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Speakers and Acoustic Treatment for Custom Installation (1/12/2008)



By Dave Chester, Custom Controls

As part of our custom installation services we are constantly recommending various speaker technologies. Whether it be multiroom audio/video in a 200-year-old farmhouse, a cutting-edge home cinema in a modern penthouse, or distributed audio throughout a luxury yacht, there is a speaker technology which is a perfect fit.

More modern new-build homes may allow for in-ceiling and in-wall speakers, complete with back boxes and colour-coded grilles for the ultimate bespoke and discreet installation. The only question in this scenario is the time-old dilemma of cost and size versus performance - do you spend a huge amount of money and integrate very large speakers to get music into the bathroom, or do you use speakers the same size as the halogen downlighters to get background music? The old farmhouse will most likely have solid walls and exposed beams - great for aesthetics but leaving very little option for hidden speakers. This scenario poses the biggest challenge for the custom installer - do the clients want floorstanding or bookshelf speakers, wallmounted or even on-wall speakers? Getting all parties to agree can be time-consuming and a test of negotiating skills!



Room with exposed beams.

Invisible speakers

A number of companies have spent some considerable effort in addressing the 'invisible speaker' issue. Artcoustic make flatpanel speakers designed to offer hi-fi quality, with a choice of frame colours and interchangeable front screens to complement your interior, whilst Amina speakers are designed to be literally plastered into the wall, leaving nothing on show.



Artcoustic on-wall speakers adjacent to TV.

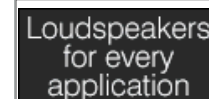
Speakers designed to be on show

Bang and Olufsen take a slightly different approach to loudspeaker design with speakers which can be a focal point. Slightly more traditional options come from the British loudspeaker manufacturer Bowers & Wilkins - finishes in Cherrywood, Rosenut and Black Ash are beautifully made, and come in a variety of sizes to fit in any room. Even renowned hi-fi company Linn make a speaker that is ideally suited for smaller spaces such as yachts - the Linn Sweetspot speakers have a 3.5" diameter and are perfectly hidden in a ceiling of halogen downlights.

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The Linn Sweetspot in-ceiling speakers.

Outdoor speakers

Outdoor speakers have typically been a hit or miss affair with more effort put in disguising them as rocks or plant pots than providing a good listening experience. We tend to install the Bowers & Wilkins weatherproof range. Available in black or white, they can be discreetly tucked in corners and, whilst not as unobtrusive as a singing plant pot, provide an excellent outdoor experience.

Home cinema speakers

Home cinema by its nature requires a plethora of speakers - at a minimum five main speakers and a subwoofer, and rising quickly from there. Accommodating all these speakers can be a nightmare, even with the whackier designs or the nicer finishes, and what may work in a large room can dominate a smaller room. There are several options available from fully in-wall speakers (possibly accompanied by in-ceiling speakers for surround or rear channels), to speakers integrated into bespoke media walls. The Custom Theatre 800 range from Bowers & Wilkins is specifically designed to be built in to the fabric of the room providing subtle installation and, using its 800 series heritage, outstanding sonic performance. The built-in approach also enables us to offer enhanced solutions such as media walls with built-in provision for projector screens and plasma lifts.

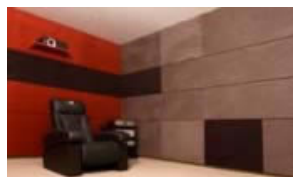


Home theatre with built-in Bowers & Wilkins speakers.

Acoustic setup

Of course all of the speakers in the world will not provide a good experience if not set up correctly. Some amplifiers will automatically set up levels and delays to provide a reasonably good sound, but even a professionally-setup and calibrated system will not perform at its full potential without the room acoustics having been taken in to consideration. In a dedicated home cinema room it may be acceptable to have walls of acoustic panelling, but in a room which must also function as a lounge or entertaining space, it is less practical.

Furnishings such as rugs, carpets and fabric sofas may well dampen down the harsh overtones but they will also absorb the sound you do want. Acoustic panels from companies such as Cineak and Cinematech will filter the sound in a good way, and the difference can be extraordinary - voices become more distinct and the stereo channels become easier to distinguish. They are available in a huge number of finishes and fabrics and can blend in or enhance the design of any room.



Room treated with Cineak acoustic panels.

I am such a convert to acoustic panels that I have a pair hanging in my dining room, where no audio/visual equipment is installed, to improve the acoustics in the room and remove the stark effect of wooden floorboards and plastered walls!

Conclusion

I believe it is worthwhile spending as much as the budget will allow on your chosen style and size of speaker, but it is equally important to get the system set up properly and take into account room harmonics. Acoustic panelling hung in the right locations can dramatically affect the sound quality in ways you would not think possible - certainly a worthwhile investment considering its relatively low cost.

Dave Chester is the Managing Director of Custom Controls, bespoke home cinema installers and multiroom AV specialists.

www.CustomControls.co.uk