

Cochlear™

Nucleus® CP810 Sound Processor User Guide

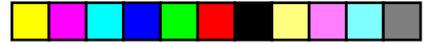


Hear now. And always



Cochlear™





Symbols



Note
Important information or advice. Can save inconvenience.



Tip
Time saving hint or saves inconvenience.

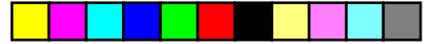


Caution (no harm)
Special care to be taken to ensure safety and effectiveness.
Could cause damage to equipment.



Warning (harmful)
Potential safety hazards and serious adverse reactions.
Could cause harm to person.

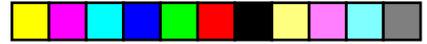




Contents

Introduction.....	7
Purpose of this guide	7
The Cochlear Nucleus CP810 Sound Processor.....	7
Getting to know your processor.....	9
Processing unit	9
Earhook.....	10
Battery module	10
Coil and coil cable	11
Coil magnet	12
Microphone protectors	12
Processor options	13
Wearing your processor	15
Placing your processor on your ear.....	15
Attaching the coil and coil cable	16
Attaching the coil cable to the coil.....	16
Attaching the coil to the processing unit.....	16
A secure and comfortable fit.....	17
Changing the earhook	18
Adjusting and replacing the coil magnet	18
Adjusting magnet depth.....	19
Changing magnet strength.....	19
Changing the coil cable	20
Using the Snugfit™ for a secure fit.....	22
Attaching and removing the Snugfit	23
Changing the way you wear your processor	24
Locking and unlocking the battery module	24
Locking and unlocking the tamper resistant battery cover.....	25
Identifying your processors	26
Detaching and attaching the battery module	27
Detaching the battery module from the processing unit.....	27





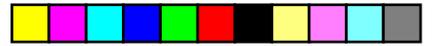
Attaching the battery module to the processing unit	28
Using your processor.....	29
Turning your processor on and off	29
Changing programs	29
Understanding indicator lights.....	30
Understanding private tones.....	32
Using the telecoil.....	33
Using Auto Telecoil.....	33
Using the telephone with your processor.....	34
Changing loudness of sounds.....	34
Controlling microphone sensitivity.....	35
Controlling microphone volume.....	35
Locking and unlocking processor buttons	36
Advanced user interface.....	36
Checking the coil	37
Replacing and recharging batteries	39
Replacing disposable batteries	39
Recharging the rechargeable battery module.....	41
Understanding battery charger indicator lights	43
General warnings and precautions for handling batteries and the battery charger.....	43
Batteries	43
Battery charger	45
Using audio accessories with your processor.....	47
Connecting and disconnecting audio accessories.....	50
Changing from an audio accessory to microphones	52
Changing from microphones to audio accessory.....	52
General warnings and precautions for the use of audio accessories	52
Using sound processor covers.....	53
Attaching sound processor covers	53

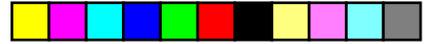




Removing sound processor covers.....	54
Caring for your processor.....	55
Wearing your processor in cold or hot temperatures	55
Protecting your processor from dust and water damage	55
Drying your processor	56
Cleaning your processor parts	57
Replacing microphone protectors	58
Cleaning the battery charger	58
Storing your processor when not in use.....	58
Using the Everyday Case.....	59
General warnings and precautions for the use of your processor ..	59
Disposal of electrical components.....	60
Other information.....	61
Your warranty and registration form.....	61
Storing your personal details	61
Processor serial number	61
Technical information.....	61
Specifications	61
Certification and applied standards.....	65
Equipment classification	65
IP rating of processor	65
FCC (Federal Communications Commission) and Canadian IC compliance.....	65
Labelling symbols.....	66
Legal statement	68
Glossary.....	69
Index.....	75







Introduction

Purpose of this guide

This user guide is designed to help recipients, parents and carers understand how to use and take care of the Cochlear™ Nucleus® CP810 Sound Processor. The guide provides step-by-step instructions for wearing and using the processor. It also provides guidance on how to take care of the processor.

It is important that you read and understand the warnings and precautions information provided in this guide. The Important Information Booklet included in the document pack you received with your processor also contains important safety information about the processor.

The CP810 and CR110 Troubleshooting Guide provided with your documentation helps you identify and troubleshoot basic processor problems.

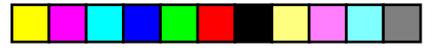
The Cochlear Nucleus CP810 Sound Processor

The Cochlear Nucleus CP810 Sound Processor is used together with a cochlear implant to transfer sound to the cochlea, which is the inner ear.

The processor consists of a processing unit, earhook, coil, coil cable and a battery module. The two buttons on the processing unit allow you to control the functions of your processor.

You can also use the Cochlear™ Nucleus® CR110 Remote Assistant to control the functions of your processor. It is an easy-to-use remote control that allows you to communicate with up to two processors at the same time. It also provides processor troubleshooting assistance. For information on how to use the remote assistant with your processor, refer to the Remote Assistant User Guide provided with your processor documentation.







Getting to know your processor

This section helps you familiarise yourself with your processor.



1. Coil
2. Coil magnet
3. Coil cable
4. Lower button
5. Microphones
6. Upper button
7. Indicator light
8. Earhook
9. Processing unit
10. Battery module
11. Accessory socket cover

Figure 1: CP810 Sound Processor parts

Processing unit

The processing unit, which is the brain of your processor, converts sound signals for transfer to your implant.



Figure 2: Processing unit with earhook





Getting to know your processor

The processing unit allows you to perform the following functions:

- Turn your processor on and off.
- Change your program (e.g. from Everyday to Noise).
- Turn the telecoil on and off.
- Lock and unlock processor buttons.

You can change microphone volume and sensitivity using the remote assistant. If your processor has an Advanced user interface, you can also change volume or sensitivity using the processing unit. For more information, see *Advanced user interface*.

The indicator light on the processing unit provides a visual indication when you perform a function (e.g. when you change a program), or when there is a problem with the processor (e.g. processor battery is empty). For more information, see *Understanding indicator lights*.

Earhook

The earhook secures the processing unit in place on your ear. It is attached to the processing unit and is available in a range of sizes. For more information, see *Changing the earhook*.

Battery module

You can use a Cochlear™ Nucleus® CP800 Series Standard Battery Module, which uses two disposable batteries (P675 zinc air batteries), or a Rechargeable Battery Module to power your processor.



Figure 3: Standard Battery Module (1) and Compact Rechargeable Battery Module (2)





Getting to know your processor

The Standard Battery Module consists of a battery holder and a battery cover.



Figure 4: Battery holder with zinc air batteries (1), tamper resistant battery cover (2) and battery lock (3)

To prevent children from detaching the battery cover from the battery holder, you can use the Cochlear™ Nucleus® CP800 Series Tamper Resistant Battery Cover. You can also lock the standard battery module or the rechargeable battery module to the processing unit.

Cochlear supplies a battery charger to recharge the rechargeable battery module. For more information, see *Replacing and recharging batteries*.

Coil and coil cable

The coil is a small round disk that you place over the implant. It transfers electromagnetic signals from your processing unit to the implant. The coil is attached to a removable coil cable, which plugs into the processing unit. The coil and coil cable are available in a choice of colours and lengths. For more information, see *Changing the coil cable*.



Figure 5: Coil only (1) and coil with cable (2)





Getting to know your processor

Coil magnet

A magnet holds the coil in place over your implant.



Figure 6: Coil magnet

If your coil falls off often, or if you experience discomfort, you can change the depth of the magnet in the coil. You can also use a stronger or weaker magnet. For more information, see *Adjusting and replacing the coil magnet*.

Microphone protectors

The processor microphones capture sound, which is processed by the processing unit for transfer to the implant. Microphone protectors are designed to protect the microphones from dirt and moisture. It is important that you keep the microphone protectors in place at all times, and replace them once a month.



Figure 7: Microphone protectors





Processor options

Depending on your listening needs, your clinician can enable the following options on your processor:

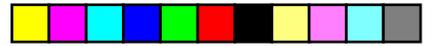
- SmartSound™ technologies to improve your hearing. SmartSound is a suite of four input sound processing technologies. These technologies are applied to four available programs: Everyday, Noise, Focus and Music. For more information on these programs, see *Changing programs*.
- Indicator light flashes that you see when you perform a function, or when there is a processor problem. For more information, see *Understanding indicator lights*.
- Private tones that you hear when you perform a function, or when there is a processor problem. A private tone can be heard only by you. For more information, see *Understanding private tones*.
- Microphone sensitivity or volume that you can change (with Advanced user interface only). For more information, see *Changing loudness of sounds*.
- Telecoil/microphones and accessory/microphones mixing ratios that you can change using the remote assistant. For more information, refer to the Remote Assistant User Guide.

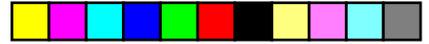
Your processor has been programmed for use with your implant only. It is important that you only use your own processor and never swap your processor with another person's processor. If you have two implants, correctly match your processor to the correct implant.



Components described in this user guide may not be available in all countries. Please contact your clinician for more information.







Wearing your processor

Your processor is designed to fit neatly and comfortably behind your ear. You can also wear the processing unit behind the ear and attach the battery module to the body. This provides greater comfort and flexibility for both adults and children.

You can change the processor coil cable, coil magnet and earhook for optimal comfort (e.g. if the coil cable length is too short, you can easily change the cable to a longer one).

This section describes how to wear your processor and wearing options.

Placing your processor on your ear

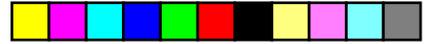
To be able to hear sound from the processor, it needs to be placed on the ear.

To place your processor on your ear:

1. Place the processing unit over your ear while holding the coil in the other hand.
2. Place the coil on your head. The coil magnet should hold it in place over your implant.

You may find it easier to turn on your processor before placing it on your ear. To turn it on, press and hold the lower button for at least one second until you see short flashes of green. The number of flashes you see corresponds to the number of your current program (e.g. if your current program is program 2, you see two green flashes).

When you turn on your processor before placing it on your ear, you may see flashes of orange. This indicates that the coil is not placed on your head. If the flashes do not stop even after placing the coil on your head, see *Understanding indicator lights* for more information.



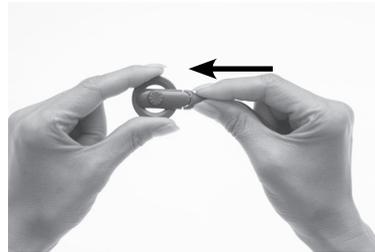
Wearing your processor

Attaching the coil and coil cable

If the coil is not attached to the processing unit, or the coil cable is not attached to the coil, you need to attach them before placing the processor on your ear.

Attaching the coil cable to the coil

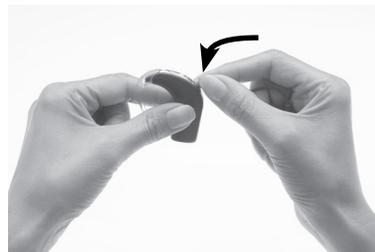
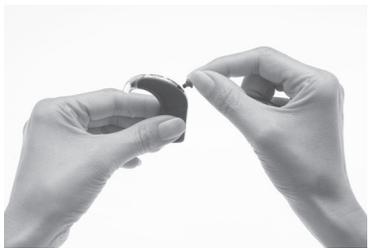
To attach the coil cable to the coil:



1. Hold the coil in one hand and the coil cable plug in the other hand as shown.
2. Align the coil end of the coil cable plug with the coil.
3. Push the coil cable plug firmly into the coil until it clicks into place.

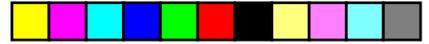
Attaching the coil to the processing unit

To attach the coil to the processing unit:



1. Align the coil cable plug with the coil cable socket on the processing unit.
2. Push the coil cable plug firmly into the socket until it clicks into place.





Wearing your processor

The coil functions properly only when the coil cable is fully inserted into the processing unit. To check if the coil is receiving sound signals from the processor, you can use the in-built coil sensor on the remote assistant. For more information on how to use the coil sensor, see *Checking the coil*.

If you attach the coil to the processing unit when your processor is turned on, your processor may turn off. If this occurs, turn your processor back on.

A secure and comfortable fit

For a more secure or comfortable fit, you may want to:

- Change the earhook size.
- Adjust the coil magnet strength.
- Change the coil magnet.
- Change the coil cable.
- Use the Snugfit™.
- Use the LiteWear cable, which allows the battery module to be attached to the body.

Read the following sections for more details.

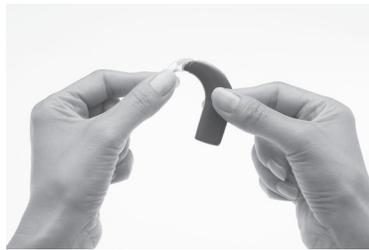


Wearing your processor

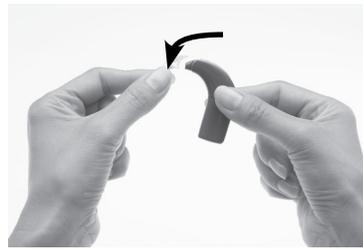
Changing the earhook

Earhooks are available in different sizes. If your earhook becomes loose, you should replace it.

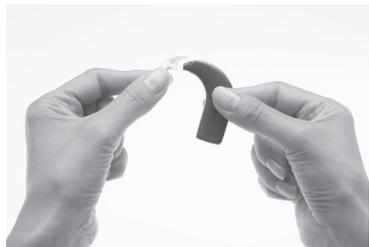
To change the earhook:



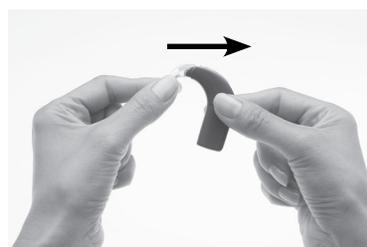
1. Hold your processor and the earhook as shown.



2. Rotate the earhook to pull it away from the processing unit.



3. Hold the new earhook in one hand and your processor in the other hand as shown.



4. Attach the earhook by pushing the lower end of the earhook onto the processing unit.

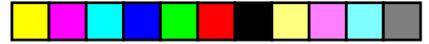
Avoid twisting the earhook as it may become loose.

Adjusting and replacing the coil magnet

If the magnet strength is too weak, the coil may fall off. If it is too strong, it may cause discomfort or skin irritation. You may consult your clinician if you are unsure about correct magnet strength.

Make sure the coil is positioned correctly against the implant by placing it where the coil magnet "pull" feels the strongest. You can change how firmly the magnet sits on your head by adjusting its depth in the coil.



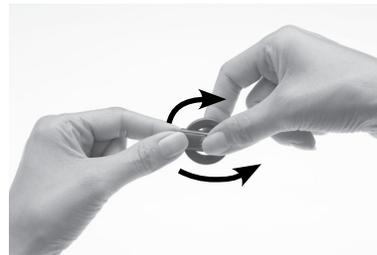


Wearing your processor

If adjusting the depth of the magnet is not sufficient, you can replace the magnet with a stronger or weaker magnet.

Adjusting magnet depth

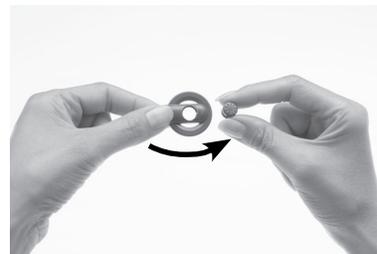
To adjust magnet depth:



1. Place the thumb and index finger on the magnet as shown.
2. Turn the magnet in a clockwise direction to increase magnet strength, or in an anti-clockwise direction to reduce strength.

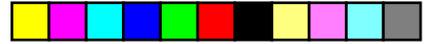
Changing magnet strength

To change the magnet to a stronger or weaker one:



1. Place the thumb on the top of the magnet and index finger on the underside of the magnet as shown.
2. Turn the magnet in an anti-clockwise direction until you remove it from the topside of the coil.

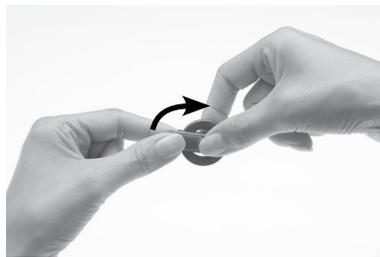




Wearing your processor



3. Hold the new magnet between the thumb and index finger as shown.
4. Hold the coil in the other hand.
5. Insert the magnet gently into the magnet slot on the topside of the coil. The side with the star should face upwards. The magnet fits easily.



6. Turn the magnet in a clockwise direction until it is in position.

Do not overtighten the magnet, or force it to turn if it becomes difficult to turn during insertion or removal. The movement should be smooth and turning should need only a small amount of force. If turning becomes difficult, check that:

- The magnet is correctly aligned in the coil.
- You are turning the magnet in the correct direction.

Changing the coil cable

If you find that the coil cable is too long or short for your comfort, you can change the coil cable. Regularly check to see if the coil cable is damaged. If damaged, you will need a new coil cable.





Wearing your processor

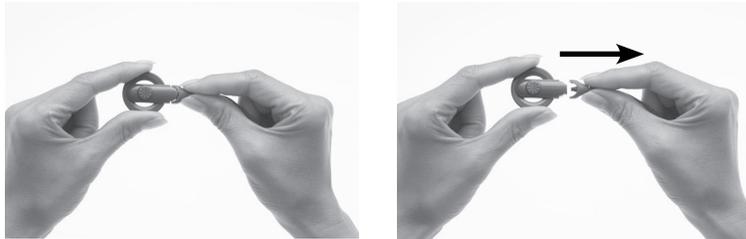
To change the coil cable to a longer or shorter one, do the following:
Remove the coil cable from the processing unit as shown.



1. Place the thumb and index finger over the finger grips on the processor end of the coil cable plug as shown.
2. Gently pull the coil cable plug away from the processor.

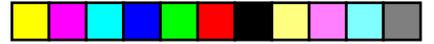
You may damage the coil cable, coil cable plug or the processing unit if you pull on the cable, or twist the cable plug.

Remove the coil cable from the coil as shown.



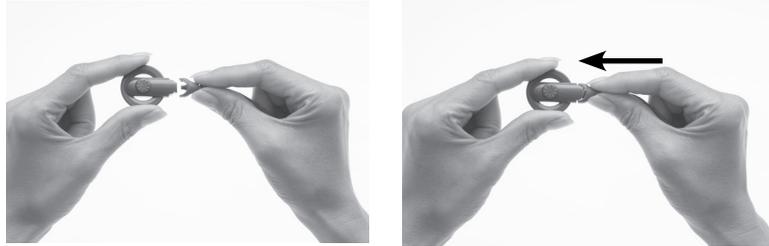
1. Hold the coil firmly in one hand as shown.
2. Place the thumb and index finger of the other hand over the finger grips on the coil end of the coil cable plug.
3. Firmly pull the coil cable away from the coil.





Wearing your processor

Attach the new coil cable to the coil as shown.



1. Hold the coil in one hand and the coil cable plug in the other hand as shown.
2. Align the coil end of the coil cable plug with the coil.
3. Push the coil cable plug firmly into the coil until it clicks into place.

Using the Snugfit™ for a secure fit

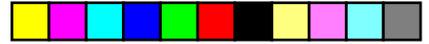
The Cochlear™ Nucleus® CP800 Series Snugfit™ helps hold the processing unit in place more securely than using the earhook alone. The Snugfit is available in a choice of different sizes to fit differently sized ears. It is easily adjustable, comfortable and robust enough to withstand an active lifestyle.

You can use the Snugfit with the Cochlear™ Nucleus® CP800 Series LiteWear option to provide an even more comfortable and secure fit. The LiteWear option allows you to attach the battery module to your body.



Figure 8: Snugfit (1) and Snugfit attached to processor (2)

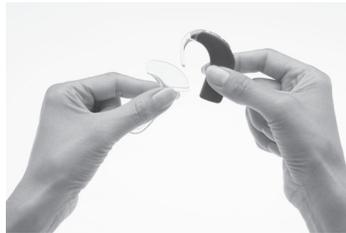




Wearing your processor

Attaching and removing the Snugfit

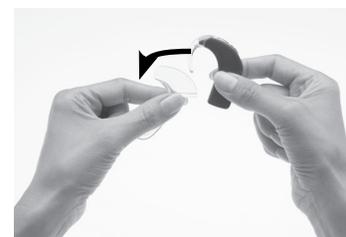
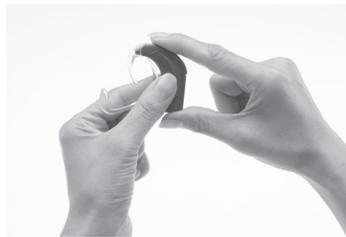
To attach the Snugfit to the processor:



1. Hold your processor in one hand as shown.
2. Hold the Snugfit between the thumb and index finger of the other hand and gently squeeze on the wings. This helps fit the Snugfit more securely on the processor.
3. Gently slide the Snugfit upwards until the base of the Snugfit is aligned with the base of the processing unit.

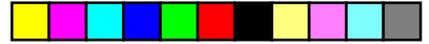
You can further adjust the shape of the Snugfit by gently bending the lower part of the bottom hook into the shape you want.

To remove the Snugfit from the processor:



1. Hold your processor and the Snugfit as shown.
2. Remove the Snugfit by gently pulling it downwards.





Wearing your processor

Changing the way you wear your processor

The Cochlear Nucleus CP800 Series LiteWear option provides greater comfort and flexibility in the way children and adults wear the processor. It allows the battery module to be attached to the body. The processing unit is worn behind the ear and is connected to the battery module by the Cochlear™ Nucleus® CP800 Series LiteWear Cable.

You cannot use the LiteWear cable with the Compact Rechargeable Battery Module.

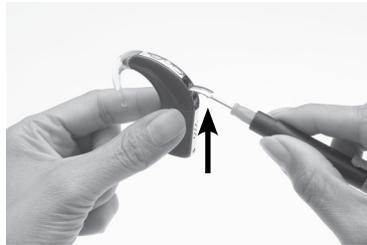
You can use the Cochlear™ Nucleus® CP800 Series LiteWear Case to protect and hold the battery module securely. Cochlear™ Nucleus® CP800 Series LiteWear Fixing Aids allow you to attach the LiteWear case to your clothing. You can also use the Snugfit with the LiteWear option.

You can lock the LiteWear cable to the processing unit and battery module. This prevents children from removing the battery module from the processing unit.

Locking and unlocking the battery module

To prevent children from removing the battery module from the processing unit, you can lock the battery module to the processing unit.

To lock the battery module to the processing unit:



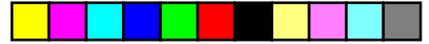
1. Lift the accessory socket cover of the processor to reveal the lock. It is located below the accessory socket.



2. Using a pair of tweezers or a screwdriver, push the latch to your left to lock the battery module.

To unlock, push the latch to your right.

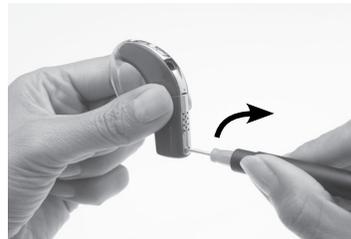
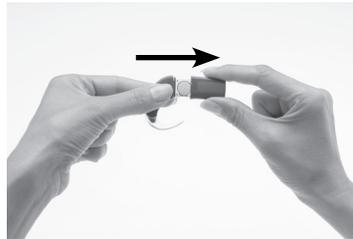




Locking and unlocking the tamper resistant battery cover

To prevent children from removing the battery holder from the battery cover, you can lock the tamper resistant battery cover of the Standard Battery Module to the battery holder.

To lock the tamper resistant battery cover:



1. Insert the battery holder into the battery cover as shown.
2. Using a screwdriver, gently rotate the lock in a clockwise direction until it is positioned horizontally.

To unlock, gently rotate the lock in an anti-clockwise direction until it is positioned vertically.

Do not overturn the lock as it could damage the lock.