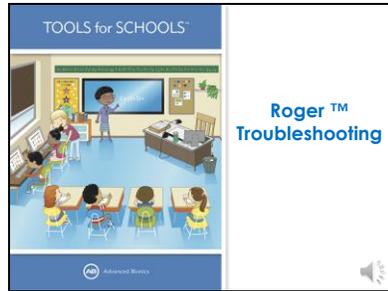
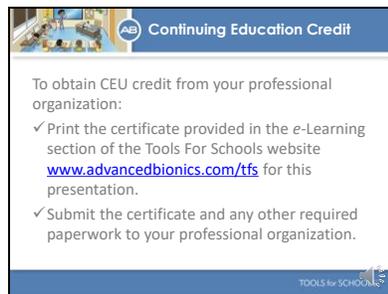


Slide 1



Hello and thanks for joining us to learn more about cochlear implants. The goal of today's presentation is to teach you how to troubleshoot Phonak's Roger system with Advanced Bionics technology. If you would like a basic overview of how to use the Roger system with Advanced Bionics, including such topics as the different types of Roger receivers and microphones, please view our other presentation titled Roger overview.

Slide 2



If you would like to submit for continuing education credits to your professional organization, please print out the certificate of completion provided at the TFS website under e-Learning for this presentation. Submit the certificate with any other required information to your professional organization.

Slide 3



If you would like to print out slides and take notes, or print out a script so you can follow along with the audio, please visit the companion materials section for this presentation in the e-learning section of the TFS webpage.

Slide 4



AB is dedicated to helping people with hearing loss hear their best. AB works in partnership with Phonak. This partnership has allowed AB to offer unique technological advances to help people with hearing loss hear better in the most challenging listening situations. From offering technologies that grow with children as they learn to listen and make sense of the world of sound...

To helping adults get back to connecting and communicating with the important people in their lives, AB is dedicated to providing the unique hearing technologies that can help recipients achieve their hearing goals.

Slide 5



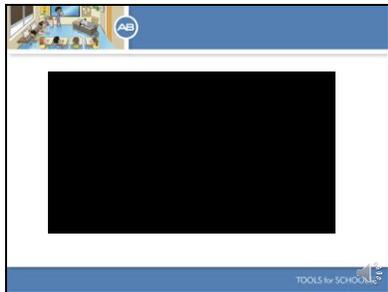
Today we are going to review how to Troubleshoot the Roger system when used with Advanced Bionics technology. The goal of the presentation is to provide you with troubleshooting steps as well as review real life troubleshooting scenarios. Let's first begin by watching a video that shows all the ways Roger helps children with hearing loss hear their best in the classroom.

Slide 6



Let's begin by watching a short video that gives us a nice overview of how Roger is used in the classroom to help children with hearing loss overcome background noise and distance as well as connect seamlessly with the technological devices that are part of the modern classroom.

Slide 7



Slide 8



To effectively troubleshoot the Roger system it is recommended that you have the following equipment on hand. For students who use the Naida CI, a spare 170 PowerCel, ear buds, and a Naida CI Listening check. For students who use the Neptune, a spare Neptune Connect. You will also need the student's own Roger equipment.

Slide 9



**Troubleshooting**

**Basic Steps**

1. Confirm the student is able to hear with their sound processor when they are not connected to Roger input.
2. Visually inspect all equipment and replace damaged parts.
3. Verify the equipment is charged.
4. Verify Roger™ program and processor settings.
5. Check Roger™ microphone position and settings.
6. Verify connection between Roger™ microphone and receiver.
7. Perform a listening check.

TOOLS for SCHOOLS

Here are the basic steps to take when completing troubleshooting.

Confirm the student is able to hear with their sound processor when they are not connected to Roger input.

Visually inspect all equipment and replace damaged parts.

Verify the equipment is charged.

Verify the processor is set to the appropriate program for Roger™ use and that other settings such as processor volume are set correctly.

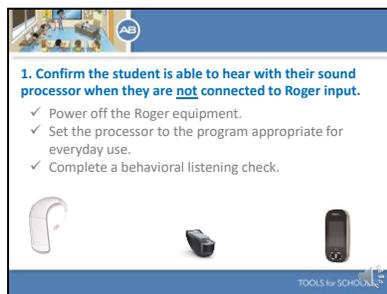
Check the Roger microphone position and setting.

Verify that there is a connection between the Roger™ microphone and receiver.

Perform a listening check.

Let's discuss each step in more detail.

Slide 10



**1. Confirm the student is able to hear with their sound processor when they are not connected to Roger input.**

- ✓ Power off the Roger equipment.
- ✓ Set the processor to the program appropriate for everyday use.
- ✓ Complete a behavioral listening check.



TOOLS for SCHOOLS

When completing troubleshooting it is important to keep in mind you are working with several pieces of equipment. The student's sound processor, the Roger receiver, and the Roger microphone. It is a good idea to begin by quickly confirming the student can hear appropriately with just their sound processor.

Completing this step ensures you do not spend time troubleshooting the Roger system when the troubleshooting issue is actually isolated to the sound processor. To do this power off the Roger microphone and receiver if the receiver type has a power button and set the processor to the program used for everyday use.

Complete a behavioral listening check using the Ling 6 sound check or a

similar task. If the student is unable to hear, complete troubleshooting of the sound processor. If the student can hear appropriately move on to step 2.

Slide 11



**AB MAKES IT SIMPLE FOR SCHOOLS!**

**Did you know??**

AB makes it Simple for Schools by providing FREE and easy downloadable instructions and pictures to conduct a Ling 6 Sound assessment.

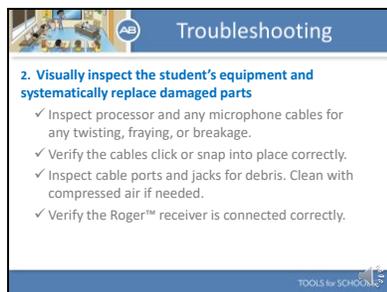
✓ Visit [AdvancedBionics.com/tfs](http://AdvancedBionics.com/tfs) and click on "Tools for Using the Ling 6 Sounds" under the Educational Support Tab

**The Ling 6 Sounds**  
"ah", "oo", "eee", "sh", "sss", "mmm"

TOOLS for SCHOOLS

Since we were just talking about the Ling 6 sounds I wanted to make sure to tell you about the FREE instructions and flash cards AB offers so you can complete the Ling 6 Sound check with your student's. It is a great way to verify your student is hearing as they should each and every day.

Slide 12



**Troubleshooting**

**2. Visually inspect the student's equipment and systematically replace damaged parts**

- ✓ Inspect processor and any microphone cables for any twisting, fraying, or breakage.
- ✓ Verify the cables click or snap into place correctly.
- ✓ Inspect cable ports and jacks for debris. Clean with compressed air if needed.
- ✓ Verify the Roger™ receiver is connected correctly.

TOOLS for SCHOOLS

A great way to troubleshoot the equipment is to visually inspect all parts for any type of damage. Begin by removing the processor and headpiece from the student. Cables are the most vulnerable to damage. Check to make sure the processor cable or any microphone cables are not kinked or frayed and that the cables correctly snap into place. Inspect all ports and jacks for debris and clean with compressed air if necessary. Finally, verify the Roger receiver is connected correctly.

Slide 13

**Troubleshooting**

**3. Verify all equipment is charged**

- ✓ Power the student's processor on/off to confirm battery status.
- ✓ Verify that the Roger™ microphone has been fully charged.

LED

LED

TOOLS for SCHOOLS

Next verify all equipment is charged. Power the student's processor on an off to verify the battery status. You can use the Naida's and the Neptune's' LED to confirm that the battery is sufficiently charged to power the processor. For both processors, slide the battery off and then back on. The LED will flash orange to indicate how much charge it contains. 3-4 orange blinks indicate the battery is sufficiently charged to power the processor. If necessary replace the battery with a fully charged one. Finally, confirm the Roger microphone is fully charged. The verification method will vary depending which Roger microphone you are using so it is important to learn exactly how power is indicated on the particular microphone you utilize in the classroom.

Slide 14

**Troubleshooting**

**4. Verify Roger™ program and processor settings**

- ✓ Verify the processor is set to the proper program for Roger use.
- ✓ Consider volume setting.
- ✓ Change programs to determine if there is one program that Roger™ input is audible to the student.
- ✓ If the student is unable to provide feedback, complete a Listening Check.

TOOLS for SCHOOLS

Next verify the processor is set to the proper program for Roger use. Consider if the volume setting needs to be turned up or down depending on the issue being reported. If you are unsure which program is designated for Roger use, you can change programs to determine if there is one program where Roger™ input is audible to the student. If the student is unable to provide feedback, complete a listening check. To complete a listening check with the Naida you will need the Naida CI Listening check and ear buds. To complete a listening check for the Neptune you will need ear buds. Information on how to complete a

listening check for the Naida CI is provided in the TFS webinar titled Troubleshooting the Naida processor. Information on how to complete a listening check of the Neptune can be found in the companion materials for this presentation.

Slide 15



I wanted to take a moment to highlight some of the materials available on the TFS webpage that can assist you in managing your student's equipment in the classroom. Here you see the Cochlear Implant Programming Record. This form can be downloaded from the TFS webpage and provides you with a place to note important information about how your student's processor is programmed. You should ask your student's parent or CI audiologist to fill this form out for you each time your student visits the audiologist for programming.

Slide 16

**Troubleshooting**

**5. Check Roger™ microphone position**

- ✓ Verify the Roger™ microphone is not muted.
- ✓ Ensure optimal placement of the microphone to the speaker's mouth.
- ✓ Confirm the child is close enough to the Roger microphone to be within its operating range.

Optimal distance  
6-8 inches

TOOLS for SCHOOLS

Next turn your attention to the Roger microphone. Verify the Roger™ microphone is not muted. Ensure it is placed correctly about 6-8 inches from the speaker's mouth. Finally, confirm the distance between you and your student is within the operating range. You will need to verify the operating range of the particular Roger microphone you are using.

Slide 17

**Troubleshooting**

**6. Verify Roger™ microphone and receiver connection**

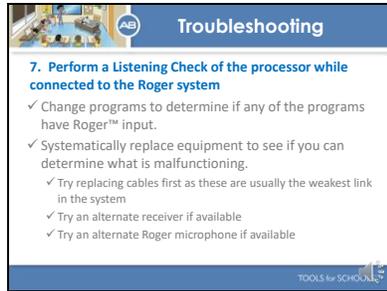
- ✓ Follow connection steps and attempt to re-connect.

<ul style="list-style-type: none"><li>• Naida<ul style="list-style-type: none"><li>• Listen for confirmation beeps</li><li>• Observe that the Naida LED turns green for two seconds</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Neptune<ul style="list-style-type: none"><li>• Connect earbuds to Neptune Connect</li><li>• Listen for Roger input</li></ul></li></ul>
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TOOLS for SCHOOLS

If you have been unable to resolve the troubleshooting issue using the steps we have discussed you should verify that the Roger microphone and receiver are connected. Follow the connection steps and attempt to re-connect. Connection steps were covered in the Roger overview presentation. For the Naida processor, have the student confirm that they hear the confirmation beeps, a low tone followed by a high tone, when Roger connects. If your student can not provide this feedback you can listen for the confirmation beeps using the Naida CI Listening check. You can also observe that the Naida LED turns green for two seconds to confirm a successful connection. For the Neptune, the best way to confirm a connection is to connect to the Neptune processor using earbuds and listen for Roger input.

Slide 18



**Troubleshooting**

**7. Perform a Listening Check of the processor while connected to the Roger system**

- ✓ Change programs to determine if any of the programs have Roger™ input.
- ✓ Systematically replace equipment to see if you can determine what is malfunctioning.
  - ✓ Try replacing cables first as these are usually the weakest link in the system
  - ✓ Try an alternate receiver if available
  - ✓ Try an alternate Roger microphone if available

TOOLS for SCHOOLS

Finally, if you have not already done so, complete a listening check of the processor while connected to the Roger system. Change programs to determine if there is any program position that allows for Roger input. Systematically replace equipment to see if you can determine what is malfunctioning. Here is a list of suggestions. I'll give you a moment to read these over. Finally, contact the student's parent or audiologist if you are unable to solve the issue.

Slide 19



**What you will learn today**

**Roger**

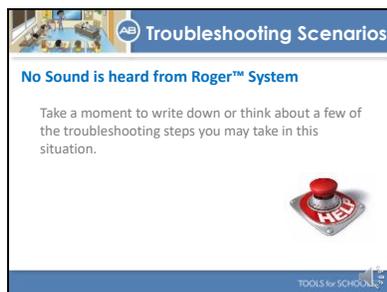
- ✓ Basic Troubleshooting Steps
- ✓ Troubleshooting Scenarios



TOOLS for SCHOOLS

Let's move on and discuss some specific situations and what you can do to troubleshoot.

Slide 20



**Troubleshooting Scenarios**

**No Sound is heard from Roger™ System**

Take a moment to write down or think about a few of the troubleshooting steps you may take in this situation.



TOOLS for SCHOOLS

In this first situation, no sound is heard from the Roger system. Take a moment to write down or think about the troubleshooting steps you would take in this situation.

Slide 21

**Troubleshooting Scenarios**

**No Sound is heard from Roger™ System**

- ✓ Verify processor is set to the proper program for Roger™ use.
- ✓ Ensure the child is close enough to the Roger™ microphone to be within its operating range.
- ✓ Verify the Roger™ microphone is charged and powered on.
- ✓ Verify the Roger™ microphone is connected to the Roger™ receiver.
- ✓ Use the Naida CI Listening Check or Neptune Connect with earbuds to assist with troubleshooting.

Did you come up with any of these troubleshooting steps?

TOOLS for SCHOOLS

Here are some recommended troubleshooting steps. I'll give you a moment to read through them. Did you come up with any on this list?

Slide 22

**Troubleshooting Scenarios**

**Student reports sound from Roger system is too soft**

Take a moment to write down or think about a few of the troubleshooting steps you may take in this situation.



TOOLS for SCHOOLS

Here is another situation where the student reports that sound from Roger is too soft. I'll give you a moment to think about what you may do to resolve the issue.

Slide 23

**Troubleshooting Scenarios**

**Student reports sound from Roger system is too soft**

- ✓ Verify the Naida CI or Neptune processor is set to the proper program for Roger™ use.
- ✓ Verify the Roger™ microphone is being worn as indicated in its user guide.
- ✓ Increase the volume on the sound processor if the volume control is active.
- ✓ Contact the child's parents or audiologist to report the child would like to hear more emphasis from Roger. The audiologist may be able to make an adjustment to Roger program if appropriate.

TOOLS for SCHOOLS

Here are some recommended solutions. Did you come up with anything on this list? The last point listed suggests letting the audiologist know if the child consistently reports that sound from the Roger system is too soft. The audiologist has the ability to emphasize sound from Roger and sound from the processor microphone in different ways. The audiologist may be able to make an adjustment that puts more emphasis on the Roger input than sound coming from the child's sound processor microphone. This will make the Roger input more salient to the student and may be the

preferred setting for this particular student.

Slide 24



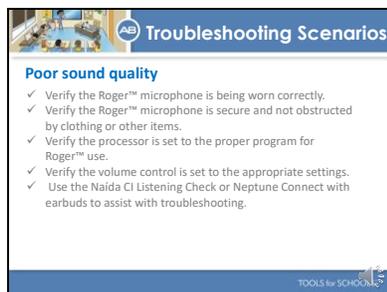
**Poor sound quality**

Take a moment to write down or think about a few of the troubleshooting steps you may take in this situation.

TOOLS for SCHOOLS

Let's do one more

Slide 25



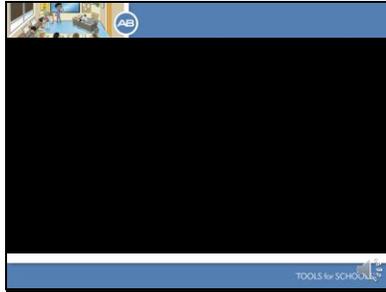
**Poor sound quality**

- ✓ Verify the Roger™ microphone is being worn correctly.
- ✓ Verify the Roger™ microphone is secure and not obstructed by clothing or other items.
- ✓ Verify the processor is set to the proper program for Roger™ use.
- ✓ Verify the volume control is set to the appropriate settings.
- ✓ Use the Naida CI Listening Check or Neptune Connect with earbuds to assist with troubleshooting.

TOOLS for SCHOOLS

Poor sound quality can be tricky as it is unclear exactly what the student is experiencing. Verify the Roger microphone is being worn appropriately and not obstructed by clothing or other items. Poor sound quality can be things such as static, transient noises, or fluctuating volume. Complete a listening so you can understand exactly what the issue is and troubleshoot appropriately.

Slide 26



Before we end our discussion today I wanted to share a short video that shows how kids are benefiting from Advanced Bionics.

Slide 27



I hope you enjoyed the video. If you are like me, you will not be able to recall the information you need the day your student reports difficulty hearing. Luckily, much on the information from today's presentation is available in an easy to print format. Visit the eLearning section of the TFS webpage and look for the companion materials for this presentation. Download and print these materials so they are available for easy reference in the classroom.

Slide 28



Finally, before we wrap up I'd like to share a FREE resource offered by Advanced Bionics. The Tools for Schools and Tools for Toddlers programs offer everything you need to educate yourself and support students with cochlear implants. Make sure to visit the webpage and take advantage of all our free resources. Thanks for joining us and have a great day.