Cochlear™

Nucleus® CR210 Remote Control

User Guide

Hear now. And always

Cochlear®

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") or Kanso® (CP950) Sound Processor. *

The remote control allows you to:

- change programs
- turn volume or sensitivity up and down
- turn Wireless Accessories on and off
- turn plug-in audio accessories on and off
- turn telecoil on and off
- turn auto telecoil on and off (if available).

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

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 its user guide.

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

* Not all products are approved in all countries.

NOTE
Please also refer to your *Important Information* document for essential advice that applies to Cochlear implant systems.

Symbols used in this guide

	Note Important information or advice.
	Tip Time saving hint.
	Caution (no harm) Special care to be taken to ensure safety and effectiveness. Could cause damage to equipment.

CR210 Remote Control

Program

Telecoil button

Next program button

Previous program button

Pin for attaching lanyard

Volume or sensitivity

Processor(s) paired

On/Off switch

Volume or sensitivity up button

Volume or sensitivity down button

Other indicators on your remote control

Telecoil on

Low battery in remote control

Auto telecoil on

Accessory on

Contents

About 1

Battery 5

Turn on 9

Turn on 10

Turn off 11

Pair 12

Out of range 13

Use 15

Change programs 16

Adjust volume or sensitivity 17

Wireless Accessories 18

Plug-in audio accessories 19

Telecoil 20

Care 23

Clean 24

If your remote control gets wet 24

Troubleshoot 27

Warnings 30

Other information 31

Battery

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.

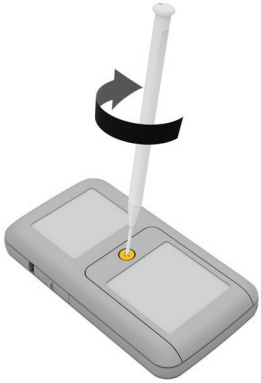
3

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

4

Replace the battery cover, bottom edge first.

5



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.

Turn on

Turn on 10
Turn off 11
Pair 12
Out of range 13

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.

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

Pair

Pairing allows two devices to communicate with each other. 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.

NOTE
For details on pairing your remote control with Wireless Accessories, see the Cochlear Wireless Accessories User Guide.

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

1

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

2

Place the coil/processor 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).

Use

Change programs 16
Adjust volume or sensitivity 17
Wireless Accessories 18
Plug-in audio accessories 19
Telecoil 20

Change programs

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

Press to move to the next program

Press to move to the previous program

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 (if available). 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.

Wireless Accessories

If you use a Cochlear Wireless Accessory with your processor, your remote control can be used to control the Wireless Accessory and monitor its status.

NOTE
Before you can stream audio, you must first pair the Wireless Accessory to your processor. See the *Cochlear Wireless Accessory User Guide* for details.

To use the Mini Microphone or TV Streamer

To start streaming audio, long-press the telecoil button.
The accessory icon will appear.

TIP
You can long-press the telecoil button again to select the next paired Wireless Accessory.

To stop streaming audio, short-press the telecoil button.
The accessory icon will disappear.

NOTE
You use the controls on the Phone Clip to make and receive calls.

Plug-in audio accessories

When you connect a plug-in 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 plug-in audio accessory is connected, use your remote control to turn the accessory off and on again.

Turn the plug-in audio accessory off

Short-press the telecoil button once. The accessory icon will disappear.

Turn the plug-in audio accessory back on

Short-press the telecoil button once. The accessory icon will appear.

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 (if available). 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 at the same time as an audio accessory.

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.

NOTE
You can also use a Cochlear Wireless Phone Clip to make phone calls. See *Wireless Accessories* on page 18.

Turn telecoil on *(if set up)*

Short-press the telecoil button once.
The telecoil icon will appear.

Turn telecoil to auto *(if set up)*

Short-press the telecoil button twice.
The telecoil icon and AUTO will appear.

Turn telecoil off

Short-press the telecoil button once.
The telecoil icon will disappear.

Care

Clean

Keep your remote control clean and 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 6.

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

3

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.

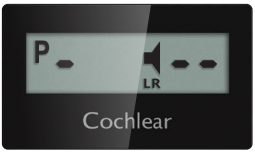
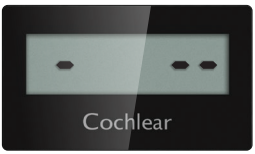
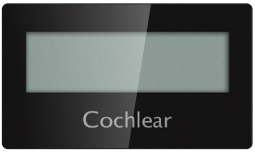
Do not use a drying kit or household appliance (e.g. hairdryer) to dry the remote control.

4

Insert a new battery.
See *Change the battery* on page 6.

Troubleshoot

Troubleshoot

PROBLEM	RESOLUTION
Remote control won't change program or adjust volume/sensitivity 	• If you have two processors, check both processors are turned on. • Move the remote control closer to your processor(s). • 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).
Remote control shows only dashes 	• Pair your remote control with your processor. See *Pair your processor and remote control* on page 12.
Remote control shows pairing error 	• Contact your clinician.
Remote control won't turn on or 'wake up' (display remains blank) 	• Replace the battery. See *Change the battery* on page 6.

PROBLEM	RESOLUTION
Processor doesn't pair with remote control	• Make sure the processor and the remote control are both turned on and "awake". • Make sure you hold the coil in place until the remote control has finished pairing. • Contact your clinician.
Telecoil button doesn't turn telecoil on	• Make sure an audio accessory is not connected to one of your processors. • Contact your clinician to check if telecoil is set up on your processor(s).
Telecoil button doesn't turn telecoil to auto	• Starting with telecoil turned off, try pressing the telecoil button twice quickly, within five seconds. • Contact your clinician and check if auto telecoil is set up on your processor(s).
Telecoil button doesn't turn telecoil off	• Wait at least five seconds without pressing any buttons on your remote control, then press the telecoil button once.
Telecoil button doesn't turn audio accessory on or off	• Make sure the audio accessory is properly connected to your processor(s).

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 13).

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

Environmental conditions

CONDITION	MINIMUM	MAXIMUM
Storage & transport temperature	-10°C (14°F)	+55°C (+131°F)
Storage & transport humidity	0% RH	90% RH
Operating temperature	+5°C (+41°F)	+40°C (+104°F)
Operating relative humidity	0% RH	90% RH
Operating pressure	700 hPa	1060 hPa

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 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

Your device fulfils the essential requirements listed in Annex 1 of the EC directive 90/385/EEC on Active Implantable Medical Devices as per the conformity assessment procedure in Annex 2.

CE 0123

The year in which authorisation to affix the CE mark was granted was 2015.

It also fulfils the essential requirements of Directive 2014/53/EU on Radio Equipment as per the conformity assessment procedure in Annex II. The declaration of conformity may be consulted at *www.cochlear.com/wps/wcm/connect/intl/about/company-information/declaration-of-conformity*

CE

Equipment classification

Your remote control is an accessory to a medical device as described in the international standard IEC 60601-1:2005/A1:2012, Medical Electrical Equipment – Part 1: General Requirements for Basic Safety and Essential Performance.

Radio compliance for Japan

This device is granted pursuant to the Japanese Radio Law (電波法) and the Japanese Telecommunications Business Law (電気通信事業法).
This device should not be modified (otherwise the granted designation number will become invalid).

R 202
LSB003

Radio compliance for Korea

Warning: This radio equipment has the possibility of radio interference during operation.

KCC-CRM-COH-CR210

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

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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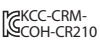
Labelling symbols

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

	Refer to instruction manual
	Specific warnings or precautions associated with the device, which are not otherwise found on the label
	Manufacturer
EC REP	Authorised representative in the European Community
REF	Catalogue number
SN	Serial number
LOT	Batch code
	Date of manufacture
	Temperature limits
CE 0123	CE registration mark with notified body number

Radio compliance certification for Australia and New Zealand

Radio compliance certification for Japan



Radio compliance certification for Korea

Do not re-use

Rx Only

By prescription

Recyclable material

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.

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