

**As regular readers will know “Customer Installer” is planning to build its own “Reference” home cinema installation and following the arrival of a set of D-Tools software the selection and integration of the equipment proceeds; albeit at a leisurely pace. But there remain some significant gaps in the installation design and one which is proving difficult is the choice of screen. Stan Curtis describes the conflicting needs of the project.**

It strikes me that one of the most important components in a home cinema has to be the screen because that is the one component you look at for hours on end. The screen has to display the picture with sufficient brightness; the best possible contrast; be free of physical distortions yet be effectively invisible to the viewer. But if I'm honest the task of selecting the optimum screen for the “Custom Installer” home cinema is starting to give me a headache because of some seemingly conflicting requirements. It's not as though I'm a stranger to screen technology. During my student days I worked as a projectionist on those nights I wasn't playing in a band and in the course of such occupation I came across a number of screens. Some were of the “trampoline” style construction with a fabric tightly stretched inside a huge frame whilst other screens were huge lattice-work constructions carrying sheets of perforated painted wood. All of them were big; none too reflective and relied upon the prodigious light output of the carbon arcs behind the projectors. Yes I can still smell the arc now. However one thing stayed firmly in my mind; all the screens I saw were curved. The CinemaScope screen used a mild curve (of at least of 120 degree arc) which was very effective in making the viewer feel immersed in the picture whilst helping to maintain sharp focus across the whole width of the screen. The CinemaScope logo may have largely disappeared, but today's movies are still shot using the same system, albeit with the improved Panavision anamorphic lenses. Today's large cinemas still use curved screens yet these seem to be unknown in home cinemas even those at the very high-end. So far at least my questions to the industry on this topic have drawn blank looks although one installer did know of a film producer who recently installed a curved screen in his UK home by the far from simple expedient of building and plastering a curved wall. Unfortunately that idea conflicts with my desire to install the loudspeakers behind the screen so I guess we'll have to have flat screen like everyone else.

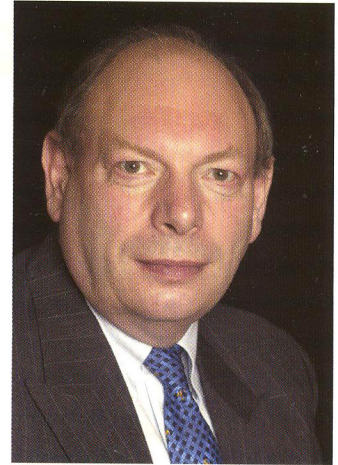
My next quandary is this matter of perforated screens. In many respects the best place for the loudspeakers is behind the screen. They are hidden; they are located in the same place as the visual images and such a placement avoids the frequency response skewing

caused by the adjacent surface reflections when loudspeakers are mounted in the proscenium arch or close to the ground. But the perforations can reduce the reflective area by some 20% so will that effect the contrast or will using a more powerful projector compensate? Furthermore it seems that some projector manufacturers are decidedly dismissive of perforated screens primarily because they don't want you to discover the unpleasant and certainly distracting Moire patterns created by light diffraction around the holes. This is an area where the conflicting advice I've been offered has left me in full-on Libran mode; “on the one hand, but then again on the other.” However, there may be hope in sight as the “Screen Research” products I saw in Birmingham do claim to successfully address most of the problems; I'll have to investigate further.

Finally there is the matter of masking; an option so desirable I wonder how the industry ever did without it. When the Pearl & Dean adverts finish and, to the accompaniment of a whirring sound, the screen extends

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into the farthest corners of the cinema you always get that frisson of anticipation. For me it is a must and fortunately there seem to be a number of options including some after-market fit products, so I don't think this is going to be too difficult except for the interfacing. Just where do I find a signal which will tell the screen controller what the aspect ratio of the movie is going to be? As usual the devil is going to be in the detail so I rather expect that some lucky installer is going to get another phone call from me. As my old Mum used to say; “A problem shared is someone else's problem.”



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