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AMPLIFIED MUSIC AS A NOISE NUISANCE

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INTRODUCTION

Public awareness to noise problems has been reflected in the growing number of complaints received by local authorities over the last few years. For example, in 1984 Scottish local authorities received 12% more noise complaints than the previous year. Many of these complaints related specifically to amplified music. In 1982 (the last year for which figures are available) 25% of all complaints about noise related to amplified music and the number of complaints had doubled since 1977.

It is frequently found that a complaint concerning amplified music is difficult to abate due to the lack of a suitable criterion, a fact which was recognised by the House of Lords Select Committee on Science and Technology [1]. Many different criteria are used and accordingly the decision as to whether or not there is a nuisance will depend not only on the level of the noise, but also on the local authority or the officer carrying out the assessment. When it is further considered that none of the existing criteria reliably assess the extent of the noise nuisance the confusion and ill feeling that can arise between noise producers, controllers and receivers can be well understood.

ASSESSING A NOISE NUISANCE

A survey of all Scottish District Councils [2] revealed that five different criteria are used in assessing whether or not a nuisance is caused by amplified music. A brief note of the advantages and disadvantages of the different criteria are described below.

Wilson Report

The Wilson Report [3] recommends that the L_{10} level measured inside the house should not exceed 35 dBA. It is an absolute level and takes no account of the background noise level inside the complainant's house. Since the report was published people's tolerances have changed [1] yet the criterion of 35dB(A) has not. This criterion was used to assess noise nuisances for 50% of cases in Scotland from 1977-82.

BS 4142

BS4142 [4] was written to assess noise from industrial and commercial premises and specifically excludes its use where the

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source of the noise is within the same building as the measurement location, a case which is frequently found in complaints concerning amplified music. This has not prevented it being used in 21% of the cases considered in Scotland from 1978-82.

ISO 1996/R(1971)[5]

This standard is similar to BS4142. It was never adopted in the United Kingdom and was replaced by ISO 1996(1982)[6]. The revised standard gives no indication of acceptable community noise levels. Used for 2% of cases in Scotland from 1978-82.

NR Curves

NR Curves [7] are a means of assessing noise from mechanical services and do not relate to music. Used for 3% of cases in Scotland from 1978-82.

Inaudibility

The criterion of "inaudibility" is highly subjective and dependant dependent on the listener and the type of music. Used for 24% of cases in Scotland from 1978-82.

SUBJECTIVE RESPONSE TO NOISE

In order to assess the usefulness of these standards and criteria a simple study was undertaken.

A tape of "disco" music, filtered to simulate the attenuation that would be obtained when the sound passed through a party wall, was prepared. This gives the characteristic low frequency "thump" which is often referred to by complainers. The tape was replayed to 40 subjects in their own homes. They were then asked to comment on whether or not they found the noise intrusive. The tape being played at levels of -20, -15, -10, -5, -0, +5 and +10dB relative to background noise level (L_{eq}). The subjects used for the survey do not form a representative sample of the population as a whole but nevertheless give a good indication of the trends to be expected.

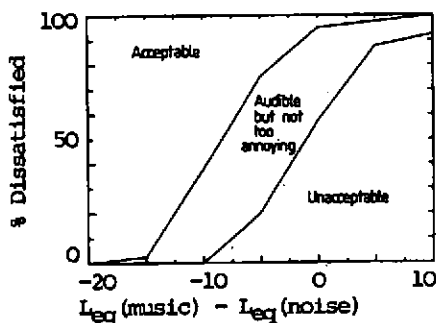


Figure 1. Percentage of people dissatisfied with the "amplified music".

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The subjects were asked to rate the sound as either

- "unacceptable (i.e. willing to complain about it)."
- "audible but not too annoying."
- "acceptable."

The results, given in Figure 1, show that even when the music is played at a very low level considerable annoyance is caused. Only 20% of the subjects found the music acceptable even when it was played at a level 5 dB below the background noise level.

In order to check that the survey results of Figure 1 were reasonable a review of all the complaints received by Edinburgh District Council was carried out. In 57 cases details of the cases enabled further analysis to be carried out.

In all cases the noise had been reduced so that the L_{10} was less than 35dB(A) so that, following the guidelines of the Wilson Report, the complainers should have been satisfied. However only 40% of the complainers and 47% of the investigating officers were actually satisfied, suggesting that the recommendations set out in the Wilson Report are not satisfactory for assessing nuisance caused by amplified music.

For many of the case records background noise levels were known and so, by assuming that the noise level was exactly 35 dB(A) (it would actually be less), a graph of the number of people dissatisfied against the difference between the music and the background noise can be drawn. This is shown in Figure 2. The results of the survey are shown on this figure and give very similar results to the actual cases. It is clear that even a very small increase in the overall noise level will cause considerable annoyance.

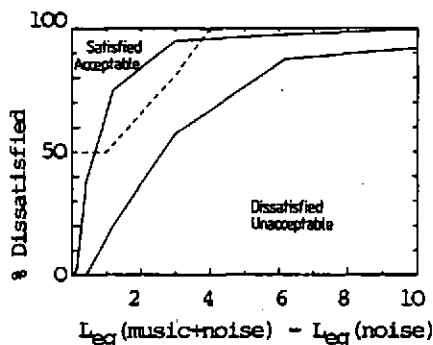


Figure 2. Percentage of people dissatisfied with the "amplified music".
— experimental survey, - - - historical records.

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BS 4142 postulates that a 10 dBA increase in the background noise level could provoke widespread complaint and that a 5 dBA increase is of marginal significance. If we relate this to the levels measured inside the house it is clear that it would seriously under-estimate the number of complaints, even if a 5 dB tonal correction was applied.

From Figure 1 it can be seen that when the music level is equal to the background noise level, so that the total noise increases by 3dB, then between 60% and 90% of the people will be dissatisfied. Few people are satisfied if the level is 5 dB or 10 dB below the background noise level. This then creates a difficulty in devising simple measurements from which the level of nuisance can be determined. Only 60% of the subjects found the music acceptable when it was replayed 10 dB below the background level which would result in the total noise level increasing by only 0.5 dB. This cannot be readily measured with a simple dB(A) meter.

Since conventional methods of assessment have failed it seems that the only reliable method of assessing a nuisance is the highly subjective method of simply listening to it. The noise is then considered a nuisance if it is audible. This is the basis of the "inaudibility" criterion. This form of assessment is in itself difficult to enforce since it depends on the opinion of the listener. However recent trials in Edinburgh suggest that actual difficulties are fewer than might be imagined.

"INAUDIBILITY" AS A CRITERION

Many of the complaints about amplified music concern licensed premises such as pubs or discos. Since these premises require a license to operate one method of controlling the noise is to place conditions on the granting of a license rather than through the courts by the use of the Control of Pollution Act [8]. This is a common method of control used for 43% of cases in Scotland from 1978-80.

Completion of the survey coincided with the introduction of new Liquor Licensing Bye-Laws in Edinburgh which set out to control problems in licensed premises. Unlike England and Wales, licensed premises in Scotland have far more liberal hours of opening and closing, with public houses open until 2.00 a.m. and places of public entertainment and restaurants until 3.00 a.m. to 4.00 a.m.

The playing of amplified music in licensed premises has become very popular and the later closing hours have exacerbated the noise problem. In order to specifically control noise, Section 3(ii) of the Bye-Laws [9] was introduced. It states:-

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'singing, playing of musical instruments, tape reproducers, gramophones or other automatic music systems (including juke boxes), discotheques, dance demonstrations or any similar form of exhibition is not permitted in the licensed premises without the prior written approval of the Board and subject to such conditions as shall be imposed by the Board. Any such approval may be withdrawn on the Board being satisfied that any of such conditions has been breached or that the activities so permitted are causing undue annoyance or inconvenience to residents in adjoining or nearby buildings. This condition applies to all types of licenses.'

The Licensing Board has also seen fit to impose as a standard condition on all applications for a license the clause that

'all music or vocals, must be controlled to the satisfaction of the Director of Environmental Health so that no noise is audible within any neighbouring premises'

This limit on amplified music applies to all applications granted for extension to permitted hours. A similar condition has, for some time now, been imposed on the granting of new planning applications, where amplified music may be provided within the new premises.

A similar condition is also imposed as standard, in all other premises requiring a license (e.g. public entertainment, late hours catering etc.) and where music may be played. A more relaxed condition is imposed on those premises where it is intended to only operate for a short period of time (e.g. fun fair, etc.) and G.L.C. guidelines being adopted for "Pop Concerts".

Inaudibility as a criterion has also been accepted by the Secretary of State for Scotland as part of the planning regulations.

Whilst it is too soon to assess the full impact of adopting such a progressive policy concerning this type of complaint, the reaction of the Environmental Health Officers dealing with the matter is a favourable one. The general public are also much happier with the new criterion since the noise is reduced until it is inaudible and therefore cannot cause a nuisance. The producers of the noise, the licensees, generally accept that all premises are treated in the same manner, whereas previously it was felt that the sound level set as acceptable in a complainer's house could vary. Agents acting for licensees called to the Board concerning noise from their client's premises readily agree to limiting the noise level in order to ensure inaudibility in the complainer's house.

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A variety of methods being adopted in order to achieve this.

Evidence so far suggests that this form of control through the Licensing Board combined with the criterion of "inaudibility" is at last producing effective control of noise without causing undue restriction on the provision of entertainment.

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