

SOUND ADVICE

Vol. 2, # 2

Summer, 2011

Published by

EDC Sound Services

404 Olivia Drive

Lexington, NC 27295

www.edcsound.com

... the sheer pleasure of natural sound

Why Put Up with a Noisy Office?



When the words “noisy office” are first mentioned, they commonly bring to mind a “bull pen” or large open office with lots of people talking. While such noisy offices certainly exist, and are a problem that needs to be remedied, several other categories of noise in offices can impair personal performance and productivity as well. One category of such problems is those that are HVAC-related. The worst cases are -- perhaps surprisingly -- those in which the noise can't be heard, but is mainly subsonic. This type of problem can be caused by a large air chiller that is not correctly vibration-isolated, and that therefore transmits vibrations that are conducted throughout the building. These vibrations can cause nausea, headaches, and difficulty in mental focusing. They are one cause of what have been called “sick buildings”. Another HVAC-related noise problem is the sound of air-handlers. If these produce a noticeable tone (whistle or hum), they will be irritating, possibly making emotional management difficult for workers. If the air-handling noise is just a steady “whoosh”, it is usually not much of a problem, except in conference rooms or offices from which teleconferencing is conducted.

Another common noise source in offices is sound created in adjacent spaces. One company president found it difficult to concentrate because video-game sound effects from the adjacent space penetrated the demising wall. Another found that his clients at the other end of a telephone call were disturbed by the high-pitched tone from a saw in an adjacent metal shop.

Sometimes, sound from people talking in an open office situation interferes with the workers' functioning. In such cases, sometimes purely acoustical methods of noise isolation are too costly, and “noise masking” systems are used to bury the sound in noise, rendering it unintelligible. This method is seeing increasing use today because of privacy concerns.

However, noise masking systems are sometimes abused. In one case, the contractor installing the noise masking had also installed masking equipment in a conference room, making it hard for conferees to hear each other. In another case, a piece of electronic equipment laid atop a drop-in ceiling panel had developed a defective cooling fan which actually sounded like a noise masking system, causing an annoying level of noise in the conference room.

The maximum acceptable noise level in an office is to some extent dependent upon the taste of the occupant(s) of the office. However, there are several conditions that are generally valid.

- Noticeable levels of vibration are always detrimental to personnel performance.
- Any noise containing a recognizable tone produces irritation that may interfere with productivity and emotional management.
- In any room used for teleconferencing, noise levels must be extremely low.



The reason for this last statement is that when you are meeting in the same room with another person, your brain recognizes ambient noise and ignores it. However, the brain has no directional or other cues as to just what sounds constitute ambient noise at the remote end of a teleconference, and so cannot ignore it. Therefore the noise in your office will be much more distracting to persons at the other end of a teleconference call than they will seem to you.

The good news is that office noise can be prevented during the facility design process, and can often be mitigated in an existing office. We are skilled at working with architects and business managers to acoustically optimize office spaces. The design processes and materials needed to correct the noise problem usually constitute an investment that will quickly be repaid in greater accuracy and productivity, and better attitudes on the part of your personnel.



Have a great Independence Day!



EDC Sound Services

404 Olivia Drive, Lexington, NC 27295
(336) 249-7910 (voice and fax)
e-mail to: postmaster@edcsound.com
www.edcsound.com

Richard A. Honeycutt, Ph.D., Principal Consultant

... the sheer pleasure of natural sound

Members: Audio Engineering Society and Acoustical Society of America

SERVICES

Acoustical consultation
Computerized acoustical modeling of new buildings
Analysis and correction of acoustical problems in buildings
Computerized testing and adjustment of sound systems
Church and institutional sound system design
Analysis/repair of sound system problems
Custom speaker design and construction
Vinyl record to CD transfer
On-location CD recording

