

DRAFT ONLY FOR CLINICAL TESTING

# Nucleus<sup>®</sup> 7 Remote Control

User Guide



CR310

*Hear now. And always*



The Cochlear™ Nucleus® 7 Remote Control (model number: CR310) is a hand-held device for controlling the commonly used functions of your Cochlear Nucleus 7 Sound Processor (model number: CP1000).

The remote control allows you to:

- change programs
- turn volume or sensitivity (if available) up and down
- turn True Wireless™ Accessories on and off
- turn telecoil on and off.

If you have two Nucleus 7 Sound Processors (bilateral), your remote control can communicate with both processors at once.

This guide is intended for Cochlear implant recipients and their carers using the Nucleus 7 Sound Processor. For more information, refer to the *Nucleus 7 Sound Processor User Guide*.

## Symbols used in this guide

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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.

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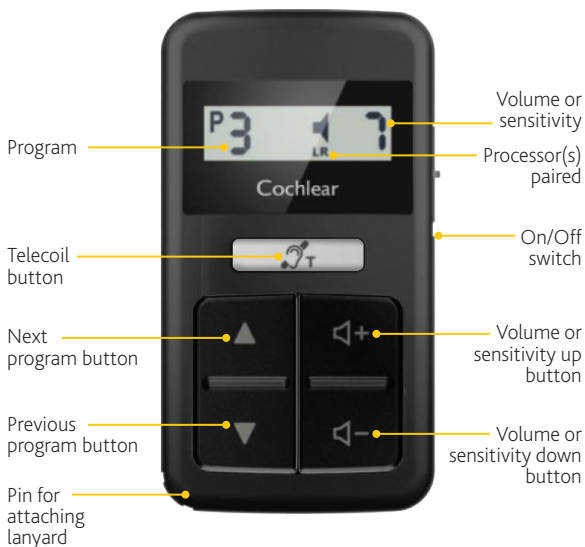


### WARNING (harmful)

Potential safety hazards and serious adverse reactions. Could cause harm to person.

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## Nucleus 7 Remote Control



### *Other indicators on your remote control*



## Battery



### 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.



## Travel

Your remote control transmits high frequency radio waves when switched on. Switch it off before takeoff and landing.

## 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.



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 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.

## Wireless accessories

If you use Cochlear True Wireless™ Accessories 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 *True Wireless Accessories User Guide* for details.

## To use a Mini Microphone or TV Streamer



1. 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.



2. 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.



## Telecoil

Your clinician can set up your processor with manual telecoil so you can listen to room hearing loops.

You can not use telecoil at the same time as a wireless accessory.



### NOTE

We recommend you use a Cochlear Wireless Phone Clip to make phone calls. See the *True Wireless Accessories User Guide*.

## Turn telecoil on (if set up)



1. Short-press the telecoil button once.

The telecoil icon will appear.

## Turn telecoil off



1. Short-press the telecoil button once.

The telecoil icon will disappear.

# Other information

## Physical configuration

The remote control comprises:

- analogue and digital integrated circuits based on a micro-processor design, with bidirectional wireless communication capabilities
- buttons and a switch for operation of unit
- buttons for remote control of sound processor"
- 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.

## 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

## Dimensions

COMPONENT	LENGTH	WIDTH	DEPTH
Nucleus 7 Remote Control	66.0 mm	36.5 mm	10.6 mm

## Weight

COMPONENT	WEIGHT
Nucleus 7 Remote Control (with battery)	35 g

## Operating characteristics

CHARACTERISTIC	VALUE/RANGE
Wireless technology	Proprietary low power bidirectional 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/wireless accessories on and off, program adjust, volume or sensitivity settings adjust
Remote communication range	Up to 2 m
Display	Custom, icon based monochrome LCD

## Wireless communication link

The remote control wireless communication link operates in the 2.4 GHz ISM band using GFSK (Gaussian frequency-shift keying) on 4 channels. The link uses a proprietary bidirectional communication protocol and operates over a distance of up to 2 metres from the processor. The wireless communication link continuously switches between the 4 channels to avoid interference on any specific channel. The remote control indicates via its display when the processor is out of operating distance (or switched off) or when the link is interrupted due to broad spectrum interference (see page 7).

## 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 Nucleus 7 Remote Control 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.



The year in which authorisation to affix the CE mark was granted was 2016.

It also fulfils the essential requirements listed in the EC directive 1999/5/EC on Radio and Terminal Telecommunication Equipment as per the conformity assessment procedure in Annex IV.



## 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.


## 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).



## Radio compliance for Korea

	1. Equipment name/model name: 특정소출력 무선기기(무선데이터통신시스템용 무선기기) / CR310
	2. Registration number: MSIP-CRM-COH-CR310
	3. Company name: Cochlear Limited
	4. Manufactured date: 2016
	5. Manufacturer/Country of Origin: Cochlear Limited/Australia



### WARNING

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

This equipment is suitable for electromagnetic equipment for home (Class B) and it can be used in all areas.

## 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: WTO-CR310

IC ID: 8039A-CR310