

Studio Acoustics

All studios need to be protected from sound transmitting into and out of the studio from surrounding areas but additionally it is important to consider the internal acoustics in order to promote sound quality. It is also very important to differentiate between the two problems as a product for sound absorption will not be an effective product for sound insulation and visa versa. Failure to correctly diagnose the problem can lead to expensive retrofits.

Some of the common acoustic problems within studios include long reverberation times, early reflections and standing waves.

If the reverberation time in a room is too long then there can often be distortion and harshness in the recording however if the reverberation time is too short, the recording will sound very flat and dry. The correct reverberation time for a studio is typically $\frac{1}{2}$ to 1 second depending on its size.

Early reflections within a room occur when a reflected sound arrives at a slightly different time to the direct sound making the direct sound unintelligible.

Standing waves occur in areas where there are parallel surfaces and the sound repeatedly bounces between the same two walls, when two sound waves of the same frequencies interfere with each other they become stationary causing an imbalance in frequencies, strengthening some frequencies but cancelling out others.

The most effective method of reducing these effects is through absorbing and diffusing the sound waves in order to prevent them bouncing between surfaces and creating long reverberation times, standing waves, early reflections and also 'dead spots' or areas within the studio where sound is weak or cannot be heard clearly.

Absorption

Absorption products help to eliminate sound waves from reflecting off hard surfaces by absorbing them. In studio environments there are many different frequencies which need to be absorbed this is why Soundsorba developed the Studiosorba range which consists of high performance

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acoustic foam products for the absorption of medium, high and low frequencies. The range of sound absorbers offers great absorption combined with superb designs which bring character to the room.

Diffusion

It is important to keep the studio sounding live. Too much absorption can create a space which is dead and as well as being uncomfortable to work in it will also produce very flat recordings. Combining absorption with diffusion is an effective way of achieving the right balance.

Diffusers reflect or diffuse sound across the space evenly contributing to the reduction of reverberation and standing waves without taking the energy out of the room. The new Diffusorba range has been specifically designed for this purpose. There are two designs within the range which can be mixed and matched together and with the Studiosorba range to create great visual effects and exceptional acoustic control.

For more information or help with your acoustic problem please contact us on 01494 536888 or email us at info@soundsorba.com

All product details are available immediately on our website
www.soundsorba.com