

Room treatment synopsis:

In order of importance/feasibility/budget, my approach consists of the following phases :

0. wherever possible use concrete as it is acoustically 'dead' (mass, resonance, ...) and avoid glass or polished surfaces
1. create a new room or adapt the existing room to more optimal ratio's and use as much symmetry as possible (surround requires 3D symmetry in theory)
2. to reduce reverberation (T60):
 - a. add as many absorbing materials as possible (acoustic wall-paper & ceiling panels, perforated dry-wall ceiling, non-leather furniture, fluffy carpets, etc...)
 - b. add dedicated panels in sweet spots, 1st order mirror reflections, behind flat panel or projection screen, etc...
 - c. with strictly cinema implementations (≠ 5channel SACD), room reverb has to be kept even further down, as the processor regulates artificial 'surround' through the additional speakers (see also Siegfried Linkwitz & R. Walker)
 - d. pay specific attention to reverb times when di-poles are used, they require less dry rooms (see also Siegfried Linkwitz & R. Walker)
3. add full height bass traps in every corner
4. add removable window/glass covers made out of dampening panels or diffuser material
5. add QRD or 3D diffusers (most of the time only applicable in a dedicated audio room, difficult to hide in a living room and not completely compatible with point 2.a.)