

ArrowAudio

INTEGRATED AUDIO VISUAL SOLUTIONS

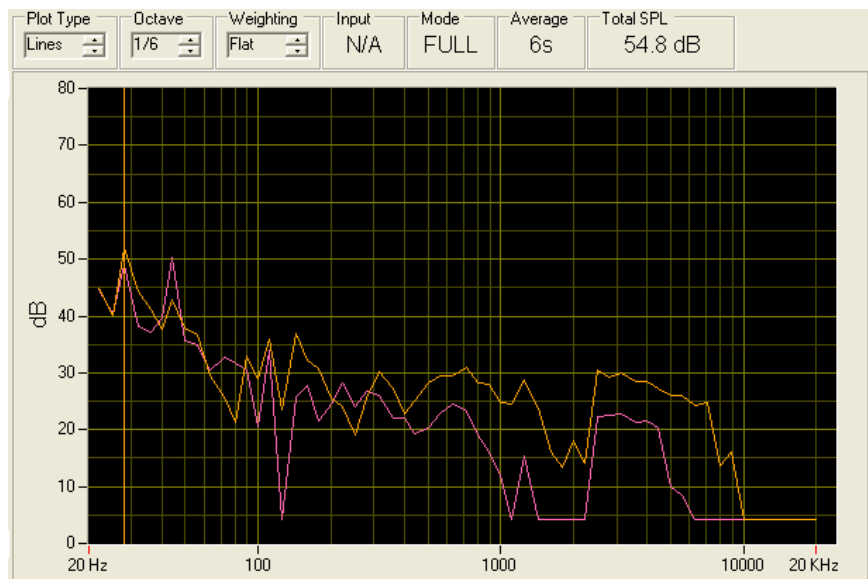
558 EISENHOWER DRIVE SUITE G KIMBERLY, WI 54136 PH. 920-731-4888 FX. 920-731-4640

St. Elizabeth Hospital in Appleton, Wisconsin was looking for a material that would help control the acoustical environment in various areas of the hospital to improve patient comfort and enhance patient privacy. In addition to controlling the noise environment the hospital wanted to have surfaces that were easy to maintain and could be easily cleaned. SoundCoustic, from SoundTech Inc. was selected for a trial installation because of its innovative design and ability to meet the defined criteria.

Acoustical testing of the effects of applying SoundCoustic in a hospital patient room was performed in a standard patient suite. Tests were conducted with and without the furniture in the suite prior to the application of the SoundCoustic material on two adjacent walls. The same series of tests were repeated after the SoundCoustic material was applied to the walls and painted. Again the tests were taken without and with furniture in the room. The furniture consisted of a standard hospital bed and two vinyl upholstered chairs.

The patient suite was originally finished with standard construction materials consisting of a vinyl tiled floor, drywall walls, drop tile ceiling and laminated cabinets. The north and east walls received the application of the SoundCoustic material.

The effect of adding the SoundCoustic material is most evident in the background noise test results. For clarity we have plotted the before and after tests together. The impact of the SoundCoustic treatment is clearly visible in the graphs. Below 500 Hz the graphs do not show significant change in the noise levels in the room under any of the conditions tested. However there is a significant reduction in the noise levels in the room particularly in the bands from 1 kHz and up. This additional absorption will reduce the level of conversational speech and sound from the television which travels to the adjacent hallway and patient suite.



Graphs of the background noise in a standard patient room at St. Elizabeth Hospital, Appleton Wisconsin. Before Treatment (Orange) and after application of SoundCoustic material to two of the walls (Pink)

Overall our conclusion is that the SoundCoustic material performs as indicated in the product literature. The application of this material, as applied at St. Elizabeth Hospital, provides a significant reduction in the reflection and transmission of the speech band frequencies. This will result in an improvement in the speech band noise levels in the patient suites and the privacy of conversations and consultations that occur in those suites. The material has the added benefit of providing this improvement while being a paintable and washable surface.

