ReSound

For people with Cochlear Implants

Spring 2024 Issue 81

Spring flowers

Manchester Cicada

An association of cochlear implant users helping each other

This newsletter has been produced on behalf of Manchester CICADA

contents

Editorial

Welcome to the Spring edition of Resound for 2024.

In this edition I am pleased to be able to report on the resumption of our regular events after the disruption of recent years.

Since the last edition we have also been developing our Facebook site so we can keep in contact easier and also be able to publicise and manage our events schedule quicker.

Further developments will see back copies of Resound and useful information about accessories be there for your use.

The Facebook page is called Manchester Cicada Club.

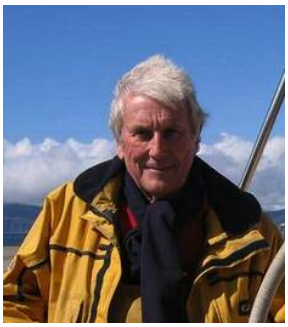
Our website is also still available for those without Facebook access for news, events and links to many helpful websites and organisations. The link is: www.manchestercicada.org.uk

Enjoy this issue and as always feedback is appreciated. Kevin Williams - Editor

Alles Klar? by John Newton

I have always felt ashamed of the fact that my only language is English in spite of the fact that I have travelled quite a lot. I am afraid that I am not at all unusual, the British are renowned for being unable to speak any other language but their own. My first venture abroad was a school trip to Germany when I was seventeen. I had an 'O' level GCSE in the language but as was the case at the time, I had no fluency except in my native tongue. We stayed in a very friendly small hotel and we liked the food. The chef had a way with potatoes which was new to us and which suited our keen adolescent appetites. The only words I still retain from the trip was "mehr Kartoffeln bitte" (more potatoes please).

I have friends who live in France and I have visited that country often, once spending



several months there but never really got beyond buying essential supplies in the language. I have memories on one trip of a very pretty and charming lady who ran a bakery which I visited every morning, she always gave me a nice smile. Alas, I was unable to progress with her beyond "une baguette s'il vous plais madame". (a loaf please)

Later as my travels continued, I came to blame my deafness for my difficulties in picking up a language. It is an obvious barrier, first of all you can't hear the words, or at least not well enough to imagine them in print and hence identify the meaning. Second, you don't get the feedback, you cannot determine whether what you are saying is correct. I confess that I have run with that excuse for a long time and effectively given up hope of ever chatting up a nice lady in a shop.

That is until a recent trip to Denmark when I spent a few days in Copenhagen and was amazed and ashamed to discover that pretty well everyone spoke perfect English. Discovering when I got to my hotel that I had left my phone charger at home, I found my way to a big electronics store and a charming young girl, a teenager who replied to my query in my own language without any prompting. I asked her how she got so fluent. "Watching American TV programmes" she said " and we did it at school of course". The other prompt arose from the possession of a clever little device called AutoLink which comes with my Med-El cochlear implant. It feeds a sound signal directly into my implant from whatever source, the TV or radio, or my laptop. It makes speech very clear so that I get 90% of what is said at least.

So, returning home I decided that I ought to have another go. I chose German because I had studied it a bit at school, I had even sung it when I was a member of a choir specialising in the music of Bach, and I knew it was quite closely related to English, particularly northern English. My first tentative steps were taken by signing up to an on line course run by City Lit. It wasn't very inspiring and I didn't think it was very good value for money . However I then discovered DuoLingo . It's an American company which runs courses in pretty well any language under the sun, it's always available via email at any time you want it and it's free! It's also very "user friendly" being illustrated with amusing cartoon figures who congratulate you when you get something right and frown when you make a mistake and encourage you with various sounds. It also seems to go on for ever. I have never reached the end of it so far and I started it about a year ago.

I have rather reluctantly concluded that it's unlikely that I can learn to have a spoken conversation in the language. I have moderated my ambition somewhat but hope to get reasonably fluent at reading the language and be able to speak it with some facility. (although, of course, I realise that being able to speak to someone is not much use if you can't hear the reply!)

In the back of my mind is the notion that people will think I'm crazy (the German for "you are crazy" is "du spinnst"!) especially at my age but I find I enjoy my new found fluency even if it's only to read the German subtitles in films of World War 2! Soon I plan to have a go at a novel in German, reading one, I mean.

JSN 02062024

(Alles Klar is German for "is that clear?", as you probably guessed)

Royal Oak meet up March 2024

After the complete closedown of event activities during the Covid lockdown period we started in the autumn of last year to try and get some more regular events organised.

We had met up at the Ellesemere port boat museum in the summer of 2022 and in 2023 managed two events, the Steam train trip to Rawtenstall in July of that year, and the trip to the Cheshire Falconry centre in September.

We have so far this year managed to hold three events and have another scheduled for June so we are making progress.

This years first event was a meet up at the Royal Oak pub near Riley Green which is

near where we have been for Canal boat trips and meals on several occasions.

Twice last year to we tried to meet up at the Royal Oak only to be defeated at the last

minute by the weather so it was great to finally gather in the sunshine.

We welcomed two new members Neil and Monika coming all the way from Rainhill near Liverpool as well as one attendee travelling at least as far by mistake, having missed the turn off on the motorway :)

However we were treated to a lovely meal in a section of the pub reserved for us which was more secluded and away from background noise which was a help.

All in all it was nice to get the events agenda running again and we also had a chance for a good chat, not just about social issues but some technical discussions going on in the background.

Things such as how people use their supplied CI accessories in different situations such as when driving in the car or watching television.

Helping each other get the maximum benefits from their CI's is a just one of the reasons for these events.

At this point I have to give my thanks to my trusty fellow explorer who helped with the investigation into prospective venues which of course is totally necessary to ensure a suitable meeting can take place - cheers Alan

New research on how humans determine the direction of sounds. Research by Macquarie University

Macquarie University researchers have debunked a 75-year-old theory about how humans determine where sounds are coming from, and it could unlock the secret to creating a next generation of more adaptable and efficient hearing devices ranging from hearing aids to smartphones.

In the 1940s, an engineering model was developed to explain how humans can locate a sound source based on differences of just a few tens of millionths of a second in when the sound reaches each ear.

This model worked on the theory that we must have a set of specialised detectors whose only function was to determine where a sound was coming from, with location in space represented by a dedicated neuron.

Its assumptions have been guiding and influencing research -- and the design of audio technologies -- ever since.

But a new research paper published in Current Biology by Macquarie University Hearing researchers has finally revealed that the idea of a neural network dedicated to spatial hearing does not hold.

Lead author, Macquarie University Distinguished Professor of Hearing, David McAlpine, has spent the past 25 years proving that one animal after another was actually using a much sparser neural network, with neurons on both sides of the brain performing this function in addition to others.

Showing this in action in humans was more difficult.

Now through the combination of a specialised hearing test, advanced brain imaging, and comparisons with the brains of other mammals including rhesus monkeys, he and his team have shown for the first time that humans also use these simpler networks.

"We like to think that our brains must be far more advanced than other animals in every way, but that is just hubris," Professor McAlpine says.

"We've been able to show that gerbils are like guinea pigs, guinea pigs are like rhesus monkeys, and rhesus monkeys are like humans in this regard.

"A sparse, energy efficient form of neural circuitry performs this function -- our gerbil brain, if you like."

The research team also proved that the same neural network separates speech from background sounds -- a finding that is significant for the design of both hearing devices and the electronic assistants in our phones.

All types of machine hearing struggles with the challenge of hearing in noise, known as the 'cocktail party problem'. It makes it difficult for people with hearing devices to pick out one voice in a crowded space, and for our smart devices to understand when we

talk to them.Professor McAlpine says his team's latest findings suggest that rather than focusing on the large language models (LLMs) that are currently used, we should be taking a far simpler approach.

"LLMs are brilliant at predicting the next word in a sentence, but they're trying to do too

Basking in the Australian sunshine!

much," he says.

"Being able to locate the source of a sound is the important thing here, and to do that, we don't need a 'deep mind' language brain. Other animals can do it, and they don't have language.

"When we are listening, our brains don't keep tracking sound the whole time, which the large language processors are trying to do.

"Instead, we, and other animals, use our 'shallow brain' to pick out very small snippets of sound, including speech, and use these snippets to tag the location and maybe even the identity of the source.

"We don't have to reconstruct a high-fidelity signal to do this, but instead understand how our brain represents that signal neurally, well before it reaches a language centre in the cortex.

"This shows us that a machine doesn't have to be trained for language like a human brain to be able to listen effectively.

"We only need that gerbil brain."

The next step for the team is to identify the minimum amount of information that can be conveyed in a sound but still get the maximum amount of spatial listening.

Scientists discover biological mechanism of hearing loss caused by loud noise -- and find a way to prevent it

Anyone who has ever been to a loud concert knows the feeling of ringing ears. Some people experience temporary or even permanent hearing loss or drastic changes in their perception of sound after the loud noises stop. Thanos Tzounopoulos, Ph.D., director of the Pittsburgh Hearing Research Center at the University of Pittsburgh School of Medicine has focused his scientific career on investigating how hearing works and developing ways to treat tinnitus and hearing loss.

In a paper published recently in the Proceedings of the National Academy of Sciences, Tzounopoulos and his Pitt collaborators Amantha Thathiah, Ph.D., and Chris Cunningham, Ph.D., discovered a molecular mechanism of noise-induced hearing loss and showed that it could be mitigated with medication.

The study showed that noise-induced hearing loss, which affects millions of Americans, stems from cellular damage in the inner ear that is associated with the excess of free-floating zinc – a mineral that is essential for proper cellular function and hearing. Experiments in mice showed drugs that work as molecular sponges trapping excess zinc can help restore lost hearing or, if administered before an expected loud sound exposure, can protect from hearing loss.

"Noise-induced hearing loss impairs millions of lives but, because the biology of hearing loss is not fully understood, preventing hearing loss has been an ongoing challenge," said senior author Thanos Tzounopoulos, Ph.D., endowed professor and vice-chair of research of otolaryngology at Pitt.

While some experience noise-induced hearing loss as a result of an acute traumatic injury to the ear, others notice a sudden hearing impairment after being continuously exposed to loud noise, for example in a battlefield or at a construction site. Others notice their hearing deteriorating after attending a loud music show.

Researchers say such noise-induced hearing loss can be debilitating. Some people start hearing sounds that aren't there, developing a condition called tinnitus, which severely affects a person's quality of life.

Tzounopoulos' research, which focuses on the biology of hearing, tinnitus and hearing loss, strived to determine the mechanistic underpinnings of the condition in the effort to lay the groundwork for the development of effective and minimally invasive treatments in the future.

By performing experiments in mice and on isolated cells of the inner ear, researchers found that hours after mice are exposed to loud noise, their inner ear zinc level spikes. Loud sound exposure causes a robust release of zinc into the extra and intracellular space which, ultimately, leads to cellular damage and disrupts normal cell to cell

communication.

Thankfully, this discovery opens doors for a possible solution. Experiments showed mice who were treated with a slow-releasing compound that trapped excess free zinc were less prone to hearing loss and were protected from noise-induced damage.

Researchers are currently developing a treatment to be tested in preclinical safety studies with the goal of making it available as a simple, over-the-counter option to protect oneself from hearing loss.

Other authors of the study are first author Brandon Bizup, Ph.D., and co-author Sofie Brutsaert, both of Pitt.

Source: University of Pittsburgh

News from Med-El

MED-EL Meet Up & Family Fun Days 2024

Thanks to everyone who came along and joined our family fun day in Stirling! It was wonderful to meet so many of you. If you're based near Nottingham or Reading, we will soon be hosting events near you. See further event details below.

NOTTINGHAM

Saturday 22nd June 2024, 10am - 2:30pm

Jubilee Conference Centre (Nottingham University Campus)

Jubilee Campus

Triumph Road

Nottingham

NG7 2TU

READING

Saturday 7th September 2024, 10am – 2.30pm

Green Park Conference Centre

100 Longwater Avenue

Green Park

Reading

RG2 6GP

Join us for a fun, informative, and interactive day celebrating hearing solutions.

Activities will include:

- Children's entertainment & family activities
- Interactive stands and displays
- MED-EL hearing device product information

- New wireless streaming accessory for RONDO 3 on display
- Free prize draw
- Rehabilitation resources available
- Meet our team
- Refreshments provided throughout the day
- Meet the Hearpeers Mentors (hearing implant volunteers)

Don't miss this opportunity to learn more about MED-EL hearing solutions, meet hearing device users, or speak to our clinicians and industry professionals.

Register today to receive further event details by scanning the QR code or visiting our website: tinyurl.com/Medel-Events

NEWS

Introducing Direct Streaming for RONDO 3

Launched in April this year, the new AudioStream Adapter makes direct, wireless streaming possible with the RONDO 3 audio processor. When plugged into RONDO 3, it streams music and speech in high-quality true stereo* from compatible smartphones**, tablets, and Smart TVs.

Rondo3 with adapter fitted

Plug in adaptor

*For bilateral / bimodal users; mono Left and Right mix for unilateral device users.
**Compatible with iOS and Android devices. Find a list of compatible devices on our website.

To learn more about the AudioStream adapter, please visit our website: https://www.medel.com/en-gb/hearing-solutions/accessories/connectivity/audiostream-adapter

Resources Update – Three Simple Steps Brochures

Our Three Simple Steps candidate brochures allow you to learn more about MED-EL's hearing solutions.

Knowing that English is not everyone's first language, we recently translated all our Three Simple Steps candidate brochures, into the following languages: Arabic, Polish, Punjabi, Urdu, and Welsh.

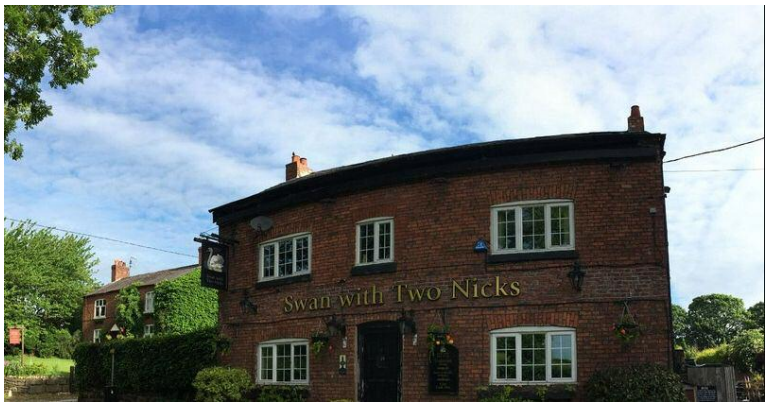
To request a candidate brochure please email our Customer Service Team: customerservice@medel.co.uk

Visiting history -- (an expedition to deepest Cheshire)

We have, in the past, been used to visiting historical locations for our events, Norton Priory, Quarry bank Mill, Lyme park and more recently St Georges Hall and a host of other grand locations.

However when you see a small countryside pub or restautant it's not immediately obvious how far back these places go historically although we know Ale houses have been around since ancient times.

One such place we recently visited was a pub called 'The Swan with two nicks' set in the Cheshire countryside up a winding road, not far from the Dunham Massey estate, which again we have visited several times. The first thing that strikes you is 'how did it get its name?'



Swans used to owned by one or other of two livery companies, the Vintners and the Dyers. Originally, the two companies made their own marks on the birds' beaks: one nick for a Dyers' bird and two for a Vintners'; today the two companies use their own rings.

This practice provided the name of the pub "The Swan with Two Nicks" as it was associated with the Vinters.

The Crown has held the right to claim ownership of all unmarked mute swans swimming in open waters throughout the country from as far back as the twelfth century.

This pub was the location for our second event of the year and proved very popular.

The meal was good and the company very agreeable and it was for some the first time we had seen each other for a while so there was lots to catch up on.

Researchers produce grafts that replicate the human ear

Using state-of-the-art tissue engineering techniques and a 3D printer, researchers at Weill Cornell Medicine and Cornell Engineering have assembled a replica of an adult human ear that looks and feels natural. The study, published online in Acta Biomaterialia on March 16, offers the promise of grafts with well-defined anatomy and the correct biomechanical properties for those who are born with a congenital malformation or who lose an ear later in life.

"Ear reconstruction requires multiple surgeries and an incredible amount of artistry and finesse," said, Dr. Jason Spector, chief of the Division of Plastic and Reconstructive Surgery at NewYork-Presbyterian/Weill Cornell Medical Center and a professor of surgery (plastic surgery) at Weill Cornell Medicine. "This new technology may eventually provide an option that feels real for thousands needing surgery to correct outer ear deformities."

Many surgeons build a replacement ear using cartilage removed from a child's ribs, an operation that can be painful and scarring. And though the resulting graft can be crafted to resemble the recipient's other ear, it generally does not have the same flexibility.

Adding Texture to Structure

One way to produce a more natural replacement ear is to enlist the aid of chondrocytes, the cells that build cartilage. In earlier studies, Dr. Spector and his colleagues used animal-derived chondrocytes to seed a scaffold made of collagen, a key component of cartilage. Though these grafts developed successfully at first, over time the well-defined topography of the ear -- its familiar ridges, curves, and whorls -- were lost. "Because the cells tug on the woven matrix of proteins as they labor, the ear contracted and shrank by half," said Dr. Spector.

To address this problem in this study, Dr. Spector and his team used sterilized animal-derived cartilage treated to remove anything that could trigger immune rejection. This was loaded into intricate, ear-shaped plastic scaffolds that were created on a 3D printer based on data from a person's ear. The small pieces of cartilage act as internal reinforcements to induce new tissue formation within the scaffold. Much like rebar, it strengthens the graft and prevents contraction.

Over the next three to six months, the structure developed into cartilage containing tissue that closely replicated the ear's anatomical features, including the helical rim, the "anti-helix" rim-inside-the-rim and the central, conchal bowl. "That's something that we had not achieved before," said Dr. Spector.

To test the feel of the ear, biomechanical studies were performed in conjunction with Dr. Spector's long time engineering collaborator Dr. Larry Bonassar, the Daljit S. and Elaine Sarkaria Professor in Biomedical Engineering at the Meinig School of Biomedical Engineering on Cornell's Ithaca campus. This confirmed that the replicas had flexibility and elasticity similar to human ear cartilage. However, the engineered material was not as strong as natural cartilage and could tear.

To remedy this issue, Dr. Spector plans to add chondrocytes to the mix, ideally ones derived from a small piece of cartilage removed from the recipient's other ear. Those cells would lay down the elastic proteins that make ear cartilage so robust, producing a graft that would be biomechanically much more similar to the native ear, he said.

This work was supported in part by the National Center for Advancing Translational Sciences of the National Institutes of Health, grant TL1- TR-002386.

Source: Weill Cornell Medicine

Telephone Tips for Cochlear Implant Recipients

Talking on the phone is one of the most challenging listening situations: unfamiliar speakers, no visual cues, and sometimes a poor connection. But despite these challenges, studies have shown that people with hearing loss begin using the phone more after they get cochlear implants. Here are some tips for practising your phone communication skills.

How To Practice Phone Calls

Practising simple conversations on the phone with a friend or family member will

- boost your confidence when talking on the phone
- allow you to practise listening in a controlled situation
- help you to build a repertoire of conversational clarification strategies
- increase your assertiveness when talking on the phone

Use the list below as a guide, working from easier phone listening tasks to more difficult ones. Choose topics that are interesting and relevant to you to keep your practice fun and engaging. Here are some ways to start practising with a family member or friend:

Practice hellos and good-byes.

Ask your phone partner simple yes/no questions. Your partner should answer with either "Yes, yes" or "No". Make sure to repeat the word "yes" so the possible responses differ more noticeably in their length and pitch. The questions you ask could be about anything.

For example, "Did you go to work today?" and your partner answers either "yes, yes" or "no".

Or "Do you like chocolate cake?" and your partner answers either "yes, yes" or "no".

Prepare short, simple conversations with written text. Have the conversation on the phone and follow along with your partner's responses in the text.

Answer simple yes/no questions about a predetermined topic, for example: "Will you go by train?"

Answer either/or questions, for example: "Will you go by bus or train?"

Answer closed-set questions with a limited number of possible answers, for example: "Which day do you want to go?"

Answer open-set questions about a general topic that will give you a clue about what the answer may be, for example: "Where shall we meet?"

Practice making an appointment or asking your telephone partner a question.

Practice using a range of clarification strategies:

Ask for repetition: "Can you say that again, please?"

Ask for rephrasing of the sentence: "Can you say that in a different way, please?"

Ask the speaker to simplify the sentence: "Can you tell me again with a shorter sentence?"

Ask for clarification by repeating the message back: "Did you say that you went to the…?"

Ask your communication partner to modify their speech, for example: slowing down speech rate or speaking louder.

Repeat back what was said for confirmation of the information.

Progress from simple to more complex conversations. You can start with prepared sentences and move to more open conversation.

Daily Calls

Plan ahead to make your phone calls effective. Here are some tips:

Before calling, write down information you need to find out and questions you must ask.

Consider likely topics so you can anticipate vocabulary and questions.

Use a notepad and pen to write down information.

Prepare an introduction to inform your phone conversation partners that you use an auditory processor and that they may need to clarify key information.

Many businesses now offer text messages to confirm appointments made over the telephone. Inquire about whether these services are available.

In work situations, request to use video conferencing for additional visual cues, and request the agenda ahead of time so you are familiar with what will be discussed and can follow the conversation more easily.

You can also use Assistive Listening Devices (ALDs) to improve speech recognition and ease of listening on the phone. Talk to your audiologist about the range of ALDs available to assist you in phone communication. Practice connecting to ALDs so you feel more confident using them in everyday life.

Assistive Listening Devices include:

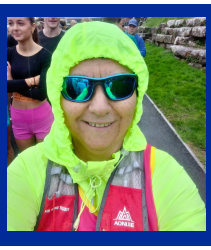
- AudioLink

- Telecoil
- Direct connect audio cable
- Bluetooth streaming with a neckloop

By using these strategies, you can make talking on the phone a breeze. You won't need to panic whenever your phone rings or you need to call to make an appointment or reservation. Keep practising and see how your confidence grows.

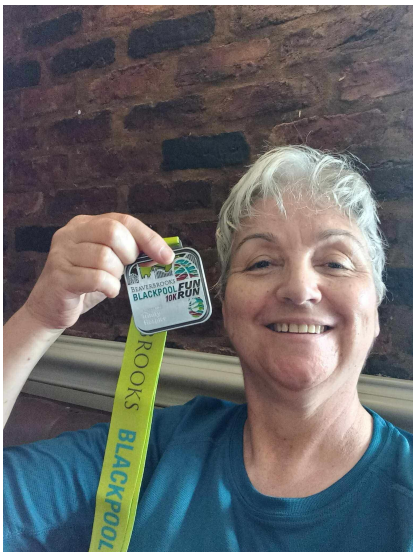
The Wigan Runner updates

by Lynn Grimshaw



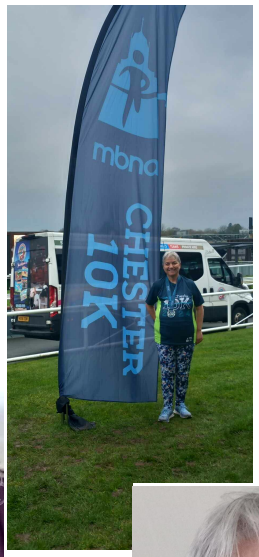
So far I've done 5 runs this year, a 10k at Chester, 5k at Wigan 10k at Bolton and 10k at Blackpool Fun Run and the Half Marathon at Manchester.

Upcoming is Glasgow, then the Great North run in September and Paris Marathon next year and … 150ft Abseiling ;)

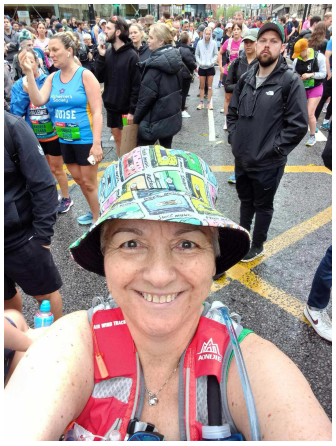


Blackpool

Bolton



Chester



Manchester

Wigan

Notes

We would welcome any feedback or suggestions for events, articles for Resound especially if you have been through a situation and have come through it and have knowledge that might help others.

Either email secretary@manchestercicada.org.uk

Or write to me at the address below, all submissions are welcome.

The next event is on 13th June at the Netherton Hall, Chester Rd, Frodsham WA6 6UL Meet at 12:30

CICADA

Website:www.manchestercicada.org.uk

Facebook group:Manchester CICADA club

Secretary direct contact:Text 07533217730

Main contacts for Cicada listed at the bottom of this page.

Manchester Implant Centre

The Richard Ramsden Centre for Auditory Implants,Peter Mount Building, Manchester Royal Infirmary, Oxford Road,Manchester, M13 9WL

Main Contact Details:
TeL: 0161 701 6931 (Appointments)
TeL: 0161 276 8079 (repairs and spares)

http://www.manchestercicada.org.uk/implant-clinic/

National Support organisations

British Tinnitus Association:
https://www.tinnitus.org.uk/
Hearing Link:
https://www.hearinglink.org/
RNID (Action on Hearing Loss):
https://www.actiononhearingloss.org.uk/
Disabled Travel Advice:
http://www.disabledtraveladvice.co.uk/
Meniere's Society:
http://www.menieres.org.uk/
National Deaf Children's Society:
http://www.ndcs.org.uk/
National Association of Deafened People (NADP): http:// www.nadp.org.uk/

Equipment Suppliers for Deaf People

Sarabec: https://www.sarabec.com/
Connevans: http://www.connevans.co.uk
Hearing Link UK: https://www.hearinglink.org/
RNID (Action on Hearing Loss):
https://www.actiononhearingloss.org.uk/

Accessory help

The accessory help page has links to videos about how to connect your processor to different accessories, such as remote microphones, TV support etc. that may be supplied to you by the implant centre.
Also if anyone is going into hospital and wants one of the Hearing support cards to show staff how you prefer to communicate then please let me know.

If you have printing facilities then the card is in PDF format at this link at the bottom of the page:

https://www.manchestercicada.org.uk/accessory-help/

If you need a laminated copy write to me or email at the link below.

Chairman	**Honorary Treasurer**	**Hon Secretary**
John Newton	Alan Corcoran	Kevin Williams
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