**EA Sensory Service**  

# Soundfield System

Hearing aids and cochlear implant processors are essential pieces of equipment for deaf pupils. They enable them to hear the sounds of speech more clearly but they do not correct hearing in the same way that glasses correct vision. Hearing aids ***do not*** restore normal hearing.

There are three main problems when listening through a hearing aid/cochlear implant:

* Distance
* Background noise
* Reverberation or echoes

Hearing aids/cochlear implants also amplify unwanted background noise, in addition to the essential speech sounds. They work best within a radius of 1 metre. Beyond this, the pupil will experience difficulty in hearing the teacher’s voice.

For pupils with hearing aids/cochlear implants, the teacher's voice should be ideally 15-20dB above the background noise of the room, as it enters the child's ear.  This is called the signal to noise ratio.

A soundfield system will help to overcome the problem of distance, and to improve the signal to noise ratio. This comprises a microphone which is worn by the teacher, and a speaker which amplifies the teacher’s voice. The soundfield system helps to reduce the effects of background noise, as the signal from the teacher’s voice is louder and stronger. A soundfield system is ideal for a child who may not wear hearing aids or cochlear implants for a variety of reasons or a child for whom a radio aid is not suitable.

There are many different systems available commercially. The soundfields currently being used by our service are as follows\*:

* [Swift Digital Soundfield](https://www.connevans.info/image/connevans/Swift_Digital_Installation_Data_Sheet_v5.pdf)
* [Roger DigiMaster 5000](https://www.connevans.info/image/connevans/Dynamic_SoundField_User_Guide1.pdf) using either a [Roger Touchscreen Mic](https://www.connevans.info/image/connevans/phonak_roger_touchscreen_mic_datasheet.pdf) or [Roger Inspiro](https://www.connevans.info/image/connevans/Dynamic-SoundField-5000-Technical-Data1.pdf)
* [Frontrow ToGo](https://www.gofrontrow.com/resources/manuals-guides/togo-quick-start-guide/)

The Qualified Teacher for the Deaf following discussion with the parents and class teacher, will decide whether or not a soundfield system is appropriate. The Sensory Service will loan soundfield systems to pupils in schools, set them up, and train staff and pupils in their use and maintenance.

\* The soundfields listed on this page are currently in use by the service but this does not constitue endorsement by the Education Authority or the Sensory Service.

For further advice please contact the Sensory Service via phone: 028 25 661 258 or email: sensoryservice@eani.org.uk