Key Studies on SoundField Amplification

1. MARRS Project Studies (1979 – 1993)
   Validated by the U.S. Dep’t of Education
   • 30% of average elementary (K-6) populations fail a 15dB screening test.
   • Most of these children have this mild hearing loss due to otitis media (infections) and middle ear fluid.
   • A smaller percentage have chronic mild hearing loss (MHL), and a larger percentage is affected periodically throughout a given school year.
   • The majority of these children go undetected since they usually pass a routine screening of 25dB. (This level has traditionally been thought to be adequate for normal classroom hearing.)
   • 75% of these MHL children have academic deficiencies by the 6th grade.
   • Many of the unidentified MHL students are misdiagnosed with various learning difficulties.
   Abbreviated Study Results Indicate Everyday Use of SFA Outstanding Results:
   • Teaching quality is enhanced as every child receives clearly audible instructions, regardless of background noise or seating location.
   • There are statistically significant improvements in reading and language test scores for K-6 students, both those with normal hearing and those with mild hearing loss.
   • The significant gains in academic scores were clearly evident in less than one school year and were maintained for the study periods of up to three years.
   • Sound-field audio was lower cost than resource room instruction to achieve the same or superior academic test scores.
   • Teachers reported that classroom management was improved and discipline problems were reduced due to better voice command response throughout the classroom.
   • Most students reported that they found it easier to understand and pay attention.

2. ICA (Improving Classroom Acoustics) Studies
   • 1993-1994 Florida School Districts: Escambia, Orange Pinellas, Sarasota (855)
   • 1994 Florida School Districts: Escambia, Orange Pinellas, Sarasota, Vousia (1319 Students)
   Conditions:
   • 97% of classrooms in the 1994 study failed the recommended acoustical standard for a good learning environment.
   • Soundfield classroom audio systems provided an average of 7-decibel increase in teacher voice intensity.
   • Teachers used soundfield amplification an average of 4.2 hours per day.
   Abbreviated Summary Results:
   • Students in early grade general education classrooms demonstrated significantly greater change in listening, learning behaviors and skills; and at a faster rate than their grade-alike peers in unamplified classrooms.
   • Younger students showed the greatest improvement in listening and learning behaviors and skills.
   • More than 95% of students said soundfield amplification (SFA) made it easier for them to hear their teacher and helped them listen better.
   • 100% of teachers identified a decrease in vocal strain as a key personal benefit of using SFA.
   • 96% of teachers said that student’s qualitative behavior related to attentiveness, listening, and comprehension improved when using SFA.
   • 92% of teachers said that the need to repeat directions and information decreased when using SFA.
   • 92% of school administrators said that SFA enhanced class instruction and management.