

AXIAL REFLECTIONS

This mode means sound is being reflected from wall to opposing wall or floor to ceiling, or two parallel surfaces.

TANGENTIAL REFLECTIONS

Corners trap bass, thus creating an illusion that the bass is adequate.

OBLIQUE REFLECTIONS

This type of reflection relates to which direction in a room sound is being reflected from one hard surface to another.

Acoustic treatment has become a multi-million-dollar business enterprise. But as far as home or budget studio owners are concerned, the minimum can still make wonders.

A solution exists to achieve the minimum acceptable acoustic levels, by **absorption and diffusion**.

ABSORPTION

Sound played in an acoustically dead environment will bounce off the wall-to-wall or from ceiling to floor or vice versa. Absorption materials such as acoustic foams absorb sound so that the listener only listens to what he/she is playing, instead of fluttering and echoes and so on.

The two latest materials for acoustic treatments are high-quality acoustic foams (studio foams) and specialized acoustic fiberglass.

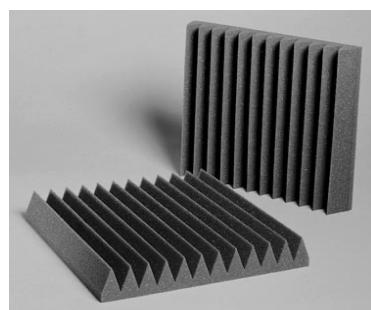


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Some benefits of acoustic foams include the following:

- Ready to work with
- Simple to trim to size, and

- Cost-effective for any type of budget studio
- Improves the sound.
- Produces accurate monitoring.
- Recordings sound better.
- What you hear is what you get.
- Creates a productive and comfortable environment.
- Space is enjoyed.
- Improved concentration and hearing acuity.

NOTE. BASED ON PHYSICS, THE THICKER THE FOAM AND THE GREATER THE AMOUNT OF OVERALL ABSORPTION

DIFFUSION

Acoustic sound diffusion prevents sound waves from grouping, thus eliminating hot spots or nulls in a room. Further, diffusion widens the 'sweet spot' and produces a song, 3-dimensional sense of openness in a room, rendering it easier to hear into a mix.

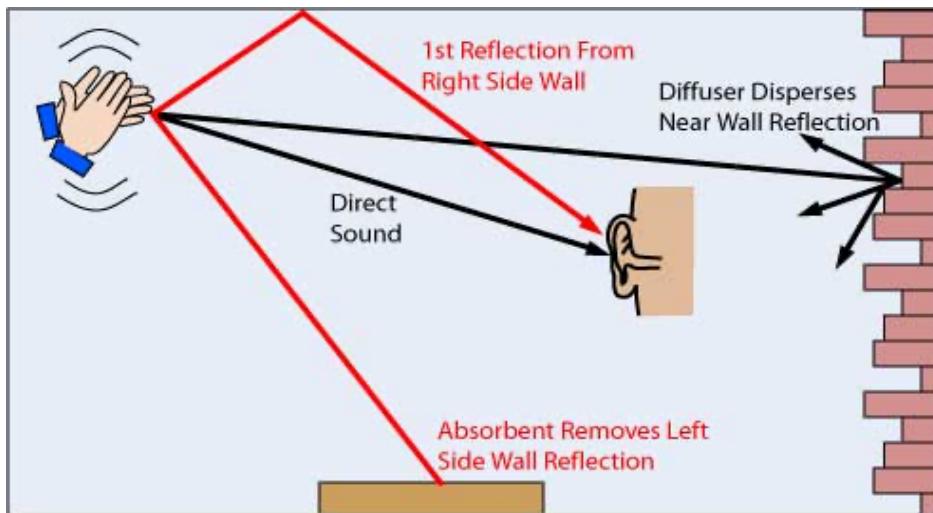


Image Source: Auralex Acoustics

In addition, diffusion obliterates standing waves and flutter echoes without just eliminating acoustic energy from space.

Acoustic sound diffusion also makes a room, smaller in size, seem large and a larger space even larger.

HOW DIFFUSION WORKS AND PERFORMS

Basically, the irregular surface contours and varying angles of the diffuser each reflect sound waves in specific different directions. Sound is simply and accurately reflected at different times.

Thus, a well-designed diffuser spreads sound symmetrically over the sonic landscape in front of it. Sound is re-distributed in the mid and high frequency evenly throughout space, and not to absorb it.

THE MECHANICS OF MUSIC

Chords supply harmony and this is how musicians have composed, arranged, and improvised their songs.

In this instance, we can delve deeper into chords.¹⁸

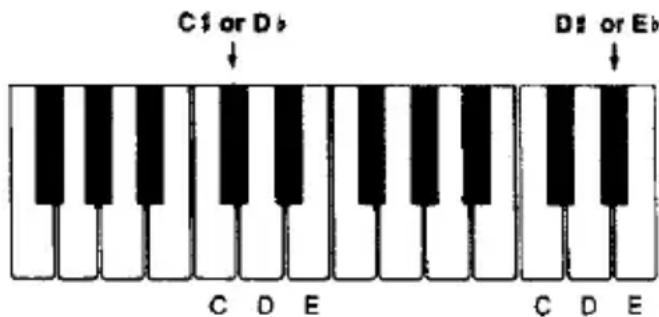


Image Source: How to play popular piano in 10 easy lessons.

Notice that the black keys come in sets of two's and three's.

CONSTRUCTION OF CHORDS

Chords make up the foundation of present-day music. So, what is a chord?

- **A chord is when you play three or more different musical notes at the same time.**
- A chord, to be simpler, a major, or a minor, contains three notes and is called a triad, TRI from Latin.¹⁹
- Moreover, chord symbols assist a keyboard or piano player or any musician to decipher what note to play without forcing them to read sheet music.
- Chord symbols have always been shown in the notation above the treble clef. They may look like a capital letter, sometimes displayed with sharps # or flats b