

Nucleus® cochlear implants

About cochlear implants

The cochlear implant is a technological triumph. It is the only medical device designed to restore a human sense and is an alternative to traditional solutions like hearing aids, which often provide little or no benefit for someone with severe-to profound hearing loss.

A hearing aid works by amplifying sound. However, for those with the most severe hearing loss, amplification often does not improve hearing because the ear itself does not function properly. Rather than making sound louder, a cochlear implant bypasses the damaged part of the ear and sends sound directly to the auditory (hearing) nerve.

This provides a clearer understanding of sound and speech.

About the Cochlear™ Nucleus® 5 System

Cochlear Nucleus 5 was developed in close collaboration with professionals, candidates and recipients from around the world.

Nucleus 5 comprises four components:

- the Nucleus CI500 Series cochlear implant
- the Nucleus CP810 Sound Processor
- the Nucleus CR110 Remote Assistant
- Cochlear Custom Sound™ Suite 3.0

The Nucleus CI500 Series cochlear implant

The Nucleus CI500 Series is the world's thinnest cochlear implant, at 3.9 mm. Built on leading implant reliability, it is 40 per cent slimmer than the previous generation. Its enhanced implant strength makes it two and a half times stronger when compared to previous

generation Nucleus implant - Nucleus Freedom™ and measured by impact testing. The Nucleus CI500 Series contains the largest number of real, active electrodes, powered by a custom-designed microelectronics platform - for the most precise stimulation, and accurate delivery of sound to the hearing nerve.

The Nucleus CP810 Sound Processor

The sound processor sets a new benchmark in hearing performance, offering four customised settings for different listening environments. New automatic phone detection which automatically recognises speech signals to optimise hearing over the phone – no more button-pressing required.

The sound processor has two in-built microphones to capture sound from all directions. It is slim, discreet, sophisticated, comfortable – and more water resistant than ever before, as measured by the International Dust and Ingress protection rating of IP57¹.

The processor is available in various colours and a range of coloured sound processor covers. Several battery modules and flexible wearing options are also available for the sound processor.

The Nucleus CR110 Remote Assistant

The CR110 Remote Assistant is more than a remote control - it is the only bi-directional remote assistant that puts hearing management in the hands of patients.

¹ When using a rechargeable battery module, the CP810 Sound Processor has a dust and ingress protection rating of IP57 (i.e. protection against penetration of solid foreign objects \geq 1.0 mm diameter, failure from dust penetration, failure from temporary immersion in water).

Recipients can either change settings on the sound processor or remotely using the CR110 Remote Assistant. Either method of change will be reflected on both devices. It enables simple monitoring, diagnostics and troubleshooting for users delivering increased confidence for the patient and, in the case of children their parents.

Cochlear Custom Sound Suite 3.0

The Custom Sound Suite 3.0 is a new software platform that simplifies programming through a more efficient workflow with an improved user interface to assist in the programming and counselling of patients.

About SmartSound™2

People with hearing loss find it especially difficult to hear in certain environments, such as where there is background noise or when trying to focus on a conversation in a crowd. SmartSound2 is the only sound enhancement technology available to cochlear implant users that can adapt to the different listening situations in the same way natural hearing does.

SmartSound Everyday, as the standard setting, is designed to deliver improved hearing in typical everyday situations such as the family home or office workplace. These situations generally include a mixture of loud and soft sounds.

In the most challenging environments, SmartSound 2 steps up another level. In difficult situations, users achieve better hearing by selecting one of the three SmartSound 2 power programmes: Noise, Focus and Music.

About Cochlear

As the global leader in hearing solutions, Cochlear is dedicated to bringing the gift of sound to people all over the world. With our hearing systems, Cochlear has reconnected over 180,000 people to their families, friends and communities in more than 100 countries.

Along with the industry's largest investment in research and development, we continue to partner with leading international researchers and hearing professionals, ensuring that we are at the forefront in the science of hearing.

For all people receiving any cochlear hearing system, our commitment is that they will hear now and for always. For the rest of their life we will be there to support them.