

## Policy

---

### **Title: Remote Microphone Systems (RMS) Policy**

Issue Date:	November 2020
Reviewed:	August 2024
Issued by:	USAIS
Frequency of review:	Two yearly (biennially)
Date to be reviewed:	August 2026
Owner:	AIS Teachers of the Deaf (QToD)

---

### **Introduction**

A 'catch-all' term for Hearing Assistance Technology (HAT) Assistive Listening Devices (ALD), Remote Microphones (RM) or Radio Aid (RA) systems is Remote Microphone Systems (RMS). These are generally all wireless systems now. They can improve the audibility of speech in situations where distance, background noise and reverberation make listening difficult. However, we need to carefully consider when the child is ready to listen to the coupled signal of the additional device. Before any RMS is introduced, we would expect a child to:

- have developed listening skills;
- to be developing independence with their speech processor(s);
- to show expressive communication behaviours that relate to their listening experience, and we would expect a cochlear implant user to have a stable or optimal map.

The benefits of Remote Microphone (RM) systems are widely recognised and have been so for several decades. They improve the audibility of speech in situations where distance, background noise and reverberation make listening difficult.

USAIS actively encourages the use of RM systems with auditory implant or bone conduction speech processors to improve outcomes for children and young people (CYP). We will assist professionals in decision making and provide information on which RM systems work with the CYP's speech processor(s).

Some RMS are proprietary, i.e. a wireless accessory is offered as a courtesy by the auditory implant company. They may also be called Assistive Listening Devices (ALD).

Such proprietary systems include the: Cochlear MiniMic, MED-EL AudioLink, Oticon Connect Clip, Phonak PartnerMic, and Phonak Roger Clip-On Mic transmitter. These are intended for social or domestic use as they do not have the full capabilities offered by adaptive systems.

Patients who are children or young people in education benefit from specific RMS that their Local Authority provides. These are generally call Radio Aids and have enhanced adaptive features, such as the Phonak Roger systems and Oticon EduMic. Adult patients may benefit from RMS provided by other funding, such as Disabled Students Allowance, Access to Work, Personal Independence Payment, or charitable funding.

We acknowledge that there are now some speech processors where the choice of Radio Aid for use in educational settings is limited by the device itself. **It is therefore recommended that local professionals seek advice about a choice of system from an USAIS QToD, prior to purchasing.**

### **Quality Standards**

'Quality Standards for the use of Personal FM systems' were published in July 2008 by the National Deaf Children's Society and updated in February 2017 as 'Quality Standards for the use of personal radio aids: Promoting easier listening for deaf children'. USAIS adheres to the relevant Quality Standards (QS).

For children with a Bone Conduction Hearing Aid (BAHA) or Bone Conduction Implant, there will be an opportunity post-processor fitting for families to become familiar with Assistive Listening Devices where these are available, and families can also request an Accessories and Technology appointment. However, if the RMS is used in an educational setting it is expected that local services will validate the device through speech in noise testing (QS4 & QS10).

### **Fitting and setting up of adaptive Radio Aids used in educational settings**

- **QS3** The Radio Aid must be set up with the CYP's individual hearing aids or auditory implant speech processor to ensure that the system provides the desired advantage\*.
- **QS4** The CYP's listening response must be checked with the complete system in place.
- **QS5** Training and written information about the Radio Aid, its settings and its appropriate use must be agreed and shared with the CYP, parents, teachers and all those involved in supporting the user.

\* USAIS is aware that sometimes the initial fitting needs to be carried out locally following discussion between local teams and USAIS, and then verified later with the child or young person (CYP) at a later clinic appointment.

### **General considerations when using RMS (proprietary RM or Radio Aid systems)**

We want children to become independent listeners and learners with their hearing devices. It is important that children should be supported and encouraged to understand the effect of distance on sound, and of localisation, as part of their listening development.

A decision to trial the use of an RMS must take into consideration the opinions of relevant professionals and the child's family. For CYP with cochlear implants the USAIS RMS CHIP provides a helpful basis for the discussion (see attached).

The speech processor may need to be set up by the Implant Centre audiologist to enable RMS use. This will vary according to specific speech processors and the RM system. The Implant Centre Teacher of the Deaf will advise the audiologist accordingly.

### **Management and use of Remote Microphone Systems (RMS) used in educational settings**

Quality Standards outline:

- **QS6** A programme for developing best use and management of RMS should be agreed, recorded and reviewed at least annually.
- **QS7** Subjective checks of RMS must take place regularly.
- **QS8** Electroacoustic checks must be performed regularly and whenever a part of the system is changed.
- **QS9** Clear identification of roles and responsibilities regarding the management and use of equipment should be in place.
- **QS10** Subjective and objective evaluation of an RMS to determine its benefit must be carried out.
- **QS11** There must be close liaison between health and education teams, including the exchange of written information relating to the use of the CYP's RMS.
- **QS12** Where soundfield systems are used in conjunction with RMS, equipment must be selected and set up to ensure that the performance of the RMS is not compromised.

Due to increasing patient numbers, USAIS is unfortunately no longer able to carry out routine checks of RMS after annual audiology reviews. However, we welcome seeing CYP for an RMS appointment in the following cases:

- If it is a first fit of an educational radio aid (or follow up from a fitting in the field).
- If processors have been upgraded.
- CYP with MED-EL processors (as local services may not have access to the necessary equipment).
- If there has been an issue with equipment that cannot be resolved locally.

### **Upgrades to Speech processors**

Under current USAIS practice, speech processors are upgraded approximately every five years. The parent or guardian will be given advance notice of the upgrade. If the processor upgrade will affect educational radio aid provision, we welcome discussing suitable systems with the Local Authority and parent/carer.

USAIS can provide advice as to which remote microphone systems are compatible with particular speech processors. However, it is down to education services to balance budget considerations and their duties under the Equality Act to consider optimal provision, i.e. an adaptive radio aid system.

## Training and support

USAIS provides a training course every two years to support local services. Bespoke and on-site training can also be arranged.

See <https://ais.southampton.ac.uk/ais-training-and-workshops/> or contact [AIS.Training@soton.ac.uk](mailto:AIS.Training@soton.ac.uk) for further information.

Hosted by the British Association of Teachers of Deaf Children and Young People and on behalf of the UK Assistive Listening Technology Working Group, the Deaf Children's Society publish Quality Standards and Good Practice Guidance for RMS, please see <https://www.batod.org.uk/information/altwg-quality-standards/>

<b>Revision Date</b>	<b>What has changed:</b>	<b>Amended by</b>	<b>Reviewed by</b>
April 2016	Minor alterations and formatting. Removed section on ear level receivers with young children		QToD
March 2017	Addition of new QS references		SDW
October 2020	Minor alterations and formatting. Added details of appointments Updated references Updated ChIP		QToD
March 2024	Further updated ChIP		QToD
August 2024	Minor alterations and formatting. Added reference to BCHI.	Alison Anning-Stevens	Devyanee Bele and Stuart Whyte

**USAIS Remote Microphone System Children’s Implant Profile (RMS–CHIP)**

AIM – to help identify if a child is ready to use a Remote Microphone System (RMS).

*We use the term ‘Carer’ to include all adults supporting the child, e.g., parents/carers, school staff, childminders etc.*

This document helps plan for the introduction of Remote Microphone Systems (RMS) like proprietary remote microphones such as the Cochlear MiniMic or the Oticon EduMic, Phonak Roger Radio Aids – or more generally, any Assistive Listening Device (ALD). The RMS–CHIP applies to cochlear implant processors which have a processor, battery, and coil cable; where relevant, it can also be applied to Bone Conduction Hearing Devices.

Depending on their capacity, some children and young people will continue to rely on carers to support their effective use of their hearing devices and ALD. Carers will benefit from resources and training to support effective and appropriate use of equipment.

Each column represents developing skills and increasing independence in the following areas:

- Managing equipment
- Listening & language
- Fine motor skills
- External Considerations

<p><b>A child dependent on the help of a carer, and carer not confident with equipment.</b></p> <p><i>Not yet ready to use RMS.</i></p>	<p><b>A child partially dependent on the help of a carer, and carer is more familiar with equipment.</b></p> <p><i>Almost ready for RMS. Discussion with USAIS, parent &amp; local team.</i></p>	<p><b>A child and/or carer developing independence and self–reliance.</b></p> <p><i>Ready to use RMS with appropriate fitting and suitable local support.</i></p>	<p><b>Independence and self–reliance established (experienced and established users).</b></p> <p><i>Appropriate use and maintenance of RMS.</i></p>
---	--	---	---

<p>A child dependent on the help of a carer, and carer not confident with equipment.</p>	<p>A child partially dependent on the help of a carer, and carer is more familiar with equipment.</p>	<p>A child and/or carer developing independence and self-reliance.</p>	<p>Independence and self-reliance established (experienced and established users).</p>
<p><i>Not yet ready to use RMS.</i></p>	<p><i>Almost ready for RMS. Discussion with USAIS, parent &amp; local team.</i></p>	<p><i>Ready to use RMS with appropriate fitting and suitable local support.</i></p>	<p><i>Appropriate use and maintenance of RMS.</i></p>
<p><b>Managing equipment</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Speech mapping is ongoing; the child has progressive maps.</li> <li><input type="checkbox"/> Wears sound processor consistently. Child may demonstrate that there is an issue, (depending on age/abilities) but not consistently.</li> <li><input type="checkbox"/> Child can demonstrate to an adult they want sound processor(s) on.</li> <li><input type="checkbox"/> Needs help to ensure sound processor(s) and coil(s) are correctly placed.</li> </ul>	<p><b>Managing equipment</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Mapping is near optimal.</li> <li><input type="checkbox"/> The child consistently alerts an adult when there is a problem with the processor.</li> <li><input type="checkbox"/> The child attempts to put the sound processor on but may still need assistance from an adult.</li> </ul>	<p><b>Managing equipment</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The child does not have progressive maps.</li> <li><input type="checkbox"/> Different programs for different listening conditions may be available. Any different program selection may need adult oversight.</li> <li><input type="checkbox"/> The child can identify when a processor is not working and knows where to get spare batteries.</li> <li><input type="checkbox"/> The child can put on their sound processor <i>(as appropriate to their motor skills and processor type)</i>.</li> <li><input type="checkbox"/> The child and/or carers can activate auxiliary options or use accessories, e.g., activate telecoil, attach receiver.</li> <li><input type="checkbox"/> The child helps to store and care for the device(s) when not being worn (as appropriate).</li> </ul>	<p><b>Managing equipment</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The child consistently and confidently wears their sound processor(s). They manage the system independently, changing programmes and batteries as appropriate.</li> <li><input type="checkbox"/> The child takes appropriate responsibility for use of their RMS system, e.g., conference mode, pairing etc.</li> <li><input type="checkbox"/> The child can be relied upon to appropriately use, care for, and manage their equipment safely, with adult support where necessary.</li> </ul>

<p><b>A child dependent on the help of a carer, and carer not confident with equipment.</b></p>	<p><b>A child partially dependent on the help of a carer, and carer is more familiar with equipment.</b></p>	<p><b>A child and/or carer developing independence and self-reliance.</b></p>	<p><b>Independence and self-reliance established (experienced and established users).</b></p>
<p><b>Listening &amp; language</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The child shows an awareness of sounds around them, their behaviour changes, e.g., they focus more on sounds of interest.</li> <li><input type="checkbox"/> Starting to detect and recognise Ling sounds (or appropriate alternatives) in daily/regular checks.</li> </ul>	<p><b>Listening &amp; language</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The child can respond to questions about the listening environment, e.g., quiet, loud, or noisy.</li> <li><input type="checkbox"/> Discriminates and identifies Ling sounds,</li> <li><input type="checkbox"/> Working towards doing the McCormick toy test (as appropriate to age/ability).</li> <li><input type="checkbox"/> Beginning to indicate sound quality using picture prompts or using adjectives, e.g., good/ bad, crackly, fuzzy/buzzy, etc. (use of training tool<sup>i</sup>) as appropriate to age/ability.</li> <li><input type="checkbox"/> The child and carers begin to understand basic age-appropriate terminology related to the cochlear implant system such as coil, battery, charger, microphone, light etc.</li> </ul>	<p><b>Listening &amp; language</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The child shows more awareness of different listening conditions, e.g., comments on background noise.</li> <li><input type="checkbox"/> The child/carers can check that each side is working individually and together.</li> <li><input type="checkbox"/> The child can discriminate and identify Ling sounds at distance by listening alone via RMS.</li> <li><input type="checkbox"/> The benefit of RMS is shown and/or assessed by appropriate speech-in-noise or speech over distance activities.</li> <li><input type="checkbox"/> The child can indicate the quality of sound they receive using picture prompts or using adjectives (appropriate to ability).</li> <li><input type="checkbox"/> The child/carers can name parts of the equipment. They are more independent in its use and describing issues.</li> </ul>	<p><b>Listening &amp; language</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The child spontaneously gives feedback on issues, describing the quality of signal and indicating the type of problem. They seek help when it is needed.</li> <li><input type="checkbox"/> The benefit of RMS can be assessed by appropriate tests.</li> <li><input type="checkbox"/> The child/carers know the terms used to describe their listening technology and its constituent parts. They take an active part in troubleshooting.</li> </ul>

<p>A child dependent on the help of a carer, and carer not confident with equipment.</p>	<p>A child partially dependent on the help of a carer, and carer is more familiar with equipment.</p>	<p>A child and/or carer developing independence and self-reliance.</p>	<p>Independence and self-reliance established (experienced and established users).</p>
<p><i>Not yet ready to use RMS.</i></p>	<p><i>Almost ready for RMS. Discussion with USAIS, parent &amp; local team.</i></p>	<p><i>Ready to use RMS with appropriate fitting and suitable local support.</i></p>	<p><i>Appropriate use and maintenance of RMS.</i></p>
<p><b>Fine motor skills</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The child is unable to independently manage listening technology due to their maturity or physical needs.</li> </ul> <p><i>If a child or young person remains dependent on a carer, then <b>adult help must be planned to support effective use of RMS.</b></i></p>	<p><b>Fine motor skills</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The child begins to understand that their equipment is expensive and may easily break.</li> <li><input type="checkbox"/> The child has adult support to troubleshoot. Carers (and child if appropriate) know about risks involved with batteries.</li> </ul>	<p><b>Fine motor skills</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The child can manipulate the processors well or has adult support to do so.</li> <li><input type="checkbox"/> The child uses their listening technology with confidence. They seek support as necessary.</li> </ul>	<p><b>Fine motor skills</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The child maintains the processors well or directs adult support. They understand what actions may damage the equipment.</li> <li><input type="checkbox"/> They take a lead in regular checks and troubleshooting.</li> </ul>



<p>A child dependent on the help of a carer, and carer not confident with equipment.</p>	<p>A child partially dependent on the help of a carer, and carer is more familiar with equipment.</p>	<p>A child and/or carer developing independence and self-reliance.</p>	<p>Independence and self-reliance established (experienced and established users).</p>
<p><i>Not yet ready to use RMS.</i></p>	<p><i>Almost ready for RMS. Discussion with USAIS, parent &amp; local team.</i></p>	<p><i>Ready to use RMS with appropriate fitting and suitable local support.</i></p>	<p><i>Appropriate use and maintenance of RMS.</i></p>
<p><b>External Considerations</b></p> <p><input type="checkbox"/> People close to the child are not knowledgeable about hearing devices and assistive listening technology; they need training.</p>	<p><b>External Considerations</b></p> <p><input type="checkbox"/> People close to the child have a basic knowledge of hearing devices and assistive listening Technology. They involve the child in regular checks.</p> <p><input type="checkbox"/> Additional training may need to be booked.</p>	<p><b>External Considerations</b></p> <p><input type="checkbox"/> People close to the child have a good knowledge of hearing devices and assistive listening Technology. They involve the child in regular checks and troubleshooting.</p> <p><input type="checkbox"/> Carers keep records of listening checks. They know how to identify changes in listening and who to contact for help when troubleshooting fails.</p>	<p><b>External Considerations</b></p> <p><input type="checkbox"/> People close to the child have an excellent knowledge of hearing devices and Assistive Listening Technology.</p>

- Revised document based on the USAIS Radio Aid Children’s Implant Profile, the Olomouc University Social HeRMSH Institute’s Wireless Technology Use Scale and the fmCHIP by Linked-up – the London Consortium of ICTODs and Peris.
- **Created September 2019; last reviewed August 2024; next review August 2026.**

<sup>i</sup> <https://www.uclh.nhs.uk/our-services/find-service/ear-nose-and-throat-services-1/auditory-implants/cochlear-implants-fm-training-tool> & [https://www.uclh.nhs.uk/application/files/8816/0623/5560/DM\\_Training\\_Tool.zip](https://www.uclh.nhs.uk/application/files/8816/0623/5560/DM_Training_Tool.zip)