

Cochlear™

# Nucleus® CR210 Remote Control

User Guide



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Cochlear®

# About

The Cochlear™ Nucleus® CR210 Remote Control is a hand-held device for controlling the commonly used functions of your Cochlear™ Nucleus® CP910 or CP920 ("CP900 series") Sound Processor.

The remote control allows you to:

- change programs
- turn volume or sensitivity up and down
- turn telecoil on and off
- turn auto telecoil on and off
- turn audio accessories on and off.

If you have two processors (bilateral), your remote control can communicate with both processors at once (depending on compatibility).

For more information on your processor, refer to the Cochlear™ Nucleus® CP910 and CP920 Sound Processor User Guide.

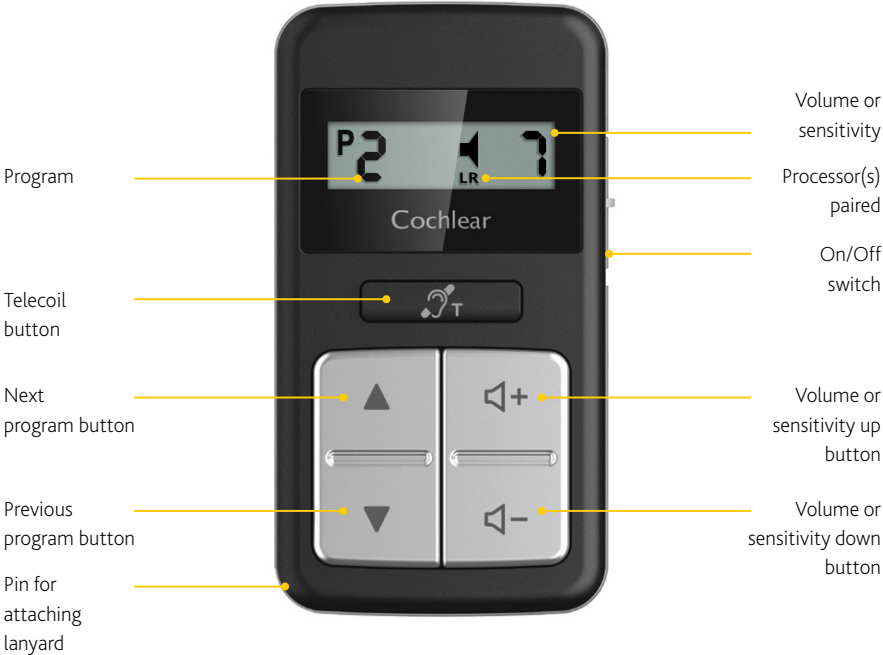
This guide is intended for cochlear implant recipients and their carers using the Cochlear™ Nucleus® CP910 or CP920 Sound Processors.

## NOTE

Refer to the Warnings section for warnings and cautions relating to the use of the remote control and batteries.



# CR210 Remote Control



## Other indicators on your remote control



## NOTE

Please refer to the booklet *Important Information: Warnings, Precautions and Electromagnetic Compatibility* for important information that applies to cochlear implant systems.



## Symbols

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### **Note**

Important information or advice.

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### **Tip**

Time saving hint.

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### **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.

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# Battery

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# Battery

Change the battery whenever you see the low battery indicator, or if the display stays blank when you try to turn the remote control on. A battery should last up to three months (if the remote control is used about 15 times a day). See *Warnings* on page 30.



## Change the battery

1

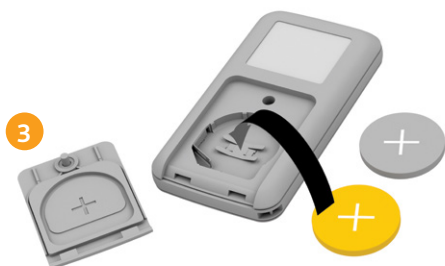


Unlock the battery cover by turning the screw anticlockwise with a small Phillips head (cross-head) screwdriver.

2



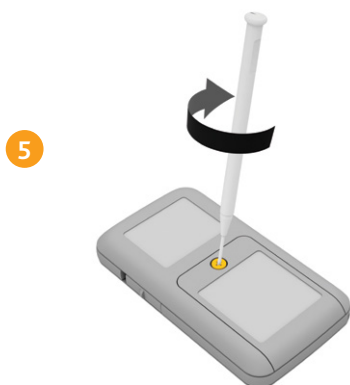
Slide off the battery cover and remove the battery.



Insert the new battery. Make sure the plus sign "+" is facing up. Take care not to damage the battery contacts.



Replace the battery cover, bottom edge first.



Lock the battery cover in place by turning the screw clockwise with a small Phillips head screwdriver until tight.

#### CAUTION

Use ONLY disposable CR2032 or 5004LC 3V standard lithium coin cell batteries in your remote control.  
NEVER use rechargeable coin cell batteries or other battery types.



BATTERY



# Turn on

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Turn on	12
Turn off	13
Pair	14
Out of range	15

## Turn on



Slide the switch up to turn on.

When the switch is in the up position, the remote control will “go to sleep” when not in use. Press any button to “wake” it again.

## Turn off



Slide the switch down to turn off.



TURN ON

### TIP

Turn off your remote control to stop it "waking" when not in use, for example, when carried in your pocket.



# Pair

Pairing allows the remote control to communicate with the processor. Your clinician may have already paired your remote control with your processor. If not, you will need to pair it the first time you use it.

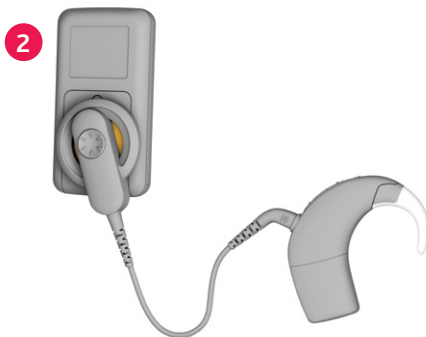


If your remote control is not paired to any processor, it displays dashes (shown left) and “blinks” when you press buttons.

## Pair your processor and remote control



Turn on your processor and remote control. They must both be “awake” and on at all times while pairing.



Place the coil on the back of your remote control.



3



The remote control will show pairing in progress.

4



The remote control then shows successful pairing of either left (L) or right (R) processor.

5



If you have two processors (bilateral), repeat steps 2-4 for your second processor.

## Out of range



If your processor is out of range or experiencing interference, the remote control displays dashes (shown left).



TURN ON



# Use

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Change programs	18
Adjust volume or sensitivity	19
Use telecoil	20
Use audio accessories	21

## Change programs

Your clinician may program your processor with up to four programs which you can choose with your remote control.



## Control two processors

Your remote control adjusts both processors at the same time.

If your processors have different settings (perhaps because you adjusted one using the processor buttons), the remote control will display the program and volume/sensitivity settings for the left processor. If either processor has telecoil or an accessory turned on, the remote will display the relevant indicators.

## Adjust volume or sensitivity

Usually, your clinician will set up your remote control to adjust the volume of the sound you hear. But your clinician can set it up to adjust sensitivity instead. Volume is the level of sound you hear. Sensitivity is the range of sounds you hear, for example, soft, background, close or far away. You can select from up to 10 volume levels or 21 sensitivity levels.



Press to turn up the volume or sensitivity

Press to turn down the volume or sensitivity

### Display current settings

When you turn on the remote control, it always displays the current settings (e.g. volume), even if you have adjusted those settings using the processor buttons (or the remote assistant), while the remote control was off.

#### CAUTION

If you are adjusting volume settings often or if adjusting volume levels causes discomfort, consult your clinician.



USE

## Use telecoil

Listen to hearing loops and hear voices on the telephone with the telecoil. Your clinician can set up your processor with manual telecoil and also auto telecoil. Auto telecoil detects the telecoil signal automatically whenever you use a telecoil-compatible phone or are in range of a hearing loop.

You can not use telecoil while an audio accessory is connected to your processor.

### NOTE

Certain electronic devices or machinery may automatically turn on auto telecoil (you may hear a buzzing noise).

If this happens, move away from the device or machinery and wait a few seconds for auto telecoil to turn itself off, or turn it off manually.

### Turn telecoil on (if set up)



Press the telecoil button once.

The telecoil icon will appear.

### Turn telecoil to auto (if set up)



Press the telecoil button twice.

The telecoil icon and AUTO will appear.

### Turn telecoil off



Press the telecoil button once.

The telecoil icon will disappear.

## Use audio accessories

When you connect an audio accessory to your processor, the accessory will be turned on automatically and your remote control will display an accessory icon. If telecoil was turned on, it will be turned off automatically.



While the audio accessory is connected, use your remote control to turn the accessory off and on again.

### Turn the audio accessory off



Press the telecoil button once.  
The accessory icon will disappear.

### Turn the audio accessory back on



Press the telecoil button once.  
The accessory icon will appear.



USE





# Care

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# Care

Keep your remote control dry.

Clean your remote control by wiping the display and buttons with a soft dry cloth.

## If your remote control gets wet

1



Dry the remote control with a soft dry cloth.

2



Remove the battery.

See *Change the battery* on page 8.

## NOTE

Before replacing the battery, check for any remaining moisture. If moisture remains, repeat the earlier steps.



3



4



Leave the remote control in a warm and well ventilated place (out of reach of children and out of direct sunlight) to dry for approximately 12 hours.

Do not use a drying kit or household appliance (e.g. hairdryer) to dry the remote control.

Insert a new battery.  
See *Change the battery* on page 8.



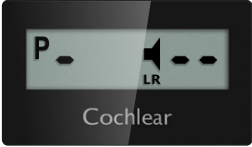
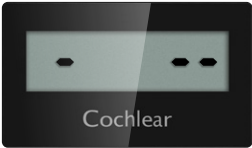
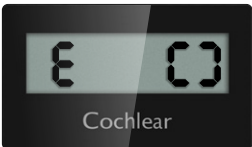
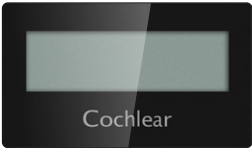
CARE



# Troubleshoot

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# Troubleshoot

PROBLEM	RESOLUTION
<b>Remote control won't change program or adjust volume/sensitivity</b> 	<ul style="list-style-type: none"><li>• If you have two processors, check both processors are turned on.</li><li>• Move the remote control closer to your processor(s).</li><li>• Move the remote control away from metal objects (e.g. keys) or other objects that might cause interference (e.g. mobile phone, Bluetooth and Wi-fi devices).</li></ul>
<b>Remote control shows only dashes</b> 	<ul style="list-style-type: none"><li>• Pair your remote control with your processor. See <i>Pair your processor and remote control</i> on page 14.</li></ul>
<b>Remote control shows pairing error</b> 	<ul style="list-style-type: none"><li>• Contact your clinician.</li></ul>
<b>Remote control won't turn on or 'wake up' (display remains blank)</b> 	<ul style="list-style-type: none"><li>• Replace the battery. See <i>Changing the battery</i> on page 8.</li></ul>

PROBLEM	RESOLUTION
<b>Processor doesn't pair with remote control</b>	<ul style="list-style-type: none"> <li>• Make sure the processor and the remote control are both turned on and "awake".</li> <li>• Make sure you hold the coil in place until the remote control has finished pairing.</li> <li>• Contact your clinician.</li> </ul>
<b>Telecoil button doesn't turn telecoil on</b>	<ul style="list-style-type: none"> <li>• Make sure an audio accessory is not connected to one of your processors.</li> <li>• Contact your clinician to check if telecoil is set up on your processor(s).</li> </ul>
<b>Telecoil button doesn't turn telecoil to auto</b>	<ul style="list-style-type: none"> <li>• Starting with telecoil turned off, try pressing the telecoil button twice quickly, within five seconds.</li> <li>• Contact your clinician and check if auto telecoil is set up on your processor(s).</li> </ul>
<b>Telecoil button doesn't turn telecoil off</b>	<ul style="list-style-type: none"> <li>• Wait at least five seconds without pressing any buttons on your remote control, then press the telecoil button once.</li> </ul>
<b>Telecoil button doesn't turn audio accessory on or off</b>	<ul style="list-style-type: none"> <li>• Make sure the audio accessory is properly connected to your processor(s).</li> </ul>



# Warnings

- Do not use your remote control if it becomes unusually warm. Notify your clinician immediately.
- Small parts such as the coin battery could pose a choking hazard. Keep the battery cover locked at all times. Change battery out of reach of children. Do not allow small children to change the battery.
- No modification of this equipment is allowed.
- Use a soft dry cloth ONLY to clean the surface of your remote control.
- Do not use alcohol, household cleaners or abrasive materials to clean your remote control.
- Do not bend or compress the display on your remote control.
- Keep your remote control dry.
- Do not disassemble, modify, deform or immerse your remote control in water. If your remote control is not working, return it to your clinician. Warranty will be void if opened.
- Protect your remote control in environments where excessive moisture and dirt can damage it.
- Protect the display from objects that may scratch it.
- When the remote control is on, keep metal objects away from the display as they may cause interference.
- Do not place the remote control inside any part of your body (e.g. mouth).
- Keep the remote control out of reach of very young children.



# Other information

## Physical configuration

The remote control comprises:

- analogue and digital integrated circuits based on a micro-processor design, with bi-directional wireless communication capabilities
- buttons and a switch for control of processor features and its own system features
- a display for indicating system status and activity
- in-built coil sensor
- lanyard pin.

## Materials

The remote control housing and buttons are made of polycarbonate and acrylonitrile butadiene styrene (ABS). The display is made of ABS.

## Battery life

**Battery life** means the time a device will run before the disposable batteries must be replaced.

## Wireless communication link

The remote control wireless communication link operates in the 2.4 GHz ISM band using GFSK (Gaussian frequency shift keying) on 5 channels. The link uses a proprietary bi-directional communication protocol and operates over a distance of up to 2 metres from the processor. When interference is present, the wireless communication link switches between the 5 channels to find a channel where the interference least affects the operation of the link. The remote control indicates via its display when the processor is not within operating distance, and when the link has been interrupted due to interference (see page 15).

## Dimensions

COMPONENT	LENGTH	WIDTH	DEPTH
CR210 Remote Control	66.0 mm	36.5 mm	10.6 mm

## Weight

COMPONENT	WEIGHT
CR210 Remote Control (with battery)	35g

## Operating characteristics

CHARACTERISTIC	VALUE/RANGE
Wireless technology	Proprietary low power bi-directional wireless link
RF frequency	2.4 GHz
Battery type	One disposable CR2032 or 5004LC lithium coin cell battery
Operating battery voltage	2.12 – 3.00 V
Button and switch functions	Remote control lock and unlock, telecoil/auto telecoil on and off, program adjust, volume or sensitivity settings adjust
Wireless transmission range	Up to 2 m
Display	Custom, icon based monochrome LCD

## Environmental conditions

CONDITION	MINIMUM	MAXIMUM
Storage & transport temperature	-30°C (-22°F)	+50°C (+122°F)
Storage & transport relative humidity	0% RH	90% RH
Storage & transport pressure	250 hPa	1030 hPa
Operating temperature	+5°C (+41°F)	+40°C (+104°F)
Operating relative humidity	0% RH	90% RH
Operating pressure	700 hPa	1030 hPa

## Environmental protection

Your remote control contains electronic components subject to the Directive 2002/96/EC on waste electrical and electronic equipment.

Help protect the environment by not disposing of your remote control or batteries with your unsorted household waste. Please recycle your remote control and batteries according to your local regulations.

## Certification and applied standards

The CR210 Remote Control fulfils the essential requirements listed in Annex I of the EC directive 90/385/EEC on Active Implantable Medical Devices and with requirements of the EC directive 1999/5/EC

on Radio and Terminal Telecommunication Equipment as per conformity assessment procedure Annex III.



The year in which authorisation to affix the CE mark was granted was 2013.

## Equipment classification

Your remote control is an accessory to a medical device as described in the international standard IEC 60601-1:2005, Medical Electrical Equipment – Part 1: General Requirements for Basic Safety and Essential Performance.

## FCC (Federal Communications Commission) and Canadian IC compliance

This device complies with part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications made to this equipment not expressly approved by Cochlear Limited may void the FCC authorisation to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC ID: WTOR200BA

IC ID: 8039A-R200BA

## Labelling symbols

The following symbols may appear on your processor or remote components and/or packaging:



Consult instructions for use



Manufacturer



Authorised representative in the European Community



Catalogue number



Serial number



Batch code



Date of manufacture



Temperature limit



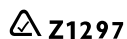
Humidity limitation



CE registration mark with notified body number. Indicates compliance with the requirements of the Active Implantable Medical Device Directive 90/385/EEC



Certification Australia



Certification New Zealand



Certification Japan



Certification Korea



Certification Taiwan



Do not re-use

**Rx Only**

By prescription



Recyclable material



Recycle under green dot scheme



Dispose of electrical components in accordance with your local regulations



Dispose of lithium-ion batteries in accordance with your local regulations



Keep dry



Coil guide. Used to position the coil against the remote control when pairing.

# Legal statement

The statements made in this guide are believed to be true and correct as of the date of publication. However, specifications are subject to change without notice.

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Hear now. And always

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