

What is a Soundfield System?

A **soundfield system** (https://shop.cie-group.com/shop/audio-visual_1/soundfield_13/soundfield-systems_1000/) is a sound system for schools that improves the learning environment for the pupils by improving the sound environment in the classroom.



Why are schools looking to audio technology to improve teaching spaces?

Class sizes are increasing and as a consequence the environment is becoming more noisy. We're using more open plan classroom and teaching spaces and this results in teachers not being able to be heard clearly or equally by all the pupils in the class. Teachers are having to speak day-in and day-out at unnaturally high voice levels which can easily result in teacher illness, stress, strain and absence.

What is Soundfield specifically doing to improve the learning environment?

Soundfield introduces a low level individual audio system into the classroom and it unobtrusively raises the teacher's voice to make sure you get constant voice coverage throughout the entire class space. This ensures that every child or student in the room hears the lesson no matter where they are at the same level.



A typical classroom without a Soundfield system



A classroom with a Soundfield system installed

What's the audio technology behind a Soundfield Voice Reinforcement System?

It's basically a mini PA system. It's an individual system which can be installed or can be portable and carried around classrooms. It consists of: an amplifier, loudspeakers and a wireless microphone (dependant on the classroom size and environment) which is worn by the teacher.

(https://shop.cie-group.com/shop/audio-visual_1/soundfield_13/soundfield-systems_1000/soundfield-system-incl-irx2-ir-rec/amp-4x-wallmount-speakers-ir-mic_922.php) What microphone options are available to the teacher?

Dependant on the teaching style or the lesson, we can use a tie clip mic, a headset mic, a neck-worn mic or even a pendant mic which is worn around the teacher's neck.



Chiayo - Soundfield Pack F
Soundfield System

[Click to find out more](#)

Is there ability to integrate other audio technologies into the system?

Of course. Soundfield isn't just about raising the level of the teacher's voice in the classroom environment, we also have the ability to plug in external sources such as MP3 players, DVD players, laptops and interactive whiteboards. We can also provide independent assistive listening systems for

children with hearing disabilities and *induction loop systems* (https://shop.cie-group.com/shop/audio-visual_1/induction-loops_14/).

How has the education market taken to the adoption of Soundfield in the classroom?

It's now becoming more common and it's written into the specification of new schools and new refurbished classrooms by LEAs throughout the UK. It's being requested more and more by teachers and lecturers in mainstream and inclusive teaching environments also where children with hearing difficulties are trying to be integrated into mainstream education.

The benefits of Soundfield Reinforcement in the classroom:

- More effective teaching in the learning environment
- All children clearly hearing and understanding the lessons
- Teachers not having to raise their voices, therefore significantly reducing voice strain, stress or illness
- Support for inclusive class training







Noise Health. 2016 Jan-Feb; 18(80): 42–49.

doi: [10.4103/1463-1741.174386](https://doi.org/10.4103/1463-1741.174386)

PMCID: PMC4918678

PMID: [26780961](https://pubmed.ncbi.nlm.nih.gov/26780961/)

Evaluating effectiveness of dynamic soundfield system in the classroom

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Abstract

Research has reported on the use of soundfield amplification devices in the classroom. However, no study has used standardized tests to determine the potential advantages of the dynamic soundfield system for normally hearing students and for the teacher's voice. Our aim was to evaluate the impact of using dynamic soundfield system on the noise of the classroom, teacher's voice and students' academic performance. This was a prospective cohort study in which 20 student participants enrolled in the third year of basic education were divided into two groups (i.e., control and experimental); their teacher participated. The experimental group was exposed to the dynamic soundfield system for 3 consecutive months. The groups were assessed using standardized tests to evaluate their academic performance. Further, questionnaires and statements were collected on the participants' experience of using the soundfield system. We statistically analyzed the results to compare the academic performance of the control group with that of the experimental group. In all cases, a significance level of $P < .05$ was adopted. Use of the dynamic soundfield system was effective for improving the students' academic performance on standardized tests for reading, improving the teacher's speech intelligibility, and reducing the teacher's vocal strain. The dynamic soundfield system minimizes the impact of noise in the classroom as demonstrated by the mensuration of the signal-to-noise ratio (SNR) and pupil performance on standardized tests for reading and student and teacher ratings of amplification system effectiveness.

Keywords: *Acoustics, child, schools, signal-to-noise ratio (SNR)*

Introduction





955 Access™

The 955 Access is a powerful classroom amplifier. But that's just the beginning.

It's also an advanced media control center that can easily integrate all your audio sources and deliver high-quality audio for every student.

It's powered by Access Technology, which means it can seamlessly connect to other Access Technology components. That makes it easy to expand to enable new methods of instruction.

This versatile solution connects to a variety of different speaker options to excel in a variety of different applications - whether it's classrooms, open areas or large spaces - with no audio dropout or interference.

A compact, powerful amplifier and media control center



Built for the demands of today's and tomorrow's active learning spaces.

With 955 Access, schools have more classroom audio options than ever before. All without the limitations that come with infrared technology. With Lightspeed's Access Technology, it's an easy and reliable way to deliver voice and multimedia in large, open rooms, with no audio drop out or interference with other technologies.

The 955 Access works with the entire class, small groups, and even students in the hallway. It easily adapts to group learning by adding an Activator Pod to each student group.

Specifications

Wireless Communication	Access Technology (1.9 GHz + RF4CE)
Wireless Transmission Range	Up to 200 ft. (60m) open field
Power Output	20 watts per channel (40 watts total)
Frequency Response	60 Hz - 7 kHz
Total Harmonic Distortion (THD)	<1% @ 10W
DC Power Input	24V/2.5A
Audio Input (with volume control)	Four 3.5 mm Inputs
Audio Outputs	One 3.5mm Output
Tone Control	Bass / Treble
Dimensions (W x D x H)	7.6" x 5" x 1.13" (193 x 127 x 29mm)
Weight	9.5 oz (269g)

955 Access™

POWERED BY ACCESS TECHNOLOGY



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PENDANT-STYLE WIRELESS
MICROPHONE WITH CRADLE
CHARGER

