

Safe Gigg ing

HEALTH AND SAFETY FOR MUSICIANS

by Dave Cross

(a British article – part/section)

Music as Noise. We all know that loud music can cause hearing loss or deafness , but the guidelines, the enforcement and even the law can be very hard to understand. It also seems that many VERY loud gigs and clubs continue week after week without prosecution, so it is tempting to think that we can all carry on regardless, as long as our venue or gig seems no louder than any other.

Wrong.

The law is actually quite clear, The 1989 Noise at Work Regulations spell it out. Simply not many Health and Safety officers understand it, understand the measuring instruments and have no guidelines from their Council to help them know what to do. I have actually met three Local Authority Safety Officers during separate music events who had very nice, new and expensive measuring instruments. Not one of them understood the instruments, and one actually passed it to me so that I could take "the right reading"! Exposure to **85dbA** or more is considered dangerous to a person's hearing. It is that simple. It doesn't make any difference whether the person exposed is in the audience, a member of staff or a performer, though if they are staff you have the power to issue them with ear-plugs and insist that they wear them. However, an ear-plug may claim that it can reduce sound levels by 30db, but that's going to be the best figure achievable, when perfectly fitted into a perfect ear - typically they will reducing the level by only 10 to 20db. Exposure to higher levels such as the **110dbA** often sustained for hours in clubs is going to increase the risks to the point where the venue operator and technical staff could be accused of grossly irresponsible behavior and even willfully attempting to inflict physical damage on the public !

The Regulations require peaks of 140dbA to be avoided at all times. As the sound is always going to be loudest immediately in front of the loudspeakers, it would be a reasonable precaution to ensure that it is not possible for anyone to stand within a meter or two of the speakers.

These sort of violations haven't been the subject of unexpected late night raids yet, but it might just be a matter of time.

It is also worth being aware that the information available in publications and on the web doesn't stop at advice to employers - there is just as much advice and support for employees and audiences in making a claim for compensation !

If you do choose to buy a sound-level meter, you will find prices range up to over a thousand pounds. Some of the more expensive models will record the maximum and average sound levels that occurred over a specific period and can store results for analysis by computer later. But there may be no need to spend much more than one or two hundred pounds (UK sterling, 2003) to get a good idea of whether your event or venue is exceeding safe limits. It will also be worthwhile spending some time understanding the meter - that might give you an advantage over a Council officer who doesn't!

The loudness of sound is measured in decibels, which is abbreviated to "**db**". The several letters used in specifying sound levels, 'A', 'B', 'C' etc (called *weightings*) refer to the way the sound readings are adjusted in respect of the amount of bass and treble that are being measured. This is because loud bass is not perceived to be as loud as, for example, the same level of a more vocal sound. Different regulations refer to different weightings - when you come across a limit of, say, 100dbA, the last letter, the 'A' in this case, indicates which weighting should be used when measuring the sound. The "**A**" weighting filters out a lot of the low bass sound,

measuring only those sounds which are agreed to be hazardous to hearing. The "B" weighting measures predominantly the bass sounds which are usually the cause of nuisance complaints and are referred to by Environmental Protection legislation, whereas the "C" weighting measures all sounds almost equally.

It may take some time before UK law starts to be enforced sensibly and consistently, but don't be the first one in your town to be caught out - enforcement is coming so you might as well speak to your Safety Officer or Environmental Health Officer now, rather than wait until it is too late. Breaches of the regulations will be considered when the venue's license comes up for renewal - that would not be the best time to start thinking about music as a health hazard.

Similarly, the 1996 Noise Act allowed the seizure of equipment if an Officer found that the noise exceeded the levels permitted in accordance with the Environmental Protection Act. Even asking for your equipment back the next day won't be easy if there is likely to be a prosecution because the Police can hold on to your equipment for use as evidence for as long as they think is necessary for their investigations whether or not they lead to a case against you in Court.

The Health & Safety Executive has published a consultation document which asks for comments from interested parties about their proposals to implement new (2003) Directives which are aimed at lowering noise levels in the workplace even further. This would have a massive impact on music and entertainments and readers may be interested to read these.

<http://www.hse.gov.uk/consult/condocs/cd196.pdf>

Sections 20 to 22 refer to live and recorded music venues.

<http://www.artsdata.net/wwwMETA/HandS.asp> -- end of quoted section--

[Afterward note by Dr. Lynn Job (April 2010):

“The psycho-acoustic effects of poorly weighted and simply too-loud musical sounds upon the communications centers of our mental and emotive neural apparatus cannot be completely measured, nor the adverse affects predicted, by simple decibel calculations. (Caution is warranted by anyone seeking to safety-check a music event by that method alone.) Elevating blood pressure & cortisol, decreased neural transmitter firing patterns, among other physical responses including the reconfiguration of crystalline structures at a molecular level, all occur in the presence of loud music: military studies in the effects of sonic torture techniques, bio-acoustics, and the growing field of Music Psycho-therapy applications, can be recommended case studies for the interested researcher. Studies are also published on the “chant effect,” “Mozart effect,” and brain scans of the “Bach effect.” Another tangential study is the pop transcendental meditative altered states achievable through frequency-shifting phase music; an experimental, unregulated music currently producing near-LSD-effect mind altering results—a trending fad, this sound-effect-type electronic music is now being abused by adolescents and college students through internet streaming and download media casting to “get high.” Some have successfully induced seizures. Related to this, a less-toxic meditative-styled music to enhance access to yoga-like trance states is offered on many occult websites and e-stores for attempts at similar mind altering outcomes—the effectiveness varies greatly by many factors—amplitude being just one. Some have effectively contacted spirit guides.”]