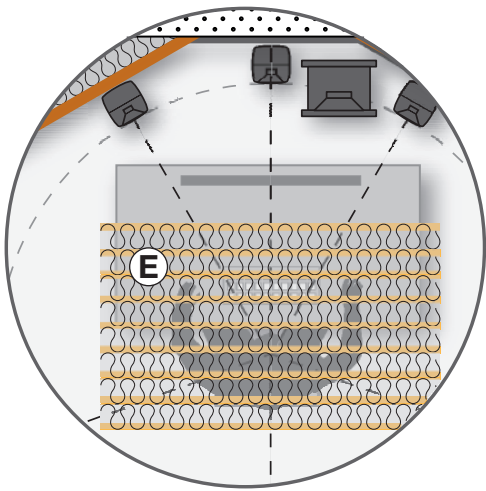
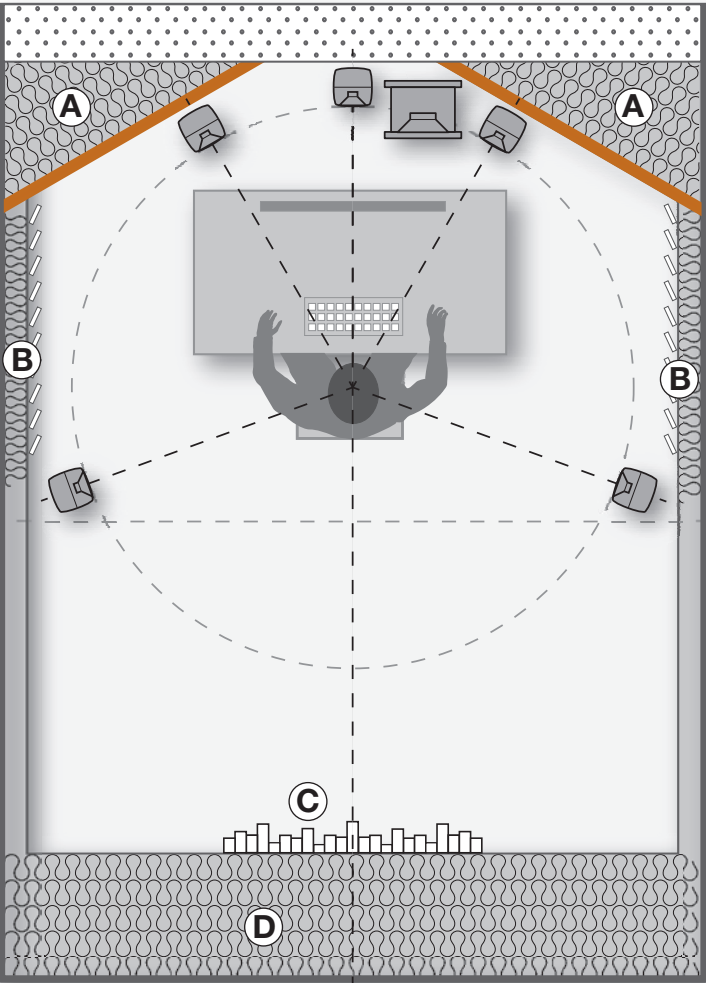


ITU-R BS.775-3

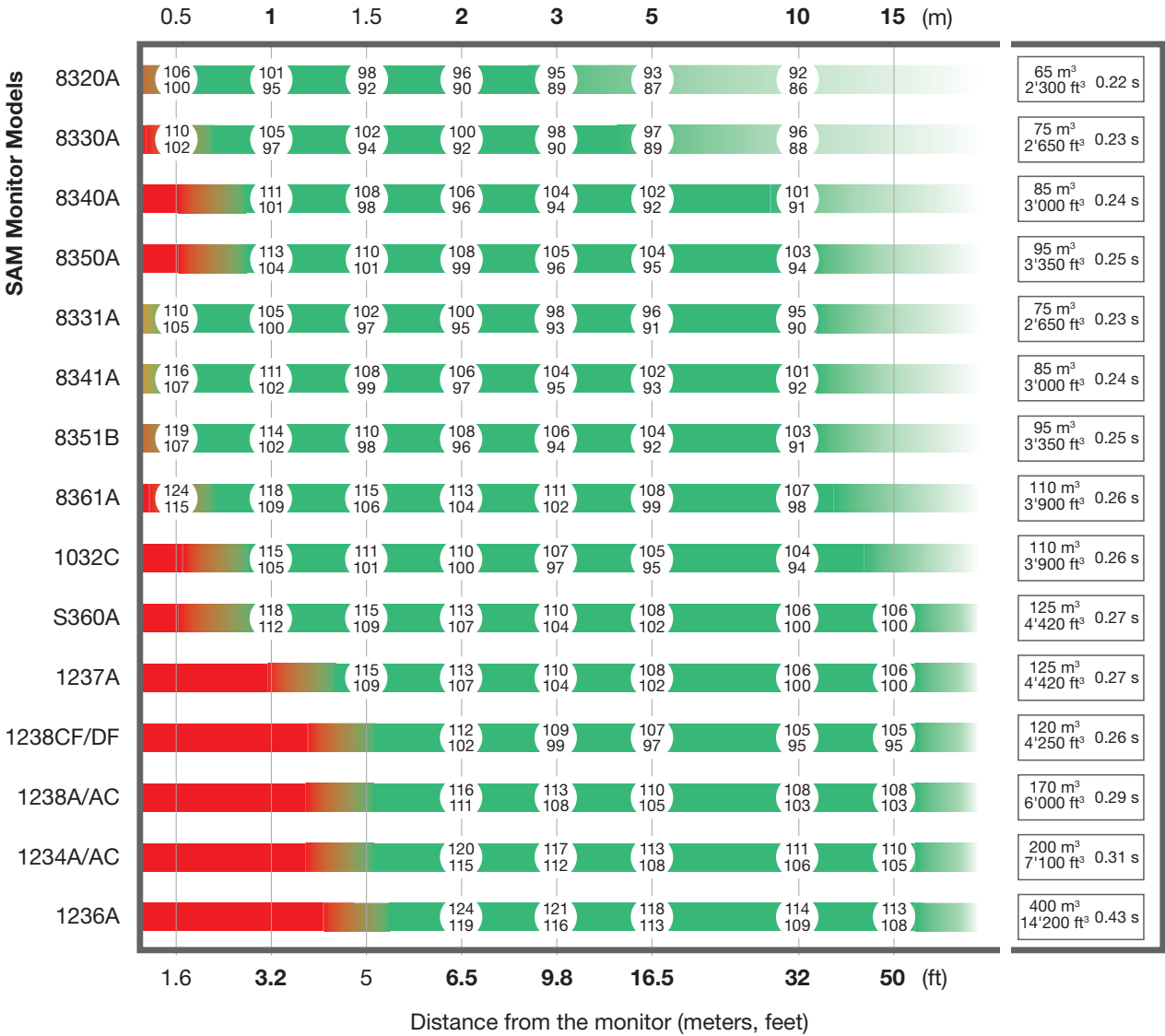
Room acoustic improvements

Several acoustic improvements can be made in a typical rectangular room where an audio monitoring setup is installed. Here are a few suggestions.



- A** Cut the room front corners at 30 degree angle using high-mass materials (concrete, bricks, multi layered gypsum board, etc). In case building materials have medium mass, make sure to fill the empty space behind these walls with mineral wool.
- B** Use a combination of absorption and diffusion on the side wall surfaces. Note that thin layers of porous absorbers only reduce HF reflections.
- C** If the room is large enough, use diffusive and absorbing element(s) on the back wall.
- D** Control low frequency room resonances using a large amount of absorption material for example in the back of the room and in the ceiling. Carefully designed and located panel resonator absorbers can also be used.
- E** Use a combination of absorption and diffusion above the listening area to reduce acoustic reflections from the ceiling.

Listening distance recommendations



Room volume
55 m³
1'950 ft³ 0.21 s

Room reverberation time (RT60)
0.21 s

Short-term sound pressure levels
Maximum short-term sine wave sound pressure level averaged from 100 Hz to 3 kHz, measured in half-space, on-axis. Peak levels are higher. This number tends to under-estimate headroom by 4 dB, based on typical immersive standards and audio content. For more detailed information, please contact Genelec.

Long-term sound pressure levels
Maximum long-term RMS sound pressure level, measured in half-space, on-axis, with simulated programme signal according to IEC 60268-5 (limited by driver unit protection circuit).

Listening Distances and SPL
The short-term and long-term sound pressure levels (SPL) listed take into consideration the typical room volume and reverberation time for each monitor (right margin, based on ITU-R BS.1116). If the reverberation time is longer, it will mainly affect the long-term SPL that will be higher than shown.

Not Recommended Distances
When the distance to the monitor is too short, summing of sound from multiple drivers is not happening as designed.

