

SEVEN KEYS



to **managing** and **understanding**
speech noise distraction
in **open plan environments**



soundmasking paging and music systems



1 Magnitude of the problem

Recent studies reported open plan speech noise distraction as the #1 facilities problem for employees. Case studies, conducted with five major U.S. corporations, show:

71% of employees rated open plan speech distraction as their biggest workplace distraction.

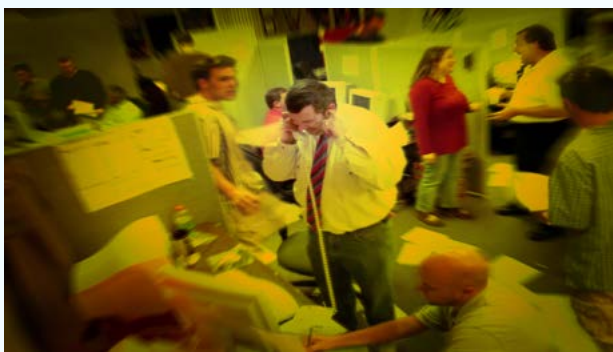
In recent years, due to increasing workstation densities and office teaming trends, distracting speech noise levels have significantly increased.

According to estimates, 85% of U.S. offices are not designed to address speech noise distraction issues. Reasons include the lack of awareness of the magnitude of speech noise problems and the lack of awareness of cost effective solutions.

2 Consequences of distracting speech noise

Consequences from distracting speech noise are very clear. Most significant are losses in employee concentration, productivity, accuracy and satisfaction.

In our knowledge economy, corporate America's greatest single asset is the knowledge of its employees!



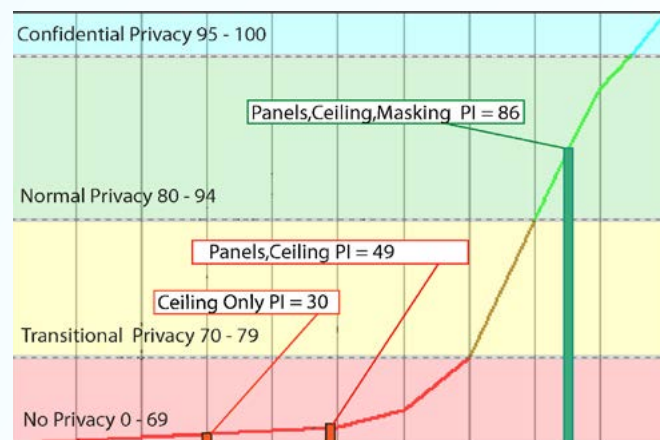
Typical employee costs, including fringe benefits, in open plan average \$400 per square foot, per person, per year. The typical class A office building costs only \$200 per square foot to build - a one time cost. Clearly, emphasis should be placed on supporting the work needs of the knowledge worker.

3 Measuring Speech Privacy with Privacy Index

Privacy Index is used to rate speech intelligibility. A Privacy Index of 95 to 100 provides confidential speech privacy. A Privacy Index below 95 allows conversations to be understood.

The following Privacy Index example is typical of an open office environment having furniture panels (62 inch tall), standard mineral tile ceilings (NRC .55) and soundmasking (47 dBA).

Privacy Index



Confidential Privacy is defined as a Privacy Index of 95 to 100 and is the goal for closed offices. Confidential privacy occurs when there is no intelligible speech, even though some speech may be audible.

Normal Privacy is defined as a Privacy Index of 80 to 94 and is the goal for most open office workstations. Normal privacy occurs when speech at a distance is no longer understood and conversations from adjacent workstations are no longer distracting.

Transitional Privacy is defined as a Privacy Index of 70 to 79 and is the goal for teaming and collaborative areas where workers are very interactive.

No Privacy is defined as a Privacy Index of 0 to 69 and is the goal for rooms designed for communication, such as training rooms, conference rooms or auditoriums. This level of privacy is common in open plan office environments lacking soundmasking.



Solutions to distracting speech noise

There are three ways to control sound in an office; Absorb, Block and Cover it. Speech privacy will be limited by the weakest of these three elements, regardless of how well the other two perform.

The ABCs - Absorb, Block and Cover

Absorb sound with lay-in acoustical ceilings with high Noise Reduction Coefficient (NRC = .70 minimum). Avoid the use of acoustically reflective lighting fixtures. Open-structure facilities, having no suspended acoustical ceiling, can provide acoustical privacy if the structure has sufficient height to reduce reflective paths.

Block sound with systems furniture panels having a height of 60" or greater. Panels should have a STC (Sound Transmission Class) of 20 or greater.

Cover distracting conversations by slightly increasing the building's background sound level by incorporating a soundmasking system by Dynasound. Soundmasking, when properly designed and tuned, will perform the critical task of covering or "masking" speech intelligibility.

What is soundmasking?

Soundmasking is electronically generated, unobtrusive ambient sound that is tuned to work in harmony with other acoustical factors such as ceilings, furniture panels and walls.



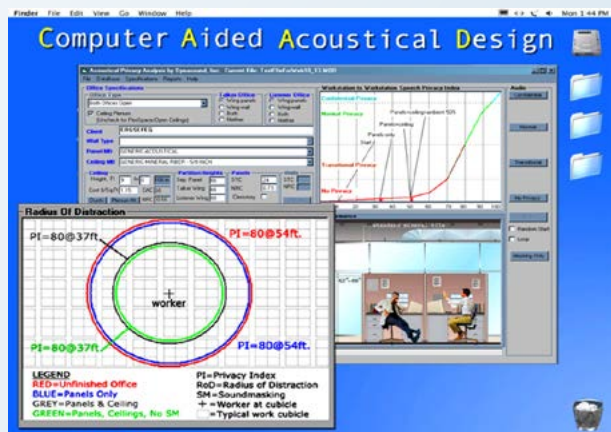
Covering conversational distractions with soundmasking has the effect of "acoustically tripling" the distance between workers.

Soundmasking systems by Dynasound increase speech privacy, and can **lower** project costs by eliminating the need for over specification of other acoustical factors. Soundmasking is dynamic and can be easily adjusted. Other variables, such as panel height and ceiling materials are cost prohibitive to change once constructed. Soundmasking addresses every sound transmission path, because it works at the listener's ear. Items such as furniture panels, or absorptive wall treatments, can only address sound that actually reaches them.

All office workers attempt to balance two important work needs; **Sense of Community** and **Sense of Territory**. Soundmasking is an easily adjustable way to balance these opposing needs of the modern day knowledge worker.

Acoustical Programming Software

Acoustical Programming Software, by Dynasound, removes the guesswork from acoustical planning for open office environments. Acoustical Programming Software can be used in the early design stages of a project to value-engineer furniture panel, wall, ceiling and soundmasking performance.



For existing facilities, without soundmasking, APS can be used to quantify the privacy soundmasking will provide.

Soundmasking Systems by Dynasound

Dynasound provides soundmasking systems designed for use above ceilings, below access floors, in open structure and can determine the correct application for your facility. Visit us at www.soundmasking.com for more information or to locate a Dynasound solution provider in your area.

Soundmasking For Open Office Privacy

Cost effective soundmasking systems can be installed above suspended ceilings, below access floors, and in open structure facilities. Studies have found it virtually impossible for facilities with conventional open plan construction to provide required levels of speech privacy without the use of an effective soundmasking system. Dynasound can provide value-engineered solutions for any soundmasking need from single-speaker systems to systems using state of the art DSP processors covering hundreds of thousands of square feet.



DS1082
Self-Contained Plenum soundmasker for small offices / HIPAA.

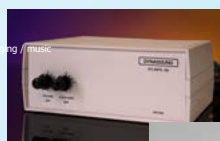


DS1338 / DS1356

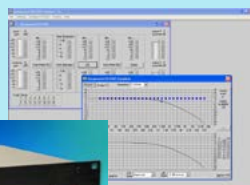


DS1390
Under-Floor Masker

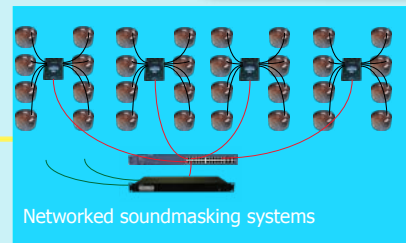
DS1042 Mini Masking System



DS1092 Masking & Paging System



DSP Soundmasking Processors/Mixers



Confidential Speech Privacy For Closed Offices



Assure confidential speech privacy, while reducing overall construction and reconfiguration costs of closed office environments, with soundmasking.

For more information, request Dynasound's brochure: **FOUR DOORWAYS to Protecting Confidential Conversations**

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