

Freedom™ BTE Sound Processor

The Freedom™ BTE sound processor is compatible with Nucleus® Freedom cochlear implants.

Each of the pieces pictured here are important parts comprising the external components of the Freedom™ BTE sound processor:



Troubleshooting Guide

Freedom™ BTE Sound Processor

Troubleshooting Kit Contents

What the kit contains:

- 675 PowerOne HP, zinc air batteries, 6 pack
- Freedom coil (8cm)
- Freedom magnet - #2 beige
- Freedom lapel microphone
- Freedom monitor earphones
- Freedom earhook set (small and large)
- Freedom microphone protector
- Freedom battery holder

Before troubleshooting step-by-step, conduct a maintenance check of the equipment.

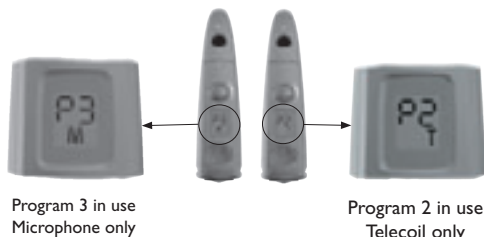
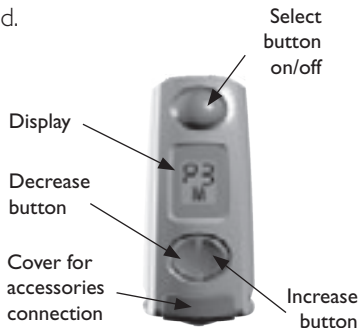
Maintenance Check

Confirm:

- Transmitting cable is properly connected.
- Cable is not broken or cracked.
- Transmitting coil is on the child's head.

Also do the following:

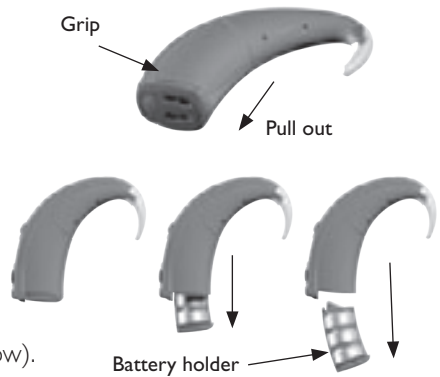
- Confirm that the Freedom BTE is 'ON'.
- If no sound, turn the Freedom BTE 'Off' for about 3 seconds, and then 'On'.
- Confirm that the child is using the recommended program setting.



- Identify whether help messages are displayed on the LCD.

Help message H1 = battery flat

- Change the batteries (ensure that all of the batteries are changed).
- Ensure that all of the batteries are inserted correctly – flat/positive side on the bottom).
- Check using the lapel microphone (refer to lapel microphone instructions below).
 - If sound improves, disconnect.
 - If sound does not improve; change battery holder.
- Change the battery holder (ensure new batteries are fitted)



Help message H2 = battery low

- Replace/recharge all of the batteries.

Help message H3 = coil error

- Check that the coil is fully inserted in the socket.
- Check that the coil is correctly located over the Implant.
- Check for cable damage.



Help message H4 = sound/stimulation error

- Check using the lapel microphone.
- Change the processing unit (use backup processing unit).
- Contact the child's cochlear implant clinician.

Help message H5 = MAP corrupt

- Change the processing unit (use backup processing unit).
- Contact the child's cochlear implant clinician.

Presented Complaints:

No sound/intermittent sound (help messages H1, H2, H3, H4)

- Change the batteries (ensure that all of the batteries are changed).
- Check using the lapel microphone.
- Check that the coil is fully inserted in the processing unit socket (and correctly located over the implant).
- Change the coil.
- Change the controller (ensure new batteries are fitted, can also try the Bodyworn controller at this stage).
- Change the processing unit (use back-up processing unit or contact the child's cochlear implant clinician).

Sound unclear/muffled

- Check the LCD for help message (H4 = see steps 2 – 5, H5 = contact your clinician).
- Check using the lapel microphone. Determine whether the sound improves.
- Disconnect the lapel microphone and remove the microphone cover. Determine whether the sound improves.
- Replace the microphone cover, if the sound does not improve.
- Replace the processing unit (use back-up processing unit or contact the child's cochlear implant clinician).

LCD blank (but sound OK)

- Stop the power to the processing unit and then restart it.
- Change the controller (return the suspected faulty controller).

Sounds uncomfortably loud

- Contact the child's cochlear implant audiologist.

Indicator light

When the indicator light is turned on, it:

- Flickers when incoming sounds are being received.
- Shows a slow flash rate as a low battery warning.
- Shows a fast flash rate for all other warnings e.g. the coil is off its position over the implant, or there is a sound error (help message H4).

To stop the alarm, push any button.

Microphone and accessories

Monitor earphones can be used by a hearing person to listen to the sound signal from either of the following:

- Microphone
- Built-in telecoil
- Microphone and built-in telecoil, together
- Accessory
- Accessory and microphone together



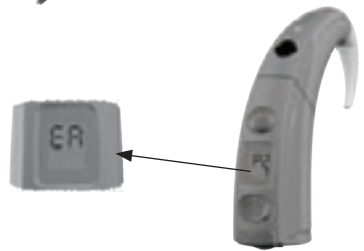
To use the lapel microphone:

- Use your fingernail to lift the socket cover.
- Push the accessory plug into the socket.
- Push both the increase and decrease buttons at the same time for a few seconds to activate the accessory.
- 'EA' (external accessory) shows briefly on the display while the change is happening.



To use the monitor earphones:

- Ensure the sound processor is on.
- Plug the monitor earphones into the base of the BTE controller:
 - Caution: Do not use force.
- Press any button on the BTE controller; for more than one second, to activate the earphones.
- Should you wish to test an accessory, plug it in to the monitor earphone connector.
- Listen to sounds.



Monitor earphones only indicate that sound can be heard. They do not indicate the quality of sound as heard by the sound processor user.

Electromagnetic interference

Move away from any electronic device that may be causing interference, e.g. buzzing sounds or distorted speech.

Most electronic devices produce electromagnetic fields. Headset cables, like antennae, pick them up. Common sources of interference include:

- Radio and TV transmission towers
- Mobile phone towers
- Shopping center and airport security systems
- Some digital mobile phones
- Battery chargers

The electronic interference (EMI) will be no louder than the programmed levels and will neither hurt nor damage the processor. If buzzing is still heard, or distorted speech, turn off the speech processor, take off the coil and consult the implant clinician