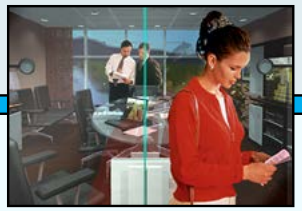
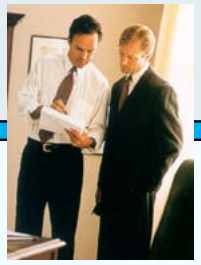
soundmasking.com by DYNASOUND

FOUR DOORWAYS

to managing and protecting confidential conversations in closed office environments.

soundmasking paging and music systems
designed for today, engineered for tomorrow





1 The Need to Protect Sensitive Conversations

Most closed offices do not provide confidential speech privacy. This results in distraction, productivity loss and potentially puts sensitive company information at risk.

Areas of concern are anywhere closed plan environments must maintain confidential levels of speech privacy including owner occupied and leased buildings, meeting rooms, conference and board rooms. Medical facilities of concern include clinics, hospitals and outpatient treatment centers - any area where Doctor-Patient confidentiality is vital.

IFMA Research Study on Closed Offices

Scope of Study

40 Major Healthcare Providers included
30 million square feet of office space
Study conducted with facility managers

Results of Study

73% had issues with acoustical problems.
75% rated acoustical issues medium to high.
45% reported previously completed acoustical corrections ineffective.

2 Evaluating Closed Plan Speech Privacy

Traditional design practice selects ceilings, walls and doors that are tested and rated separately for acoustical privacy performance. Components are not laboratory tested acording to their specific field installation. In addition, they do not include job-site construction deficiencies such as sound leaks which reduce speech privacy.

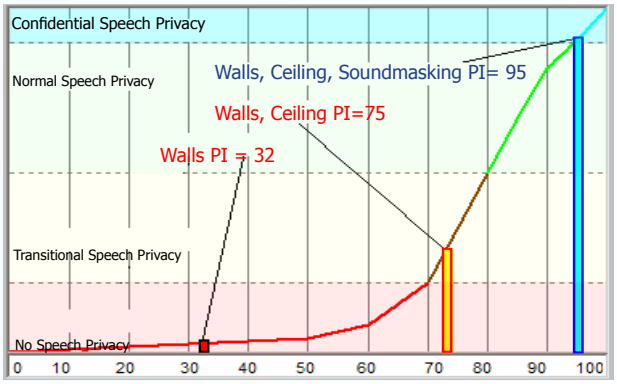
Examples of possible sound leaks include air leaks around light fixtures, non-baffled air grills, back-to-back electrical boxes, defective wall joints, and non-gasketed partition interface at ceiling.

Variable-air-volume HVAC systems reduce traditional background sound levels. Buildings are simply too quiet and conversations are easily overheard.

Typical closed office construction does not provide confidential speech privacy. PI = 75

Privacy Index - Rating Speech Privacy

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 a closed office having STC 35 walls, CAC 35 mineral tile ceiling and with soundmasking at 44 dBA.



Laboratory and facility measurements in several major facilities and exam rooms show that 75% Privacy Index ratings are typical. This inadequate level of speech privacy is common - even with office doors closed.

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3 Achieving Confidential Speech Privacy - The ABCs

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

Absorb sound with lay-in acoustical ceilings installed continuosly from wall to wall. Ceilings should be specified with high Noise Reduction Coefficient (NRC = .70 minimum) and standard Ceiling Attenuation Class performance (CAC = 35 minimum). Supplement the ceiling grid system with closure components that prevent sound leaks from return air grills and other utility penetrations.

Block sound with fixed drywall ceiling-high partitions (3-5/8" studs with 1/2" drywall) or pre-engineered, high STC-rated (STC = 35 minimum) relocatable wall systems that provide solid speech privacy. Tests also used a major wall manufacturer's pre-fabricated, relocatable, fabric covered, gypsum wall system, and the industry standard 2' x 2' x 3/4" mineral fiber ceiling tile and grid system.

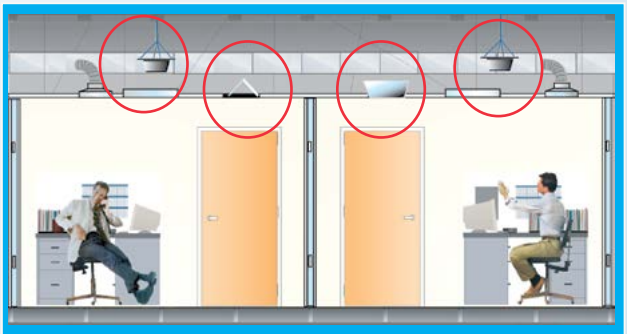
Cover distracting or sensitive conversations by slightly increasing the building's background sound level by incorporating a soundmasking system by Dynasound. Soundmasking, when properly designed and tuned, will perform the critical task of covering or "masking" speech intelligibility. Studies have found it virtually impossible for facilities with conventional closed plan construction to provide confidential levels of speech privacy without the use of soundmasking systems. Most owners could not absorb the high cost and lack of flexibility to construct and properly seal wall systems, install individual ceiling systems in each room, and provide individually ducted supply and return-air diffusers - all needed to provide confidential privacy when soundmasking is not used.

4 Proving Closed Plan Confidential Speech Privacy

Private offices were constructed inside the acoustical test laboratory - the first time that "as-built" offices were constructed and used for lab testing.

Laboratory tests were completed on two 10' x 12' closed plan offices containing:

- 2' x 2' lay-in ceilings 35 CAC, .70 NRC, mineral fiber lay-in tile installed on a 15/16" tee grid. The ceiling system also contained:
  - 2' x 2' lay-in return air grilles (acoustically baffled)
  - 2' x 2' lay-in supply air diffusers (ducted)
  - Sprinkler heads and fire/smoke sensors
  - 2' x 4' recessed lay-in parabolic light fixtures
- Ceiling high drywall partitions with standard grade, solid core, doors.
- Soundmasking system, professionally designed and tuned, increased closed office privacy levels from 75 to 95 percent.



Adding return air attenuators and soundmasking provides confidential speech privacy. PI = 95

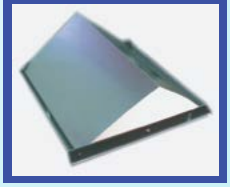
Tests prove that the combination of conventional drywall construction, 2' x 2' x 3/4" mineral fiber ceilings and the addition of soundmasking will provide privacy levels of 95 to 100.

Confidential Speech Privacy For Closed Offices

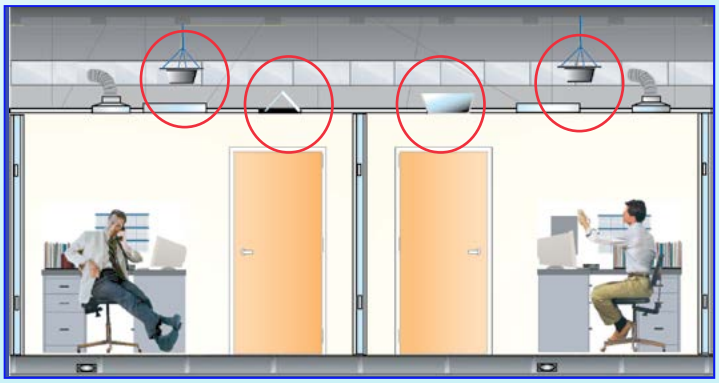
- Laboratory and field tests prove that cost-effective closed office construction provides both confidential privacy and reconfiguration flexibility.
- Reduce construction and reconfiguration costs of ceiling, wall and HVAC systems by specifying moveable walls or drywall partitions that stop at the suspended ceiling.
- Protect open return air grilles with tented attenuators to minimize cross-talk between offices.
- Achieve predictable and cost-effective confidential speech privacy with soundmasking by Dynasound installed into access floors or ceiling plenums.
- Contact Dynasound for soundmasking systems designed using acoustical programming software that quantifies and value engineers facility specific solutions. Since 1975 Dynasound has provided speech privacy solutions to business, healthcare and government facilities.

DS1390
Floor Masker

DS2022
Air Return Cover



DS1338
Plenum Masker



Protection From Electronic Eavesdropping

Many facilities, or certain areas within, require additional protection from deliberate electronic eavesdropping. Dynasound manufactures Eavesdropping Protection Systems to treat doors, walls, windows, ducts, access floor and ceiling cavities, pipes and conduits.

For more information, request Dynasound's brochure:Eavesdropping Protection

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