9 68.8	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -3.5 -6.5 -6.5 -6.1	140.6 137.5 140.6  140.6  140.6 137.5	 -3.6 -1.3 -5.5  -2.1  -5.6 -4.7	175.0  175.0  175.0  	-5.9   -5.1 	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62	68.8 68.8 71.9 68.8 68.8 68.8  68.8 71.9	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -3.5  -6.5 -5.5 -6.1	140.6 137.5 140.6  140.6  140.6 137.5  137.5	 -3.6 -1.3 -5.5  -2.1  -5.6 -4.7  -6.5	175.0   175.0  175.0	 -5.9   -5.1  	325.0	-5.7     			
51 52 53 54 55 56 57 58 59 60 61 62 63	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5  -6.5 -5.5 -6.1	140.6 137.5 140.6  140.6  140.6 137.5 137.5 140.6	 -3.6 -1.3 -5.5  -2.1  -5.6 -4.7 -6.5 -6.7	175.0  175.0  175.0  	-5.9   -5.1 	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8  68.8	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -6.5 -6.5 -6.1        -	140.6 137.5 140.6  140.6  140.6 137.5  137.5 140.6 137.5	 -3.6 -1.3 -5.5  -2.1  -5.6 -4.7  -6.5 -6.7 -5.5	175.0  175.0  175.0  	-5.9   -5.1  	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8  68.8 68.8	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -6.5 -5.5 -6.1     -3.1 -1.1	140.6 137.5 140.6  140.6  140.6 137.5 137.5 140.6	 -3.6 -1.3 -5.5  -2.1  -5.6 -4.7 -6.5 -6.7	175.0  175.0  175.0  	 -5.9   -5.1  	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8  68.8	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -6.5 -6.5 -6.1        -	140.6 137.5 140.6  140.6  140.6 137.5  137.5 140.6 137.5	3.6 -1.3 -5.52.15.6 -4.76.5 -6.7 -5.5 -3.2	175.0  175.0  175.0   	 -5.9   -5.1    	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8  68.8 68.8	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -6.5 -5.5 -6.1     -3.1 -1.1	140.6 137.5 140.6  140.6  140.6 137.5  137.5 137.5 137.5	3.6 -1.3 -5.52.15.6 -4.76.5 -3.2	175.0  175.0  175.0    	 -5.9   -5.1    	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8  68.8 71.9 68.8 71.9	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -6.5 -5.5 -6.1    -3.1 -1.1 -7.0	140.6 137.5 140.6  140.6  140.6 137.5  137.5 140.6 137.5	3.6 -1.3 -5.52.15.6 -4.76.5 -6.7 -5.5 -3.2	175.0  175.0  175.0    	 -5.9   -5.1    	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8  68.8 71.9	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -5.5 -6.1   -3.1 -1.1 -7.0	140.6 137.5 140.6  140.6  140.6 137.5  137.5 140.6 137.5 140.6	 -3.6 -1.3 -5.5  -2.1  -5.6 -4.7  -6.5 -6.7 -5.5 -3.2 	175.0  175.0  175.0    	 -5.9   -5.1    	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8 68.8 71.9 	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -5.5 -6.13.1 -1.1 -7.0	140.6 137.5 140.6  140.6  140.6 137.5  137.5 140.6 137.5 137.5 137.5	3.6 -1.3 -5.52.15.6 -4.76.5 -6.7 -5.5 -3.2 -2.7 -5.2	175.0  175.0  175.0    	 -5.9        	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8  68.8 71.9  68.8 71.9	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -6.5 -6.5 -6.1	140.6 137.5 140.6  140.6  140.6 137.5  137.5 140.6 137.5  140.6 137.5	3.6 -1.3 -5.52.15.6 -4.7 -6.5 -6.7 -5.5 -3.25.2	175.0  175.0  175.0    	 -5.9        	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8  68.8 71.9  71.9	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -6.5 -6.5 -6.13.1 -1.1 -7.06.5	140.6 137.5 140.6  140.6 137.5  137.5 137.5 137.5 137.5  140.6 137.5  140.6	3.6 -1.3 -5.52.15.6 -4.76.5 -6.7 -5.5 -3.22.7 -5.26.5	 175.0  175.0        	 -5.9   -5.1      	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8  68.8 71.9  71.9 71.9	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -6.5 -6.13.1 -1.1 -7.06.5 -6.5 -6.5 -6.5	140.6 137.5 140.6  140.6 137.5  137.5 137.5 137.5 137.5  140.6 137.5  140.6	3.6 -1.3 -5.52.15.6 -4.76.5 -3.22.7 -5.26.5 -4.3	175.0 175.0 175.0	 -5.9   -5.1      	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8 71.9  71.9 71.9 71.9	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -5.5 -6.13.1 -1.1 -7.06.5 -6.5 -6.5 -6.5 -6.5	140.6 137.5 140.6  140.6  140.6 137.5  137.5 140.6 137.5  140.6 137.5  140.6		175.0 175.0	 -5.9         	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8  68.8 71.9     71.9 71.9 71.9	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -5.5 -6.13.1 -1.1 -7.06.5 -6.5 -6.5 -6.5	140.6 137.5 140.6  140.6  140.6 137.5  137.5 137.5 140.6 137.5  140.6 137.5  140.6		175.0  175.0  175.0       	 -5.9         	325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 f <sub>i</sub> [Hz]   dL <sub>k</sub> [dB]	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8 71.9  71.9 71.9 71.9	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -6.5 -6.5 -6.13.1 -1.1 -7.06.5 -4.2 -6.9 -2.0	140.6 137.5 140.6  140.6  140.6 137.5  137.5 137.5 140.6 137.5  140.6 137.5  140.6	3.6 -1.3 -5.52.15.6 -4.7 -5.5 -3.25.26.5 -4.3 -6.9 -6.4 -2.0	175.0  175.0  175.0       		325.0	-5.7			
51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 f <sub>1</sub> [Hz]   dL <sub>k</sub> [dB]	68.8 68.8 71.9 68.8 68.8 68.8 71.9 68.8 71.9  71.9 71.9 71.9	-6.1 -3.8 -6.5 -4.8 -3.5 -3.5 -6.5 -6.5 -6.13.1 -1.1 -7.06.5 -4.2 -6.9 -5.6	140.6 137.5 140.6  140.6  140.6 137.5  137.5 137.5 140.6 137.5  140.6 137.5  140.6		175.0  175.0  175.0       		325.0	-5.7			







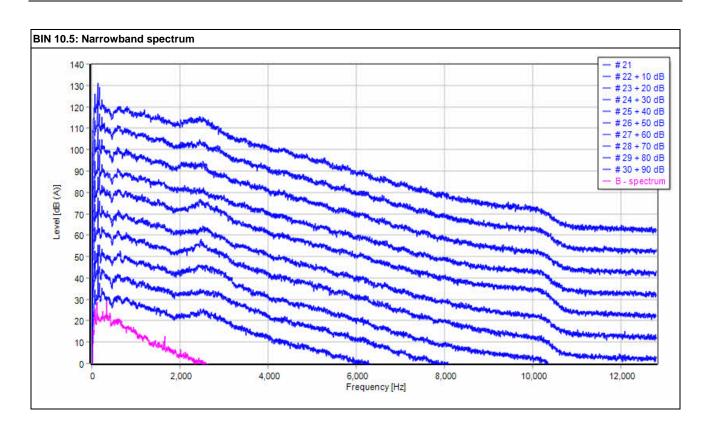
















BIN 11: Tonal C	components deter							
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	La	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
dL <sub>t1,1,11</sub> :	71.9	3.13	27.7	36.7	41.0	-4.3	-2.0	-2.3
dL <sub>t1,2,11</sub> :	71.9	3.13	26.3	39.4	39.6	-0.2	-2.0	1.8
dL <sub>t1,3,11</sub> :	68.8	3.13	26.3	33.8	39.5	-5.6	-2.0	-3.6
dL <sub>t1,4,11</sub> :	71.9	3.13	27.3	33.7	40.6	-6.9	-2.0	-4.9
dL <sub>t1,6,11</sub> :	71.9	3.13	26.0	34.5	39.3	-4.8	-2.0	-2.7
dL <sub>t1,7,11</sub> :	68.8	3.13	25.6	34.2	38.8	-4.6	-2.0	-2.6
dL <sub>t1,8,11</sub> :	68.8	3.13	24.7	35.5	37.8	-2.3	-2.0	-0.3
dL <sub>t1,9,11</sub> :	84.4	3.13	29.6	36.0	42.9	-6.9	-2.0	-4.9
dL <sub>t1,12,11</sub> :	71.9	3.13	26.8	36.6	40.1	-3.4	-2.0	-1.4
dL <sub>t1,14,11</sub> :	68.8	3.13	28.6	34.7 35.2	41.8 41.1	-7.0 -5.9	-2.0	-5.0 -3.9
dL <sub>t1,15,11</sub> :	68.8	3.13 3.13	28.0 27.3		40.5	-5.9 -5.9	-2.0 -2.0	-3.9
dL <sub>t1,18,11</sub> : dL <sub>t1,19,11</sub> :	68.8 68.8	3.13	26.9	34.6 36.5	40.5	-3.6	-2.0	-3.9 -1.6
dL <sub>t1,19,11</sub> . dL <sub>t1,20,11</sub> :	71.9	3.13	25.9	35.7	39.2	-3.5	-2.0	-1.5
dL <sub>t1,20,11</sub> :	68.8	3.13	29.7	37.0	42.8	-5.8	-2.0	-3.8
dL <sub>t1,22,11</sub> :	71.9	3.13	27.8	39.1	41.1	-3.0	-2.0	0.0
dL <sub>t1,24,11</sub> :	71.9	3.13	25.5	36.1	38.8	-2.7	-2.0	-0.7
dL <sub>t1,25,11</sub> :	71.9	3.13	28.9	39.8	42.2	-2.4	-2.0	-0.4
dL <sub>t1,26,11</sub> :	71.9	3.13	28.7	36.3	42.0	-5.7	-2.0	-3.7
dL <sub>t1,27,11</sub> :	71.9	3.13	28.6	37.8	41.9	-4.1	-2.0	-2.1
dL <sub>t1,29,11</sub> :	68.8	3.13	27.6	35.4	40.7	-5.3	-2.0	-3.3
dL <sub>t1,30,11</sub> :	71.9	3.13	27.4	38.1	40.7	-2.6	-2.0	-0.6
dL <sub>t1,31,11</sub> :	68.8	3.13	26.9	35.5	40.0	-4.5	-2.0	-2.5
dL <sub>t1,32,11</sub> :	71.9	3.13	28.9	36.5	42.2	-5.7	-2.0	-3.7
dL <sub>t1,36,11</sub> :	71.9	3.13	26.7	34.4	40.0	-5.5	-2.0	-3.5
dL <sub>t1,37,11</sub> :	68.8	3.13	27.2	36.2	40.3	-4.1	-2.0	-2.1
dL <sub>t1,38,11</sub> :	68.8	3.13	25.8	34.6	39.0	-4.3	-2.0	-2.3
dL <sub>t1,39,11</sub> :	68.8	3.13	26.9	34.1	40.1	-5.9	-2.0	-3.9
dL <sub>t1,42,11</sub> :	71.9	3.13	27.0	34.1	40.3	-6.2	-2.0	-4.2
dL <sub>t1,43,11</sub> :	68.8	3.13	28.1	36.3	41.3	-5.0	-2.0	-3.0
dL <sub>t1,44,11</sub> :	68.8	3.13	27.6	33.7	40.8	-7.1	-2.0	-5.1
dL <sub>t1,45,11</sub> :	71.9	3.13	27.6	35.5	40.9	-5.4	-2.0	-3.4
dL <sub>t1,46,11</sub> :	68.8	3.13	28.6	37.3	41.8	-4.5	-2.0	-2.5
dL <sub>t1,48,11</sub> :	71.9	3.13	30.0	37.1	43.3	-6.2	-2.0	-4.2
dL <sub>t1,49,11</sub> :	71.9	3.13	27.5	37.3	40.8	-3.5	-2.0	-1.5
dL <sub>t1,50,11</sub> :	68.8	3.13	26.5	35.8	39.7	-3.9	-2.0	-1.9
dL <sub>t1,51,11</sub> :	68.8	3.13	29.2	36.4	42.4	-6.0	-2.0	-4.0
dL <sub>t1,52,11</sub> :	75.0	3.13	27.9	37.0	41.2	-4.2	-2.0	-2.2
dL <sub>t1,53,11</sub> :	68.8	3.13	25.9	38.2	39.0	-0.8	-2.0	1.2
dL <sub>t1,54,11</sub> :	71.9	3.13	29.0	35.1	42.3	-7.2	-2.0	-5.2
dL <sub>t1,56,11</sub> :	71.9	3.13	27.4	35.6	40.7	-5.2	-2.0	-3.2
dL <sub>t1,57,11</sub> :	68.8	3.13	25.6	33.8	38.7	-4.9	-2.0	-2.9
dL <sub>t1,58,11</sub> :	68.8	3.13	27.1	33.9	40.2	-6.4	-2.0	-4.4
dL <sub>t1,59,11</sub> :	71.9	3.13	27.5	36.2	40.8	-4.6	-2.0	-2.6
dL <sub>t1,60,11</sub> :	68.8	3.13	26.3	36.6	39.5	-2.9	-2.0	-0.9
dL <sub>t1,61,11</sub> :	68.8	3.13	27.2	34.7	40.3	-5.6	-2.0	-3.6
dL <sub>t1,62,11</sub> :	68.8	3.13	27.8	36.3	40.9	-4.7	-2.0	-2.7
dL <sub>t1,64,11</sub> :	68.8 68.8	3.13	25.6 26.3	35.2 35.8	38.8 39.4	-3.6 -3.6	-2.0 -2.0	-1.6 -1.6
dL <sub>t1,65,11</sub> :	71.9	3.13 3.13	26.3 25.8	35.8 34.6	39.4 39.1	-3.6 -4.4	-2.0 -2.0	-1.6 -2.4
dL <sub>t1,67,11</sub> :	71.9	3.13	25.8	34.6	39.1	-4.4 -3.5	-2.0 -2.0	-2.4 -1.5
dL <sub>t1,68,11</sub> : dL <sub>t1,69,11</sub> :	68.8	3.13	26.6	36.4	39.8	-3.5	-2.0	-1.5 -1.4
dL <sub>t1,69,11</sub> :	71.9	3.13	28.3	36.4	41.6	-5.4 -5.1	-2.0	-3.1
dL <sub>t1,70,11</sub> :	71.9	3.13	27.1	34.3	40.4	-6.1	-2.0	-4.1
dL <sub>t1,74,11</sub> :	68.8	3.13	28.4	34.7	41.5	-6.8	-2.0	-4.8
dL <sub>t1,75,11</sub> :	68.8	3.13	27.1	36.2	40.2	-0.6 -4.1	-2.0	-2.1
dL <sub>t1,76,11</sub> :	68.8	3.13	26.6	35.3	39.7	-4.1	-2.0	-2.4
dL <sub>t1,78,11</sub> :	71.9	3.13	26.3	32.5	39.6	-7.1	-2.0	-5.1
dL <sub>t1,78,11</sub> :	71.9	3.13	28.8	35.4	42.0	-6.6	-2.0	-4.6
dL <sub>t1,80,11</sub> :	71.9	3.13	27.7	36.8	40.9	-4.2	-2.0	-2.2
dL <sub>t1,81,11</sub> :	71.9	3.13	27.9	34.2	41.2	-7.0	-2.0	-5.0
dL <sub>t1,84,11</sub> :	71.9	3.13	26.9	36.8	40.2	-3.4	-2.0	-1.4
dL <sub>t1,85,11</sub> :	71.9	3.13	26.4	35.6	39.7	-4.1	-2.0	-2.1
dL <sub>t1,86,11</sub> :	71.9	3.13	25.7	34.6	39.0	-4.3	-2.0	-2.3
dL <sub>t1,87,11</sub> :	68.8	3.13	25.7	36.8	38.9	-2.0	-2.0	0.0
dL <sub>t1,88,11</sub> :	68.8	3.13	25.7	32.2	38.9	-6.7	-2.0	-4.7
dL <sub>t1,89,11</sub> :	68.8	3.13	27.8	34.7	40.9	-6.2	-2.0	-4.2
dL <sub>t1,91,11</sub> :	71.9	3.13	29.4	35.5	42.7	-7.2	-2.0	-5.2
dL <sub>t1,92,11</sub> :	75.0	3.13	29.1	37.0	42.4	-5.4	-2.0	-3.4
dL <sub>t1,92,11</sub> :	68.8	3.13	28.0	35.2	41.1	-5.9	-2.0	-3.9







dL <sub>11.99.11</sub> :	71.9	3.13	30.1	36.7	43.4	-6.7	-2.0	-4.7
dL <sub>t1,100,11</sub> :	68.8	3.13	28.4	36.6	41.5	-4.9	-2.0	-2.9
dL <sub>t1,101,11</sub> :	68.8	3.13	28.3	36.0	41.4	-5.4	-2.0	-3.4
dL <sub>t1,103,11</sub> :	71.9	3.13	27.8	34.1	41.1	-6.9	-2.0	-4.9
dL <sub>t1,104,11</sub> :	68.8	3.13	29.2	35.5	42.3	-6.8	-2.0	-4.8
dL <sub>t1,106,11</sub> :	71.9	3.13	28.3	36.6	41.6	-5.0	-2.0	-3.0
dL <sub>t2,9,11</sub> :	84.4	3.13	29.6	36.0	42.9	-6.9	-2.0	-4.9
dL <sub>t2,33,11</sub> :	100.0	3.13	28.1	41.0	41.4	-0.4	-2.0	1.6
dL <sub>12,71,11</sub> :	106.3	3.13	29.5	42.3	42.7	-0.5	-2.0	1.5
dL <sub>t2,72,11</sub> :	93.8	3.13	29.4	46.8	42.7	4.1	-2.0	6.1
dL <sub>t3,1,11</sub> :	140.6	3.13	31.2	42.5	44.5	-2.0	-2.0	0.0
dL <sub>t3,5,11</sub> :	140.6	3.13	32.4	40.2	45.7	-5.5	-2.0	-3.5
dL <sub>t3,6,11</sub> :	140.6	3.13	29.9	39.1	43.2	-4.0	-2.0	-2.0
dL <sub>t3,7,11</sub> :	140.6	3.13	29.2	40.5	42.5	-1.9	-2.0	0.1
dL <sub>t3,9,11</sub> :	140.6	3.13	31.8	38.8	45.1	-6.3	-2.0	-4.3
dL <sub>t3,11,11</sub> :	140.6	3.13	31.6	41.3	44.9	-3.6	-2.0	-1.6
dL <sub>t3,12,11</sub> :	143.8	3.13	29.8	41.2	43.1	-1.9	-2.0	0.1
dL <sub>t3,13,11</sub> :	140.6	3.13	31.8	39.2	45.1	-5.9	-2.0	-3.8
dL <sub>t3,19,11</sub> :	140.6	3.13	30.0	36.2	43.3	-7.1	-2.0	-5.1
dL <sub>t3,22,11</sub> :	140.6	3.13	32.9	41.8	46.1	-4.4	-2.0	-2.4
dL <sub>t3,22,11</sub> : dL <sub>t3,23,11</sub> :	143.8	3.13	31.3	45.6	44.6	1.1	-2.0	3.1
dL <sub>t3,24,11</sub> :	140.6	3.13	31.0	41.7	44.3	-2.7	-2.0	-0.7
dL <sub>t3,24,11</sub> :	143.8	3.13	31.8	40.5	45.1	-4.5	-2.0	-2.5
dL <sub>t3,25,11</sub> : dL <sub>t3,26,11</sub> :	140.6	3.13	31.5	39.8	44.8	-5.0	-2.0	-3.0
dL <sub>t3,28,11</sub> :	137.5	3.13	30.2	44.1	43.5	0.6	-2.0	2.6
dL <sub>t3,28,11</sub> : dL <sub>t3,29,11</sub> :	137.5	3.13	30.6	39.5	43.9	-4.4	-2.0	-2.4
dL <sub>t3,29,11</sub> : dL <sub>t3,30,11</sub> :	143.8	3.13	30.4	36.7	43.7	-7.0	-2.0	-4.9
dL <sub>t3,30,11</sub> : dL <sub>t3,32,11</sub> :	140.6	3.13	32.6	38.9	45.9	-7.0	-2.0	-4.9
dL <sub>t3,36,11</sub> :	140.6	3.13	30.3	38.6	43.6	-5.0	-2.0	-3.0
dL <sub>t3,43,11</sub> :	137.5	3.13	31.4	39.0	44.7	-5.6	-2.0	-3.6
dL <sub>t3,43,11</sub> : dL <sub>t3,47,11</sub> :	140.6	3.13	32.2	41.1	45.5	-4.4	-2.0	-2.4
dL <sub>t3,48,11</sub> :	143.8	3.13	32.9	39.8	46.2	-6.4	-2.0	-4.3
dL <sub>t3,50,11</sub> :	140.6	3.13	30.6	38.9	43.9	-5.0	-2.0	-3.0
dLt3,50,11: dLt3,51,11:	137.5	3.13	31.9	41.8	45.1	-3.3	-2.0	-1.3
dL <sub>t3,54,11</sub> :	140.6	3.13	32.7	42.5	46.0	-3.5	-2.0	-1.5
dLt3,54,11: dLt3,55,11:	140.6	3.13	31.8	42.5	45.1	-2.6	-2.0	-0.5
dL <sub>t3,56,11</sub> :	140.6	3.13	30.3	40.4	43.6	-3.2	-2.0	-0.5
dLt3,56,11. dLt3,57,11:	137.5	3.13	29.8	40.1	43.1	-3.0	-2.0	-1.0
dLt3,57,11: dLt3,58,11:	140.6	3.13	31.2	38.4	44.5	-6.0	-2.0	-4.0
dLt3,58,11. dLt3,59,11:	143.8	3.13	31.9	40.8	45.2	-4.4	-2.0	-2.3
dL <sub>t3,59,11</sub> : dL <sub>t3,67,11</sub> :	143.8	3.13	30.7	45.5	44.0	1.5	-2.0	3.6
dLt3,67,11. dLt3,68,11:	140.6	3.13	29.4	42.6	42.7	-0.1	-2.0	1.9
dL <sub>t3,68,11</sub> :	140.6	3.13	29.9	38.5	43.2	-4.7	-2.0	-2.7
dL <sub>t3,77,11</sub> : dL <sub>t3,83,11</sub> :	140.6	3.13	31.9	43.8	45.2	-1.4	-2.0	0.6
dL <sub>t3,83,11</sub> : dL <sub>t3,85,11</sub> :	143.8	3.13	30.4	44.3	43.7	0.6	-2.0	2.6
dL <sub>t3,85,11</sub> : dL <sub>t3,86,11</sub> :	143.8	3.13	30.0	45.2	43.2	1.9	-2.0	3.9
dL <sub>t3,86,11</sub> :	137.5	3.13	30.1	41.7	43.4	-1.6	-2.0	0.4
dL <sub>t3,90,11</sub> :	140.6	3.13	31.2	42.0	44.5	-2.5	-2.0	-0.4
dL <sub>t3,90,11</sub> : dL <sub>t3,91,11</sub> :	140.6	3.13	32.9	40.0	46.2	-6.1	-2.0	-4.1
dL <sub>13,91,11</sub> . dL <sub>13,93,11</sub> :	140.6	3.13	31.3	38.9	44.6	-5.7	-2.0	-3.6
dLt3,93,11. dLt3,94,11:	140.6	3.13	31.4	40.9	44.7	-3.8	-2.0	-1.8
dL <sub>t3,95,11</sub> :	140.6	3.13	32.0	39.0	45.3	-6.3	-2.0	-4.2
dL <sub>t3,95,11</sub> :	140.6	3.13	32.7	39.0	46.0	-7.0	-2.0	-5.0
dL <sub>t3,98,11</sub> . dL <sub>t3,102,11</sub> :	140.6	3.13	31.9	40.7	45.2	-4.5	-2.0	-2.5
dL <sub>t3,102,11</sub> : dL <sub>t3,103,11</sub> :	140.6	3.13	31.0	38.4	44.3	-5.8	-2.0	-3.8
dL <sub>t3,103,11</sub> : dL <sub>t3,104,11</sub> :	137.5	3.13	31.7	41.0	45.0	-3.9	-2.0	-1.9
dL <sub>t3,104,11</sub> : dL <sub>t3,106,11</sub> :	140.6	3.13	32.1	41.5	45.4	-3.9	-2.0	-1.9
dL <sub>t3,106,11</sub> :	175.0	3.13	31.0	39.6	44.3	-4.7	-2.0	-2.7
dL <sub>t4,4,11</sub> :	175.0	3.13	30.1	40.0	43.4	-3.4	-2.0	-1.4
dL <sub>t4,4,11</sub> : dL <sub>t4,8,11</sub> :	175.0	3.13	29.4	41.8	42.7	-1.0	-2.0	1.1
dL <sub>t4,8,11</sub> :	175.0	3.13	30.9	39.5	44.1	-4.6	-2.0	-2.6
dL <sub>t4,16,11</sub> :	175.0	3.13	30.5	41.6	43.8	-2.1	-2.0	-0.1
dL <sub>t4,18,11</sub> :	175.0	3.13	31.3	39.7	44.6	-4.9	-2.0	-2.9
dL <sub>t4,21,11</sub> :	175.0	3.13	31.6	37.9	44.9	-7.0	-2.0	-5.0
dL <sub>t4,27,11</sub> :	175.0	3.13	30.2	41.0	43.5	-2.5	-2.0	-0.4
dL <sub>t4,31,11</sub> : dL <sub>t4,33,11</sub> :	175.0	3.13	30.0	38.6	43.3	-4.7	-2.0	-2.7
dLt4,33,11. dLt4,34,11:	175.0	3.13	31.3	37.9	44.6	-6.7	-2.0	-4.7
dL <sub>t4,34,11</sub> : dL <sub>t4,35,11</sub> :	175.0	3.13	30.1	42.4	43.4	-1.0	-2.0	1.1
dLt4,35,11. dLt4,37,11:	175.0	3.13	30.7	43.2	44.0	-0.8	-2.0	1.3
dLt4,37,11. dLt4,38,11:	175.0	3.13	30.4	39.3	43.7	-4.4	-2.0	-2.3
dLt4,38,11. dLt4,39,11:	175.0	3.13	31.0	41.1	44.3	-3.2	-2.0	-2.3
dL <sub>t4,39,11</sub> : dL <sub>t4,40,11</sub> :	175.0	3.13	32.0	41.7	45.3	-3.6	-2.0	-1.6
dL <sub>t4,40,11</sub> . dL <sub>t4,41,11</sub> :	175.0	3.13	31.3	39.8	44.6	-4.8	-2.0	-2.8
	175.0	J. 13	٥١.٥	J9.0	<del>44</del> .0	-4.0	-2.0	-2.0







dL <sub>t4,42,11</sub> :	175.0	3.13	31.0	39.2	44.3	-5.1	-2.0	-3.1
dL <sub>t4,45,11</sub> :	175.0	3.13	31.5	39.0	44.8	-5.8	-2.0	-3.8
dL <sub>t4,52,11</sub> :	175.0	3.13	31.2	38.0	44.5	-6.5	-2.0	-4.5
dL <sub>t4,53,11</sub> :	175.0	3.13	30.3	39.4	43.6	-4.3	-2.0	-2.2
dL <sub>t4,60,11</sub> :	175.0	3.13	30.0	40.5	43.3	-2.7	-2.0	-0.7
dL <sub>t4,61,11</sub> :	175.0	3.13	30.8	37.6	44.1	-6.6	-2.0	-4.5
dL <sub>t4,62,11</sub> :	175.0	3.13	32.2	39.1	45.5	-6.4	-2.0	-4.4
dL <sub>t4,63,11</sub> :	175.0	3.13	32.7	39.8	46.0	-6.3	-2.0	-4.2
dL <sub>t4,64,11</sub> :	175.0	3.13	31.1	41.2	44.4	-3.2	-2.0	-1.2
dL <sub>t4,65,11</sub> :	175.0	3.13	30.6	39.0	43.9	-4.9	-2.0	-2.9
dL <sub>t4,69,11</sub> :	175.0	3.13	31.0	43.0	44.3	-1.3	-2.0	0.7
dL <sub>t4,70,11</sub> :	175.0	3.13	31.3	38.6	44.6	-6.0	-2.0	-3.9
dL <sub>t4,71,11</sub> :	175.0	3.13	31.0	37.5	44.3	-6.8	-2.0	-4.8
dL <sub>t4,74,11</sub> :	175.0	3.13	30.9	39.4	44.2	-4.8	-2.0	-2.8
dL <sub>t4,75,11</sub> :	175.0	3.13	31.6	39.0	44.9	-5.9	-2.0	-3.8
dL <sub>t4,76,11</sub> :	175.0	3.13	30.8	41.6	44.1	-2.6	-2.0	-0.5
dL <sub>t4,78,11</sub> :	175.0	3.13	31.1	38.7	44.4	-5.7	-2.0	-3.7
dL <sub>t4,79,11</sub> :	175.0	3.13	31.6	37.9	44.9	-7.1	-2.0	-5.0
dL <sub>t4,84,11</sub> :	175.0	3.13	30.3	41.4	43.6	-2.2	-2.0	-0.2
dL <sub>t4,88,11</sub> :	175.0	3.13	30.8	39.5	44.1	-4.5	-2.0	-2.5
dL <sub>t4,89,11</sub> :	175.0	3.13	31.6	37.8	44.9	-7.0	-2.0	-5.0
dL <sub>t4,97,11</sub> :	175.0	3.13	32.6	39.3	45.9	-6.5	-2.0	-4.5
dL <sub>t4,100,11</sub> :	175.0	3.13	32.0	38.1	45.3	-7.1	-2.0	-5.1
dL <sub>t4,101,11</sub> :	175.0	3.13	31.3	41.0	44.6	-3.6	-2.0	-1.6
dL <sub>t5,85,11</sub> :	231.3	3.13	31.0	38.0	44.3	-6.3	-2.1	-4.3
dL <sub>t6,12,11</sub> :	309.4	3.13	29.1	41.4	42.6	-1.2	-2.1	0.9
dL <sub>t6,16,11</sub> :	309.4	3.13	28.7	36.9	42.2	-5.4	-2.1	-3.3
dL <sub>t6,17,11</sub> :	309.4	3.13	29.2	40.2	42.8	-2.6	-2.1	-0.5
dL <sub>t6,20,11</sub> :	309.4	3.13	30.0	36.5	43.5	-7.1	-2.1	-5.0
dL <sub>t6,51,11</sub> :	325.0	3.13	30.3	36.9	43.9	-7.0	-2.1	-4.8
dL <sub>t6,75,11</sub> :	325.0	3.13	29.2	35.7	42.8	-7.1	-2.1	-4.9
dL <sub>t6,77,11</sub> :	325.0	3.13	30.1	37.4	43.6	-6.2	-2.1	-4.1
dL <sub>t6,78,11</sub> :	325.0	3.13	29.9	36.5	43.5	-7.0	-2.1	-4.9
dL <sub>t6,102,11</sub> :	325.0	3.13	30.3	38.2	43.9	-5.7	-2.1	-3.5

BIN 11: Tonal co	mponents	determined	- Compact	t	•		•	•		•		
Spectrum	fτ	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]
1	71.9	-4.3			140.6	-2.0						
2	71.9	-0.2										
3	68.8	-5.6					175.0	-4.7				
4	71.9	-6.9					175.0	-3.4				
5					140.6	-5.5						
6	71.9	-4.8			140.6	-4.0						
7	68.8	-4.6			140.6	-1.9						
8	68.8	-2.3					175.0	-1.0				
9	84.4	-6.9	84.4	-6.9	140.6	-6.3						
10												
11					140.6	-3.6						
12	71.9	-3.4			143.8	-1.9					309.4	-1.2
13					140.6	-5.9						
14	68.8	-7.0										
15	68.8	-5.9										
16							175.0	-4.6			309.4	-5.4
17											309.4	-2.6
18	68.8	-5.9					175.0	-2.1				
19	68.8	-3.6			140.6	-7.1						
20	71.9	-3.5									309.4	-7.1
21							175.0	-4.9				
22	68.8	-5.8			140.6	-4.4						
23	71.9	-2.0			143.8	1.1						
24	71.9	-2.7			140.6	-2.7						
25	71.9	-2.4			143.8	-4.5						
26	71.9	-5.7			140.6	-5.0						
27	71.9	-4.1					175.0	-7.0				
28					137.5	0.6						
29	68.8	-5.3			137.5	-4.4						
30	71.9	-2.6			143.8	-7.0						
31	68.8	-4.5					175.0	-2.5				
32	71.9	-5.7			140.6	-7.0						
33			100.0	-0.4			175.0	-4.7				
34							175.0	-6.7				
35							175.0	-1.0				
36	71.9	-5.5			140.6	-5.0						





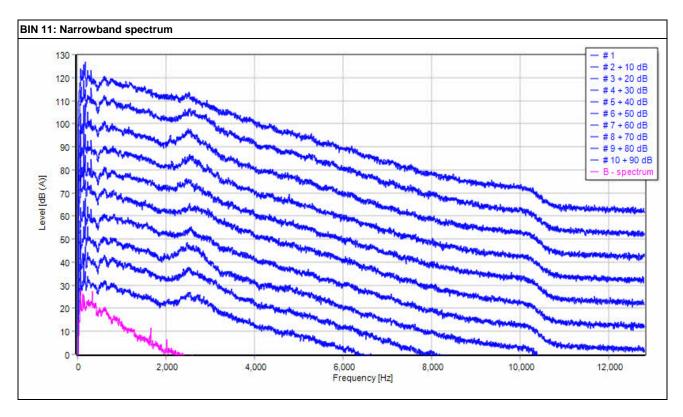


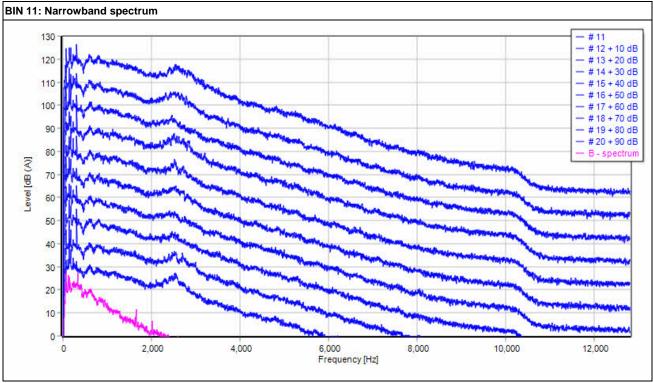
	00.0	4.4					475.0	0.0	1	1	1	1
37	68.8	-4.1					175.0	-0.8				
38	68.8	-4.3					175.0	-4.4				
39	68.8	-5.9					175.0	-3.2				
40							175.0	-3.6				
41							175.0	-4.8				
42	71.9	-6.2					175.0	-5.1				
43	68.8	-5.0			137.5	-5.6						
44	68.8	-7.1										
45	71.9	-5.4					175.0	-5.8				
46	68.8	-4.5										
47					140.6	-4.4						
48	71.9	-6.2			143.8	-6.4						
49	71.9	-3.5										
50	68.8	-3.9			140.6	-5.0						
51	68.8	-6.0			137.5	-3.3					325.0	-7.0
52	75.0	-4.2					175.0	-6.5				
53	68.8	-0.8					175.0	-4.3				
54	71.9	-7.2			140.6	-3.5						
55					140.6	-2.6						
56	71.9	-5.2			140.6	-3.2						
57	68.8	-4.9			137.5	-3.0						
58	68.8	-6.4			140.6	-6.0						
59	71.9	-4.6			143.8	-4.4	475.0					
60	68.8	-2.9					175.0	-2.7				
61	68.8	-5.6					175.0	-6.6				
62	68.8	-4.7					175.0	-6.4				
63							175.0	-6.3				
64	68.8	-3.6					175.0	-3.2				
65	68.8	-3.6					175.0	-4.9				
66												
67	71.9	-4.4			143.8	1.5						
68	71.9	-3.5			140.6	-0.1						
69	68.8	-3.4				-0.1	175.0	-1.3				
70	71.9	-5.1					175.0	-6.0				
71			106.3	-0.5			175.0	-6.8				
72			93.8	4.1								
73												
74	71.9	-6.1					175.0	-4.8				
75	68.8	-6.8					175.0	-5.9			325.0	-7.1
76	68.8	-4.1					175.0	-2.6				
77	68.8	-4.4			140.6	-4.7					325.0	-6.2
78	71.9	-7.1					175.0	-5.7			325.0	-7.0
79	71.9	-6.6					175.0	-7.1				
80	71.9	-4.2										
81	71.9	-7.0										
82												
83					140.6	-1.4						
84	71.9	-3.4					175.0	-2.2				
85	71.9	-4.1			143.8	0.6			231.3	-6.3		
86	71.9	-4.3			143.8	1.9						
87	68.8	-2.0			137.5	-1.6						
88	68.8	-6.7					175.0	-4.5				
89	68.8	-6.2					175.0	-7.0				
90					140.6	-2.5						
91	71.9	-7.2			140.6	-6.1						
92	75.0	-5.4										
93	68.8	-5.9			140.6	-5.7						
94					140.6	-3.8						
95					140.6	-6.3						
					140.0							
96							 175 O	 6 E				
97					440.0		175.0	-6.5				
98	74.0				140.6	-7.0						
99	71.9	-6.7										
100	68.8	-4.9					175.0	-7.1				
101	68.8	-5.4					175.0	-3.6				
102					140.6	-4.5					325.0	-5.7
103	71.9	-6.9			140.6	-5.8						
104	68.8	-6.8			137.5	-3.9						
105												
f <sub>t</sub> [Hz]   dL <sub>k</sub> [dB]	71.0	-5.8	99.9	-10.6	140.7	-6.1	175.0	-7.6	231.3	-13.3	310.1	-11.7
	, 1.0	-2.0	55.5	-2.0	170.1	-2.0	170.0	-2.0	201.0	-13.3	010.1	-2.1
						-2.0 -4.1						
dL <sub>a,k</sub> [dB]		-3.8		-8.6				-5.6		-11.2		-9.6
K <sub>TN</sub> [dB]		0		0		0		0	<u> </u>	0		0







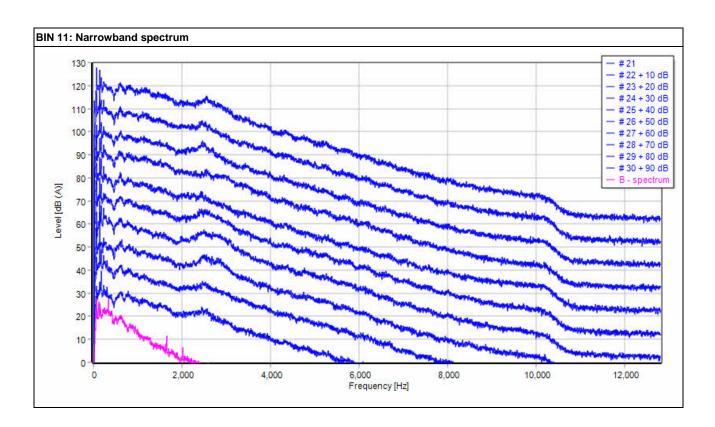
















DIN 11.5. TOTIAL	components deter				•			
	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	La	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
dL <sub>t1,1,11.5</sub> :	71.9	3.13	25.6	36.0	38.9	-2.9	-2.0	-0.9
dL <sub>t1,2,11.5</sub> :	75.0	3.13	26.9	39.0	40.2	-1.3	-2.0	0.7
dL <sub>t1,3,11.5</sub> :	71.9	3.13	27.6	35.5	40.9	-5.4	-2.0	-3.4
dL <sub>t1,4,11.5</sub> :	75.0	3.13	27.1	36.8	40.4	-3.7	-2.0	-1.7
dL <sub>t1,5,11.5</sub> :	71.9	3.13	26.3	35.7	39.6	-3.9	-2.0	-1.9
dL <sub>t1,6,11.5</sub> :	84.4	3.13	28.8	35.4	42.1	-6.7	-2.0	-4.7
dL <sub>t1,8,11.5</sub> :	71.9	3.13	29.2	36.3	42.4	-6.2	-2.0	-4.2
dL <sub>t1,10,11.5</sub> :	71.9	3.13	26.6	34.9	39.8	-4.9	-2.0	-2.9
dL <sub>t1,11,11.5</sub> :	71.9	3.13	28.7	37.6	42.0	-4.3	-2.0	-2.3
dL <sub>t1,15,11.5</sub> :	75.0	3.13	28.3	36.5	41.6	-5.1	-2.0	-3.1
dL <sub>t1,17,11.5</sub> :	71.9	3.13	28.2	34.4	41.4	-7.0	-2.0	-5.0
dL <sub>t1,20,11.5</sub> :	75.0	3.13	28.0	36.6	41.3	-4.7	-2.0	-2.7
dL <sub>t1,21,11.5</sub> :	71.9	3.13	29.0	36.3	42.3	-6.0	-2.0	-4.0
dL <sub>t1,22,11.5</sub> :	71.9	3.13	27.8	35.3	41.1	-5.7	-2.0	-3.7
dL <sub>t1,23,11.5</sub> : dL <sub>t1,24,11.5</sub> :	71.9 71.9	3.13 3.13	26.6 28.0	37.4 37.5	39.9 41.2	-2.5 -3.8	-2.0 -2.0	-0.5 -1.8
	71.9	3.13	26.4	38.5	39.7	-3.6 -1.1	-2.0	0.9
dL <sub>t1,26,11.5</sub> :	71.9	3.13	26.4	36.5	39.7	-3.2	-2.0	-1.2
dL <sub>t1,27,11.5</sub> : dL <sub>t1,28,11.5</sub> :	68.8	3.13	27.3	36.4	40.5	-3.2 -4.0	-2.0	-1.2
dL <sub>t1,28,11.5</sub> : dL <sub>t1,29,11.5</sub> :	75.0	3.13	29.1	35.7	42.4	-4.0 -6.8	-2.0	-2.0 -4.8
dL <sub>t1,29,11.5</sub> . dL <sub>t1,30,11.5</sub> :	75.0	3.13	27.2	36.4	42.4	-0.8	-2.0	-4.0 -2.1
dL <sub>t1,30,11.5</sub> . dL <sub>t1,31,11.5</sub> :	71.9	3.13	28.4	35.7	41.7	-6.0	-2.0	-2.1 -4.0
dL <sub>t1,35,11.5</sub> :	71.9	3.13	28.1	36.0	41.4	-5.4	-2.0	-3.4
dL <sub>t1,36,11.5</sub> :	71.9	3.13	27.8	34.4	41.1	-6.8	-2.0	-4.8
dL <sub>t1,36,11.5</sub> : dL <sub>t1,37,11.5</sub> :	75.0	3.13	29.8	37.4	43.1	-5.7	-2.0	-3.7
dL <sub>t1,39,11.5</sub> :	71.9	3.13	28.4	36.4	41.7	-5.3	-2.0	-3.3
dL <sub>t1,42,11.5</sub> :	68.8	3.13	25.9	34.8	39.0	-4.2	-2.0	-2.2
dL <sub>t1,44,11.5</sub> :	87.5	3.13	31.1	37.7	44.4	-6.6	-2.0	-4.6
dL <sub>t1,45,11.5</sub> :	84.4	3.13	27.0	40.1	40.2	-0.1	-2.0	1.9
dL <sub>t1,46,11.5</sub> :	71.9	3.13	28.6	37.1	41.9	-4.8	-2.0	-2.8
dL <sub>t1,48,11.5</sub> :	71.9	3.13	29.3	35.8	42.6	-6.8	-2.0	-4.8
dL <sub>t1,49,11.5</sub> :	75.0	3.13	27.3	36.0	40.6	-4.7	-2.0	-2.6
dL <sub>t1,50,11.5</sub> :	71.9	3.13	25.8	32.4	39.1	-6.7	-2.0	-4.7
dL <sub>t1,51,11.5</sub> :	71.9	3.13	30.2	36.3	43.5	-7.2	-2.0	-5.2
dL <sub>t1,53,11.5</sub> :	75.0	3.13	29.1	37.3	42.4	-5.1	-2.0	-3.1
dL <sub>t1,55,11.5</sub> :	71.9	3.13	28.5	36.3	41.8	-5.5	-2.0	-3.5
dL <sub>t2,1,11.5</sub> :	143.8	3.13	28.9	39.0	42.2	-3.2	-2.0	-1.1
dL <sub>t2,3,11.5</sub> :	143.8	3.13	31.6	44.2	44.9	-0.7	-2.0	1.3
dL <sub>t2,6,11.5</sub> :	140.6	3.13	30.5	39.0	43.8	-4.7	-2.0	-2.7
dL <sub>12,8,11.5</sub> :	143.8	3.13	32.1	39.7	45.4	-5.7	-2.0	-3.7
dL <sub>t2,9,11.5</sub> :	143.8	3.13	32.0	42.3	45.3	-3.0	-2.0	-0.9
dL <sub>12,11,11.5</sub> :	143.8	3.13	31.2	40.9	44.5	-3.7	-2.0	-1.6
dL <sub>t2,12,11.5</sub> :	140.6	3.13	30.3	38.9	43.6	-4.7	-2.0	-2.7
dL <sub>12,13,11.5</sub> :	140.6	3.13	30.5	42.1	43.8	-1.6	-2.0	0.4
dL <sub>12,14,11.5</sub> :	143.8	3.13	30.6	43.1	43.9	-0.8	-2.0	1.2
dL <sub>12,23,11.5</sub> :	143.8	3.13	30.2	40.3	43.5	-3.3	-2.0	-1.2
dL <sub>t2,27,11.5</sub> :	140.6	3.13	31.0	44.0	44.3	-0.3	-2.0	1.7
dL <sub>t2,32,11.5</sub> :	140.6	3.13	31.3	42.2	44.6	-2.4	-2.0	-0.4
dL <sub>t2,35,11.5</sub> :	143.8	3.13	30.9	41.6	44.2	-2.6	-2.0	-0.6
dL <sub>t2,36,11.5</sub> :	140.6	3.13	30.9	39.0	44.2	-5.2	-2.0	-3.1
dL <sub>t2,39,11.5</sub> :	143.8	3.13	31.2	41.5	44.5	-3.0	-2.0	-1.0
dL <sub>t2,45,11.5</sub> :	140.6	3.13	29.6	38.7	42.9	-4.2	-2.0	-2.2
dL <sub>12,55,11.5</sub> :	143.8	3.13	31.6	43.1	44.9	-1.7	-2.0	0.3
dL <sub>t3,4,11.5</sub> :	175.0	3.13	30.9	37.8	44.2	-6.4 -4.7	-2.0	-4.3
dL <sub>t3,5,11.5</sub> :	175.0 175.0	3.13 3.13	29.9 30.4	38.5 36.5	43.2 43.7	-4.7 -7.3	-2.0 -2.0	-2.6 -5.2
dL <sub>t3,10,11.5</sub> :	175.0	3.13	30.4	36.5	43.7 45.2	-7.3 -5.3	-2.0 -2.0	-3.3
dL <sub>t3,16,11.5</sub> : dL <sub>t3,17,11.5</sub> :	175.0	3.13	31.9	38.6	45.2 45.2	-5.3 -6.6	-2.0	-3.3 -4.6
dL <sub>t3,17,11.5</sub> . dL <sub>t3,18,11.5</sub> :	175.0	3.13	32.4	39.0	45.7	-6.7	-2.0	-4.7
dL <sub>t3,18,11.5</sub> : dL <sub>t3,20,11.5</sub> :	175.0	3.13	30.9	37.6	44.2	-6.7	-2.0	-4.6
dL <sub>t3,20,11.5</sub> : dL <sub>t3,22,11.5</sub> :	175.0	3.13	31.7	40.2	45.0	-4.9	-2.0	-2.8
dL <sub>t3,22,11.5</sub> : dL <sub>t3,24,11.5</sub> :	175.0	3.13	31.7	38.6	45.0	-6.4	-2.0	-4.3
dL <sub>t3,24,11.5</sub> : dL <sub>t3,25,11.5</sub> :	175.0	3.13	32.3	39.4	45.5	-6.2	-2.0	-4.1
dL <sub>t3,26,11.5</sub> :	175.0	3.13	30.5	41.6	43.8	-2.2	-2.0	-0.2
dL <sub>t3,28,11.5</sub> :	175.0	3.13	31.4	38.4	44.7	-6.3	-2.0	-4.3
dL <sub>t3,29,11.5</sub> :	175.0	3.13	31.9	40.5	45.2	-4.7	-2.0	-2.7
	175.0	3.13	32.3	39.6	45.6	-6.1	-2.0	-4.0
	170.0							-1.8
dL <sub>t3,37,11.5</sub> :	175 N	3 13	31.5	An a	44 /		-/11	
dL <sub>t3,40,11.5</sub> : dL <sub>t3,40,11.5</sub> :	175.0 175.0	3.13 3.13	31.5 31.8	40.9 37.9	44.7 45.1	-3.8 -7.1	-2.0 -2.0	-1.6 -5.1







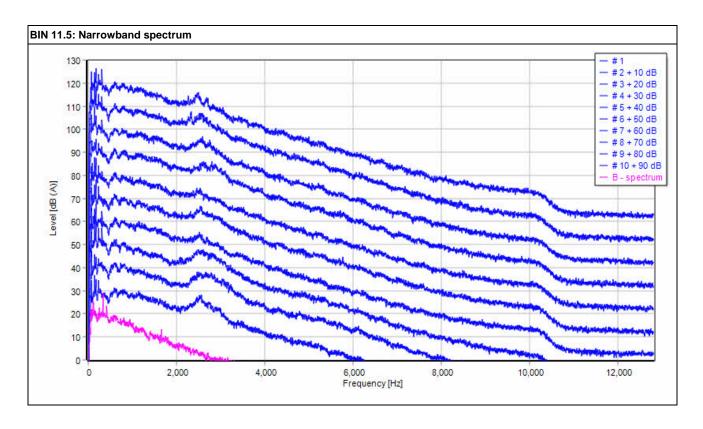
dL <sub>t3,50,11.5</sub> :	175.0	3.13	30.0	38.1	43.3	-5.2	-2.0	-3.2
dL <sub>t4,10,11.5</sub> :	309.4	3.13	29.1	37.2	42.7	-5.5	-2.1	-3.4
dL <sub>t4,13,11.5</sub> :	309.4	3.13	29.5	37.5	43.0	-5.5	-2.1	-3.4
dL <sub>t4,42,11.5</sub> :	325.0	3.13	29.1	36.4	42.7	-6.3	-2.1	-4.1

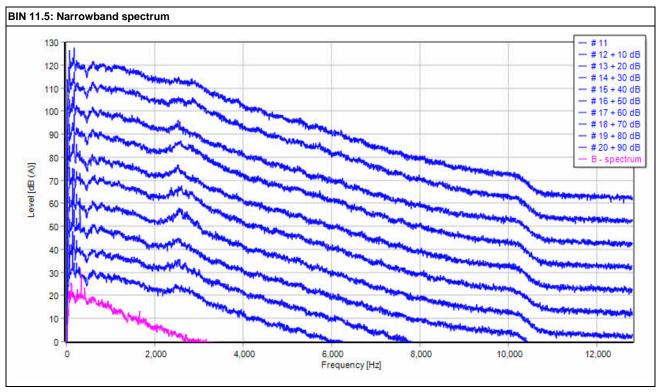
BIN 11.5: Tonal c	omponents	determine	ed - Compa	ct							
Spectrum	f <sub>T</sub>	$dL_{tn,j,k}$	f <sub>T</sub>	$dL_{tn,j,k}$	f <sub>T</sub>	$dL_{tn,j,k}$	f <sub>T</sub>	$dL_{tn,j,k}$			
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]			
1	71.9	-2.9	143.8	-3.2		[,]					
2	75.0	-1.3									
3	71.9	-5.4	143.8	-0.7							
4	75.0	-3.7			175.0	-6.4					
5	71.9	-3.9			175.0	-4.7					
6	84.4	-6.7	140.6	-4.7		-4.7					
7		-0.7		-4.7							
8	71.9	-6.2	143.8	-5.7							
9		-0.2	143.8	-3.0							
10	71.9	-4.9		-3.0	175.0	-7.3	309.4	-5.5			
11	71.9	-4.3	143.8	-3.7							
12	71.9	-4.3	140.6	-4.7							
13											
			140.6	-1.6			309.4	-5.5			
14	75.0		143.8	-0.8							
15	75.0	-5.1			 475.0	 F 2					
16	74.0				175.0	-5.3					
17	71.9	-7.0			175.0	-6.6					
18					175.0	-6.7					
19											
20	75.0	-4.7			175.0	-6.7					
21	71.9	-6.0									
22	71.9	-5.7			175.0	-4.9					
23	71.9	-2.5	143.8	-3.3							
24	71.9	-3.8			175.0	-6.4					
25					175.0	-6.2					
26	71.9	-1.1			175.0	-2.2					
27	71.9	-3.2	140.6	-0.3							
28	68.8	-4.0			175.0	-6.3					
29	75.0	-6.8			175.0	-4.7					
30	75.0	-4.1									
31	71.9	-6.0									
32			140.6	-2.4							
33											
34											
35	71.9	-5.4	143.8	-2.6							
36	71.9	-6.8	140.6	-5.2							
37	75.0	-5.7			175.0	-6.1					
38											
39	71.9	-5.3	143.8	-3.0							
40					175.0	-3.8					
41											
42	68.8	-4.2					325.0	-6.3			
43											
44	87.5	-6.6								<b> </b>	
45	84.4	-0.0	140.6	-4.2						<b> </b>	
46	71.9	-4.8		-4.2	175.0	-7.1					
47						-7.1					
48	71.9	-6.8									
49	75.0	-4.7			175.0	-4.2					
50	71.9	-4.7			175.0	-5.2					
51	71.9	-7.2				-5.2					
52	71.9	-1.2								-	
									-		
53	75.0	-5.1									
54	71.0	 E E	442.0	4.7							
55	71.9	-5.5	143.8	-1.7							
56	70.0		440.4	7.4	475.0			40.5			
ft[Hz]   dLk[dB]	73.0	-6.1	143.4	-7.1	175.0	-9.1	309.7	-12.5			
L₃[dB]		-2.0		-2.0		-2.0		-2.1			
dL <sub>a,k</sub> [dB]		-4.1		-5.1		-7.0		-10.4			
K <sub>TN</sub> [dB]		0		0		0		0			







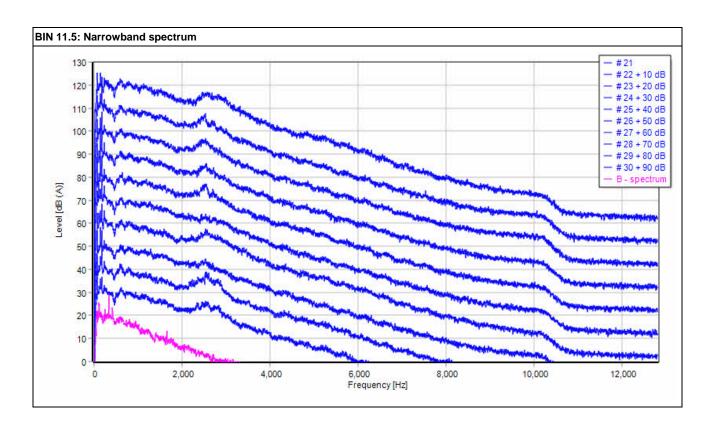
















DIN 12. TOTIAL	components determ							
	Frequency	delta f	Lpn,avg,j,k	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	La	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
dL <sub>t1,1,12</sub> :	175.0	3.13	31.3	37.5	44.6	-7.0	-2.0	-5.0
dL <sub>t1,2,12</sub> :	175.0	3.13	31.9	38.7	45.2	-6.5	-2.0	-4.5
dL <sub>t1,4,12</sub> :	175.0	3.13	30.0	37.6	43.3	-5.7	-2.0	-3.7
dL <sub>t1,12,12</sub> :	175.0	3.13	30.0	36.6	43.3	-6.6	-2.0	-4.6
dL <sub>t1,13,12</sub> :	175.0	3.13	30.9	39.2	44.2	-5.0	-2.0	-3.0
dL <sub>t1,17,12</sub> :	175.0	3.13	32.2	38.5	45.5	-7.1	-2.0	-5.0
dL <sub>t1,18,12</sub> :	175.0	3.13	31.4	40.4	44.7	-4.3	-2.0	-2.3
dL <sub>t1,19,12</sub> :	175.0	3.13	30.9	41.4	44.1	-2.7	-2.0	-0.7
dL <sub>t1,20,12</sub> :	175.0	3.13	31.6	38.1	44.9	-6.8	-2.0	-4.8
dL <sub>t1,21,12</sub> :	175.0	3.13	31.2	39.7	44.5	-4.8	-2.0	-2.8
dL <sub>t1,22,12</sub> :	175.0	3.13	31.5	42.2	44.8	-2.6	-2.0	-0.5
dL <sub>t1,27,12</sub> :	175.0	3.13	30.9	37.7	44.2	-6.4	-2.0	-4.4
dL <sub>t1,29,12</sub> :	175.0	3.13	31.1	37.4	44.4	-7.0	-2.0	-5.0
dL <sub>t1,30,12</sub> :	175.0	3.13	30.8	38.4	44.0	-5.6	-2.0	-3.6
dL <sub>t1,31,12</sub> :	175.0	3.13	30.5	36.8	43.8	-7.0	-2.0	-5.0
dL <sub>t1,33,12</sub> :	175.0	3.13	32.2	41.1	45.5	-4.4	-2.0	-2.4
dL <sub>t1,34,12</sub> :	175.0	3.13	30.5	41.4	43.8	-2.3	-2.0	-0.3
dL <sub>t2,3,12</sub> :	140.6	3.13	30.0	40.3	43.3	-3.0	-2.0	-1.0
dL <sub>t2,9,12</sub> :	140.6	3.13	31.1	37.2	44.4	-7.1	-2.0	-5.1
dL <sub>t2,14,12</sub> :	140.6	3.13	31.6	38.5	44.9	-6.4	-2.0	-4.3
dL <sub>t2,23,12</sub> :	143.8	3.13	31.5	41.3	44.8	-3.5	-2.0	-1.5
dL <sub>t2,24,12</sub> :	143.8	3.13	30.8	42.0	44.1	-2.1	-2.0	-0.1
dL <sub>t2,26,12</sub> :	143.8	3.13	29.4	42.1	42.7	-0.6	-2.0	1.4
dL <sub>t2,28,12</sub> :	140.6	3.13	31.7	41.9	45.0	-3.1	-2.0	-1.1
dL <sub>t2,32,12</sub> :	143.8	3.13	32.7	38.8	46.0	-7.2	-2.0	-5.2
dL <sub>t2,35,12</sub> :	143.8	3.13	30.1	44.3	43.4	0.8	-2.0	2.9
dL <sub>t3,1,12</sub> :	175.0	3.13	31.3	37.5	44.6	-7.0	-2.0	-5.0
dL <sub>t3,2,12</sub> :	175.0	3.13	31.9	38.7	45.2	-6.5	-2.0	-4.5
dL <sub>t3,4,12</sub> :	175.0	3.13	30.0	37.6	43.3	-5.7	-2.0	-3.7
dL <sub>t3,12,12</sub> :	175.0	3.13	30.0	36.6	43.3	-6.6	-2.0	-4.6
dL <sub>t3.13.12</sub> :	175.0	3.13	30.9	39.2	44.2	-5.0	-2.0	-3.0
dL <sub>t3,17,12</sub> :	175.0	3.13	32.2	38.5	45.5	-7.1	-2.0	-5.0
dL <sub>t3,18,12</sub> :	175.0	3.13	31.4	40.4	44.7	-4.3	-2.0	-2.3
dL <sub>t3,19,12</sub> :	175.0	3.13	30.9	41.4	44.1	-2.7	-2.0	-0.7
dL <sub>t3,20,12</sub> :	175.0	3.13	31.6	38.1	44.9	-6.8	-2.0	-4.8
dL <sub>t3,21,12</sub> :	175.0	3.13	31.2	39.7	44.5	-4.8	-2.0	-2.8
dL <sub>t3,22,12</sub> :	175.0	3.13	31.5	42.2	44.8	-2.6	-2.0	-0.5
dL <sub>t3,27,12</sub> :	175.0	3.13	30.9	37.7	44.2	-6.4	-2.0	-4.4
dL <sub>t3,29,12</sub> :	175.0	3.13	31.1	37.4	44.4	-7.0	-2.0	-5.0
dL <sub>t3,30,12</sub> :	175.0	3.13	30.8	38.4	44.0	-5.6	-2.0	-3.6
dL <sub>t3,31,12</sub> :	175.0	3.13	30.5	36.8	43.8	-7.0	-2.0	-5.0
dL <sub>t3,33,12</sub> :	175.0	3.13	32.2	41.1	45.5	-4.4	-2.0	-2.4
dL <sub>13,34,12</sub> :	175.0	3.13	30.5	41.4	43.8	-2.3	-2.0	-0.3
dL <sub>t4,4,12</sub> :	309.4	3.13	29.4	35.9	42.9	-7.0	-2.1	-4.9
dL <sub>t4,24,12</sub> :	325.0	3.13	29.5	39.4	43.0	-3.7	-2.1	-1.5
	325.0	3.13	29.6	35.8	43.1	-7.3	-2.1	-5.2

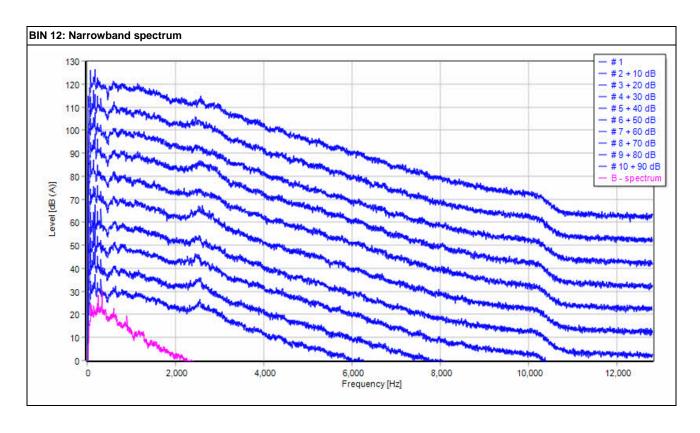
BIN 12: Tonal co	BIN 12: Tonal components determined - Compact												
Spectrum	f⊤	$dL_{tn,j,k}$	f <sub>T</sub>	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$					
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]					
1					175.0	-7.0							
2					175.0	-6.5							
3	71.9	-6.9	140.6	-3.0									
4	71.9	-2.6			175.0	-5.7	309.4	-7.0					
5													
6	71.9	-7.0											
7													
8													
9	71.9	-6.3	140.6	-7.1									
10	71.9	-4.8											
11	75.0	-4.8											
12	71.9	-4.2			175.0	-6.6							
13	71.9	-2.0			175.0	-5.0							
14	71.9	-7.0	140.6	-6.4									
15													
16													
17	75.0	-6.5			175.0	-7.1							
18	71.9	-4.6			175.0	-4.3							
19	71.9	-5.6			175.0	-2.7							





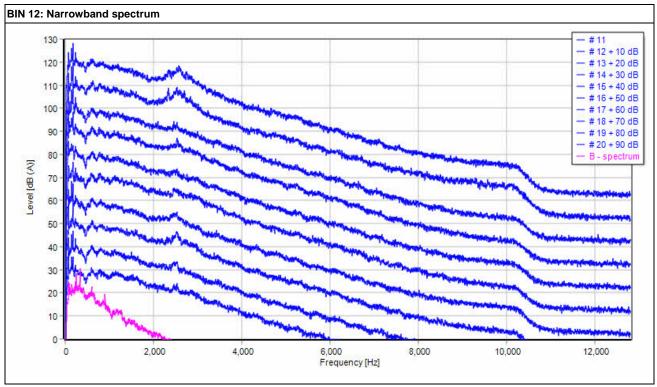


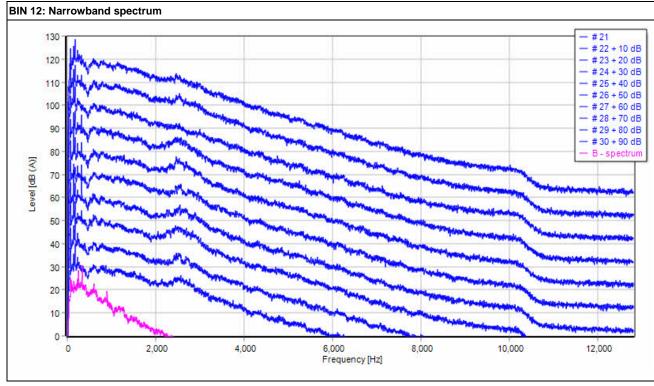
20					175.0	-6.8				
21	71.9	-3.4			175.0	-4.8				
22	71.9	-3.7			175.0	-2.6				
23	71.9	-5.6	143.8	-3.5						
24	71.9	-3.3	143.8	-2.1			325.0	-3.7		
25	75.0	-4.6								
26	71.9	-4.6	143.8	-0.6						
27	71.9	-6.3			175.0	-6.4	325.0	-7.3		
28			140.6	-3.1						
29	71.9	-1.9			175.0	-7.0				
30	71.9	-4.1			175.0	-5.6				
31	71.9	-5.0			175.0	-7.0				
32	71.9	-5.3	143.8	-7.2						
33	71.9	-5.0			175.0	-4.4				
34	71.9	-4.6			175.0	-2.3				
35	71.9	-3.3	143.8	0.8						
36										
$f_t[Hz] \mid dL_k[dB]$	72.1	-5.7	141.1	-7.8	175.0	-7.7	310.3	-12.0		
L <sub>a</sub> [dB]		-2.0		-2.0		-2.0		-2.1		
$dL_{a,k}[dB]$		-3.7		-5.8		-5.7		-9.9		
K <sub>TN</sub> [dB]		0		0		0		0		

















	Frequency	delta f	$L_{pn,avg,j,k}$	$L_{pt,j,k}$	$L_{pn,j,k}$	$dL_{tn,j,k}$	La	$dL_{a,j,k}$
	[Hz]	[Hz]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
L <sub>t1,2,12.5</sub> :	71.9	3.13	29.9	38.0	43.2	-5.2	-2.0	-3.2
L <sub>t1,3,12.5</sub> :	71.9	3.13	28.5	36.7	41.8	-5.1	-2.0	-3.1
L <sub>t1,5,12.5</sub> :	75.0	3.13	28.0	34.8	41.3	-6.5	-2.0	-4.5
L <sub>t1,6,12.5</sub> :	71.9	3.13	28.0	38.0	41.3	-3.3	-2.0	-1.3
L <sub>t1,7,12.5</sub> :	71.9	3.13	24.9	38.4	38.2	0.3	-2.0	2.3
L <sub>t1,8,12.5</sub> :	71.9	3.13	28.0	36.4	41.2	-4.8	-2.0	-2.8
L <sub>t1,9,12.5</sub> :	71.9	3.13	28.1	37.0	41.4	-4.4	-2.0	-2.4
L <sub>t1,10,12.5</sub> :	75.0	3.13	28.3	36.9	41.6	-4.6	-2.0	-2.6
L <sub>t1,11,12.5</sub> :	71.9	3.13	25.2	39.7	38.5	1.2	-2.0	3.2
L <sub>t1,12,12.5</sub> :	75.0	3.13	27.8	36.5	41.1	-4.6	-2.0	-2.6
L <sub>t1,13,12.5</sub> :	75.0	3.13	28.7	37.1	41.9	-4.8	-2.0	-2.8
L <sub>t1,14,12.5</sub> :	71.9	3.13	26.8	38.2	40.1	-1.9	-2.0	0.1
L <sub>t1,15,12.5</sub> :	71.9	3.13	28.0	38.4	41.3	-2.8	-2.0	-0.8
L <sub>t1,16,12.5</sub> :	71.9	3.13	27.7	35.9	41.0	-5.0	-2.0	-3.0
L <sub>t1,17,12.5</sub> :	78.1	3.13	29.4	37.8	42.7	-4.9	-2.0	-2.9
L <sub>t1,18,12.5</sub> :	71.9	3.13	26.7	37.7	40.0	-2.3	-2.0	-0.3
L <sub>t1,19,12.5</sub> :	71.9	3.13	26.8	33.6	40.1	-6.5	-2.0	-4.5
L <sub>t1,22,12.5</sub> :	71.9	3.13	27.8	37.4	41.1	-3.7	-2.0	-1.7
L <sub>t1,23,12.5</sub> :	71.9	3.13	26.5	37.2	39.8	-2.6	-2.0	-0.6
L <sub>t2,2,12.5</sub> :	143.8	3.13	32.1	41.1	45.4	-4.2	-2.0	-2.2
L <sub>t2,11,12.5</sub> :	143.8	3.13	29.1	35.9	42.4	-6.5	-2.0	-4.5
L <sub>t2,14,12.5</sub> :	143.8	3.13	31.4	43.5	44.7	-1.1	-2.0	0.9
L <sub>12,19,12.5</sub> :	143.8	3.13	30.6	41.6	43.9	-2.3	-2.0	-0.3
L <sub>t2,20,12.5</sub> :	140.6	3.13	31.3	39.4	44.5	-5.1	-2.0	-3.1
L <sub>t3,4,12.5</sub> :	175.0	3.13	31.8	39.1	45.1	-5.9	-2.0	-3.9
L <sub>t3,5,12.5</sub> :	175.0	3.13	31.2	39.4	44.5	-5.1	-2.0	-3.1
L <sub>t3,6,12.5</sub> :	175.0	3.13	31.6	39.9	44.9	-5.0	-2.0	-3.0
L <sub>t3,7,12.5</sub> :	175.0	3.13	29.5	38.0	42.8	-4.8	-2.0	-2.8
L <sub>t3,8,12.5</sub> :	175.0	3.13	30.9	38.3	44.2	-5.9	-2.0	-3.9
L <sub>t3,12,12.5</sub> :	175.0	3.13	31.2	38.7	44.5	-5.8	-2.0	-3.8
L <sub>t3,13,12.5</sub> :	175.0	3.13	31.4	40.4	44.7	-4.3	-2.0	-2.3
L <sub>t3,15,12.5</sub> :	175.0	3.13	30.9	39.5	44.2	-4.7	-2.0	-2.7
L <sub>t3,16,12.5</sub> :	175.0	3.13	30.9	39.1	44.2	-5.0	-2.0	-3.0
L <sub>t3,18,12.5</sub> :	175.0	3.13	30.6	42.5	43.9	-1.4	-2.0	0.6
L <sub>t3,23,12.5</sub> :	175.0	3.13	30.9	38.1	44.2	-6.0	-2.0	-4.0
Lt4,2,12.5:	309.4	3.13	29.8	36.7	43.4	-6.7	-2.1	-4.6
L <sub>t4,3,12.5</sub> :	309.4	3.13	29.7	35.9	43.2	-7.3	-2.1	-5.2

BIN 12.5: Tonal c	omponents	s determine	ed - Compa	ct						
Spectrum	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$	f⊤	$dL_{tn,j,k}$		
##	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]	[Hz]	[dB]		
1										
2	71.9	-5.2	143.8	-4.2			309.4	-6.7		
3	71.9	-5.1					309.4	-7.3		
4					175.0	-5.9				
5	75.0	-6.5			175.0	-5.1				
6	71.9	-3.3			175.0	-5.0				
7	71.9	0.3			175.0	-4.8				
8	71.9	-4.8			175.0	-5.9				
9	71.9	-4.4								
10	75.0	-4.6								
11	71.9	1.2	143.8	-6.5						
12	75.0	-4.6			175.0	-5.8				
13	75.0	-4.8			175.0	-4.3				
14	71.9	-1.9	143.8	-1.1						
15	71.9	-2.8			175.0	-4.7				
16	71.9	-5.0			175.0	-5.0				
17	78.1	-4.9								
18	71.9	-2.3			175.0	-1.4				
19	71.9	-6.5	143.8	-2.3						
20			140.6	-5.1						
21										
22	71.9	-3.7								
23	71.9	-2.6			175.0	-6.0				
$f_t[Hz] \mid dL_k[dB]$	72.7	-4.0	143.6	-8.7	175.0	-7.3	309.4	-12.4		
$L_a[dB]$		-2.0		-2.0		-2.0		-2.1		
$dL_{a,k}[dB]$		-2.0		-6.7		-5.3		-10.3		
K <sub>TN</sub> [dB]		0	_	0	_	0	_	0		_







