

WHITE SOUND - A DESCRIPTION

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- 1 Open-Plan Pros and Cons In the '70s, the cubicle was king. Companies discovered the benefits possible with open-plan design. Popping partitions between employees in a "bullpen" could boost efficiency without the expense of private offices. But, as many discovered, open-plan designs were as likely to be a flying success as a costly failure. Without proper attention to acoustical considerations, noise levels rose, productivity fell and employees became disgruntled. What was true then is true today: open-plan design requires thoughtful acoustical planning. The key to success in open-plan design is knowing when and how to use it. Open-plan is ideally suited to increasing productivity where employees need to interact on a regular basis. In fact, contemporary open-plan can be defined as an area of work stations organized on the basis of communications flow between stations. Open-plan design is ideally suited to areas requiring marginal privacy, where a relatively quiet atmosphere is needed but speech privacy isn't a primary concern. Areas requiring confidential privacy or normal privacy, where speech can be understood only with careful listening, are more challenging to accommodate with open-plan design
- 2 Screening Noise in an Open Plan Environment The single biggest problem in open-plan offices is noise, whether from copiers, telephones, printers, calculators, keyboards or people. Absorbing those sounds before they have a chance to travel about the space is key to creating an environment that enhances productivity. A number of systems are typically used:-
 - 2.1 Acoustical ceilings keep sound from reflecting down onto the work space so they need to be highly absorptive
 - 2.2 Carpeting can be useful in absorbing "surface noises" such as dropped items and footfalls. Carpeting alone, however, will not provide sufficient sound absorption for the open office
 - 2.3 Curtains are often overrated as a sound control solution. To prevent reflection off exterior walls, the curtains would need to be so heavy they would block light and would have to be kept closed
 - 2.4 Light fittings Placed directly above a partition, fixtures can reflect sound from one area to another. Luminary placement is particularly critical in environments requiring confidential or normal privacy

- 2.5 Partitions Perhaps the element most associated with open-plan design is the partitions used to separate spaces. Providing visual privacy, partitions also perform the more vital task of absorbing sound. They should have enough sound attenuation to prevent sound from traveling through the screen and also be high and wide enough to block flanking sound paths. Partitions should also have sound-absorptive material on each side to reduce sound reflection
- 3 The Solution An irony of open-plan acoustics is that when sufficient sound absorbing materials have been installed to effectively cut reflected sound, direct sound (sounds that are heard before they strike an absorbing surface) become a major distraction which can interrupt concentration or entice others to participate in overheard conversations. Either situation leads to lower productivity
- 4 White Sound - A Definition White sound systems are used to "hide" direct and unabsorbed noise. White sound systems are essential in open-plan offices requiring speech privacy and where noise levels are especially high. The systems work not by eliminating noise, but by producing a sound of their own that masks distracting noises. In most offices, mechanical systems produce a masking effect. White sound systems are simply controlled background noise specifically engineered to suit a particular acoustical environment. Typical white sound systems consist of electronic equipment that generates the masking noise and loudspeakers, located in the ceiling void, that broadcast the noise about the space. The masking noise level and spectrum content (frequencies used to make the noise) are specially adjusted to suit the specific requirements of each installation

<p><u>White Sound users</u> - AGA, Melrose Arch, Joburg, (Andrea Josephson 214 8386) - ABSA Towers (Chris Leeson 482 2920) - African Life - Afrox - AMDAHL - Bank of Lisbon Building - Deutsche Morgan Grenfell - Discovery Health - First National Bank, Bank City (Jim Cadger 371 5565) - Liberty Life Head Office (Mahzabin Haffejee 408 2216) - Makro - Mutual and Federal Head Office - Standard Bank Head Office - Telkom</p>
