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THE NORTHERN, WEST DIDSBURY, MANCHESTER

NOISE IMPACT ASSESSMENT: PROPOSED TENNIS COURTS

Report **16764-NIA-03 RevC**

Prepared on 29 November 2022

Issued For:
Northern Lawn Tennis Club Limited
Palatine Road
West Didsbury
Manchester
M20 3YA



Executive Summary

This noise impact assessment has been undertaken in order to assess use of proposed all-weather tennis courts at The Northern, West Didsbury, Manchester

The proposed development comprises three additional all-weather tennis courts, to be installed adjacent to existing all-weather tennis courts.

Attended noise measurements have been undertaken of the existing tennis courts at The Northern, West Didsbury, Manchester, in order to determine the noise levels currently experienced due to noise from typical tennis courts. The levels have been used to inform the level of noise anticipated from the proposed new courts.

Calculations were undertaken using the proprietary noise modelling software package CadnaA for the nearest identified receivers. It should be noted that if there are closer receivers than those assessed in this report, a reassessment will be necessary, and this should therefore be confirmed by the Client.

It has been demonstrated that compliance with the established criterion is expected, dependant on the current proposed layouts, the anticipated nature of usage, and assumptions regarding boundary treatments including the proposed introduction of screening to residential gardens on Elm Road.

If there is any deviation from the above, Clement Acoustics must be informed, in order to establish whether a reassessment is necessary.

Clement Acoustics has used all reasonable skill and professional judgement when preparing this report. The report relies on the information as provided to us at the time of writing and the assumptions as made in our assessment.

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16764-NIA-03-SP1	Indicative Site Plan
Appendix A	Glossary of Acoustic Terminology
Appendix B	Raw Measurement Data
Appendix C	Calibration Certificates

Document Revision	Date of Revision	Reasons for Revision	Revision By
0	15/08/2022	First Issue	Duncan Martin MIOA
RevA	26/10/2022	Amended boundary treatments to include proposed screening	Duncan Martin MIOA
RevB	17/11/2022	Amended barrier location	Duncan Martin MIOA
RevC	29/11/2022	Cumulative assessment updated	Duncan Martin MIOA

1.0 INTRODUCTION

Clement Acoustics has been commissioned by Northern Lawn Tennis Club Limited to undertake an assessment of proposed additional all-weather tennis courts at the existing tennis club. Measured noise levels have been used to determine the expected noise impact of a proposed development of additional all-weather tennis courts, in agreement with the planning requirements of the Manchester City Council.

This report presents the results of onsite noise measurements followed by noise impact calculations and outlines any necessary mitigation measures.

An acoustic terminology glossary is provided in Appendix A.

2.0 SITE DESCRIPTION

The existing area of the Northern Lawn Tennis Club undergoing development, currently consists of a grass court area and intermediate grass areas.

Current proposals are to develop the site to provide three additional all-weather tennis courts in the location shown in Figure 2.1. A separate application has also been made two covered Padel courts in an adjacent location, also shown in Figure 2.1.

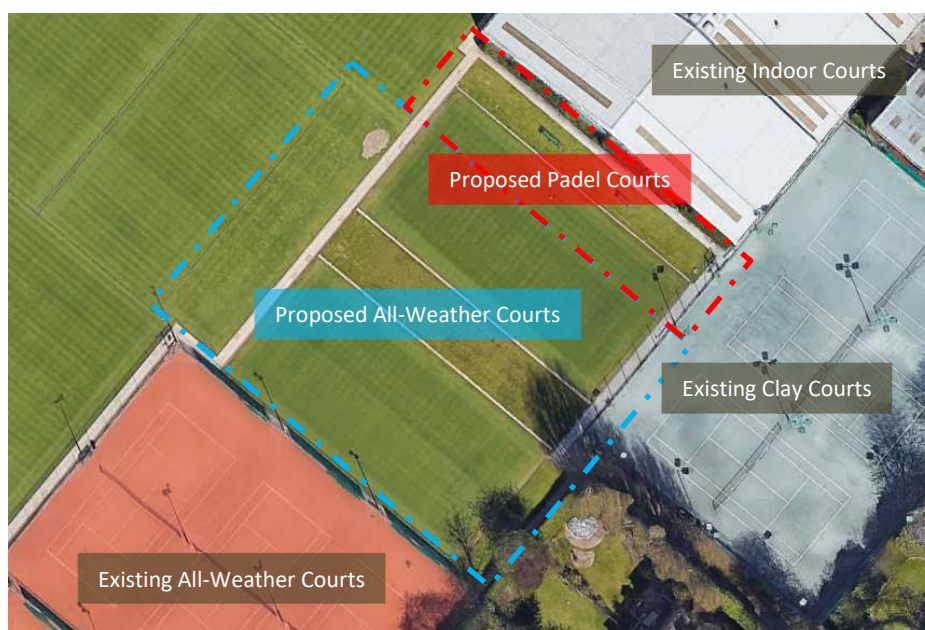


Figure 2.1: Aerial view of existing site showing development location

It should be noted that, although this report addresses only the proposed all-weather tennis courts in detail, a cumulative assessment of the Padel and proposed all-weather pitches in combination is also provided.

The gardens and facades of residential houses on Elm Road have been identified as the nearest affected residential receivers. These nearest noise sensitive receivers were identified through site plans and on-site observations. If there are any receivers closer to that identified within this report then a further assessment will need to be carried out. Therefore, the closest noise sensitive receivers should be confirmed by the client before any work begins.

Locations are shown in attached site plan 16764-NIA-03-SP1.

3.0 ONSITE MEASUREMENTS

3.1 Attended Measurements of Tennis Activity

Attended noise measurements of tennis games were undertaken on the existing tennis courts at The Northern Lawn Tennis Club, to provide an understanding of the prevailing noise environment. The choice of these positions was based both on accessibility and on collecting representative noise data in relation to the identified significant noise sources.

Three two-minute measurements were undertaken for the duration of the survey between 13:30 on and 14:15 on 27 May 2021.

At the time of the measurements, the ambient noise profile was largely dominated by noise due to activities taking place on the tennis courts.

The noise levels measured at the monitoring position were considered suitably representative of noise from the tennis courts only, being away from any railway lines and surrounding roads.

The sound level meters were mounted approximately 1.5 m above ground level under free-field conditions at the locations described in Table 3.1.

Position No.	Description
1	The sound level meter was located at a distance of approximately 1 m from the edge of the net during a singles game. ^[1]
2	The sound level meter was located at a distance of approximately 1 m from the edge of the net during a singles game. ^[1]
3	The sound level meter was located at a distance of approximately 3.5 m the court boundary fence during three simultaneous singles and doubles matches. ^[1]

Table 3.1: Description of attended monitoring locations

Note [1]: The position was considered to be free-field according to guidance found in BS 4142: 2014, and a correction for reflections has therefore not been applied.

Measurement locations are shown in attached site plan 16764-NIA-03-SP1.

3.2 Weather Conditions

At the time of the attended measurements, the weather conditions were dry with very low winds.

It is considered that the weather conditions did not significantly adversely affect the measurements and are therefore considered suitable for the measurement of environmental noise.

3.3 Equipment

The equipment calibration was verified, by means of a field verification check, before and after use and no abnormalities were observed.

The equipment used was as follows.

- 1 No. Norsonic Nor 145 Class 1 Sound Level Meter
- Norsonic Type 1251 Class 1 Calibrator

4.0 RESULTS

4.1 Attended Noise Measurement Results

Table 4.1 presents the results of the measurements carried out at the attended positions described in Section 3.1 above. For each measurement position, the $L_{Aeq,1\text{ sec}}$ noise level has been obtained, and the highest ambient noise level for the whole period has been derived from these values.

Position	Duration	Distance	Max $L_{eq,T}$	Noise Source Description
1	2 min	1 m	52 dB(A)	Consistent noise of ball being hit and bouncing, with occasional talking and shouting conversation.
2	2 min	1 m	60 dB(A)	
3	2 min	3.5 m	53 dB(A)	

Table 4.1: On-site measured noise levels

5.0 NOISE CRITERIA

5.1 Local Authority Policy

The Manchester City Council document 'Planning and Noise – Technical Guidance', issued in October 2022 details appropriate criteria to be used for different types of noise source.

The proposed noise source of Tennis Courts is best categorised by 'Other potentially noisy activities', which includes Multi-Use Games Areas [MUGAs], sports stadia and gymnasia.

The guidance for these types of noise sources is as follows:

"[These] types of development proposals or applications may have additional specific guidance published to review noise impacts or may otherwise be a potential source of noise."

A review has therefore been undertaken of possible applicable guidance in order to determine suitable criteria for noise emissions.

5.2 British Standard 4142

British Standard 4142:2014 +A1:2019 'Methods for rating and assessing industrial and commercial sound' [BS 4142] is typically used to provide an assessment of proposed commercial activities and their impact on residential receptors.

BS 4142 is also stated as preferred method of assessing commercial and industrial noise in the 'Industrial / commercial developments' section of the City of Manchester guidance.

However, Paragraph 1.3 of BS 4142 lists a number of activities that the standard should not be applied to. This list includes 'recreational activities'. BS 4142 therefore cannot be applied to the assessment of Tennis Court noise, and alternative guidance has therefore been sought.

5.3 Artificial Grass Pitches (AGP) Acoustics

Sports pitches will be assessed according to the recommendations of Sport England document 'Artificial Grass Pitches (AGP) Acoustics – Planning Implications'.

This document gives recommended methodologies for calculating the noise level due to AGP use at different receivers.

Although the Tennis Courts do not use artificial grass, the guidance of this document is considered the most relevant applicable to a proposed noise source of sports activity. The sports mentioned in the document are Football, Rugby and Hockey, sports which all include ball impacts, particularly Hockey.

The guidance of the document with regards to setting a noise limit for noise emissions is as follows:

"The determining noise criteria for AGPs proximity to residential properties, to avoid moderate annoyance in the daytime and evenings, as set by the World Health Organisation's 'Guidelines for Community Noise': 50 dB $L_{Aeq(1hour)}$ upper noise limit external to residential properties and within external living areas."

5.4 BS 8233: 2014 Internal Noise Criteria

BS 8233: 2014: 'Guidance on sound insulation and noise reduction for buildings' describes recommended acceptable internal noise levels for residential spaces during daytime and night-time hours. These levels are shown in Table 5.1.

Activity	Location	Design range $L_{eq,T}$	
		Daytime (07:00-23:00)	Night-time (23:00-07:00)
Resting	Living Room	35 dB(A)	-
Dining	Dining Room/Area	40 dB(A)	-
Sleeping	Bedroom	35 dB(A)	30 dB(A)

Table 5.1: BS 8233: 2014 recommended internal background noise levels

The guidance of BS 8233: 2014, with regards to external amenity spaces, is as follows:

"For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited."

5.5 Adopted Criteria

British Standard 8233: 2014 gives recommendations for acceptable internal noise levels in residential properties. Assuming worst case conditions, of the closest window being for a bedroom, BS 8233: 2014 recommends $L_{Aeq;16hr}$ 35 dB(A) as being acceptable internal resting conditions during daytime.

With loudest external levels of 50 dB(A) at the nearest residential facade, acceptable internal conditions would be met by taking the attenuation of the window itself into consideration. According to BS 8233: 2014, a typical building facade with a partially open window offers 15 dB attenuation, resulting in an internal level of 35 dB(A).

As this is comparable to the AGP guidance, 50 dB(A) will also be adopted as the criterion to be achieved at residential facades.

As the guidance of BS 8233: 2014 for external amenity space is comparable to that of APG, we would recommend the lower guideline value of $L_{Aeq,T}$ 50 dB(A) would be an appropriate target to achieve in outdoor garden areas.

6.0 DESCRIPTION OF PROPOSALS

6.1 Source Noise

The measurements described in Section 3 of this report have been used to inform source noise levels for the proposed new tennis courts. A source noise representing all three courts in use, is shown in Table 6.1.

Noise Source	Sound Pressure Levels (at 3.5 meters, dB) in each Frequency Band								dB(A)
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
Tennis Courts	53	47	45	42	51	43	41	34	53

Table 6.1: Tennis Court Source Noise Measurement

Due to the number of matches ongoing during the above measurement, the level is considered suitably robust to assess the noise from the proposed three new courts.

6.2 Receiver Description

Two houses on Elm Road have been identified as the nearest affected residential receivers, as described in Table 6.2. These nearest noise sensitive receivers were identified through site plans and on-site observations.

Receiver Number	Description
1	Rear gardens and facades of 29 & 31 Elm Road - The closest part of the garden is 23 m from the closest point of the Padel Court - The closest façade is 33 m from the closest point of the Padel Court
2	Front garden and side facade of 33 Elm Road - The closest part of the garden is 41 m from the closest point of the Padel Court - The closest façade is 45 m from the closest point of the Padel Court

Table 6.2: Noise levels and criterion at noise sensitive receivers

29 & 31 Elm Road comprise ground floor and first floor flats in the position marked as Receiver 1 in attached site plan 16764-NIA-03-SP1. The boundary to the rear garden in this location comprises a hedge, which would not be expected to provide any meaningful acoustic attenuation.

Additional screening is recommended to protect rear garden areas to 29 & 31 Elm Road that face the proposed courts.

The proposed barrier location is shown in Figure 6.1, marked in a yellow line.

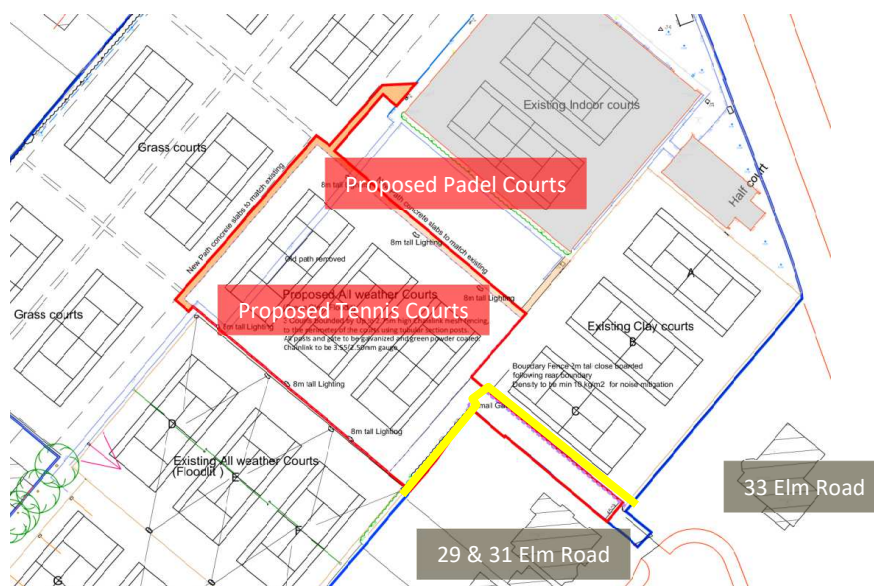


Figure 6.1: Plan view showing proposed barrier position

We would recommend a 2 m tall barrier in the position shown. The barrier should be imperforate, with no gaps around the perimeter, including between the foot of the wall and the ground below.

The barrier should be formed of a solid material with a minimum density of 10 kg/m².

It is understood the site boundary to 33 Elm Road does not have any solid screening and the preference is to avoid adding any screening in this area.

6.3 3D Noise Map Model

In order to assess the noise impact of proposed courts, noise emissions have been assessed by developing a noise map.

The noise model was constructed using the proprietary noise modelling software package CadnaA. The noise model was constructed utilising the following assumptions and parameters:

- Noise source height is 1.5 m above ground,
- Proposed barrier is present, at the site boundaries described in Section 6.2,
 - Height of the proposed barrier is 2 m,
- Garden Assessment:
 - Receiver 1 is 1.5 m above ground in rear garden of 29 & 31 Elm Road,
 - Receiver 2 is 1.5 m above ground in front garden of 33 Elm Road,
- Façade Assessment:
 - Receiver 1A is 1.5 m above ground on rear façade of 29 & 31 Elm Road
 - Receiver 1B is 4 m above ground on rear façade of 29 & 31 Elm Road,
 - Receiver 2 is 4 m above ground on side façade of 33 Elm Road
- Topography of the site is flat and level.

Calculations are performed over single octave bands from 63 Hz to 8 kHz.

Figure 6.1 visually represents the modelled tennis court development.

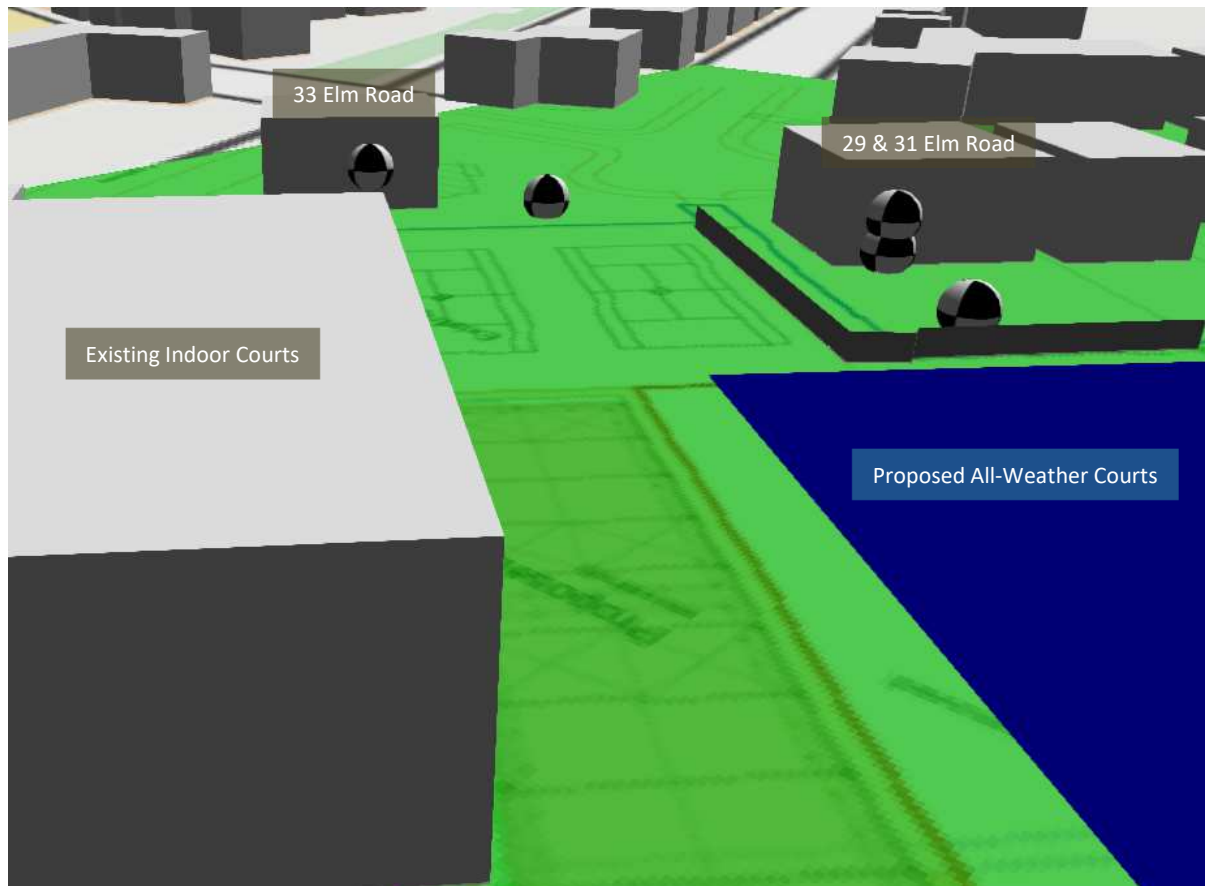


Figure 6.1: 3D view of noise mapping model

7.0 NOISE IMPACT ASSESSMENT

Receiver levels have been calculated using the constructed noise model, with receiver positions placed as shown in Figure 7.1.

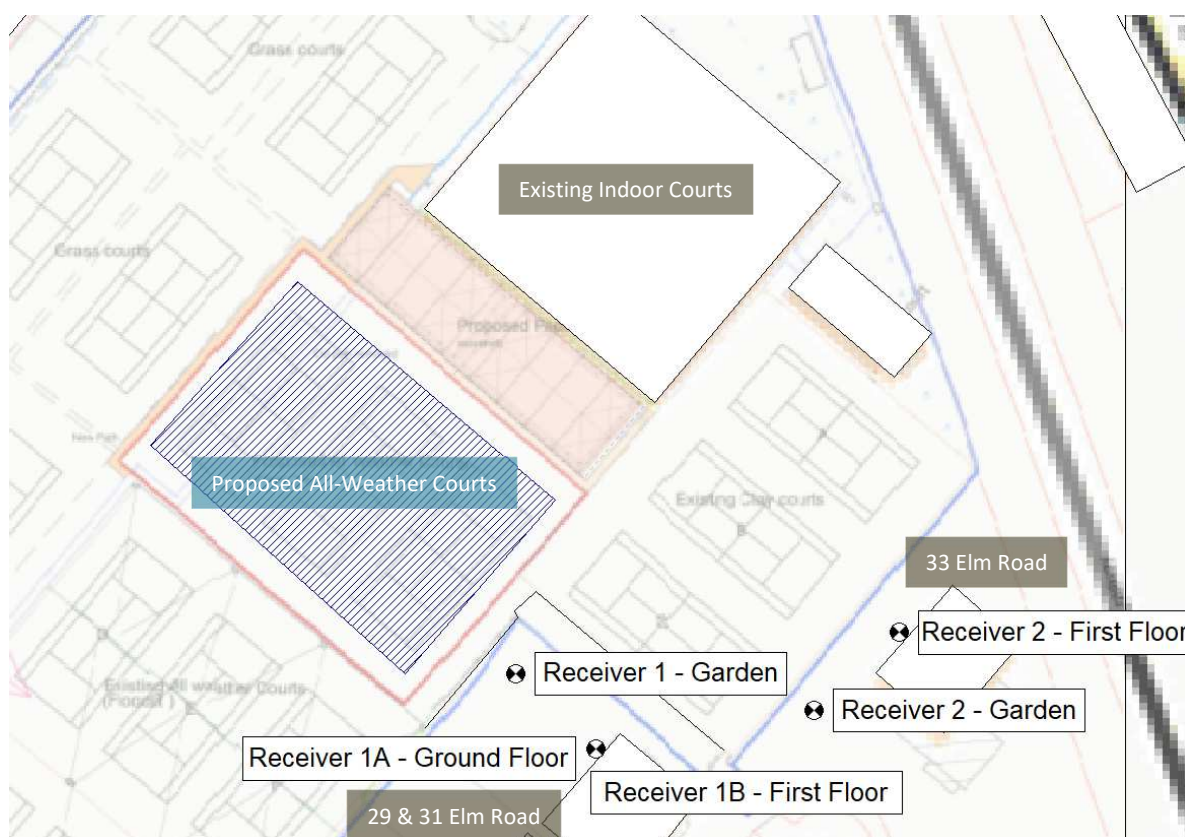


Figure 7.1: 2D View of noise map and receivers

7.1 Garden Noise Impact Assessment

Calculations have been undertaken for all three all-weather courts in constant use. Calculated noise emission levels due to the noise emission levels are shown in Table 7.1.

Receiver	Recommended Criterion	Noise Level at Receiver (due to sports pitches)
1 - Garden (29 & 31 Elm Road)	$L_{Aeq,t}$ 50 dB(A)	$L_{Aeq,t}$ 44 dB(A)
2 - Garden (33 Elm Road)		$L_{Aeq,t}$ 41 dB(A)

Table 7.1: Noise levels and criterion at noise sensitive receivers – gardens

As shown in Table 7.1, the distance and proposed screening to the residential gardens is expected to sufficiently reduce noise emissions due to the proposed all-weather courts, to the point where it would be below the recommended criterion at all receivers.

7.2 Façade Noise Impact Assessment

Further calculations have been undertaken to assess whether the noise emissions from the proposed courts would be expected to meet recognised British Standard recommendations, in order to further ensure the amenity of nearby noise sensitive receivers.

Calculated noise emission levels due to proposed all-weather court noise emissions are shown in Table 7.2.

Receiver	Recommended Criterion	Noise Level at Receiver (due to sports pitches)
1A – Ground Floor (29 & 31 Elm Road)		$L_{Aeq,t}$ 41 dB(A)
1B – First Floor (29 & 31 Elm Road)	$L_{Aeq,t}$ 50 dB(A)	$L_{Aeq,t}$ 45 dB(A)
2 – First Floor (33 Elm Road)		$L_{Aeq,t}$ 41 dB(A)

Table 7.2: Noise levels and criterion at noise sensitive receivers – facades

As shown in Table 7.2, the distance and proposed screening to the residential facades is expected to sufficiently reduce noise emissions due to the proposed all-weather courts, to the point where it would be below the recommended criterion at all receivers.

8.0 CUMULATIVE ASSESSMENT

As described in Section 2.0, wider proposals also include the provision of covered Padel courts. Detailed noise impact calculations are presented in Clement Acoustics report 16764-NIA-02, which accompanies the Padel court application.

Cumulative receiver noise levels have also been calculated using the constructed noise model and the source noise levels detailed in this report and report 16764-NIA-02, assuming all proposed Padel and tennis courts in simultaneous use. The calculated noise levels at the identified receivers are summarised in Table 8.1.

Receiver	Recommended Criterion	Noise Level at Receiver (due to sports pitches)
1 - Garden (29 & 31 Elm Road)	L _{Aeq,t} 50 dB(A)	L _{Aeq,t} 47 dB(A)
2 - Garden (33 Elm Road)		L _{Aeq,t} 47 dB(A)
1A – Ground Floor (29 & 31 Elm Road)		L _{Aeq,t} 45 dB(A)
1B – First Floor (29 & 31 Elm Road)		L _{Aeq,t} 49 dB(A)
2 – First Floor (33 Elm Road)		L _{Aeq,t} 47 dB(A)

Table 8.1: Cumulative noise levels and criterion at all receivers due to Padel and tennis applications

As shown in Table 8.1, the distance and screening to the residential gardens and facades is expected to sufficiently reduce noise emissions due to the cumulative effects of proposed Padel and tennis courts, to the point where it would comply with the criterion at all receivers.

9.0 CONCLUSION

Attended noise measurements have been undertaken at The Northern, West Didsbury, Manchester. Criteria has been set for noise emissions arising from the use of additional all-weather tennis courts, based on the set requirements of relevant guidance documents and standards.

Calculations according to the guidance from the relevant documents indicate that internal and external noise levels are expected to comply with relevant criteria.

Further calculations have demonstrated that the cumulative effects of noise from this tennis court court application and another Padel court application would also comply with the criteria.

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29 November 2022



GLOSSARY OF ACOUSTIC TERMINOLOGY

dB(A)

The human ear is less sensitive to low (below 125Hz) and high (above 16kHz) frequency sounds. A sound level meter duplicates the ear's variable sensitivity to sound of different frequencies. This is achieved by building a filter into the instrument with a similar frequency response to that of the ear. This is called an A-weighting filter. Measurements of sound made with this filter are called A-weighted sound level measurements and the unit is dB(A).

L_{eq}

The sound from noise sources often fluctuates widely during a given period of time. An average value can be measured, the equivalent sound pressure level L_{eq} . The L_{eq} is the equivalent sound level which would deliver the same sound energy as the actual fluctuating sound measured in the same time period.

L_{10}

This is the level exceeded for not more than 10% of the time. This parameter is often used as a "not to exceed" criterion for noise

L_{90}

This is the level exceeded for not more than 90% of the time. This parameter is often used as a descriptor of "background noise" for environmental impact studies.

L_{max}

This is the maximum sound pressure level that has been measured over a period.

Octave Bands

In order to completely determine the composition of a sound it is necessary to determine the sound level at each frequency individually. Usually, values are stated in octave bands. The audible frequency region is divided into 10 such octave bands whose centre frequencies are defined in accordance with international standards.

Addition of noise from several sources

Noise from different sound sources combines to produce a sound level higher than that from any individual source. Two equally intense sound sources operating together produce a sound level which is 3dB higher than one alone and 10 sources produce a 10 dB higher sound level.

Attenuation by distance

Sound which propagates from a point source in free air attenuates by 6dB for each doubling of distance from the noise source. Sound energy from line sources (e.g. stream of cars) drops off by 3 dB for each doubling of distance.

Subjective impression of noise

Sound intensity is not perceived directly at the ear; rather it is transferred by the complex hearing mechanism to the brain where acoustic sensations can be interpreted as loudness. This makes hearing perception highly individualised. Sensitivity to noise also depends on frequency content, time of occurrence, duration of sound and psychological factors such as emotion and expectations. The following table is a reasonable guide to help explain increases or decreases in sound levels for many acoustic scenarios.

Change in sound level (dB)	Change in perceived loudness
1	Imperceptible
3	Just barely perceptible
6	Clearly noticeable
10	About twice as loud
20	About 4 times as loud

Barriers

Outdoor barriers can be used to reduce environmental noises, such as traffic noise. The effectiveness of barriers is dependent on factors such as its distance from the noise source and the receiver, its height and its construction.

Reverberation control

When sound falls on the surfaces of a room, part of its energy is absorbed and part is reflected back into the room. The amount of reflected sound defines the reverberation of a room, a characteristic that is critical for spaces of different uses as it can affect the quality of audio signals such as speech or music. Excess reverberation in a room can be controlled by the effective use of sound-absorbing treatment on the surfaces, such as fibrous ceiling boards, curtains and carpets.

Appendix B

Raw Measurement Data

Position 01 Data

	L Aeq	L AFmax	L feq 50 Hz (1/3)	L feq 63 Hz (1/3)	L feq 80 Hz (1/3)	L feq 100 Hz (1/3)	L feq 125 Hz (1/3)	L feq 160 Hz (1/3)	L feq 200 Hz (1/3)	L feq 250 Hz (1/3)	
27.05.2021 13:25:08.676	47.3	48.2	43.6	42.4	42.4	42.2	39.5	38.6	38.1	42.1	38.5
27.05.2021 13:25:09.676	46.3	47.8	47.2	41.4	42.5	43.1	45	43.4	43.4	43.6	40.1
27.05.2021 13:25:10.676	47.3	51	45.2	43.7	44.4	42	44.7	43.6	43.6	43.6	40.3
27.05.2021 13:25:11.676	49.4	54.6	45.9	45.1	42.5	43.6	45.6	44.1	44.1	45.1	40.8
27.05.2021 13:25:12.676	48.5	53.6	46.4	44	42	43.7	45.2	46.3	46.3	46.2	41.9
27.05.2021 13:25:13.676	46.9	50	46.9	43.6	42.6	42.6	44.1	44.4	44.4	42.9	37.6
27.05.2021 13:25:14.676	47.3	51.6	45.8	45.9	39.1	39.2	38.3	42.1	41.2	39.7	39.7
27.05.2021 13:25:15.676	43.7	51.1	46.5	45.1	40.9	38.9	37.6	37.6	35	33.4	33.4
27.05.2021 13:25:16.676	51.9	58.1	47.6	42.3	39	41.3	41.5	43.7	45.3	44.5	44.5
27.05.2021 13:25:17.676	42.8	56.4	47.7	42.2	38.2	39.6	38.3	38.6	36.8	36.5	36.5
27.05.2021 13:25:18.676	54.1	61.9	48.8	40.6	39.6	39.8	41.2	41.6	43.8	44.9	44.9
27.05.2021 13:25:19.676	44.3	49.1	44.9	41.9	38	39.3	38.3	37.7	39	38.2	38.2
27.05.2021 13:25:20.676	49.3	56.4	43.6	38.2	40.6	38.4	39.6	42.3	44	43.3	43.3
27.05.2021 13:25:21.676	50.1	57.2	47.4	45.2	43.8	41.7	41.8	42.4	44.1	44.9	44.9
27.05.2021 13:25:22.676	44.3	51.5	44.9	41.6	40.8	41.2	39.5	37.7	35.9	36.3	36.3
27.05.2021 13:25:23.676	52.2	60.2	44.9	43.6	39.2	38.5	41.6	41.6	44.8	46.4	46.4
27.05.2021 13:25:24.676	41.8	44	47	40.5	37.5	37.2	34.6	37.1	35.3	33.7	33.7
27.05.2021 13:25:25.676	54.4	59.1	45.6	40.7	38.5	37.9	38.8	41.5	40.9	38.6	38.6
27.05.2021 13:25:26.676	53.4	59.4	46.7	42.7	37.8	40.7	39.7	42.6	40.9	39.3	39.3
27.05.2021 13:25:27.676	43.7	47.5	45.1	38.2	36.2	37.5	36.3	37.3	36.9	36.3	36.3
27.05.2021 13:25:28.676	40.3	44.9	46.6	39.6	38.1	39.4	36.2	36.2	35.8	34.2	34.2
27.05.2021 13:25:29.676	43.8	48.7	42.8	40.1	39.8	40.7	39.8	39.4	38.2	37.3	37.3
27.05.2021 13:25:30.676	46.8	52	45.5	41.2	39.7	41.6	45.1	43.1	43.3	44.6	44.6
27.05.2021 13:25:31.676	47.7	51.4	45.6	41.5	39	43.1	45.2	44.7	43.5	38.9	38.9
27.05.2021 13:25:32.676	47.3	50.4	47.8	43.1	41.3	42.1	43.7	41.3	39	37.2	37.2
27.05.2021 13:25:33.676	49.6	56.1	45.4	45.2	39.4	43.1	45	41.8	41	39.2	39.2
27.05.2021 13:25:34.676	44.2	48	50	43.9	43	42.5	43.7	42.2	39.7	38	38
27.05.2021 13:25:35.676	44.9	49.7	44.2	41.1	41.6	42.5	43.4	41.6	41.9	40.1	40.1
27.05.2021 13:25:36.676	44.7	48.6	43.9	39.8	40.1	43.4	44.9	42.3	40.1	38.9	38.9
27.05.2021 13:25:37.676	42.4	43.6	42.3	41.3	42.9	45.8	44.3	41.4	40.5	35.6	35.6
27.05.2021 13:25:38.676	44.1	45.3	45.5	45.2	43.2	44.1	45.2	42.1	39.9	37.5	37.5
27.05.2021 13:25:39.676	45.4	48.7	50	42.9	42.7	43.5	42.5	39.9	38.4	37.2	37.2
27.05.2021 13:25:40.676	47.1	53.9	45.1	41.8	39.5	40.1	39	39.8	38.8	37.9	37.9
27.05.2021 13:25:41.676	48	53.5	45	42.2	40.2	42.4	39.4	40.1	43.9	42.7	42.7
27.05.2021 13:25:42.676	47.5	52.4	46.6	44	39.4	40.4	41.3	41.8	42.6	40.1	40.1
27.05.2021 13:25:43.676	46.7	50.3	44.9	42.5	43.1	41.3	39.3	40.4	42.3	40.9	40.9
27.05.2021 13:25:44.676	49.3	56.4	42.3	43.2	40.9	38.9	40.1	41.7	43	41.1	41.1
27.05.2021 13:25:45.676	44.9	49.9	48.6	45.8	39.2	41.2	41.7	40.1	41.5	40.5	40.5
27.05.2021 13:25:46.676	52.7	60.5	46.1	49.5	42	41.3	42.1	45.9	48.3	49.1	49.1
27.05.2021 13:25:47.676	54.6	59.3	46.2	47.2	44.8	38.9	41.3	42.3	45	43.3	43.3
27.05.2021 13:25:48.676	48.5	53.4	50.7	42.4	46.4	38.9	39.9	39.5	40.3	36.1	36.1
27.05.2021 13:25:49.676	47.8	53.8	49	43.9	42.4	40.4	40.3	43.1	42.6	42.7	42.7
27.05.2021 13:25:50.676	48.3	53.2	52.1	44.7	42.2	40.3	42.7	40.9	42	37.7	37.7

27.05.2021 13:25:51.676	47.4	52.9	55.1	45.3	40.5	39.5	41.8	39	40.6	38.2
27.05.2021 13:25:52.676	50.8	57.5	51.3	48.5	38.9	42	41.8	46.2	48.9	45
27.05.2021 13:25:53.676	49.6	54.6	50	52.2	45.8	46.2	44.5	42.8	40.5	40.5
27.05.2021 13:25:54.676	50.1	54.9	47.7	51.1	47.1	49.1	48.4	45.5	45.2	42.5
27.05.2021 13:25:55.676	45.7	48.3	54.4	51	46.6	48.6	47.6	44.5	43.2	37.8
27.05.2021 13:25:56.676	48	51.5	55.1	53.4	48.4	47.3	45.8	44.7	44.9	42.1
27.05.2021 13:25:57.676	43.9	47	49.6	50.8	46.8	49.9	48.8	44.7	43.3	38.1
27.05.2021 13:25:58.676	46.6	51	55.2	52.9	48.5	49.3	47.7	45.5	44.5	41.6
27.05.2021 13:25:59.676	47.4	50.9	51.2	48.7	47.7	46.2	44.1	41.8	41.2	39.8
27.05.2021 13:26:00.676	44.4	49.3	50.2	47.1	43.9	43.3	44.9	40.3	40.7	38.5
27.05.2021 13:26:01.676	44	45.8	49.1	46.9	48	43.1	42.3	39.9	39.8	40.3
27.05.2021 13:26:02.676	41.8	44.5	49.6	45.1	45.8	41.1	39.3	38.5	38.6	38.1
27.05.2021 13:26:03.676	46	51.2	48.9	44.6	39.3	42.8	41.4	39.2	42.3	40.6
27.05.2021 13:26:04.676	43.4	47.4	51.6	47.6	41.5	41	40.1	39.8	44.9	40.7
27.05.2021 13:26:05.676	46	49.4	51.1	47.6	41.8	41.6	40.3	40.8	42.3	39.5
27.05.2021 13:26:06.676	45.1	47.4	51.8	56.4	45.4	42.5	39.4	43.4	42.6	37.6
27.05.2021 13:26:07.676	49.8	55.9	47.6	56.6	53.4	44	41.3	41.7	41.9	41.3
27.05.2021 13:26:08.676	46.6	54.4	47.1	53.2	55	46.6	41.4	41.2	41.7	38.3
27.05.2021 13:26:09.676	53.1	60.3	47.7	48.8	43.1	41.3	42.9	43.8	45.8	45
27.05.2021 13:26:10.676	52.6	59.2	49.8	49.3	41	42.8	44.3	47.3	46.5	44.7
27.05.2021 13:26:11.676	49.4	57.7	47.4	42.9	41.4	44.3	47.3	46.8	46.9	44.5
27.05.2021 13:26:12.676	44.8	47.7	46.5	46.6	43.4	41.7	44.3	42.7	44.9	39.1
27.05.2021 13:26:13.676	46.5	51.4	50.6	47.5	42.1	41	41.3	41.7	43.7	37.8
27.05.2021 13:26:14.676	42.9	47.2	47	46.9	39.4	39.2	38.2	37.6	42.8	36
27.05.2021 13:26:15.676	48.4	53.7	47.5	49.1	43.4	42.9	44.9	43.5	48.4	43.3
27.05.2021 13:26:16.676	52.2	60.3	47.4	49.5	41.9	40.6	41.8	43.4	46.5	43.7
27.05.2021 13:26:17.676	51	58.9	55.3	46.2	40.1	40.9	38.5	42.1	45.7	43
27.05.2021 13:26:18.676	43.8	58.5	53.8	46	40.1	39.9	39.7	40.4	43.1	37.5
27.05.2021 13:26:19.676	57.9	66.2	47.4	45.7	42.3	41.2	40.9	43.9	46.9	46.4
27.05.2021 13:26:20.676	42.8	59.9	46.5	42.7	39.4	39.6	38.2	39.2	41.2	37.9
27.05.2021 13:26:21.676	48.3	55	49.6	45.1	42.5	42.6	41.1	42.5	42.6	43.8
27.05.2021 13:26:22.676	46.6	51.4	44.7	42.7	44.8	40.7	40.2	42.9	44.6	42.8
27.05.2021 13:26:23.676	53.1	60.4	45	42.7	42.8	39.9	41.2	43.2	47.8	47.1
27.05.2021 13:26:24.676	59.1	67	42.4	44	42.8	42	42	45.8	45.9	45.6
27.05.2021 13:26:25.676	61.3	66.7	45.9	47.6	40.9	41.7	38.6	44.9	45.6	39.8
27.05.2021 13:26:26.676	56.5	63.6	48.3	55	42.6	43.5	40.4	42.6	46.2	43.1
27.05.2021 13:26:27.676	45.1	48.2	46.6	50.8	47.8	44.4	44.5	44	45.6	39.7
27.05.2021 13:26:28.676	45.9	49.5	51	42.7	49.6	42.7	42.8	42.5	44.6	37.1
27.05.2021 13:26:29.676	46.4	50.9	47.6	45.2	44.1	42.6	39.6	42.6	44.9	37.7
27.05.2021 13:26:30.676	45.4	49.9	47.8	48.9	42.1	43.3	42	48.9	48.9	36.2
27.05.2021 13:26:31.676	50.9	53.3	47.4	49.3	43.4	39.9	40.1	54.8	53	41.5
27.05.2021 13:26:32.676	46.3	50.7	47.7	45.1	49.2	41.4	42.2	54.4	50.9	33.8
27.05.2021 13:26:33.676	45.4	47	52.8	41.5	40.7	40.2	39.1	50.2	45.7	35.2
27.05.2021 13:26:34.676	48.3	52.5	52.4	44.3	40.2	40.3	40.7	52.6	46	41.6
27.05.2021 13:26:35.676	49.4	54.1	50.3	43.3	41.3	44.3	43.1	56.8	48.8	41.9
27.05.2021 13:26:36.676	48	54.1	54.8	47.5	43.4	46.7	42.8	53.9	46.2	40.4
27.05.2021 13:26:37.676	48.5	51.6	54.1	49.7	43.8	44.2	43.7	53.1	43.9	40.1

27.05.2021 13:26:38.676	44.3	46.7	50.2	45.6	40.5	41.8	40.8	49.4	39.4	37.9
27.05.2021 13:26:39.676	48.6	51.1	50.3	44.3	41.8	42.6	39.9	57.8	43.4	37.9
27.05.2021 13:26:40.676	45.4	48.1	47.9	44.7	44.6	42.3	39.5	53.5	41.5	38.5
27.05.2021 13:26:41.676	46.2	47.6	48.2	41.8	41.9	40.1	40.1	55.8	41.9	36.4
27.05.2021 13:26:42.676	46.3	48	47.9	40.1	40.1	41.6	40.9	58.2	40.3	33.9
27.05.2021 13:26:43.676	49.2	49.8	52.1	42.3	41.8	44.2	43.8	61.4	41.9	36.8
27.05.2021 13:26:44.676	47.9	49.2	50.2	43.2	42.5	42.3	44.1	60.4	40.3	34.4
27.05.2021 13:26:45.676	49.2	52.8	44.7	41.7	42.4	41.9	45	60.5	41.1	39
27.05.2021 13:26:46.676	50.8	53.2	47.6	42.7	41.4	40.3	46	59.7	43.7	45.6
27.05.2021 13:26:47.676	52.5	57.8	46.6	40.7	39.7	40.5	48.1	61	45.9	46.4
27.05.2021 13:26:48.676	53.6	56.8	48.4	44.7	39.8	40.3	52.9	64	46	43.2
27.05.2021 13:26:49.676	58.6	66.4	47.5	42.2	39.8	41.2	50.3	58.8	46.1	47.2
27.05.2021 13:26:50.676	54.7	58.9	49.5	41.6	41.4	41.6	54	60.1	48.1	46.5
27.05.2021 13:26:51.676	55.8	57.5	47.6	42.6	41.5	41.8	63	66.3	43.4	46.6
27.05.2021 13:26:52.676	52.9	55.1	47.3	42.4	41.1	44.6	61.2	61.9	44.1	47.2
27.05.2021 13:26:53.676	53.3	54.9	46.5	43.6	43.1	43.1	62.4	59.3	46.5	46.9
27.05.2021 13:26:54.676	50.6	52.9	46.6	42.8	42.8	43.5	62.5	56.5	46.1	45.9
27.05.2021 13:26:55.676	50	52.1	48.6	41.9	40.1	41.7	59.8	50.9	44.2	44.4
27.05.2021 13:26:56.676	50.4	52.3	50.9	43.6	41.3	43.2	62.7	52.2	43.5	45.8
27.05.2021 13:26:57.676	50.4	51.6	48.2	45.5	41.2	44.2	61.7	49.6	40.7	46
27.05.2021 13:26:58.676	49.8	53.9	51.1	44.3	41.2	43.6	58.4	46.8	44.3	46.3
27.05.2021 13:26:59.676	53.8	57.2	48.2	45.6	44.1	43.9	53.9	43.1	46.9	47.7
27.05.2021 13:27:00.676	53.6	56.7	47.1	45.1	41.4	42.8	57.5	43.9	44.5	46.6
27.05.2021 13:27:01.676	54.7	58	45.3	47.9	41.2	45.1	60.6	44.3	45.4	48.3
27.05.2021 13:27:02.676	52.4	57.4	50.5	47.8	42.6	44.9	59.6	44.2	45.1	45.3
27.05.2021 13:27:03.676	56.2	61	48	44	41.7	47.5	62.8	45.1	43.8	44.9
27.05.2021 13:27:04.676	56	62.2	51	50	48.5	50	61	50.9	49.1	47.2
27.05.2021 13:27:05.676	48.3	52.3	50.9	47.3	49.7	50	61.6	47.6	45.4	44.9
27.05.2021 13:27:06.676	47.3	49.1	44.2	42.6	41.2	47.7	59.5	40.6	43	44.7
27.05.2021 13:27:07.676	45.8	46.7	46.5	44	40.6	49.3	59.1	40.2	41.3	41.8
27.05.2021 13:27:08.676	47.3	47.8	47.6	45.9	39.1	52.9	61.8	42.7	42.1	42
27.05.2021 13:27:09.676	48.5	52.6	45	45.4	41.8	53.2	60.5	41.8	43.1	45.4
27.05.2021 13:27:10.676	46.9	49.4	47.1	43.1	41.5	51.2	56	41.4	41	41
27.05.2021 13:27:11.676	49.7	53.8	45.9	42.5	38.9	52.5	54.6	42.8	43.3	44.2
27.05.2021 13:27:12.676	54.4	60.9	46.8	43.9	38.6	54.7	55.2	43.9	43.2	43.2
27.05.2021 13:27:13.676	56.5	64.3	49.2	43.9	40.9	56.9	54.2	44	45.7	45.7
27.05.2021 13:27:14.676	49.7	58.8	51.6	52	52.1	59.9	54.7	49	49.4	46.9
27.05.2021 13:27:15.676	57	64.7	48.3	43.9	40.1	55.3	50.6	45.6	49.4	50.9
27.05.2021 13:27:16.676	49.9	58.9	45.7	42.8	40.4	60.7	53.7	41.1	42.3	45.9
27.05.2021 13:27:17.676	55.7	61.8	48.6	44.9	42.2	60	51.6	44.9	48	48.3
27.05.2021 13:27:18.676	65.2	71.5	50.9	44.2	40.7	58.8	51.5	45	46.9	48.9
27.05.2021 13:27:19.676	54	59.3	46.4	43.1	40.8	57.3	47.7	49.3	44.5	45
27.05.2021 13:27:20.676	54.4	55.4	45.6	42.1	39.8	57.2	45.3	49.1	51.6	43.2
27.05.2021 13:27:21.676	56.2	60.1	46.4	43.4	42.4	54.7	47.3	45.6	55.3	58.5
27.05.2021 13:27:22.676	54.9	59.3	53.9	45.9	45.8	53.3	47.6	44.8	58.6	57.4
27.05.2021 13:27:23.676	57.4	60	55.2	55.2	58.1	57.1	53.3	54	61.5	53.6
27.05.2021 13:27:24.676	51.5	56.7	46.6	47.9	48.9	51	44.5	47	53.3	46.8

[illegible]

Lfreq 315 Hz (1/3)	Lfreq 400 Hz (1/3)	Lfreq 500 Hz (1/3)	Lfreq 630 Hz (1/3)	Lfreq 800 Hz (1/3)	Lfreq 1 kHz (1/3)	Lfreq 1.25 kHz (1/3)	Lfreq 1.6 kHz (1/3)	Lfreq 2 kHz (1/3)	Lfreq 2.5 kHz (1/3)	Lfreq 3.15 kHz (1/3)
39.1	37.6	32.7	34	36.6	37.7	38.4	36.1	34.2	39.2	36
39.2	37.8	36.5	40.6	37.4	36.2	34.7	35.1	33.2	32.4	31.6
39.2	38.4	37.9	39.1	39.4	38.2	34.4	35	37.9	32.7	33.5
44	46.7	44.8	38.5	39.3	38.7	39.3	33	30	35.4	35.1
40.9	44	43.3	38.5	38.7	37.5	37.2	34.6	32.1	33.8	33.7
38.4	38.5	39.2	37.4	39.1	41.4	35.3	33.5	31.6	30.9	30.8
38.5	37.5	36.1	36.7	37.9	38.9	38.3	36	37.2	35.7	31
32	31.8	33	31.8	33.3	34.2	32.6	31.3	34.3	36.9	28.5
41.1	38.4	37.3	42.4	44.1	46	42.4	41.5	40.1	37.9	35.4
33.8	31.9	32.9	35.4	34.7	34.7	33.8	31.9	29.8	28.6	25.7
42.7	38.5	37.7	40.8	38.8	48.8	50.3	39.2	35.4	35	33.3
35.2	33.2	33.2	34.2	35.5	37	35.5	33.8	30.1	31.6	29.2
40.8	38.7	35.3	36	37.4	41.4	42.4	37	40.6	34.4	34.3
44.1	41.6	38.3	39.1	39.9	42.8	42.8	37.1	36.5	37.7	32.5
32.5	32.8	32.1	31.1	32.9	34	32.2	35.2	33.9	35.9	33.5
43.8	40.7	40.3	38.8	37.7	48.8	44.2	38	35	34.8	35.6
33.6	32.5	33.6	34.3	33.2	32.5	30.6	31.7	30.1	28.3	26.1
41.5	40.3	36.9	50.9	49.8	47.7	42.7	38.2	32.2	33.4	30.1
39.4	36.9	40.6	53.9	44.1	40.5	34.7	33.5	33.4	35.1	30
35.3	34.6	32.7	31.5	33.1	34.4	31.8	31.6	36	34.3	27.3
32.8	31.9	32.1	31	32.6	32.6	30.8	27.7	26.1	25.4	23
36.9	36.2	32.2	33.1	35.5	38.3	35	30.7	28.6	27	22.6
46.7	45.4	39.5	36.9	34.2	35	33.6	29.6	26.4	23.9	23.2
38.8	39.6	37.6	46.1	38.8	37	33	31.6	31.3	31.1	28.7
39.4	40.4	38.7	39.7	39.2	39.9	38.3	34.6	30.7	33.4	29.2
37.8	36.6	36.8	35.8	44.2	42.8	39	38.1	35.9	32.4	31.7
34.9	35.9	35.5	37.8	38.1	37.8	30.9	28.7	26.9	24.3	23.3
39.1	37.1	34.8	34.6	36.4	37.7	36.1	32.6	31.6	27.3	24.2
38.6	36.6	34.4	36.4	34.7	33.1	32.1	31.4	36.1	34	29
33.5	34.6	34	32.6	33.7	32.9	31	30.1	30	31.3	23.9
37.7	35.8	36.3	37	35.7	34.4	33.4	31.7	32.1	28.8	25.9
35.1	35.8	35.4	34.3	36.3	38.9	35.8	34.6	34.6	30.1	27.9
37.3	39.4	38.7	40.1	38.4	36.7	40.1	32.8	32.1	33.8	32.7
42.9	45.2	42.6	36.8	39.2	40	36	33.2	29.4	30.1	30.1
36.9	38.8	38.3	38.2	34.4	34.9	41.7	38.1	35	33.4	31.2
38.4	41.9	37.8	38	35.2	39.4	35	36.8	34.3	33.7	26.9
38.2	35.6	40.1	43.6	42.7	39.7	36.9	37.1	35.8	36.9	34.4
38.1	37.6	35.7	34.2	34.7	37.7	35.8	33.8	31.6	28.1	26.9
47.2	47	45.8	45.2	40.4	45.6	41.6	37.2	38.3	36.9	33.2
41.9	39.9	39.8	43.8	46	50.9	44.7	39.7	42.8	39.6	34.8
34.5	43.2	38.8	38.8	37.4	37.2	39.6	42.4	33.4	34.1	32.7
41.9	40.7	37.7	35.7	36.9	42.7	38.8	34.7	33.8	30.8	29.1
35.6	44.5	37.7	41.9	37.8	41.9	35.5	36.9	34.8	34.3	32.2

36	34.6	33.8	43.4	38.9	38.4	35.4	37.1	36.6	33	30
42.9	43.4	42.3	45.4	41.6	43.2	39.6	39.2	35.4	35.1	29.7
38	36.1	41.9	41.3	47.4	35.9	34.9	36.6	35.7	34.5	29.9
39.5	39.6	38.8	37.5	40.2	41.1	42.6	39.3	38.6	37.3	33.9
36	35.1	35.7	35.8	37.8	36.4	34.3	32.5	35.4	31.7	28.5
41.5	42.4	37.2	35.5	38.5	40.2	38.8	33.7	34.3	34.4	31
35.2	33.4	33.2	31.6	35.1	35.8	34.4	30.4	29.3	28.2	23.2
39.2	38.7	37.5	37.3	36.9	39.8	35.4	33	32.4	31.1	26.9
40.7	37.3	35.4	35.3	35.4	36.5	34.6	35.2	41	37.9	30.5
36.3	35.5	35.4	34.3	34.7	35.3	34.2	31.1	32.8	35.3	25.8
34.7	35	35.3	32.6	33.5	34.3	31.9	32.4	33.8	35.1	26.3
34.8	33.8	33.6	32	33.7	34	32	28.9	27.9	24.7	21.9
36.2	35.2	35.1	34.2	41.2	37.8	34.3	36	31.6	28.9	27.3
34.9	36.3	34.6	33.8	34.9	34.8	32	32.7	27.8	25	22.8
39.9	42.7	36.8	37.1	37.2	38.8	35.7	32.1	30.4	27.6	24.2
37.2	37.2	36.1	38	36.2	36.7	35	34.2	29.9	27.5	23.9
38.8	36.9	35.6	35.8	44.5	43.4	40.3	36.6	34.2	32.8	31.3
38.4	42.5	39.1	35.6	37.4	36.8	37.3	33.9	36.2	35.4	28.8
46	47.5	43.5	38.7	40.7	46	43.3	43.9	43.1	37.9	34.1
44.8	49.4	46.7	40.9	39.6	42.6	43.9	41.6	39.8	36.3	36.6
43.8	45.3	44.9	42	40	38.9	37.9	36.2	33.4	30.9	27.7
36.7	40.5	38.9	35.5	35.8	36.1	34.3	31.1	27.6	26.7	22.9
35.2	39.4	36.7	36.6	37.4	38.5	40.2	35.2	31.7	28.9	26.5
33.5	33.1	34	33.7	35.5	34.7	32.3	32.8	30	27.1	25.4
41.4	40.4	37.9	36	39.4	41.3	39.4	36.7	34.6	33.7	30.9
38.7	37.6	35.9	35.8	38	49.3	43.9	41.9	32.2	33.1	33
40.2	36.5	35.3	36.4	39.1	47.7	43.7	35	32.2	34.9	32.3
34.7	34.6	33.9	33.2	33.9	34.5	32.8	32.1	31.5	35.6	28.4
45.4	42.5	39.4	39.5	43.3	55.3	52	43.2	35.2	37.3	31.5
36.7	34.7	32.9	32.7	34.1	35.6	32.9	30.7	27.6	29.5	26.2
40.2	36.5	35.2	36.6	35.9	41.1	43.4	33.4	32.1	33.1	30.2
40.9	39.6	37	39.5	37.9	38.5	36.5	33.2	29.4	30.4	31.2
44.6	47.2	45	44.4	41.3	43.7	44.7	40.2	38.1	42.7	37.2
44.2	48	53.4	55.4	48.6	53.2	47.7	42.5	41.9	42.6	40
38	47.4	55.9	57.7	57.2	52.4	44	36.3	34.8	44	40.2
41.1	41.4	42.2	43.4	50.9	52.4	48.2	41.5	38.9	38.1	35.6
37.6	35.8	38.3	35.7	34.2	34	32.3	35	31	30	31.9
36.4	34	34.1	33.8	40.2	39.3	34.3	33.8	32.1	31.2	26.7
39.7	44.7	39	38.4	33.7	35.8	35.9	32.9	32.8	32.6	25.7
37.3	38.2	39.7	36.8	33.6	33.7	32	30.1	28.4	26.7	26.7
39.4	39.2	47.5	45.4	36.8	35.6	40.3	34.8	33.5	29.7	27.9
35.2	37.9	36.8	33.7	33.3	32	30.9	29.5	31.8	30	23.9
35.5	37.1	35.3	40.4	33.2	32.6	30.6	30.9	34	34.8	26.4
43.8	41.1	35.7	34.9	37.8	40.6	37.1	35.6	35.7	32	30.2
40.7	45.7	42.9	37.8	38.7	37.5	34.1	33.1	31.9	29.7	28.4
41.5	43.1	39.7	37.8	40.3	36.9	34.7	34.6	33.2	30.2	27.5
38.5	35.9	37.3	44.3	41.1	40	36.5	32.9	34	29.6	27.8

43.6	41.3	41.1	38.1	36.5	39.4	35.1	33.1	30.7	28.1	26.9
51.2	49.7	48.4	38.8	40	41	39.7	37.7	39.1	35.9	31.6
51.3	55.8	44.6	48.1	48.4	45.6	41	40.9	44.3	42.5	41.1

Lfreq 4 kHz (1/3)	Lfreq 5 kHz (1/3)	Lfreq 6.3 kHz (1/3)	Lfreq 8 kHz (1/3)	Lfreq 10 kHz (1/3)
28.9	25.2	22.8	18.9	15.4
26.2	21.4	17.7	14.7	11.4
30	25	21.1	21.6	16.5
28.8	27.2	24.2	19.1	16.5
32.8	33.3	31.4	28.2	24.1
27.3	25.7	23	20.2	16.4
27.7	26.6	24.9	20.9	17.3
22.9	20.8	20.2	17	12.4
31	28.5	24.5	20.5	18.8
23.2	20.9	18.2	16.1	12.9
29.6	29.3	25.2	24.2	21.5
27.3	25.5	23.5	20.6	18.8
29.6	27.7	24.7	23.9	18.7
32.5	29.5	28.8	26.9	23.6
22.8	21.4	18.1	15	12.1
33.4	29.4	27.4	25.7	22.1
23.9	20.5	18.1	16.2	13
30	26.3	23	20.8	15.4
29.2	26.4	22.7	20.2	16.2
25.3	26.3	19.6	14.8	12
22.1	20	14.8	12.8	10.4
21.3	22.8	15.5	15.5	11.8
24.2	18.2	15.7	13.6	11.5
27.8	25.8	21.3	21.5	14.6
26.8	23.4	21.8	19.7	12.4
36.1	33.8	33.3	29.9	26
21	18.3	16.7	14.8	15.4
24.1	21.6	17.2	15.7	13.2
23.5	20.5	18.7	15.9	14.5
20.4	18.7	15	13.8	10.3
21.2	23.5	13.5	13.7	10.1
26.9	25.3	21.7	18.9	15.8
29.3	30.6	25.3	21.6	15.8
30.4	25.7	25.7	29.1	20.5
25.8	25.9	21.8	19.9	17.4
25.1	23.6	21.1	18.5	15.8
30.4	32.2	33.3	25.2	23.8
24.6	23.6	18.6	16.6	14.3
33.6	36.2	33.8	31.3	30.4
35.7	34.8	31.9	31.6	29.4
26.8	25.5	22.9	19.1	21.4
28	24.9	21.6	17.9	14.3
28.4	25.4	24.9	20.4	17.9

25.7	23.4	20.9	19.7	18
27.8	28.4	25.1	23.8	21.5
27.1	24.8	22.6	20.4	18.4
33.7	32.6	28.9	26.9	24.6
27.2	24.9	21.2	19.4	17.3
29.5	28.8	28.5	27.8	25.1
21.2	20	16.5	13	10.8
26.4	23	20.2	18.1	15.1
25.6	22.7	19.1	15.7	12.8
24.3	21.3	18.5	16.6	16.2
23.4	20.8	16.9	14.1	11.3
22.1	18	14.6	13	10.4
24	22.3	21.4	16.8	13.2
19.8	15.6	12.5	12.1	10
27.5	23.6	18.7	17.2	14.3
23.6	18.8	14.8	13.6	10.8
30.4	31.4	27.9	30.9	23.6
24.4	20.3	17.7	15.5	11.9
34.3	28.4	28.1	23.7	18.8
35.8	32.5	30.3	30.1	27.1
25.4	22.2	19.7	17.9	16.3
19.1	18.3	15	14.2	11.8
24.5	21.1	20.3	17.2	15.4
22.2	19	16.7	14.6	12
27.8	25.5	22.4	19	17
31.1	27.3	22.4	21.5	17.4
28.4	27.1	27.8	26.8	22.9
22.7	20.4	19.7	18.8	17
31.1	29.4	28.4	25.3	21.6
21.7	18.4	16.1	14.6	11.8
27.1	27.5	24.7	23	22.3
26.8	22	18.9	18.2	16.9
35.3	33	28.5	27.3	24.8
37.5	35.6	33.6	31.4	30.9
31.8	26.1	24.2	20.6	16.7
36.2	33.8	33.4	30.3	26.7
27.6	26.9	25.3	21.5	24.5
26.1	24.3	21.8	19.1	15.4
24.4	21.1	19.4	16.9	14.6
30.2	22.2	18.4	16.2	13.1
28.2	23.3	19	17.5	14.6
23.4	22.2	17.2	14.7	11.7
20.4	18.1	14.7	13.5	10.6
32.3	27	24.7	23.1	19.1
26.5	21	20.7	20.8	16.3
25.5	23.5	19.6	16.8	14.1
22.6	19.3	17.1	17.8	15.8

23.2	21.3	17.6	16.6	13.6
30.5	23.9	20	15.7	12.6
26.4	24.3	20.6	14.8	11.8
25.7	21.7	15.7	14	11.6
27.2	25.3	16.2	13.2	10.9
31.3	26.6	17.2	13.8	10.2
25.6	22.5	14.2	11.9	10.1
31	26.5	20.1	19	14.8
31.5	30.1	26	25.1	20.9
33	32.3	24.5	21.4	20.5
37.2	33.5	31.9	29.6	26.3
35.4	32.2	28.8	27.7	24.8
33.6	28.2	23.4	20.9	18
32	28.6	23.7	20.1	16.5
34.2	29.9	27.3	20	16.6
38.2	42.7	25.4	20.2	15.4
30.6	27.4	22.7	18.6	12.8
25.2	21.9	18.9	14.7	12
24.6	24.4	22.1	17.4	15.9
26.6	26.5	22.5	20.5	14.2
36.1	36.9	23.3	20.9	15.4
35.3	32	30.1	26.2	17.6
35.3	34.8	26.2	26.8	20.7
36.4	32.2	28.3	21.9	20.4
36.7	39.2	27.1	21.1	16.1
37.7	32.4	33.1	28.9	25.8
25.4	20.9	16.6	14.9	13.1
32.8	33.8	24	17.8	12.5
33.9	32.8	22.7	15.4	10.6
29.4	29.4	16.1	16.1	10
21	19.8	13.7	15.5	12.3
27.8	25.3	23.1	20.3	17.3
27.5	22.4	17.5	15.3	13.5
35.8	43.7	31.2	16.3	13.6
37.2	37.9	32.1	24.7	19.4
31.1	30	26.4	26.2	24.3
27.3	25	22.4	20.6	16.6
35.3	41.2	28.6	25.3	23.3
39	41.4	35.2	20.8	17.4
33.9	31.4	30.9	27.9	24.4
37.5	35.2	29.5	27.8	25.4
41.3	49.7	31.9	19.9	15.5
37	40	30.9	17.9	13
34.8	33.3	31.9	28.1	22.9
33.8	32	26.8	22.3	16.6
40.5	48.5	33.4	25.9	20.8
38.4	41.9	34.7	17.4	12.9

28.7
33.2
41.2

25
30.3
44.4

20.6
25.9
35

17.8
23.4
27.1

16.7
20.9
22.4

Position 02 Data

	L Aeq	LAFmax	Lfreq 50 Hz (1/3)	Lfreq 63 Hz (1/3)	Lfreq 80 Hz (1/3)	Lfreq 100 Hz (1/3)	Lfreq 125 Hz (1/3)	Lfreq 160 Hz (1/3)	Lfreq 200 Hz (1/3)	Lfreq 250 Hz (1/3)	
27.05.2021 13:29:19.365	42.6	44.8	43.2	39.7	37.6	37.7	37.2	38.9	38.6	38.1	
27.05.2021 13:29:20.365	53.1	60.9	44.6	36.9	37.8	37.9	36.9	40.9	40.7	41.5	
27.05.2021 13:29:21.365	57.9	66	47.7	44.2	40.1	39.2	41.4	42.5	48	50.5	
27.05.2021 13:29:22.365	49.4	65.9	44.1	43.4	38.8	41.1	43.5	40.6	44.1	44.6	
27.05.2021 13:29:23.365	59.1	67	41.5	49.8	41	42.5	43.7	46.9	48	52.3	
27.05.2021 13:29:24.365	49.9	55.5	40.9	44.2	38.9	41	42.3	37.5	42.1	41.7	
27.05.2021 13:29:25.365	50.4	54.3	41	40.8	37.3	38.1	40.2	43.6	42.1	37.6	
27.05.2021 13:29:26.365	47.9	54.2	42.3	41.2	40.5	38.5	41	43.9	40.9	39.9	
27.05.2021 13:29:27.365	50.2	51.9	44.5	39.5	40.3	39.3	39.1	44.6	39.9	39.3	
27.05.2021 13:29:28.365	46.8	49	43.9	38.5	38.9	41	37.6	46.1	39.9	36.7	
27.05.2021 13:29:29.365	47	48.5	41.1	40.9	39.3	43.3	36	43.6	35.7	36.9	
27.05.2021 13:29:30.365	48.9	52.6	44	37.6	39.6	40.8	37.4	44.9	40.5	41.9	
27.05.2021 13:29:31.365	52.1	57.5	44.6	39.4	38.6	37.6	41.5	42.9	44.1	45.7	
27.05.2021 13:29:32.365	50.8	53	42.9	38.4	38.1	37.7	39.6	40.6	42.8	39.9	
27.05.2021 13:29:33.365	49.5	54.6	42.2	39.6	35.4	40.7	40.6	38.3	38.2	40	
27.05.2021 13:29:34.365	47.7	50.2	43.4	39.7	35.6	39.1	37.6	38.4	41.5	40	
27.05.2021 13:29:35.365	43.3	47.5	46.7	40.1	38.8	38.9	36.2	40.2	40.7	35.9	
27.05.2021 13:29:36.365	45.5	49	48.6	39.4	39.8	38.4	36.1	39.1	41.8	38.7	
27.05.2021 13:29:37.365	45.9	48.4	48.9	39.7	36.3	37.5	37.3	37.9	37.6	38	
27.05.2021 13:29:38.365	45	46.4	49.1	40.9	34.8	38.7	39.5	37.5	38.1	36.8	
27.05.2021 13:29:39.365	53.5	61	44	40	36.6	38.4	41.7	41.6	41.1	39.9	
27.05.2021 13:29:40.365	50.9	56.4	46.6	41.9	38.3	40.8	39.5	40.3	39.1	39	
27.05.2021 13:29:41.365	45.7	50.5	47.9	39	36	37.8	37.7	37.5	35.8	36.1	
27.05.2021 13:29:42.365	41.8	43	45	39	34.8	39.1	36.1	38.3	37	34	
27.05.2021 13:29:43.365	45.6	48.2	45.9	40.9	37.6	38.7	37	37.4	36.6	34.1	
27.05.2021 13:29:44.365	41.9	43.6	46.2	42.5	39.3	38.9	36.9	38	35.5	36.1	
27.05.2021 13:29:45.365	49.6	53.3	44.9	40.5	40.8	39.5	38.4	42.8	37.6	41.9	
27.05.2021 13:29:46.365	43.7	47.2	44.6	39.9	34.7	37.6	37.7	36.8	36	34.1	
27.05.2021 13:29:47.365	45.9	49.8	43.1	42.3	36.6	38.5	38.2	38.4	41.5	39.9	
27.05.2021 13:29:48.365	46.6	49.8	42.8	45	37.7	39.4	40.6	39.2	40.4	41.2	
27.05.2021 13:29:49.365	46.7	50.4	41.6	41.3	36.1	40	40.9	39.7	40.7	43.7	
27.05.2021 13:29:50.365	46.9	49.4	43.6	45.7	36.1	40.2	39.6	38.7	37.3	36.3	
27.05.2021 13:29:51.365	47.6	52.3	43.4	41.6	39.3	39.2	38.5	39.4	40.8	41.5	
27.05.2021 13:29:52.365	46.6	49.2	45.5	44.1	36.9	39.4	39.5	37.6	37.4	37.6	
27.05.2021 13:29:53.365	53.1	56.7	46.8	47.9	38.2	38.3	39.7	39.8	41.3	41.5	
27.05.2021 13:29:54.365	47.7	54.1	46	44.4	37.3	35.3	37.9	38.2	35.5	34.6	
27.05.2021 13:29:55.365	54.7	61.1	46.6	45.9	39.9	37	36.6	42.6	41.4	39.6	
27.05.2021 13:29:56.365	47.8	50.9	46.3	42.9	39.8	37.6	40.1	40.4	41.9	43.8	
27.05.2021 13:29:57.365	52.5	58.4	48.6	42.3	41.2	39.6	41.2	46.1	48.4	50	
27.05.2021 13:29:58.365	59	66.9	45.7	41.4	39.3	37.4	40.1	45.8	46.7	51.8	
27.05.2021 13:29:59.365	51	60.4	46.3	44.8	38.6	39.1	40.1	41.2	42.4	43.8	
27.05.2021 13:30:00.365	52.9	56.8	46.4	43.5	39.9	39.9	39.8	43.7	43	45.1	
27.05.2021 13:30:01.365	54.6	61	48.2	42.2	39.2	38	41.4	45	46.5	48.3	

27.05.2021 13:30:02.365	49.9	54.6	47.4	40.4	40.1	39.9	44.5	45.1	43.6	44.6
27.05.2021 13:30:03.365	56.3	61.3	48.4	41.3	38	40.7	41.5	44.2	48	44.9
27.05.2021 13:30:04.365	55.8	58.8	50.8	42.5	41.5	39.2	42.3	43.6	46.9	38.2
27.05.2021 13:30:05.365	60.3	64.4	49.2	44.6	41.8	42.7	42	43.8	44.9	40.5
27.05.2021 13:30:06.365	51.7	60.3	44.9	42	38.5	43.2	41	39.7	42.2	38.8
27.05.2021 13:30:07.365	45.3	50.8	47.4	44.3	42.8	41.1	40.7	37.6	41.9	39.1
27.05.2021 13:30:08.365	43.5	44.4	48.5	46	42.2	40.9	37.4	38.6	38.5	39.2
27.05.2021 13:30:09.365	49.2	52.7	49.8	39.4	37.8	40	40.1	40.1	42.9	41.3
27.05.2021 13:30:10.365	46	50.6	45.8	42.9	40.3	40	38.5	41	40.8	41.2
27.05.2021 13:30:11.365	48.1	49.8	44.5	41.6	37.2	38.7	37.3	40.2	41	39.7
27.05.2021 13:30:12.365	48.6	52.3	42.4	39.8	37	38.7	38.8	39.6	40	42.4
27.05.2021 13:30:13.365	45.3	49.5	42.9	39.8	37.9	39.6	37.8	40.5	40	41.8
27.05.2021 13:30:14.365	42.1	46.1	44.4	40.1	38.3	36.3	37.2	39.1	37.9	37.3
27.05.2021 13:30:15.365	44.1	47.8	44.4	39.3	36.7	38.5	36.1	38.5	39.8	39.4
27.05.2021 13:30:16.365	41.3	42.4	47	46.4	40.7	37.7	38.9	37.8	35.9	35.2
27.05.2021 13:30:17.365	51	55.1	44.1	41.1	38	38	38.6	40.4	39.9	41.3
27.05.2021 13:30:18.365	55.6	62.5	48	45.4	39.6	38.3	39.1	43	41.7	44.5
27.05.2021 13:30:19.365	53.7	58.1	47	45.8	38.6	39.8	42.2	42.5	44.9	47.6
27.05.2021 13:30:20.365	44	48.6	45	38.9	36.7	37.9	37.3	37	37.8	36
27.05.2021 13:30:21.365	47	51.8	47	45.3	38.6	37.7	37.1	38.9	39.5	41.5
27.05.2021 13:30:22.365	48.7	52.4	46.7	43.2	38.1	38.1	41.3	38	38.2	36.9
27.05.2021 13:30:23.365	47.5	52.8	46.2	41.5	37.5	39.8	39.2	38	40	37.4
27.05.2021 13:30:24.365	49	54.4	44.7	38.2	37.9	40.1	44.2	43.5	45	43.5
27.05.2021 13:30:25.365	45.4	50.9	47.3	41.2	37.4	38.3	40.1	38.7	41.1	39.8
27.05.2021 13:30:26.365	40.3	42	47.8	40.3	36.6	39.6	39.8	34.2	35.8	34.5
27.05.2021 13:30:27.365	41.4	42.4	49.6	39.3	38.1	38.4	38.5	36.9	37.3	36.5
27.05.2021 13:30:28.365	46	50.4	47.8	37.6	37	37.9	37.6	34.8	35.5	33.6
27.05.2021 13:30:29.365	48.5	51.4	50.4	39.1	38.6	39.1	37	37.5	39.7	39.2
27.05.2021 13:30:30.365	50.3	55	53.5	38.6	38.7	39.3	36.8	35.1	35.2	34.2
27.05.2021 13:30:31.365	45.4	48.3	52.3	39.7	38.7	43	38	35.2	39.3	38.9
27.05.2021 13:30:32.365	46.9	49.7	51.8	40.6	38.6	40.7	37.8	36.8	38.7	39.1
27.05.2021 13:30:33.365	46.2	50	53.1	40.6	38.4	40.8	36.8	37	38.1	38.7
27.05.2021 13:30:34.365	41.2	44.3	54.7	40.4	40.3	40.8	38	36	35.4	32.2
27.05.2021 13:30:35.365	41	41.8	54.7	39.3	38.6	39.8	37.1	35.9	36.8	33.2
27.05.2021 13:30:36.365	53.8	60.9	58.9	42	42.9	41	39.7	43.6	41.8	43.2
27.05.2021 13:30:37.365	47.2	49.6	61.7	41.1	39.1	41.5	40.8	38.2	38	38.5
27.05.2021 13:30:38.365	44.2	47.3	54.6	41.4	40.6	39.9	40.2	40.2	37	35.6
27.05.2021 13:30:39.365	50	52.3	50.2	40.3	39.9	40.2	37.8	37.5	37.6	38.8
27.05.2021 13:30:40.365	50.6	52.8	47.8	40.1	42.1	37.4	38.3	40	40.3	40.5
27.05.2021 13:30:41.365	48.1	54.2	52.7	40.6	43.9	43.3	39.9	38.5	38.2	35.9
27.05.2021 13:30:42.365	51	56	49.9	40.5	43.9	42.5	42.1	39	38.7	41
27.05.2021 13:30:43.365	45.6	48.4	47.7	41.9	43.8	41.9	39.6	38.4	38.8	36.5
27.05.2021 13:30:44.365	43.1	45.7	47.4	41.8	49.5	41.1	40.2	38.7	37.4	37.1
27.05.2021 13:30:45.365	41.9	44.9	45.6	41.9	45.4	38.5	39.3	38.5	36.6	34.5
27.05.2021 13:30:46.365	44.1	46	52.5	41.9	40.5	41	42.7	38.3	38.7	38.1
27.05.2021 13:30:47.365	46.6	48.6	52.3	42.8	40	44.3	39.4	39.4	39.2	36.1
27.05.2021 13:30:48.365	52.8	55	51.2	48.9	45.6	42.8	38.8	40.9	40.2	39

Lfreq 315 Hz (1/3)	Lfreq 400 Hz (1/3)	Lfreq 500 Hz (1/3)	Lfreq 630 Hz (1/3)	Lfreq 800 Hz (1/3)	Lfreq 1 kHz (1/3)	Lfreq 1.25 kHz (1/3)	Lfreq 1.6 kHz (1/3)	Lfreq 2 kHz (1/3)	Lfreq 2.5 kHz (1/3)	Lfreq 3.15 kHz (1/3)
35.4	35.6	37	33.7	33.6	33.5	31.7	32.8	28.4	25.8	21.9
37.4	36.1	39.3	41.7	45.2	44.5	47.6	42.2	40	40.3	36.6
47.8	45.3	39.8	40.3	44.3	53.6	52.5	42.8	38.7	39.3	39.5
42	42.9	43.3	40.7	40.3	43.4	40.7	36.3	35.1	35.1	31.3
51.9	51.2	55.9	52.5	48.3	51.4	44.4	46.7	44.5	42.2	44
37.6	38.7	40.2	42.6	43.1	43.4	37.4	38.4	38.4	37.1	33
38.7	43.8	40	41.9	41.9	41.1	43.8	39	37.1	34.6	34.3
40.5	41.9	42.2	40.9	38.6	37.8	37.2	34.8	34.2	33.3	33.7
38	38.4	42.3	39.8	40	40.8	41.5	40	38.7	38.2	37.2
38	35.1	38.4	38.6	38.3	37.8	36.3	33.1	35	33.5	32.9
40	35.4	37	37.3	36	38	36.7	35.4	35.9	36	34.5
42.9	37	40.6	40.4	38.2	41.2	40.8	37.1	34.7	35.2	34.4
43.4	44	44.7	46.3	45.9	43.5	40.7	37.4	39.2	34.9	34.7
40.4	37.9	41.1	47.6	44.6	39.5	36.2	35.3	39	36	35.9
33.7	38.1	45.9	43.4	42.9	37.2	37.2	37.7	38.9	34.7	31.8
39.2	39.1	43.9	34.1	35.4	37.8	39.3	38.1	35.2	35.7	30.2
34.5	37.5	36.7	36.9	35.1	33.8	31.5	29.5	29	28.4	26.9
38	40	42	37.8	34.8	37.9	36	31.1	27.6	24.7	24
37.8	40.8	40.3	38.6	35.1	33.3	33.5	35.2	35.1	34.7	29.5
36	42.4	41.7	37.1	35.3	33.6	30.3	28.8	30.4	29.7	27.2
39.8	44.5	44	44.8	46.6	45.2	45.6	39.4	41.7	38.8	40.1
38.8	39	38.8	38.2	41.2	41.9	41.3	39.6	40.4	41.6	39.6
33.6	36.5	37.9	36.1	36.6	36.9	37.6	35	35	33.2	28.8
34.2	36.3	34.2	34.7	34.6	32.5	29.8	28.2	26.3	26.6	24.7
35.9	39.7	35.1	36.2	34.6	33.5	34.2	35.1	36.8	36.7	30.4
31.4	33.8	35.5	34.9	34.9	33	31.1	27.9	29.5	26.6	22.2
40.4	34.5	35.7	36.1	37.2	38.1	37.8	39.9	42.5	39.4	38.8
35.2	37.9	37.5	34.8	35.6	37	34.1	29.7	28.2	27.2	25.6
37.3	41	39.1	36.1	36.3	39.3	37.2	32.8	30.3	28.2	22.5
39.2	37.8	39.2	37	36.2	38.6	38.7	34.9	33.8	32.8	27.8
41.5	39.7	42.5	38.9	37.7	37	34.7	35.2	32.5	31.5	27.9
34.1	32.4	35.3	40.2	38.8	35.9	37.3	36.5	36.8	37.6	29.8
40.8	38.8	38.5	39.5	39.8	41.6	38.7	34.5	31.9	29.4	27.7
35.6	33.6	34.3	35.9	36.5	37.6	37.1	36.8	35	36.1	30.8
39.9	36.6	35.4	36.7	37.6	41	35.8	33.2	44.9	48.2	44.8
36.6	33.3	36.9	38.4	34.8	33.9	31.2	31.4	39.1	41.2	38.5
38.2	38.1	41.6	43.4	46.4	43.3	41.4	42.6	39	47.7	47.9
39.8	39.5	41.1	37.5	38.8	39.6	38.6	34.9	35.3	35.5	31.4
46.7	43.3	43	43.8	42.9	45	43.8	40	37.5	37.5	35
51.6	51.9	52.4	48.6	51.3	52.4	47.6	47.5	47.1	42.3	39.6
42.4	37.5	39.3	40	41.3	43.3	43.5	39.1	38.1	32.7	32.7
41.6	40.6	41.6	46.6	47.8	40.3	40.7	39.8	40.9	43.3	39.7
47.4	44.2	45.7	48.8	48.4	44.7	43	43.7	42.1	37	39.3

42.8	43.2	44.7	42.8	38.2	40.8	39.9	37.6	37.4	35.5	32.2
41.1	39.6	40.6	49.8	49.7	49.4	49.8	41.7	40.7	40.9	38.3
37	39.8	40.7	51.9	51.5	39.4	40.5	40.5	45.3	44.7	43.1
38.5	37.7	39.7	48.7	55.5	56.1	47.6	41	49.6	45.5	40.5
37.8	37.8	35.9	39.4	47.5	47.2	42.6	34.8	34.3	34	33.5
40	40	40	39.3	37.9	35.5	33.2	31.1	29.5	26.8	24.1
34.2	33.5	37.7	34.3	36.4	34.6	32.3	31.7	32	28	24
38.7	39.3	43.6	44.9	39.5	38.1	40	33.9	35.4	36.4	33.7
40	38.2	40.3	38	38	37.1	35	32.2	32.7	32.3	27.3
39.4	41.4	39.9	40.8	39	37.7	37.1	39.2	36.4	34.4	29.7
39.6	38	41.9	43.7	39.2	40.3	40.2	34.7	33.1	32.7	31.1
39.9	38.1	36.2	34.3	36.9	37.1	35.4	32.8	32.3	31	29.9
35.2	35.5	34.4	33.5	34.7	34.8	32.3	27.9	27.2	26.3	20.5
38.2	37.2	38.2	36.4	36.3	36.1	33.7	30.1	26.9	24.8	24.9
34.3	33.1	33.8	33.6	34.9	34.4	30.2	27	24.3	23.1	20.1
40.6	40.5	42.9	39.8	40.1	39.6	34.5	33.1	46	41.9	25.2
39.8	40.2	39.4	42.6	48.1	47.8	48.9	42.7	42.4	46.1	41.2
43.5	40	41.5	43.1	42	43.9	44.1	37.1	47.5	43.5	36.9
33.3	32.4	36.4	36.2	36.3	34.6	33.9	32.5	33.6	31.6	26.8
40	38	37.6	36.9	38.4	40.3	37.3	34.5	34.5	33	30.8
34.8	36.7	40.7	42.4	42.8	41.4	38.9	37.1	33.2	32.7	30.1
36.8	33.6	37.5	46.3	38.2	35.4	35.6	32.8	32.6	31.6	28.6
42.2	44.2	40.3	43.4	40.5	41.3	34.8	34.3	35.6	31.2	31
39	41.3	40.8	39.5	36.4	35.1	32.6	30.7	30.2	28.2	25
30.2	30.3	31.8	33.3	34.1	31.7	29.7	26.8	26.6	25.1	22.5
32.7	31.2	33	32.9	34.5	32.6	30.8	29.2	28.7	25.3	24.1
30.1	29.3	30.6	31.7	34.3	32.6	29.7	31.3	42.4	36	21.4
38.1	37.5	36.2	35.2	34.9	37.8	36.3	32.9	37	43.1	38.3
34.1	32.7	32.1	35.3	36.7	34.6	32.4	34	46	43	34.8
39.3	39.9	38.4	38.4	38.4	36.5	33.9	31.1	30.9	27.7	24.7
37.1	37.5	39.5	39.1	39.1	39.6	38.4	34.5	33.3	32.7	29.3
35.5	34.9	38.9	37.2	42.3	38.2	35.9	31.8	31	29.3	26.4
30.6	31.8	31.8	31.7	35.1	33.8	28.5	25.5	24.3	26.4	26.3
30.4	31.1	31.7	33.2	35.7	33.7	28.9	25.8	23.8	21.9	24.2
40.4	37.8	39.4	43.7	47.8	47	48.6	38.9	35.8	34.3	33.4
37.9	35.6	36.6	36.7	38.2	40.1	38	36.1	35.9	35.5	31.9
35.7	33.2	33.8	38.1	37.6	34.8	30.4	30.2	32.6	30.4	27.6
40.1	31.9	34.5	37.8	36.4	35.8	32.6	33	42.9	43.8	41.1
38.8	37.9	38.2	37.5	38.6	35.1	35.1	41.9	45.7	40.1	32.5
33	35.5	35.7	39.6	35.3	32.7	30	29.8	43.2	40.2	28.6
37.7	41.1	41.6	48.5	44.3	38.4	41.5	36.9	33.4	37.3	33.4
35	33.4	32.8	35.7	35.5	33.6	31.5	30.8	30.4	29.4	27.3
33.4	31.3	33.1	34.3	37.4	34.3	30.4	28.5	26.7	23.9	24.6
33	30.8	31.8	33.7	35.8	33.9	30.8	30.7	29.3	28.5	21.5
35.4	32.4	36.3	37.8	36.8	34.9	30.2	31.8	29.6	28.1	30.2
33.9	36.7	36.1	40.5	38.3	35.3	30.8	35.8	35.1	35.4	30.7
34.2	35.6	41.9	40.3	38.8	38.1	32	38.6	41.4	49.3	38.4

33.8	37.3	40.6	37.7	38.7	37.7	35.1	39.8	46.5	46.8	43.3
40.5	39.9	41.6	38.1	39.9	44.1	41.3	38.7	36	38.1	34.3
39.1	43	45.1	50.2	43.8	44.2	42.2	45	39.6	39.8	35
36.9	38.9	41.6	50	44.7	37.9	39.6	38.6	34	37.8	32.2
35.6	35.9	41.2	42.1	38.6	36.2	35.6	32.3	31.1	32.9	30
40.6	41.6	43.9	41.2	40.4	38.1	34.9	34.9	39.7	35.8	33.6
39	39	38.3	41.7	39	37.3	35.3	38.2	41.6	38.6	32.7
41.4	41.5	47.7	41.8	39	39.6	37.2	38.2	41.9	42	35.8
37.7	38.4	47.1	44.9	40.4	41.3	39	41.7	46.2	39.4	35.4
40.3	39.1	48	47.7	41.4	44.9	40.9	40.4	41.4	40.8	41.2
36.5	37.1	47.4	47	40	42.3	39.9	40.2	41.9	40.4	41.2
41.5	40	48.1	46.4	41.8	42	39	39	41.5	39.6	38.7
41.4	39.5	46.1	47.6	46.2	47.1	46.6	42.6	40.5	39.4	37.6
44.9	44.4	48.1	48.2	43.2	47.2	46.4	43	43	42.1	42.7
41.2	42.7	47.6	46.8	42.3	43.9	40.7	40.6	45	44.9	38.7
49.3	51.1	49.3	54	53.5	52.9	44.3	41.1	44.3	46.3	45.9
42.3	38.1	44.1	46.9	39.9	46.6	39.5	40.2	44.8	44.8	38.2
39.4	38.6	48.2	46.6	40.3	37.8	35.2	36.6	37.9	38.6	35.8
45.3	44	45.5	46	42.6	42.6	38.7	37.5	35.7	39.9	38
42.9	49	46.1	46.3	42.4	41.4	41.4	39.9	37.2	38.7	35.6
39.9	40.4	43.8	41.6	43.6	41.8	39.4	38.6	39.6	37	34.3
40.5	38.2	39.9	41.2	46.5	41.3	37.6	37.9	42.4	38.1	33.7
44	40.5	42	47.9	40.5	37.3	35.6	41.1	46.5	46.9	35
43.1	40	38.5	46.8	40.4	42.4	40.6	41	44.2	50.1	49.2
42.9	38.5	44.9	46.6	39.6	40.2	38.6	45.3	46.1	52.2	47.4
36.3	34.3	44.6	46.5	38.4	38.2	36	37.6	38.3	37.6	35.2
40.1	42.3	44.2	46.8	41.5	40.7	40.1	37.7	38.4	37.4	37.2
39.9	41.2	45	45.5	43.1	41.7	39.2	36.4	36.8	37.3	36.7
40	39.9	42.7	46.7	40.2	41.8	40.7	38	36.9	36.7	36.3
42.1	37.5	40.2	46.6	40.7	41	38.4	35.6	35.8	35.6	35.2
39.8	39.9	41.6	45.4	39.6	38.9	36.6	38.6	46.5	46	38.2
40.3	40.4	42	44.2	38.1	36.2	33.8	37.1	41.3	45.7	35.2
35.8	37.8	42.5	43.4	45.2	43.2	47.1	40	34.5	34.8	36.4
35.6	39.6	40.9	41.9	43.5	41.2	40.7	44.4	42.2	43.3	40.4
35.6	37.2	37.6	38.6	37.1	34.9	33.1	29.9	32.2	32.9	31.2
32.3	32.5	34.8	34.5	35.9	33.8	31.8	29.1	28.9	27.3	26.4
36.7	38.4	36.1	35.6	36.2	33.3	30.5	28.8	30.2	26.7	25.1
36.4	34.3	36	35.3	35.9	34.3	30.7	31.6	43.5	46.5	38.4
42.8	40.6	39.2	42.1	43.9	45	48.1	41.6	40	39.5	39.1
38.4	35.1	39.4	43	40.9	39.8	36.3	34.9	37.4	39.2	38.3
35	35.6	36.6	37.9	38.9	35.6	33	33.7	37.4	43.5	35.9

Lfeq 4 kHz (1/3)	Lfeq 5 kHz (1/3)	Lfeq 6.3 kHz (1/3)	Lfeq 8 kHz (1/3)	Lfeq 10 kHz (1/3)
18.5	14.9	11.8	11.4	8.8
32.8	33	32.7	24.8	23.3
37.1	35.7	38.3	35.3	29.6
27.8	26.3	26.7	23.7	19.7
38	37.2	36.9	35.1	32.9
31.2	27.1	22.6	16	13.3
29.5	27.6	23.8	18	15.5
33.6	31.3	21.9	15.4	12.6
36.5	33.2	28.1	25.6	22.4
33.7	30.2	21.4	14.8	10.6
33.9	31.2	23.5	16.3	11.9
33.4	30.5	24.8	20.1	15.6
37.1	28.3	22.9	21	17.2
33.6	33	27.4	22.4	17
28.8	23.2	14.7	13.2	12.4
28.6	27.3	24.5	20.3	17
24.7	21.8	19.8	18.3	14.5
22.3	19.9	16.8	13.5	9.8
25.3	22.8	17.6	14.7	11.2
26	24.5	19.1	14.6	10.4
34.9	34.2	33.4	31.9	29.3
35.2	33.8	31.5	28.9	24.7
25.6	23.3	19.7	16.3	14.3
24.8	21.8	17.4	14	11.2
29.7	25.9	22.2	18	15.2
20.2	17	15.2	14.2	12
32	32	27	22.3	18.2
23.5	24.7	21.5	18.9	17.5
21.6	20.2	16.7	13.5	11.4
25.7	24.2	19.1	16.1	11.6
26.5	26.1	23.8	21.7	16.8
26.8	24.8	18.7	15.2	11.8
26.5	25.1	22.8	20	16.3
27.3	25.9	20.8	16	11.9
28.4	24.8	20.3	18	13.8
29.1	25.5	22.1	13.7	13.9
31.4	27.8	25.7	25.3	17.5
30.1	30.2	23.9	17	15
33.5	30.7	32	25.4	21.4
40.4	39.1	35.1	30.4	29.7
30.5	28.8	24.9	22.8	21.3
37	34.5	29.6	29.3	28.7
33.6	33.9	30.7	29.7	26.1

30.6	26.8	24.6	22.4	20
34.3	31.1	31.1	28.9	25.8
35.7	26.6	23.2	20.8	18
41.2	37.1	34.6	30	27.4
29.8	26.6	20.8	16.5	13.2
22.2	18.6	15.8	13.4	10.6
21.8	18.8	15.7	14.5	12
31.9	25.1	21.5	16.9	13.3
25.5	25.2	21.8	17.7	14.9
32.3	26.5	24.1	20.5	18.2
29.1	20.4	16.3	13.2	10.7
29.4	24.9	20.7	17.3	15.2
18.7	17.8	15.3	12.9	10.2
23.2	21.5	17	14.5	11.6
19.6	18.6	15.3	12.9	10.7
22.3	20.4	19.8	16.4	12.9
36.2	32.8	31.3	26	22.2
36.3	31.8	30.2	25.4	23.1
24.7	22.7	18.6	16.3	13.4
28	26.1	24.7	20.3	17
26.8	24.3	20	16.9	13.2
26.8	23.5	21.2	19.8	14.5
28.3	25.4	20.5	17.6	14.5
23.1	23	19.5	17.9	13
21.2	18.7	16.4	14.1	11.3
24.4	20.4	17.9	15	11.8
21.6	18.8	16.6	14.5	11.8
32.9	22.7	19.5	16.8	13.2
33.5	26.8	24	18.6	15.4
25.2	21.6	16.4	14.2	11.6
27.2	21.7	16.7	14.1	11.4
24.1	18.7	15.8	13.9	11.3
29.8	24.5	14.8	12	10.2
27.1	19.9	13.9	12.3	10.4
31.3	31.5	28	28	21.6
30.2	23.1	18.8	16.8	12.7
31.1	26.4	24.1	20.2	18.2
32.6	27.3	26	24.7	20.5
31.1	25.5	20.1	21.9	16.8
30.2	26.6	26.4	19.5	13.7
30.1	25	21.3	18.7	14
36.3	39.8	30	15.5	12.9
32.3	29.6	23.7	14	11.3
21.2	16.3	13.2	12.3	10.4
31.6	23.1	21.1	14.5	12.2
29.3	35.9	23	16.2	13.3
32.8	33.6	27.5	18.6	14.6

31.3	29	25.3	24	23.1
29.9	24	20.1	16.7	15
38.8	46.2	28	21.3	19.1
31.6	29	28	20.9	16
24.6	26	21.7	21.9	19.6
34.6	28.4	24.8	22	20.4
33	28	23.4	17.2	11
36.7	42.1	31.4	19.1	13.9
33.8	31.7	27.8	14.8	12.3
37.8	33.7	25.7	23.8	13.6
40	41.1	33.7	16.5	10.8
37.3	34.8	26.3	17.1	13.9
38.6	34.3	28.5	24.6	21.2
43.3	39.6	37.4	33.7	27.3
37.8	33.6	26.9	21.1	18.4
42.6	41.8	38.7	34.9	33.8
38.8	34.9	29.7	24.8	21
32.1	27.6	21.6	16	13
32.3	26.6	23.7	20.3	15.6
32	27.5	22.8	20.2	17.3
31.2	25.6	21.7	20.5	15.7
32.6	29.3	24.5	23.6	21.6
30.1	25.2	21.7	21.1	19.2
34.9	30.8	25	20.3	17.1
35.9	29.5	23.8	24.5	15.4
35.5	32.9	21.7	17.5	15.4
35.7	32.6	23.9	17.9	14.4
36.5	31.5	22.9	16.8	13.1
35.9	31.5	23.3	16.8	13.7
35.4	30.7	23.3	14.5	11.2
38.6	33.6	23.8	15.9	11.6
32.3	30	30.2	26.2	11.9
32.8	31	31.5	30.8	26.9
36.8	34.7	32	28.4	25.2
27	26.4	19.4	18	13.8
23.6	24.6	17.5	13	10.8
24.2	23	19.8	16.6	12.5
24.5	22.1	18	14.8	12.3
39.5	40.7	33.3	29.9	26.3
32.3	38.4	26.3	18.7	15.9
31.9	30.7	29.5	23.4	19.7

Position 03 Data

	Laeq	LAFmax	Lfeq 50 Hz (1/3)	Lfeq 63 Hz (1/3)	Lfeq 80 Hz (1/3)	Lfeq 100 Hz (1/3)	Lfeq 125 Hz (1/3)	Lfeq 160 Hz (1/3)	
27.05.2021 14:10:04.360	44	44.7	50.6		46.2	44.9	45.9	48.3	45.3
27.05.2021 14:10:05.360	44.7	46.5	46		46.9	42.6	47.6	48.6	45.3
27.05.2021 14:10:06.360	48.4	52.8	47.3		45.6	43.2	45.8	48.6	45.1
27.05.2021 14:10:07.360	45.2	49	46.3		46	40.7	46.2	49.2	46
27.05.2021 14:10:08.360	49.4	56.2	47		42.2	42	46.4	49.1	45.5
27.05.2021 14:10:09.360	44.7	47.2	47.8		43.9	41.8	44.8	46.3	45.1
27.05.2021 14:10:10.360	46.4	49.4	48		44.2	46	44.3	46.9	45.5
27.05.2021 14:10:11.360	45.9	48.9	43.8		45.1	45.5	45	46.4	43.1
27.05.2021 14:10:12.360	45.8	48.5	42.2		43.7	44.8	44.9	43	42.9
27.05.2021 14:10:13.360	42.8	44.6	51.9		45.5	45.3	43	44.5	44.3
27.05.2021 14:10:14.360	42.6	47	57.1		46.1	43.8	43.5	44	42.2
27.05.2021 14:10:15.360	42.5	44	50.3		45.2	43.2	42.9	42.9	40.3
27.05.2021 14:10:16.360	43.3	45.3	51.4		46.2	41.5	46.5	41.1	39.1
27.05.2021 14:10:17.360	46.9	53.3	48.5		48	42.7	45.3	38.9	40.1
27.05.2021 14:10:18.360	48.8	54.6	44.3		47.1	42.2	38.3	39.2	41.1
27.05.2021 14:10:19.360	43.4	47	44.3		42.4	38	37.8	38.5	39.9
27.05.2021 14:10:20.360	48.3	54.5	53.9		55.6	49.9	46.4	43.9	42
27.05.2021 14:10:21.360	43.3	45.4	47.4		43.3	39.3	40.8	37.9	38.1
27.05.2021 14:10:22.360	47.3	53.7	45.6		46.2	39.1	39.9	39.5	41.8
27.05.2021 14:10:23.360	45	46.9	44.8		43.2	40.8	40.3	40.8	43
27.05.2021 14:10:24.360	51.7	58.3	46.9		42.1	41.4	41.8	39	39.1
27.05.2021 14:10:25.360	47.1	51.4	44.9		45.8	39	38.3	41.9	40.5
27.05.2021 14:10:26.360	43.6	46.5	43.7		42.6	41.1	37.9	38.7	37.4
27.05.2021 14:10:27.360	47.2	50.2	47.8		42.5	40.8	39.7	38.2	38.9
27.05.2021 14:10:28.360	45.9	48.1	45.3		42.3	41.1	39.1	38.4	39.3
27.05.2021 14:10:29.360	46.6	49.2	45.8		44.5	40.3	38.8	38.7	36
27.05.2021 14:10:30.360	45	47.1	46.3		44.6	41.6	40.1	39.6	40.2
27.05.2021 14:10:31.360	43.7	45.9	45.4		41.9	40.1	39.4	38.6	37.6
27.05.2021 14:10:32.360	47.7	49.9	50		40.3	38.7	38.5	39.2	38.7
27.05.2021 14:10:33.360	46.8	51.1	53.4		41.7	39.6	38.8	38.9	37.2
27.05.2021 14:10:34.360	48.4	55	57.6		41.5	40.5	39.1	40	38.3
27.05.2021 14:10:35.360	47.4	52	51.4		42.2	37.7	38.1	38.1	40.3
27.05.2021 14:10:36.360	42.9	46.5	44.7		41	39.8	38.5	38.3	39.1
27.05.2021 14:10:37.360	43	46.2	42.7		41.1	40.1	41.5	37.7	38.7
27.05.2021 14:10:38.360	44.4	46.8	46.9		44.3	42.2	40	39.6	35.9
27.05.2021 14:10:39.360	46.5	49.9	53.5		42.9	42.2	41.8	40.6	37.4
27.05.2021 14:10:40.360	43.5	46.7	50.3		48.5	40.5	39.6	41.7	37.9
27.05.2021 14:10:41.360	43.5	44.9	46.3		44.8	44.5	43.7	39.9	37.8
27.05.2021 14:10:42.360	44.4	45.4	52.2		45.5	46	41.4	41.7	40.9
27.05.2021 14:10:43.360	46	51.4	59.4		42.3	44.7	42.2	43.7	41.8
27.05.2021 14:10:44.360	41.5	42.3	59.1		42	42.7	42.8	42.8	43.4
27.05.2021 14:10:45.360	44.7	47.8	52.8		43.3	41.8	40.7	43.7	43.9
27.05.2021 14:10:46.360	48.4	53.7	52.6		42.6	42.6	43	42.4	44.2

27.05.2021 14:10:47.360	46.7	52.2	53.2	40.6	41.5	42.6	41.5	43.2	43.1
27.05.2021 14:10:48.360	46.7	51.6	49.1	41.7	41.2	42.3	41.7	43.5	44.1
27.05.2021 14:10:49.360	46.1	48.2	48.8	41.7	40.2	43.2	40.2	42.9	43
27.05.2021 14:10:50.360	49.6	54.1	46.3	39.3	40.9	42.4	40.9	39.7	42.2
27.05.2021 14:10:51.360	45.2	46.5	53.6	42.4	40.4	41.3	40.4	38.2	38.8
27.05.2021 14:10:52.360	50.9	53.4	51.2	44	47.8	42	47.8	38.2	37
27.05.2021 14:10:53.360	48.3	51	47.7	41.8	40.2	40.6	40.2	36.8	36.6
27.05.2021 14:10:54.360	46.7	50.2	47.1	43.4	42.6	41.4	42.6	38.5	37.5
27.05.2021 14:10:55.360	42.4	44.8	51.8	44.4	45.1	44.8	45.1	39.6	39.2
27.05.2021 14:10:56.360	43.7	44.8	49.4	50.5	48	43.8	48	38.6	39
27.05.2021 14:10:57.360	48	51.6	45.1	50	48.2	49.2	48.2	42.7	44.2
27.05.2021 14:10:58.360	47.8	51.2	44.5	50.2	51	49.8	51	42.3	41.9
27.05.2021 14:10:59.360	43	43.6	45.6	53.5	51.1	52.3	51.1	41.2	40.3
27.05.2021 14:11:00.360	45	46.5	44.8	55.8	52	54.7	52	45	45.5
27.05.2021 14:11:01.360	45.1	47.8	45	53.2	52.6	51.1	52.6	44.4	44.3
27.05.2021 14:11:02.360	42.7	44.7	44.5	42.5	39	42.3	39	38.7	40
27.05.2021 14:11:03.360	45.2	46.1	48.9	43.2	39.8	40	39.8	39.4	40.2
27.05.2021 14:11:04.360	50.1	54.3	46.2	44.6	40.1	39.7	40.1	40.3	40.9
27.05.2021 14:11:05.360	43.5	49.9	46.9	44.9	45.9	45.1	45.9	44.1	40.7
27.05.2021 14:11:06.360	42.6	45.7	47	44.3	47.5	40.8	47.5	43.4	39.2
27.05.2021 14:11:07.360	44.3	47.3	48.4	41.2	46.9	39.2	46.9	39	41.5
27.05.2021 14:11:08.360	46.5	52	47.3	48.7	47	41.7	47	40.6	40.9
27.05.2021 14:11:09.360	42.9	47.6	42.9	48.5	43.6	42.2	43.6	40.4	38
27.05.2021 14:11:10.360	49.7	56.2	47.3	50.4	41.4	38.8	41.4	38.2	40.1
27.05.2021 14:11:11.360	45.9	49.2	46.3	45.5	41.5	40.2	41.5	38.7	40.5
27.05.2021 14:11:12.360	44.4	46.2	47.7	46.7	39.3	41.9	39.3	38.6	39.3
27.05.2021 14:11:13.360	45.2	47.8	50.3	46.7	43	43	43	39.8	40.7
27.05.2021 14:11:14.360	45.7	49.2	44.9	47.6	40.6	40.7	40.6	39.6	40.8
27.05.2021 14:11:15.360	48.8	54.8	48	46.5	40.8	41.9	40.8	42.1	41.8
27.05.2021 14:11:16.360	52.8	60.6	51	48.6	42.9	43.3	42.9	40.1	41.4
27.05.2021 14:11:17.360	44.9	58.5	51	42.6	39.9	44	39.9	36.9	39.7
27.05.2021 14:11:18.360	50.3	54.4	47.6	44.2	41.3	42.9	41.3	39.1	41.8
27.05.2021 14:11:19.360	52.8	56.8	48.7	43	40.4	41.5	40.4	39.1	38.9
27.05.2021 14:11:20.360	44.9	55.8	51.9	45.4	41.2	40	41.2	40	40.7
27.05.2021 14:11:21.360	44.6	48.9	49.5	45.5	39.8	42	39.8	38.6	38.1
27.05.2021 14:11:22.360	39.9	41.5	52.1	47.8	39.8	40.7	39.8	36.3	36.5
27.05.2021 14:11:23.360	42.8	45.2	51.1	45	43.9	43.1	43.9	41.3	40.8
27.05.2021 14:11:24.360	44.9	46.8	51.8	53.2	42.8	45.3	42.8	47.9	41.4
27.05.2021 14:11:25.360	45.4	47.4	48.3	47.8	41	48.1	41	45.5	39.8
27.05.2021 14:11:26.360	48.4	50.5	51.8	54.6	48.7	47.4	48.7	44.6	42.7
27.05.2021 14:11:27.360	47.9	51.1	52.8	48.5	40.1	42.2	40.1	45.3	42.6
27.05.2021 14:11:28.360	43.4	45.2	50	45.1	40.5	44.8	40.5	41.7	38
27.05.2021 14:11:29.360	45.3	49.5	49.7	45.1	45.3	43.8	45.3	40.2	38.1
27.05.2021 14:11:30.360	44.8	49.1	50.9	42.8	44.4	45.7	44.4	40.7	40.6
27.05.2021 14:11:31.360	43.1	43.9	48.6	44.1	44.1	51.1	44.1	43.4	40.9
27.05.2021 14:11:32.360	44.8	47.5	47.5	46.5	47.6	45	47.6	45.2	38.6
27.05.2021 14:11:33.360	43.1	45.6	48.5	48.4	50.2	43.6	50.2	43.9	37.5

27.05.2021 14:11:34.360	42.3	44.5	48.8	48	45.6	40.3	41.8	39.7
27.05.2021 14:11:35.360	42.5	44.3	48.6	47	42.6	40.7	40.3	38.9
27.05.2021 14:11:36.360	46.1	50.7	43	46.2	43.5	40.3	41.6	38.3
27.05.2021 14:11:37.360	44.8	48.4	52.4	45.7	45.7	45	41.5	38.1
27.05.2021 14:11:38.360	48.1	52.5	54.3	48.2	45.1	45.9	41.4	41.3
27.05.2021 14:11:39.360	52.4	59.8	50.8	47.6	44.3	44.4	42.9	44.7
27.05.2021 14:11:40.360	47	54.1	46.4	48.1	42.4	43.1	41.7	43.3
27.05.2021 14:11:41.360	48.1	52.5	47.1	48.3	41.9	41.3	41.3	41.8
27.05.2021 14:11:42.360	45.1	47.7	48.1	47.1	40.4	40	40.4	40.2
27.05.2021 14:11:43.360	46.7	49.7	47.3	49.6	40.8	40.6	41.3	39.9
27.05.2021 14:11:44.360	47.8	51.8	45.8	48.2	42	39.6	41	39.8
27.05.2021 14:11:45.360	48.1	51.9	49	47.2	42.1	42.1	40.9	40.6
27.05.2021 14:11:46.360	46.9	49.2	47.7	46.1	44	43.3	40.1	40.6
27.05.2021 14:11:47.360	52	57.5	50	45.5	41.5	43.4	40.7	44.6
27.05.2021 14:11:48.360	45.8	49.1	46.8	47.4	42.2	43.2	43.7	42.8
27.05.2021 14:11:49.360	45	49.1	47.9	46.5	44.1	43	41.5	39.9
27.05.2021 14:11:50.360	49.7	53.8	48.6	48.2	45	39.7	39.4	37.5
27.05.2021 14:11:51.360	44.9	47.9	47.3	45.8	46.6	39.6	40.3	40.3
27.05.2021 14:11:52.360	46	49	49.6	48.2	44.8	43.6	38.1	42.1
27.05.2021 14:11:53.360	46.3	49.7	49.2	44.2	41.4	40.8	37.3	38.8
27.05.2021 14:11:54.360	47.6	52.5	48.7	43.5	43.3	40.7	37.5	36.9
27.05.2021 14:11:55.360	45.5	51.5	50.3	44.1	40.4	40.1	39.4	38.1
27.05.2021 14:11:56.360	43.1	47.5	44.5	40.1	41.4	39.6	38.4	37.4
27.05.2021 14:11:57.360	40.3	42.8	47.1	40.5	43.6	40.2	36.6	37.9
27.05.2021 14:11:58.360	40.4	42.1	52.9	43.4	42.9	43.2	37.9	36.1
27.05.2021 14:11:59.360	42.5	48.4	54.5	44	42.8	43	37.4	36.9
27.05.2021 14:12:00.360	47.5	52.1	49.6	49.1	40.1	42.2	40	38
27.05.2021 14:12:01.360	45.6	50.2	51.4	50.6	43.5	38.3	38.8	37.7
27.05.2021 14:12:02.360	42	43.7	48.4	45.1	44.9	39.5	35.4	38.1
27.05.2021 14:12:03.360	41.3	45.5	47.3	45.8	40.9	39.9	39.5	37.3
27.05.2021 14:12:04.360	44.5	48.6	50.6	43.4	42.9	41	38.4	39.3
27.05.2021 14:12:05.360	44	45.2	50.6	44.6	45.4	40.1	38.4	40.4
27.05.2021 14:12:06.360	47.1	50.7	53.9	46.1	42.9	43.7	38.7	39
27.05.2021 14:12:07.360	45.3	47.3	53.7	46.2	42	40.3	38.4	37.9
27.05.2021 14:12:08.360	45.5	47.5	49.4	43.5	41.8	40.7	39.9	38.4
27.05.2021 14:12:09.360	43.8	44.5	53.9	45.4	41.3	38.3	39.5	40.6
27.05.2021 14:12:10.360	46.5	52	49.9	45.1	40.4	41.4	39.3	41.8
27.05.2021 14:12:11.360	46.9	51	49	43.7	41.6	41.2	40.7	38.9
27.05.2021 14:12:12.360	48.2	53.1	49.1	43.9	42.2	42.1	40	39.7
27.05.2021 14:12:13.360	46.1	48	48.5	44.1	43.6	41	39.6	39.7

Lfreq 200 Hz (1/3)	Lfreq 250 Hz (1/3)	Lfreq 315 Hz (1/3)	Lfreq 400 Hz (1/3)	Lfreq 500 Hz (1/3)	Lfreq 630 Hz (1/3)	Lfreq 800 Hz (1/3)	Lfreq 1 kHz (1/3)
43.2	39.5	36.8	36.4	34.4	32.9	36.1	35.9
43.9	40.1	35.4	35.2	35.9	34.4	36.5	36
43.8	40.7	38.7	39.9	39.2	34.5	37.4	38.3
43.3	40.2	36.1	35.7	36.9	35.2	36.6	35.8
45.5	41.7	36	36.3	36.6	36.7	39.6	45.2
44.3	39.8	36.2	38.1	37.4	35.1	36	35.6
41.5	40	36.4	38.3	39.7	35.7	39.4	37.1
41.9	38.8	33.9	31.8	34.9	32.5	36.2	36.1
40.7	37.1	34.1	33.9	35.5	32.2	35.2	36.1
40.1	35.3	34.5	32.2	37	31.3	32.6	33.4
38.3	35.5	34.5	37.1	37	32.1	34.1	32.8
36.5	33.7	29.4	29.9	36.5	30	31.3	32.3
36.8	35	33.7	34.8	35.5	30.5	33.2	32.8
41.2	38.7	37.6	37.7	39.3	37.4	39.3	41.6
40.2	39	39.4	39.8	36.4	35.6	37.5	39.8
38	36.5	35.5	34.8	35	32.8	34.7	35.9
42.3	41	40	39.6	39.4	36.9	36.1	36.7
36.9	35.1	34.7	34.9	32	31.8	35	34.9
42	41.3	39	39	39.6	37.4	39.2	39.9
40	37.9	34.8	34.7	33.6	35.8	35.8	38.3
39	39.8	36.9	38.1	34.4	32.8	33.4	37.1
35.7	34.1	33.8	33.8	35.9	34.2	33.8	35.1
37.1	36.3	32	36.2	38.5	33.6	36.5	34.9
37.3	35.6	33.4	35.2	40.8	36.9	38.3	36.4
39.8	39.5	36.8	41.6	42.5	37.3	35.8	36.5
35.9	34.9	31.2	38.6	43.3	34.6	35.2	35.6
40.6	36.6	34.2	33.1	34.4	35.4	34.4	35.2
36.6	34.3	32.4	31.2	31.8	30.8	33.9	34.8
35.9	34.6	33.6	31.5	32.7	33.1	34.3	35.5
35	33.9	31.2	31.1	31.7	32.5	34.4	34.4
39	37.8	37.4	39.7	38	33.9	37.6	42.8
41.2	42.6	38.9	42.7	43.5	37.5	35.5	36.2
37.4	35.5	32.2	30.7	33.2	34	35.7	36.1
37.3	36.7	33.6	33.1	32.1	31.5	35.4	37
36.1	35.3	31.9	37.8	34.3	33.6	35.4	35
36.7	35.5	32.3	36.9	32	31.5	34	36.2
37.8	36.2	32.6	32.8	32.4	33.2	34.2	36.6
36.6	34	30	31.9	31.7	32.3	33.6	34.3
38.4	33.9	31.9	30.5	31.7	31.8	33.6	34.6
38.7	34.9	31	36.6	34.4	31.7	34.5	34.3
42.1	36.5	32	29.5	30.5	31.2	33.8	34
40.9	36.2	33.4	37.2	31.4	32.6	34.5	34.8
43.2	40.2	34.8	32.8	34.6	36.3	39	39.6

41.8	39.8	36.6	34.2	32.3	33.8	36.8	37.7
44.4	44.1	39.8	38.9	35.5	34	37.3	38.6
42.6	41.4	37.3	36.9	37.8	37.5	38	38.9
42.5	41.4	39.9	39.9	45.1	43.9	39.2	41.2
40.3	39.4	36.3	36.8	38.2	34.3	38	39.2
37.5	38.5	41.4	39.6	46.9	39.8	44.4	46.4
36.5	37.4	36.9	37.7	43.7	36.5	38	37.9
38.2	35.8	33.8	34	37	35.8	38.1	35.9
36.6	34.4	31.7	31	33.1	33.1	35.4	35.6
37.5	35.7	32.5	31.9	31.7	32.8	35.5	35.5
38.8	35.5	38.4	39.2	40.1	31.7	35.6	35.5
38	36.2	34.6	37.7	38.1	34.2	36.6	37.2
37.4	35.4	32.2	30.3	31.1	30	35.1	35.5
40	39.3	35.7	36.5	36.4	32.9	35.8	37.7
40.5	37.8	36.3	34.6	37.7	31.6	36.9	37.8
37.9	35.3	31.2	31.2	34.5	34.8	34.7	34.7
39.8	39.4	36.1	34.6	35.9	32.6	34.6	35.6
39.1	37.6	36.3	37.8	37.6	33.5	35	35.8
40.8	39.4	38.1	36.7	37.3	34.9	35.6	34.7
37.9	36.6	33.4	32.7	33.6	32.9	33.8	34.3
40	37.3	35.8	37.2	36.6	34.5	35.1	35.1
38.4	36	31.9	31.4	34	34.4	36.1	41.2
37.6	35.9	33.5	35.5	33.3	32.3	35.8	36.3
41.6	41.8	38.9	42.4	41.4	35.6	35.2	37.3
39.9	38.9	36.9	36.8	40.8	33.6	35.6	35.9
40.2	35.9	37.8	41.7	37.8	34.5	34.2	35.2
38.3	35.6	34.6	36.2	40.8	36.6	36.1	37.2
39.2	37.3	33.4	33.2	35.1	32.7	33.5	34.6
42.2	39.9	38.5	37.1	38.3	37.4	38	42.9
41.7	40.1	37.2	39.3	36.6	35.4	41.6	47.7
37.6	35	32.7	33.1	35.2	34.7	37.1	37.5
40.7	41.7	41.5	46.1	42.6	36.6	37.9	39.2
39.6	37.4	35.7	36.4	50.3	46.9	39.8	44.9
36.8	35.1	36.6	33.5	43.5	33.5	33.7	35.9
36.4	35	34.5	30.5	31.3	31.9	33.1	33.5
34.8	32.3	31.6	30	30.3	30.8	32.7	33.3
37	35.2	34.3	32.9	31.2	31.1	33.8	34.7
39.5	39.4	37.2	37.2	34.8	33.8	35.8	36.1
38.9	39.2	36.9	37.6	35.3	35.2	37.1	36.5
40.1	39.5	39.4	39.5	38.1	34.9	37	38.1
40.2	39.4	37.7	39.6	39.6	35.3	35.7	36
38.9	35.7	32.7	36.3	32.9	32.7	36.1	36.4
38.9	37.9	36.2	36.1	35.8	32.7	36.3	37.2
41	37.5	37.1	37.8	36.5	33	36.9	37.4
39.7	35.9	33.1	33.3	31.9	31.7	35.5	35.1
38.1	36.2	34.3	33.1	33.9	32.8	35.5	36.8
37.4	35.7	31.7	30.9	32.2	33.8	35.1	35.6

37.4	35.2	34.5	35.4	34	32.1	34.5	34.1
36.6	35.5	32.2	32.5	33.6	33.5	35	34.7
39.4	37.4	33.5	36.2	33.3	33.7	35.1	34.6
39.5	37.2	33.5	33.4	32.4	31.9	34.9	35
42	38.7	34.8	38.1	36.8	36.3	37.3	42.2
46.9	47.8	42.3	41.6	41.9	40	40.8	48.6
41.5	40.2	39.2	36.8	43.5	39	37.1	37
43.4	40.2	38.2	40.1	44.7	40.9	38.3	38.8
40.5	39.4	35.8	36.1	40.4	35.8	36.3	37.9
38.7	38.5	34.8	35.4	39.2	36.5	35.8	36.9
39.1	36.3	36	37.9	45.2	38.2	36.9	38.5
39.2	36.6	33.8	36.5	41.3	36.7	37.9	37.1
39.3	39.8	33.5	39.6	43.8	36.1	37.3	38
46.4	47	42.5	47.2	46.2	44	40.1	46.2
43.1	41.4	37.5	40.1	40	37.7	36.7	37.8
39.9	37.4	34.1	36.7	41	37.5	35.8	36.9
39.1	38.5	34.6	37.1	43	42.6	36.6	36.8
37.3	36.4	34.6	37.5	40.7	36.4	36.2	34.7
42.8	38.3	32.9	35.2	36.8	34.6	40.2	37.4
42	39.2	33.3	33.4	31.4	37.5	40.5	40.5
35.2	33.2	32.7	33.4	35.2	37.1	34.4	33.8
37.7	36.9	33.4	34.4	39	33.3	33.9	33.7
36.6	36.3	31.8	33.8	42.1	32.7	33.9	33.5
34.3	32.9	31.3	31.5	33.7	30.5	33.4	33.1
33.2	32.6	31.6	29.7	34.4	29.2	32.6	33
36	33.2	31.2	31.3	31.5	30.8	33.7	36.1
36.6	36.9	34.9	34.6	35.5	30.5	33.7	34.2
35.8	34.5	34.5	35.1	33.6	32.6	34.4	34.8
34.6	33.7	30.6	30.3	30.1	29.5	33.5	33.3
35.3	34.6	32.4	32.1	32.2	31.2	35	32.7
39.5	38.5	36.6	39.1	37.5	34.3	36.9	35.9
39.6	38.8	35.8	37.5	34.7	34.2	36.3	36.3
37.6	36	34.8	33.7	41	32.1	35.6	33.4
36.7	36.9	32.6	33.8	35.3	31.7	34.7	34.7
36.9	36.5	33.3	34.5	44.1	34.6	36.7	39.2
36.3	36.3	34.8	33.2	33.2	32.4	37.6	38.4
41	38.8	35.3	34	34	34.6	38.5	41.7
39.2	38.3	35.4	34.9	33.8	33.6	37.6	38.7
43.1	42.7	39.5	42.3	37.4	37	37.4	38.6
39.6	39.1	35.3	33	37	34.1	35.9	37.7
41.7	42.2	39.1	38.8	42.1	42.5	37	40.5
43.7	42	36.4	35.3	36.1	38.2	37.3	39.8
45.6	44.1	41.5	44.8	43.9	39.8	43.2	45.3
40.8	40.6	36.1	36.1	35.9	35.7	36.8	38.2
40.2	38.7	36.1	37.4	39.1	36	36.7	38.6

Lfreq 1.25 kHz (1/3)	Lfreq 1.6 kHz (1/3)	Lfreq 2 kHz (1/3)	Lfreq 2.5 kHz (1/3)	Lfreq 3.15 kHz (1/3)	Lfreq 4 kHz (1/3)	Lfreq 5 kHz (1/3)	Lfreq 6.3 kHz (1/3)
33.2	31	30.2	26.3	22.4	19	14.4	12.1
34.1	32.5	30.2	29.8	24.5	24	24.3	20
34.2	33.5	42.2	38.4	31.2	30.5	26.6	22.9
34.3	31.9	32.5	31.3	28.4	26.5	24.5	15
39	37.6	34.7	34.7	33	31.3	26.5	25.8
33.9	30.7	30.7	30.4	25.2	22.5	19	16.1
37.6	35.8	31.2	29.7	26.6	25.2	23	24.3
32.1	31.7	39.6	36.2	24.4	26	27	19.9
35.8	35.5	38.8	33.1	25.9	27.4	25.4	22.4
31.6	28.9	30.4	30.9	27.2	23.8	23.4	15.4
31	26.8	27.3	27.1	26.6	27.3	25	20.8
30.6	29.8	34	33.9	23.6	21.4	20.2	14.9
31.5	31.8	31.3	29.3	25.6	24.3	25.8	17.9
38.9	32.7	30	29.6	27.5	28.5	26.1	21.8
41.4	37.1	38.6	39.8	30.2	29.9	29.5	21.4
34.5	31	29.9	27.1	27.2	28.8	24.9	23.6
39.6	37.8	37.6	38.3	33.4	30.2	28.5	26.6
34	31.3	32.9	32.2	26.2	24.8	23.2	16.4
33.4	32.9	37.4	33.9	31.1	32	30.1	26.4
34.2	30.1	36.5	32.4	26.1	22.7	21.4	17.1
33.8	48.9	41.9	39.7	27.2	32.1	22.4	20.9
36.9	38.5	40.6	37.4	30.3	26.2	21.9	16
34.3	29.9	27.7	26.4	24.4	26.8	29.2	18.1
37.1	40.3	36.8	30.7	28.2	25	25	19.3
34	32	34.3	28.7	26.5	26.9	29.5	19.2
33.9	35.6	37.3	36.1	29.8	27.4	29.5	25.1
33.9	33.7	35	34.9	29.7	29.8	31	25
34	33.1	30.1	26.3	26	34.7	34.2	24.2
33.8	32.5	40.9	35.5	30	38.5	39.3	34
32.8	30.3	29.2	25.6	31.7	41	41.1	31.8
38.1	38.8	38.7	31.2	29.5	33.6	28.1	20.8
35.5	33.9	34.2	32.1	30.3	34.6	31.9	22.5
33.3	30.9	29.7	27	24.4	29.4	27.8	17.5
33.4	30.7	30.2	26.8	23.2	26.6	24.7	16.4
35.5	34.5	33.3	32.3	29.1	27.2	23.1	18.7
33.3	32.7	42.4	33	31	23.3	21	17.8
33.6	30.2	28.6	34.6	28.5	25.5	19.1	15.4
32	31.6	33.4	34.3	31.8	25.7	26.3	20.5
31.8	32.6	34.7	36.7	33.4	25.1	26.3	20.3
33.3	30.1	29.8	40	38.1	21.5	17.4	12.9
30.5	27.5	24.6	22.6	23.8	23.1	18.1	12.6
31.3	31.4	38.7	33.3	25.4	21.2	17.6	15.4
39.1	35.5	39.4	39.5	34.7	29.6	25	26

34	32.3	31.5	41.8	29.3	25.8	19.6	16.9
37.3	36.2	32.1	29.9	30.1	30.3	29.7	25.1
35.9	33.9	32.1	31.4	27	24.7	19.9	14.2
40.5	39	34	32.6	28.7	26	21.5	17.1
35	33.1	31.3	28	23.6	21.2	19.1	17.4
40	32.4	32.3	30.7	28.9	26.9	25.3	18.6
33.4	34.3	42.8	35.7	27.6	25.1	22	21.6
32	31.4	39.9	39.2	25.6	24.5	23.6	15
31.6	29.5	26.8	25.9	21.8	23.1	31.2	14.5
32.3	29.7	34.4	31.6	28.4	29.5	27.4	18.5
33.8	35.1	42.7	38.4	24.8	22.4	17.6	13.9
36.3	32.1	40.3	41.1	24.9	21.5	20.3	16.2
32.7	29.4	26.5	23.1	23.2	27.7	27	24.1
34.5	30.8	29.1	25.2	21.8	25.1	20.9	21.7
35	32.1	31.8	27.5	24.9	25.3	24.8	19.1
33	29.5	32	29.3	23.6	22.6	22.4	15.7
34.5	31	37.1	35.2	31.2	25.4	25.6	20.5
31.4	32.1	45.1	44.8	29.1	20.2	17.4	14.7
30.8	27.6	30.1	28.1	21.9	19.8	27.9	13.7
31.3	30.1	30.7	30.3	25.6	26.4	27.2	23.5
30.5	29.6	36.6	31.3	26	22.6	22.4	18
36.5	31.9	35.1	37.5	29.2	26.1	27	21.8
32.3	28.8	28.6	30.1	22.3	23.9	20.3	17.6
39.5	40.9	40.8	39.9	34.2	34.6	28.9	26.6
32.8	36.9	36	35.4	26.5	23.2	26.6	15.7
32.2	33.1	32.2	30	24.5	23.2	22.4	18.3
36.5	34	29.4	27.9	25.7	23.2	18.9	17
31.3	31	35.6	40.7	26.2	25.8	30.5	19.6
34.5	35.7	39.9	35.7	30.6	32.6	36.5	30.2
47.5	37.5	40.1	36.4	30.5	33.5	39.9	32.1
37.2	30.7	29.1	27.1	24.8	27.7	34.4	29.8
41.1	42.2	37.4	39.8	32.1	30.7	30.3	25.6
42.4	36.3	36.9	38.3	37.2	35.9	29.4	26.1
32.2	28.8	35	32.9	25	25.7	16.2	11.5
30.8	27.9	40.5	31	30.1	27.5	19.5	13.5
30.2	26.8	24.4	21.4	19	21.1	20.8	13.6
33.2	32.2	30.2	28.7	23.4	25.6	31.3	20.1
34.9	33.3	34.2	28.7	22.9	23.8	29.4	23
35	33.9	34.1	33.4	26.9	26.2	26.3	17.7
38.1	36.6	39.5	40.6	32.1	27.1	28.4	21.3
34.6	34.2	42.3	34.9	33.7	32.9	32.2	23
33	31.3	28.1	23.5	21.2	28.5	30.4	20.9
34.2	31.2	30.1	32	32.7	34.2	34.7	24.4
34.8	31.9	31.8	29.4	26.5	28.8	27.4	20.9
31.7	29.4	30.3	30	22.9	25.2	26.2	18.3
33.4	30.7	34.5	35.8	28.3	29.4	27.7	18.2
32.5	28.9	33.4	27.2	25.9	27.9	25.6	19.3

31.5	29.1	27.6	26.3	28.6	26.5	21.5	14.1
32	30.2	31.6	27.8	27.1	22.6	19.4	15
36.5	35.5	30.4	39.2	36	22.4	19.9	19.8
33	31.2	39.5	33	21.6	21.8	23.7	13.3
39.6	34.3	36	37.7	31.9	29.4	27.2	25.5
43	40.4	36.3	34.5	33.1	31.3	28.1	26.6
36.4	34.4	33.9	32.2	28.9	29.6	27.5	21.3
37.1	36.1	34.7	33.6	28.4	31	29.8	21.9
34.8	32.4	29.5	30.1	27.8	25.9	23.1	17.5
38.8	37.1	37.8	31.3	28.7	26.8	24.7	27.1
36.2	33.1	40.1	29.6	24.8	24.5	20.3	13.9
36.8	35	40.9	38.6	33.8	26.3	26.1	20.6
34.5	33.5	38.3	30.6	25.9	23.9	23.7	20.4
39.5	34.4	39.4	36.9	29.8	29.4	28.4	25
34.2	32.7	34.2	29.7	24.8	24.9	19	17.4
34.2	31.5	32.7	27.6	23.2	24.6	19.1	16.7
35.4	37.8	44.6	37.7	27.5	27.1	18.6	15.4
32.8	31.4	35.6	31.4	25.6	24	19.3	11.9
32.8	33.6	36.2	35	26.4	23.1	19.6	13.4
36.7	32.6	33.1	29.1	26.4	22.1	17.9	13.9
31.1	31.1	44.1	38.4	25.5	21	19.3	13.5
32	33.7	40.4	31	25.4	21.8	20	14.3
33.2	28.5	28.1	26.9	22.3	22.6	17.9	13.3
29.5	27.2	26.5	24.7	20.1	18.7	14.2	12.5
29.2	26.9	30.1	24.2	20.3	20.1	17.9	13.5
32.6	33.2	28.3	25.5	27.9	26.4	25.4	19.6
30.4	32	44.7	34.7	25.1	22.1	19.9	18.4
32.2	31.8	41.5	32.2	27.6	22.3	19	16.2
28.8	27.4	34.1	34.1	22.9	19.1	17.2	12.3
28.9	28.1	30.7	26.8	24.3	25.9	23.8	16.3
32.7	30.3	31.4	30.6	31.9	24.3	22.6	18.2
33.8	32.3	30.7	27.6	26.5	24	23	19.3
34.2	30.7	40.1	40.6	23.2	18	13.5	13.8
31.3	28.8	35.6	40.4	24.6	16.5	15.8	11.3
33	29.9	29.7	26.1	20.4	19.1	18.9	13.8
33.3	30.7	29.6	28.9	24	19.2	19.7	14.8
37.4	33.9	31.6	31.4	28.4	29	23.2	26.2
33.9	31.9	39.5	39.4	29.4	22.8	19.6	14.2
35.3	36.9	42	32.8	29.5	28.2	25.9	21.8
34.1	30.8	38	38.2	24.9	22.1	19.6	19
35.9	36.7	38.1	36.4	32.3	32	30.6	25.6
35.2	35.2	33.3	31.2	30	28.1	23.5	19.1
37.3	35.6	36.1	37.3	32.5	31	29.2	27.2
34.6	31.3	32.8	30.1	27.4	31.2	20.8	16.3
35.9	34.8	37.1	35	29	28.7	28.3	22.4

Lfeq 8 kHz (1/3)	Lfeq 10 kHz (1/3)	
9.9	9.2	
16.4	11.8	
20.3	17.1	
10.1	9.1	
22.4	18.9	
13	10.6	
19.5	13.8	
18.8	19.5	
16.7	14.5	
12.4	9.1	
18.4	13.8	
10.1	9	
21.3	16.8	
18.2	13.7	
17.5	14.3	
18	13.4	
24.4	17.9	
13.5	11.9	
24.1	22.2	
13.9	12.2	
19.2	16.9	
12	9.8	
10.6	9.5	
14.8	12.2	
13	13.7	
13.4	10.8	
17.4	10	
12.4	10.3	
15.7	12.5	
14.6	14.1	
16.8	12.5	
19.7	14.5	
10.8	9.5	
10.1	9.1	
10.5	9.2	
15.5	10.5	
11.1	10.9	
18	15.8	
14.7	11.4	
10.4	9.4	
9.7	8.7	
9.7	8.9	
18.7	15.2	

12.7
19.8
12.1
14.6
12.7
14.9
20.5
11.6
10.5
12.5
10.6
13.5
10.3
13.7
14
11.5
15.8
13.7
11.9
15.1
11.8
19.6
17.2
29.5
13.4
13.6
14.6
17.1
29
28.6
19.9
21
20.3
10.1
10.6
9.9
15
14
11.6
16.1
16.9
9.9
18
18
14
14.7
11.9

11.2
15.3
10.8
13.1
10.8
12.6
16.1
10
9.6
9.9
9.3
10
8.7
10.1
11
9.8
12.4
10.4
9.3
11.5
10.7
14.7
10.5
26.4
10.6
10.6
14.4
11.4
26.7
22.1
13
15.3
19.3
9.3
9.3
8.9
10.9
10
9.6
11.8
15.3
9.5
14.7
12.3
10.9
12.4
9.7

10.6	9
13.2	10.4
16.4	9.9
14.6	9.4
20.6	17
27.2	22.3
18.1	16.9
20.9	18.8
16.3	14.4
19.8	18.9
13.3	12.2
18	16.9
20.6	18
27.4	25.2
15.2	14.1
14.8	12.8
13	14.3
10.6	9.5
12.6	11.3
12	10.3
13.8	12.4
13.2	10.7
11.9	10.7
11.3	10.2
11.5	10.5
17.6	14.1
14.5	11
14.3	10.7
10.4	9.4
12.3	11.1
13.2	10
16.9	14.7
10.9	8.8
9.5	8.9
10.9	9.1
11.4	8.9
22.5	22.5
12.6	11.1
18.2	15.6
15.5	11.8
24.3	18.4
16.3	14
23.7	20.3
15.8	14.4
18.5	15.4

Appendix C

Calibration Certificates

Campbell Associates Ltd

5b Chelmsford Road Industrial Estate
GREAT DUNMOW, Essex, GB-CM6 1HD
www.campbell-associates.co.uk
Phone 01371 871030 Facsimile 01371879106



CALIBRATION



0789

Certificate of Calibration and Conformance

Certificate number: U32216

Test object: Sound Level Meter, BS EN IEC 61672-1:2013 Class 1 (Precision) and associated Frequency Analyser BS EN IEC 61260, Class 1
Producer : Norsonic
Type : 145
Serial No.: 14529148
Customer: Clement Acoustics Ltd
Address: 1B(c) Yukon Road,
London. SW12 9PZ.
Contact Person: Florian Clement

Method :

Calibration has been performed as set out in CA Technical Procedures TP01 & 02 as appropriate. These are based on the procedures for periodic verification of sound level meters as set out in BS EN IEC 61672-3:2013 and for electrical testing of frequency filters as set out in BS EN IEC 61260. Results and conformance statement are overleaf and detailed results are in the attached Test Report.

Tested

	Producer:	Type:	Serial No:	Certificate number
Microphone	Norsonic	1227	332156	32215
Calibrator*	Norsonic	1251	31716	U32214
Preamplifier	Norsonic	1209	22275	Included

Additional items that also have been submitted for verification

Wind shield	Norsonic	Nor1451 (ø 60mm)
Attenuator	-	
Extension cable	-	

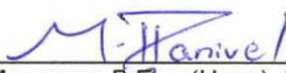
These items have been taken into account wherever appropriate.

Instruction manual: Im145_1Ed1R0En Firmware version: Appl: v2.2.1601/SP: v2.2.26 The test object is a single channel instrument.

Conditions	Pressure	Temperature	Humidity
Reference conditions:	101.325 kPa	23.0 °C	50 %RH
Measurement conditions:	101.98 ±0.17 kPa	21.8 ±0.8 °C	44.3 ±0.7 %RH

Date received for calibration: 26/06/2019
Date of calibration: 03/07/2019
Date of issue: 03/07/2019
Engineer

Supervisor


Palanivel Marappan B.Eng (Hons), M.Sc

Darren Batten Tech IOA

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

*The sound calibrator was complete with the coupler specified in the instruction manual for the sound calibrator and the sound level meter as appropriate for the coupling of the microphone provided to the specified sound calibrator.

Certificate of Calibration and Conformance

UKAS Laboratory Number 0789

Certificate number: U32216

Conformance

From markings on the sound level meter or by reference to the manufacturer's published literature it has been determined that the instrument submitted for verification was originally manufactured to BS EN IEC 61672-1:2013 and similarly that the associated sound calibrator conforms to BS EN IEC 60942.

Statement of conformance

The sound level meter submitted for testing has successfully completed the periodic tests of BS EN IEC 61672-3:2013, for the environmental conditions under which the tests were performed. As evidence was publicly available¹, from an independent testing organisation responsible for approving the results of pattern-evaluation tests performed in accordance with BS EN IEC 61672-2:2013, to demonstrate that the model of sound level meter fully conformed to the requirements in BS EN IEC 61672-1:2013, and that the sound level meter submitted for testing conforms to the class 1 specifications of BS EN IEC 61672-1:2013.

The filter functions have been found to conform, by electrical testing, to the relative attenuation requirement of BS EN IEC 61260 (as required by UKAS Lab23) for a class 1 filter over the range of frequencies shown in the attached test report.

¹ This evidence is held on file at the calibration laboratory

Summary of Measurement Results

Indication at the calibration check frequency - IEC61672-3 Ed.2 Clause 10	Passed
Self-generated noise - IEC 61672-3 Ed.2.0 Clause 11.2	Passed
Acoustical signal tests of a frequency weighting - IEC 61672-3 Ed.2.0 Clause 12	Passed
Electrical signal tests of frequency weightings - IEC 61672-3 Ed.2.0 Clause 13	Passed
Frequency weightings: A Network - IEC 61672-3 Ed.2.0 Clause 13.3	Passed
Frequency weightings: C Network - IEC 61672-3 Ed.2.0 Clause 13.3	Passed
Frequency weightings: Z Network - IEC 61672-3 Ed.2.0 Clause 13.3	Passed
Frequency and time weightings at 1 kHz IEC 61672-3 Ed.2.0 Clause 14	Passed
Level linearity on the reference level range - IEC 61672-3 Ed.2.0 Clause 16	Passed
Toneburst response - IEC 61672-3 Ed.2.0 Clause 18	Passed
Peak C sound level - IEC 61672-3 Ed.2.0 Clause 19	Passed
Overload indication - IEC 61672-3 Ed.2.0 Clause 20	Passed
High level stability test - IEC 61672-3 Ed.2.0 Clause 21	Passed
Long term stability test - IEC 61672-3 Ed.2.0 Clause 15	Passed
1/1octave: Relative attenuation - IEC 61260, Clause 4.4 & #5.3	Passed
1/3octave: Relative attenuation - IEC 61260, Clause 4.4 & #5.3	Passed

Comment

Correct level with associated calibrator is 114.0dB(A).

Observations

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a coverage probability of approximately 95 %. The uncertainty evaluation has been carried out in accordance with UKAS requirements. Details of the uncertainty for each measurement are available from the Calibration Laboratory upon request. Details of the sources of corrections and their associated uncertainties that relate to this verification are contained within the test report accompanying this certificate.



CERTIFICATE OF CALIBRATION



0653

Date of Issue: 08 July 2020

Certificate Number: UCRT20/1607

Issued by:

ANV Measurement Systems

Beaufort Court

17 Roebuck Way

Milton Keynes MK5 8HL

Telephone 01908 642846 Fax 01908 642814

E-Mail: info@noise-and-vibration.co.uk

Web: www.noise-and-vibration.co.uk

Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

Page 1 of 2 Pages
Approved Signatory

B. Giles

CUSTOMER Clement Acoustics Ltd
First Floor 1B(C)
Yukon Road
London
SW12 9PZ

ORDER No 2006300059

Job No UKAS20/07348

DATE OF RECEIPT 06 July 2020

PROCEDURE Procedure TP 1 Calibration of Sound Calibrators

IDENTIFICATION Sound Calibrator Norsonic type 1251 serial number 31716 with one-inch housing and adapter type 1443 for half-inch microphone

CALIBRATED ON 08 July 2020

PREVIOUS CALIBRATION Calibrated on 02 July 2019, Certificate No. U32214 issued by a UKAS accredited calibration laboratory No. 0789

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. *This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.*

CERTIFICATE OF CALIBRATION

UKAS ACCREDITED CALIBRATION LABORATORY No 0653

Certificate No UCRT20/1607

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MEASUREMENTS

The sound pressure level generated by the Sound Calibrator in its half-inch configuration was measured using a B&K type 4134 microphone with the protective grid in position. The microphone sensitivity was traceable to National Standards.

RESULTS

The mean level of the calibrator output was

$114.18 \pm 0.1 \text{ dB rel } 20 \mu\text{Pa}$

The fundamental frequency of the sound output was $1002 \text{ Hz} \pm 0.06 \%$, and its total distortion was $(0.12 \pm 0.03) \%$.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

During the measurements the laboratory environmental conditions were:

Temperature: 23 to 24 °C

Atmospheric pressure: 100.4 to 100.5 kPa

Relative humidity: 56 to 66 %

The tests carried out were as specified in Annex B of BS EN 60942:2003, but with five determinations of sound pressure level, and limited to the above level(s) & freq(s). The sound calibrator has been shown to conform to the class 1 requirements for periodic testing in Annex B of IEC 60942:2003 for the sound pressure level and frequency stated, for the environmental conditions under which the tests were performed. However, as public evidence was not available, from a testing organisation responsible for pattern approval, to demonstrate that the model of sound calibrator conformed to the requirements for pattern evaluation described in Annex A of IEC 60942:2003, no general statement or conclusion can be made about conformance of the sound calibrator to the requirements of IEC 60942:2003. However it has successfully undergone pattern evaluation to the earlier Standard IEC 942:1988

The results on this certificate only relate to the items calibrated as identified above.

Calibrator adjusted

No

END

R 2