

MARVEL CI CLINICAL TOOLS



NAÍDA CI M

SKY CI M

TARGET CI



ADVANCED
BIONICS

POWERFUL CONNECTIONS

At Advanced Bionics, our commitment to putting patients first and providing the best possible hearing performance remains at the forefront of what we do. We are honored to have the opportunity to help those with hearing loss enjoy a life without limitations. Marvel CI offers your patients a powerful hearing experience with excellent sound quality in a variety of situations and comes with built-in connectivity solutions. Target CI fitting software is designed for easier, faster, and smarter fittings. It provides a streamlined workflow for a more efficient fitting experience.

To fulfill this commitment, we have a dedicated team to support your needs. Please contact your local Advanced Bionics representative who will be glad to assist. We offer:

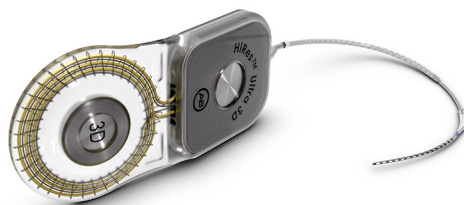
- **CLINICAL SUPPORT: AUDIOLOGICAL, SURGICAL AND REHABILITATIVE**
- **CUSTOMER SERVICE**
- **PRODUCT TRAINING**



Naída™ CI M
SOUND PROCESSOR



Phonak Naída™ Link M
HEARING AID



HiRes™ Ultra 3D
COCHLEAR IMPLANT



Phonak Sky™ Link M
HEARING AID

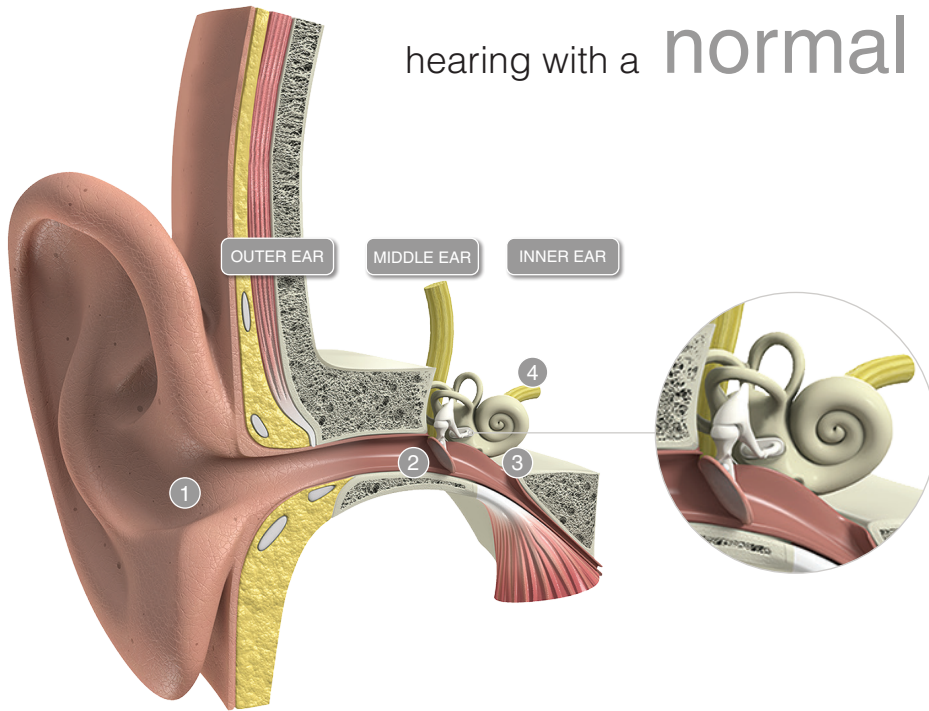


Sky CI™ M
SOUND PROCESSOR

For more information and online resources, please visit

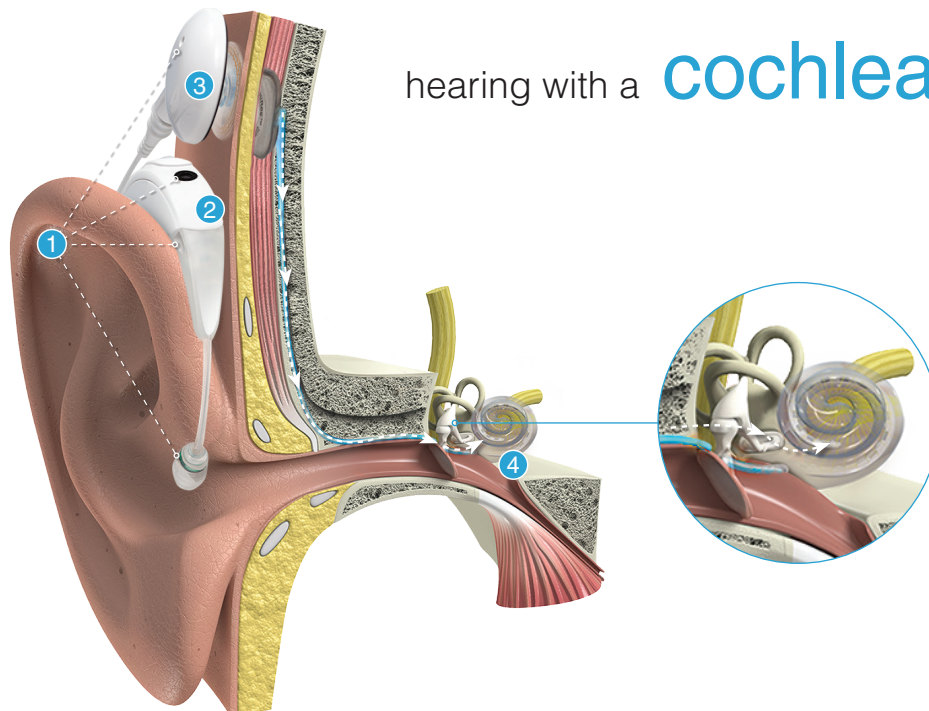
[AdvancedBionics.com/MarvelCI](https://www.advancedbionics.com/MarvelCI)

hearing with a normal ear

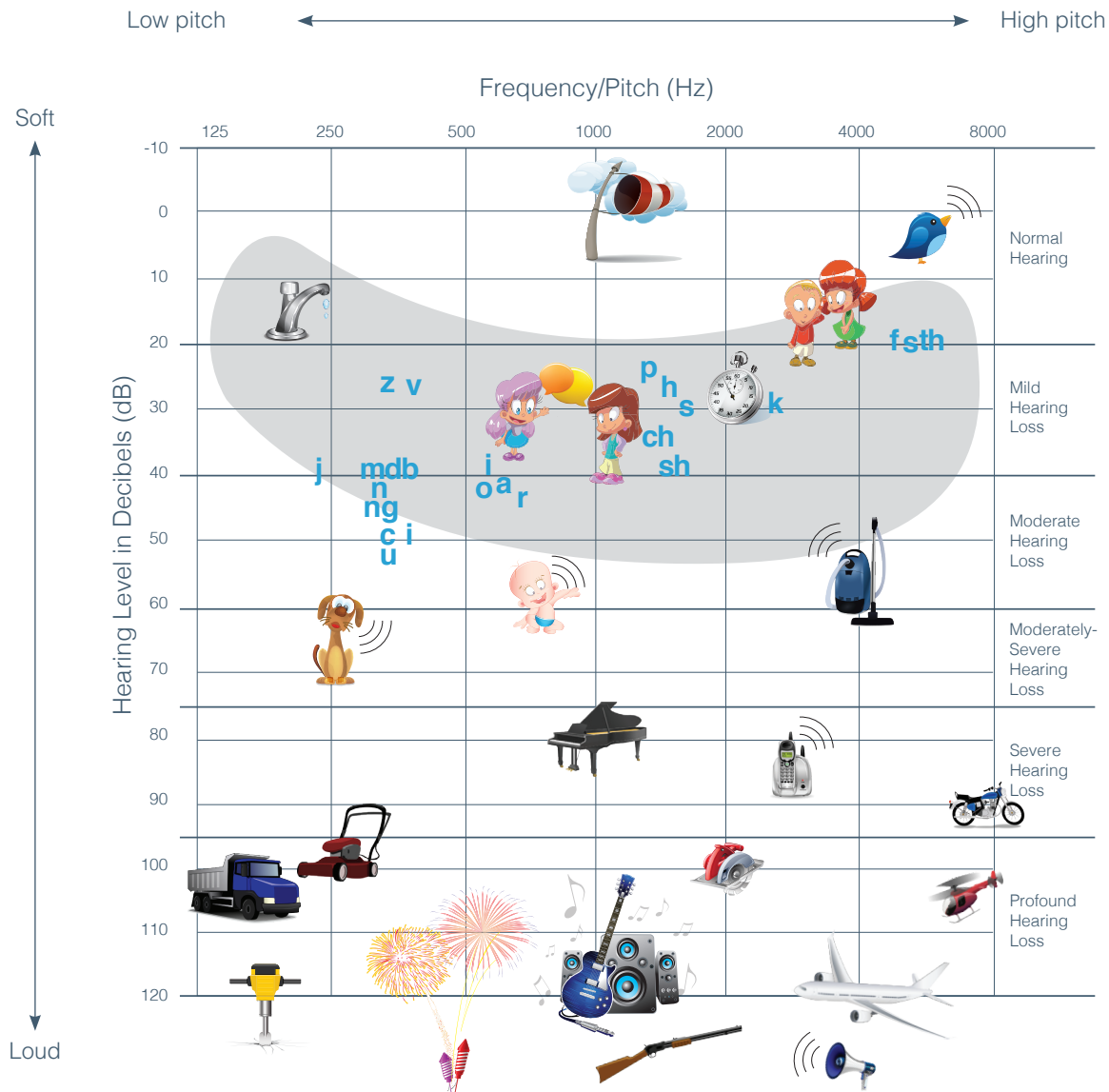


- 1 The outer ear collects sound waves that pass through the air.
- 2 The sound waves vibrate the eardrum and the three tiny bones in the middle ear, the ossicles: malleus, incus, and stapes.
- 3 The vibrations move the tiny hairs of the sensory cells in the cochlea.
- 4 Sensory cells convert the vibrations to electrical signals that are sent to the hearing nerve. From there, the impulses are sent to the brain, where they are interpreted as sound.

hearing with a cochlear implant



- 1 The microphones capture sound waves that pass through the air.
- 2 The sound waves are converted into detailed digital information by the sound processor.
- 3 The magnetic headpiece sends the digital signals to the implant and electrode array in the inner ear.
- 4 The electrode array in the implant sends electrical signals to the hearing nerve. From there, the impulses are sent to the brain, where they are interpreted as sound.



Adapted from: American Academy of Audiology, www.audiology.org and Northern, J & Downs, M. (2002). Audiogram of familiar sounds; and Ling, D. & Ling, A (1978). Aural Habilitation.

The audiogram is a graph that shows a person's hearing levels. It is measured during a hearing test and shows the softest sounds a person can hear at different frequencies (itches).

X represents the hearing responses for the **left ear**

O represents the hearing responses for the **right ear**



Too Loud



Loud



Most Comfortable

You could listen at this level for a long time without discomfort.



Soft



Too Soft



No Sound



ADVANCED
BIONICS
POWERFUL CONNECTIONS

Loudness Scale FOR PAEDIATRICS



Too Loud



Good



Too Soft

Marvel CI sound processors (Naída CI M90 and Sky CI M90) offer your patients a powerful hearing experience with excellent sound quality in a variety of situations and comes with built-in connectivity solutions. This guide provides the basic information needed to get started with the fitting, maintenance and troubleshooting.

COMPATIBILITY

Marvel CI sound processors are programmed in the Advanced Bionics Target CI fitting software and are compatible with the following implant type: HiRes Ultra 3D, HiRes Ultra, HiRes 90K Advantage, HiRes 90K and CII.

PRODUCT HIGHLIGHTS

- **AutoSense OS™ 3.0** operating system automatically senses the surroundings and adjusts the signal processing to provide optimum clarity and comfort in different listening situations.
- **Integrated Bluetooth® and RogerDirect technology** allow recipients to stream audio and media wirelessly from their favourite devices. Recipients can stay connected with loved ones with truly hands-free phone calls.
- **Unique ergonomic processor and headpiece design** for a discreet, comfortable, and secure fit.
- **M Waterproof Battery** ideal for swimming and outdoor activities.

COMPONENTS

1. M T-Mic™ microphone with cover
2. Sound processor
3. Front microphone
4. Multi-function button with status LED
5. Back microphone
6. M Battery
7. Slim HP with integrated cable



To turn the sound processor either on or off, simply attach or remove the battery.

Multi-function Button

The multi-function button is programmable in Target CI and can be customised to meet the needs of each recipient. For example, it can be disabled completely for paediatric use, or set as a volume and/or programme control.



Listening Need	Short Press (< 2 seconds)	Long Press (> 2 seconds ¹)
Standard listening	Volume up or down	Programme change ²
During Audio Streaming	Streaming volume up or down	Programme change
During Phone Calls	Accept phone call (while ringing) or phone call volume up or down (during call)	Reject phone call (while ringing) or end phone call (during call)

Remote Control Options



For convenient and discreet device management, the AB Remote app or Phonak RemoteControl allows the recipient to make programme and volume adjustments effortlessly. The AB Remote app also helps to perform a simple device check.

1. Pressing the button up or down has the same function.

2. When the multi-function button is used to change programmes, whether pressing the top or the bottom part of the rocker, the programmes toggle forward. To go backwards, please use the AB Remote app or toggle through the sequence.

Indicator Light (LED) Guide

The indicator light is a programmable feature that provides visual information about the sound processor status, battery life, programme position, and sound processor error conditions.

Colour	Behaviour	Programmable	Indication
	AutoSense: 1 long green blink Programme 1: 1 short green blink Programme 2: 2 short green blinks Programme 3: 3 short green blinks Programme 4: 4 short green blinks	Yes	Programme Change
	Blinks during use in response to loud input	Yes	Microphones are responding to loud sound
	3 green blinks upon command by fitting software or AB Remote mobile app	No	Detect sound processor
	1 purple blink	Yes	Progressive level change, if enabled
	Blue blinking while streaming audio/media	Yes	Receiving streaming information
	One long orange blink at start-up after battery and program status	No	Flight mode
	Orange blinking	No	Battery status at start-up: 1 orange blink < 20% 2 orange blinks 20-49% 3 orange blinks 50-84% 4 orange blinks 85%+
	Continuous orange blinking	Yes	Low battery
	Solid red	No	Start-up issue/error
	Blinking red, faster than once per second	No	Wrong implant detected
	Blinking red, once per second after start-up	Yes	No lock to implant

CARE AND MAINTENANCE

Daily care and proper use of the sound processor and accessories will result in optimal function over time. Wipe the sound processor and components with a soft dry cloth. Do not immerse, or use solvents e.g. soap. Store the sound processor in the drying case every night. The M T-Mic covers should be replaced at regular intervals.

TROUBLESHOOTING

The checklist below and the AB Remote mobile app will help to systematically troubleshoot the device.

- Perform a device check with the AB Remote mobile app
- Check the indicator light
- Try a different programme
- Try a different fully charged battery
- Listen to the device with the M Listening Check
- Check and change the Slim HP
- Check other equipment, e.g., charger, etc.
- Check and change the sound processor

FOR MORE INFORMATION

Refer to the Marvel CI User Guide. Refer to the AB website for wireless technology.

Check with local AB representative for regulatory approvals and product availability in your area.




The Slim HP offers comfort and convenience with a low profile design. This guide provides the basic information needed to get started with the fitting, counselling and maintenance of the headpiece.

COMPATIBILITY

Implants: HiRes Ultra 3D, HiRes Ultra, HiRes 90K Advantage, HiRes 90K and CII.

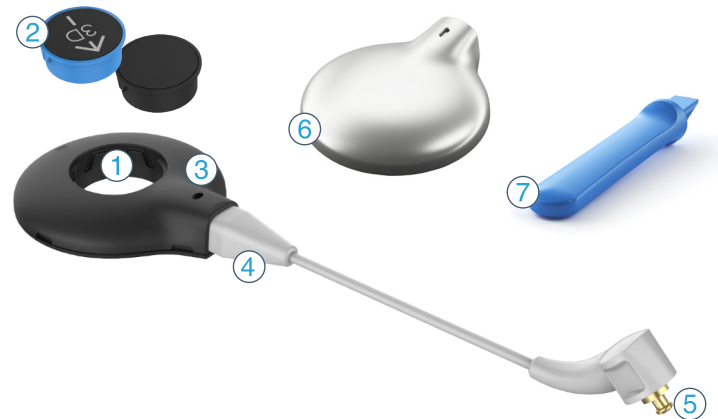
Sound processors: Naïda CI M90, Naïda CI M30, Sky CI M90, Naïda CI Q Series and Neptune (compatible with Slim HP AquaMic only).

HEADPIECE OPTIONS

 <p>SLIM HP</p> <ul style="list-style-type: none"> • No microphone. • For sound processor on-the-ear use. 	 <p>SLIM HP MIC</p> <ul style="list-style-type: none"> • Integrated microphone. • For sound processor off-the-ear use. 	 <p>SLIM HP AQUAMIC</p> <ul style="list-style-type: none"> • For use with the M Waterproof Battery for complete protection against moisture, dust. • Integrated waterproof microphone (water droplet icon on the underside).
---	--	--

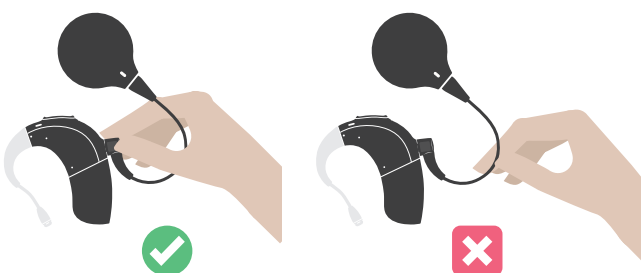
COMPONENTS

1. Magnet well
2. 3D Magnet (**BLUE**), Standard Magnet (**BLACK**)
3. Headpiece microphone (*Only available on selected models*)
4. Headpiece cable connector with integrated cable
5. Processor cable connector
6. Colour cap
7. Colour cap removal tool



OPERATING INSTRUCTIONS

Always hold the cable's strain relief when attaching and removing the headpiece cable from the sound processor.



The arrow on the underside indicates the inlet where the removal tool should be inserted to remove the colour cap.

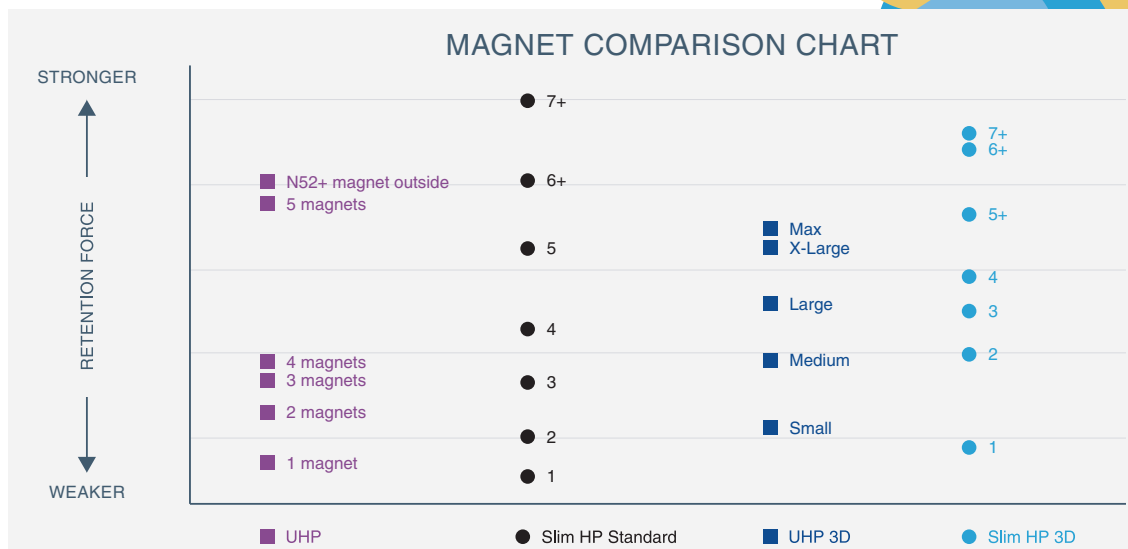
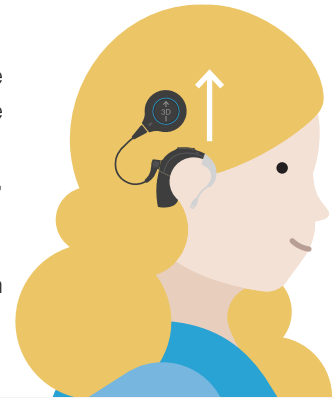


MAGNET SELECTION GUIDE

The CI professional is responsible for evaluating the headpiece magnet strength. It is important to use the appropriate magnet strength to avoid discomfort or retention issues. If magnet strength is insufficient, the headpiece may fall off. If magnet strength is excessive, the user may experience irritation or discomfort.



- **Slim HP 3D Magnets are BLUE** for HiRes Ultra 3D implants. The arrow on top of the 3D magnet indicates the direction for alignment: **ensure the arrow points up** when the Slim HP with 3D magnet is on the recipient's head.
- **Slim HP Standard Magnets are BLACK** for HiRes Ultra, HiRes 90K Advantage, HiRes 90K and CII implants.
- Magnets are labeled from 1 to 7, corresponding to their magnetic strength.
- Insert the appropriate magnet into the magnet well. Ensure the magnet strength number is facing the underside of the Slim HP i.e. towards the patient's implant.



SLIM HP COLOUR CAPS

There are two sizes of Colour Caps that can be used with the Slim HP, Slim HP Mic, and Slim HP AquaMic: **Standard** and **Large**. The Large Colour Caps are required for strongest magnet strengths (Standard Magnet sizes 6+ and 7+ and 3D Magnet sizes 5+, 6+ and 7+). These stronger magnets are **not recommended for children ages 3 years and younger**, as these colour caps and magnets may become displaced if dropped.

CARE AND MAINTENANCE

Daily care and proper use of the sound processor and headpiece will result in optimal function over time. Wipe the sound processor and headpiece with a soft dry cloth and store the sound processor with the headpiece in the equipment case. Use the AB Remote app or M Listening check to troubleshoot and/or assess the headpiece sound quality.

Following use of the Slim HP AquaMic in water, rinse the Slim HP AquaMic with clean water. Remove the colour cap, wipe the headpiece upper surface with a soft cloth. Place in an appropriate drying system to dry completely overnight.

FOR MORE INFORMATION

Refer to the sound processor and headpiece instructions. If further support or information regarding product availability is required, please contact your local AB representative.

Target CI is designed for easier, faster, and smarter fitting. It provides an intuitive and streamlined workflow for a more efficient fitting experience.

FITTING HARDWARE

Marvel CI sound processors are programmed in the Target CI fitting software, using either the Noahlink Wireless or CPI-3 programming interface.

FITTING GUIDE

Open Target CI and follow the steps below to navigate a **unilateral CI fitting**. Work through the tabs from left to right to complete the required fitting steps.

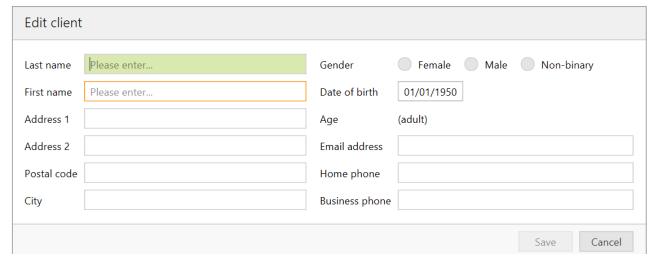
1. CREATE THE CLIENT FILE

For a New client

- Select *New client*. Enter the client details and *Save*.
- Select *New session* to open a new fitting session.¹

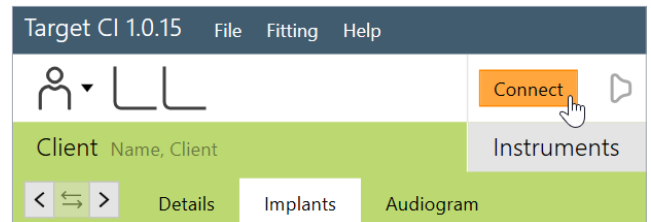
For an Existing client

- Search and select the client's file, then click *Open session*.²



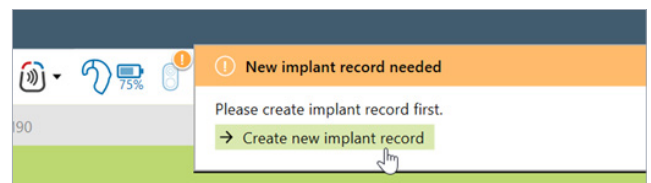
2. CONNECT TO THE HEARING INSTRUMENT

- Connect to the hearing instrument via Noahlink Wireless or CPI-3.
- If using the Noahlink Wireless, ensure that a fully charged rechargeable battery is used. Remove and re-attach the battery to put the sound processor into pairing mode. Click the *Connect* button within the 3-minute pairing window.
- Verify the side for which the device is intended to be used.
- Once device connection is successful, *Close* to proceed.



3. CONNECT TO THE INTERNAL DEVICE

- Place the headpiece on the recipient's head to achieve lock with the implant.
- For a new client, create a new implant record by clicking on the implant icon and following the prompts to add a new implant.
- Add the required implant information, then select *Save*.

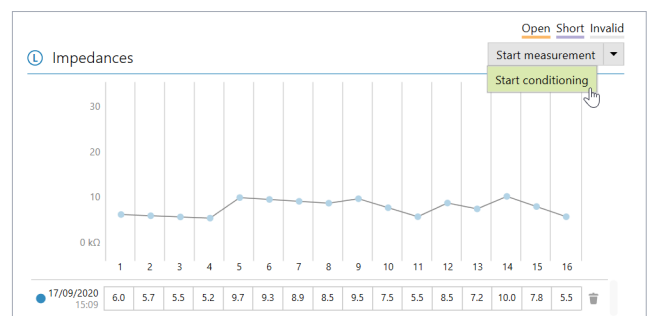


4. MEASURE IMPEDANCES AND NEURAL RESPONSE IMAGING (NRI)

- Under *Client* access the *Impedance* tab to run impedances and conditioning.
- Access the *NRI* tab to measure NRI, if desired.

5. SELECT THE ATTACHMENTS

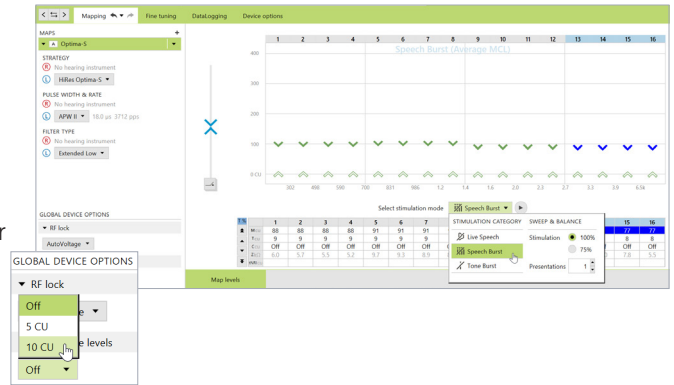
- Under the *Instruments* tab, go to *Acoustic parameters* and ensure that T-Mic/Standard is selected as the appropriate attachment.



¹. Always enter the client's *Date of birth* so that the appropriate default settings can be applied.
². Open session should be used at all follow-up visits to allow access to past impedance and NRI data.

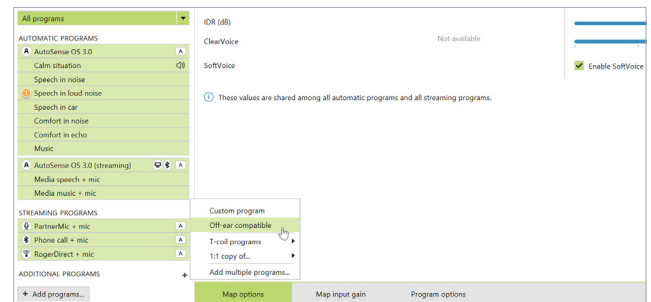
6. CREATE A MAP

- Under *Fitting*, access the *Mapping* tab to set the appropriate map parameters i.e. stimulation strategy, pulse width, etc.
- Select the *Stimulation mode* type to measure M-Levels. T-Levels will default to 10% of the set M-Levels.
- To start and stop stimulation, click the play button, or the “unmute” and “mute” control in the dashboard or press the S-key and spacebar on the keyboard.
- Verify comfort using *Live Speech stimulation*.
- If desired, create progressively louder levels under *Global device options*.³



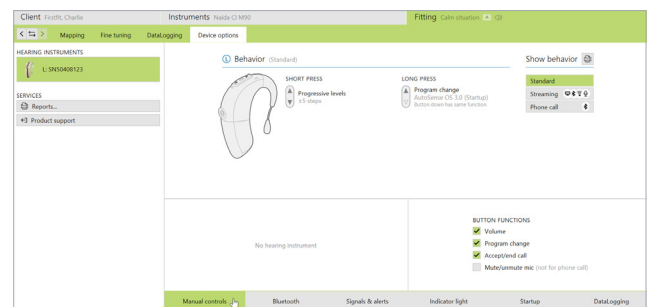
7. FINE TUNING

- *AutoSense OS™ 3.0* operating system offers one easy-to-use automatic programme that senses the recipient’s listening environment and adjusts the device automatically.
- Confirm settings for the *AutoSense OS* program, as desired.
- Add any *Additional programmes [+]*, if required, based on the recipient’s unique listening needs. For example, select *Off-ear compatible* for off-ear device usage with the headpiece microphone active.
- Confirm settings in the *Map options* tab, as desired.⁴
- Access the *Programme options* tab to fine tune individual programmes further, if desired.⁵



8. MANAGE DEVICE OPTIONS

- Access the *Device options* tab to manage Manual controls, Bluetooth®, Signals & alerts, Indicator light, Startup and Datalogging, as needed, based on each recipient's unique preferences.
- For ease of discovering the device during Bluetooth pairing, access the *Bluetooth* tab and label each side with the recipient’s name.



9. SAVE AND CLOSE THE SESSION

- Select *Save & close session* to finalise the fitting session.
- Run and review the sound processor *Battery estimation*, if desired.
- Add any notes to the fitting session, if desired.
- Follow the prompts to *Save* the fitting session to the Hearing instruments and/or the Database.
- Select *Close* to complete the fitting session.

3. The recipient can adjust the progressive level using the multi-functional button or the AB Remote mobile app.
 4. IDR, ClearVoice and SoftVoice settings are applied to all automatic programmes and streaming programmes.
 5. Microphone mode and comfort features can be adjusted in the Programme options tab for each individual programme, if desired.

Neural Response Imaging (NRI) is a valuable tool used by clinicians to obtain an objective measurement of the electrically-evoked compound action potential (eCAP) which can assist with intra-operative testing and post-operative cochlear implant programming. This guide provides the basic information needed to get started with performing NRI in Target CI.

FITTING HARDWARE

NRI can be performed in Target CI fitting software using a Marvel CI sound processor and either the Noahlink Wireless or CPI-3 programming interface.

PERFORMING NRI MEASUREMENTS

1. OPEN TARGET CI

2. ACCESS THE CLIENT FILE AND OPEN A FITTING SESSION

For a New client:

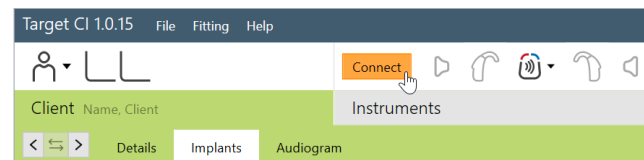
- Select *New client*. Enter the client details¹ and *Save*.
- Select *New session* to open a new fitting session.

For an Existing client:

- Search and select the client's file; then select *Open Session*².

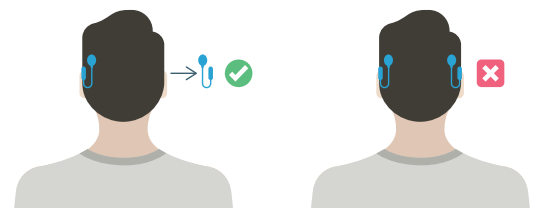
3. CONNECT TO THE HEARING INSTRUMENT

- Connect to the hearing instrument via Noahlink Wireless or CPI-3.
- If using the Noahlink Wireless, ensure that a fully charged rechargeable battery is used. Remove and re-attach the battery to put the sound processor into pairing mode. Select the *Connect* button within the 3-minute pairing window.
- Verify the side for which the device is intended to be used.
- Once device connection is successful, *Close* to proceed.



4. CONNECT TO THE INTERNAL DEVICE

- Place the headpiece on the recipient's head to achieve lock with the implant.
- For a new client, create a new implant record.
- Remove the contralateral sound processor³ prior to running NRI (if applicable). Otherwise, excessive noise will be observed in the NRI tracing.

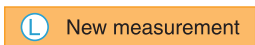


5. REVIEW IMPEDANCES

- Under *Client*, access the *Impedance* tab to review impedances and run conditioning, if desired.
- Only run NRI on electrodes with normal impedances⁴.

6. ACCESS NEURAL RESPONSE IMAGING (NRI)

- Under *Client*, access the *NRI* tab to measure NRI⁵.
- Select *New measurement* to open the NRI measurement window.



1. Always enter the client's Date of birth so that the appropriate default settings can be applied.
 2. Open session should be used at all follow-up visits to allow access to past impedance and NRI data.
 3. It is okay for the recipient to wear contralateral hearing aid during NRI measurements.
 4. Do not perform NRI on extra-cochlear, shorted, open, or out of compliance electrodes.
 5. Due to probable impedance changes after surgery, it is best to re-run NRI in the clinic prior to creating new maps for the recipient instead of using NRI data collected in the OR.

7. DETERMINE ELECTRODES TO MEASURE

- To add/remove electrodes, select the stimulating electrode(s) in the NRI window
- Use keyboard shortcuts to select more than one electrode at a time.

Electrode	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
300																
225																

- Hold the *Ctrl* key while selecting channels in the data grid to measure multiple electrodes.
- Use the *Ctrl+A* keys to select all electrodes for NRI measurement.

8. ADJUST NRI SETTINGS

- Set High and Low CU values for electrode(s) to be measured.
 - Behavioral M-Levels can be used as a guide to establish initial low and high CU values.
 - A minimum range of 150 – 200 CU should be considered where the low CU value results in one or two responses within the noise floor.
- Choose number of *Data points*, as appropriate.
 - Target CI will populate 5 data points by default; however more can be added, as needed.
 - Unmeasured data points are indicated by an open circle. Filled data points indicate a completed measurement.
- Choose the appropriate *Stim Level Ordering*.
 - Select *Low to High* for use in the clinic.
 - Select *High to Low* for use in the operating room.
- Consider using the following settings as a starting guide for measuring NRI:

FOR USE IN OPERATING ROOM

- Low CU = 150
- High CU = 400
- Data points = 5
- Stim Level Ordering = High to Low

FOR POST-OPERATIVE USE (ADULTS)

- Low CU = 100
- High CU = 300
- Data points = 5
- Stim Level Ordering = Low to High

FOR POST-OPERATIVE USE (PAEDIATRICS)

- Low CU = 50
- High CU = 250
- Data points = 5
- Stim Level Ordering = Low to High

9. SELECT START

- NRI will continue to conduct measurements until all data points have been obtained.
- When measuring NRI post-operatively, monitor the recipient for signs of discomfort while NRI is running to ensure stimulus levels are not exceeding the recipient's comfort levels.
- Press *Pause* or the *Space bar* to stop running a measurement at any time.

10. NRI ANALYSIS

NRI measurement

Electrode	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
High _{cu}	0	0	0	0	0	0	0	0	250	0	0	0	0	0	0	0
Low _{cu}	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0
Data points	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
Record on	3	4	1	2	3	4	5	6	7	8	9	10	11	12	13	14
ZkΩ	9.3	5.6	6.8	8.1	7.5	6.0	9.6	8.1	9.6	8.3	6.9	5.5	6.4	6.1	5.8	5.5
tNRI _{cu}									79							

RECORDING

▶ Start

DATA POINT

▶ Skip to next data point

▶▶ Skip to next electrode

SETTINGS

Stim level ordering: Low to high

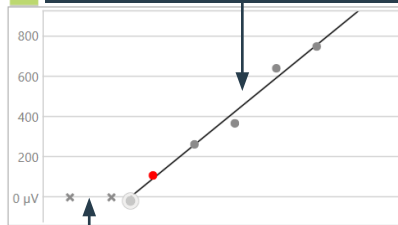
Averages per data point: 32

Simulated dataset: 1

Recording gain: 300

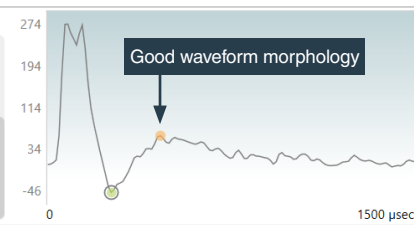
Stimulation sequence: Cathodic first

EP Growth Function – Regression Analysis
(with 1-2 data points in the noise floor and more than 3 measured data points above the noise floor)



Responses

- Response @ 138 CU EP: 264 μV ✓
- Response @ 175 CU EP: 369 μV ✓
- Response @ 213 CU EP: 643 μV ✓
- Response @ 250 CU EP: 752 μV ✓



Good waveform morphology

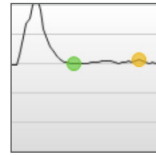
Save Save and close Cancel

GOOD RESPONSE



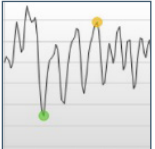
- It is important to obtain 1-2 data points within the noise floor and a minimum of 3-4 data points rising from the noise floor for an accurate calculation of tNRI.
- Confirm accuracy of selected N1 and P2 peaks for each waveform. N1 and P2 latencies will remain stable with increased stimulation levels.

NO RESPONSE



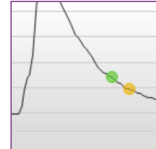
- If there is no visible response:
- Increase the stimulation level (up to levels of compliance), while monitoring recipient for comfort.
 - Use a different recording electrode to measure the NRI response.

NOISY RESPONSE



- If waveform tracing appears noisy:
- For bilateral recipients, confirm that the contralateral processor is removed.
 - Increase the number of Averages per data point.

RESPONSE WITH ARTIFACT



- If artifact is present, use a different recording electrode to measure the NRI response

- Verifying correct tNRI values prior to saving and closing the session will ensure correct tNRI values are calculated.
- To repeat measurements in future sessions, use the copy setting function, as shown below.

1/26/2021 11:43 AM

●	86	88	89	85	88	84	85	74	📄	+	🗑️
---	----	----	----	----	----	----	----	----	---	---	----

Copy

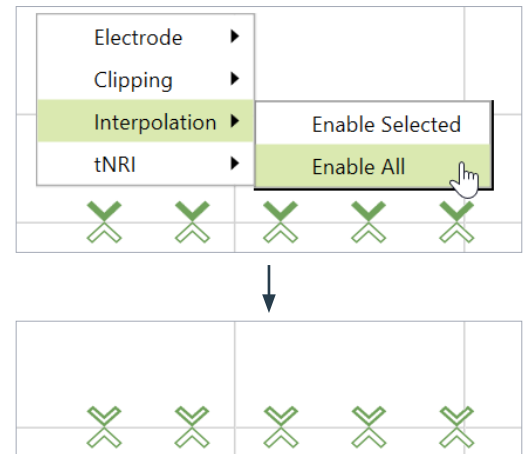
11. SAVE NRI MEASUREMENT

- *Save and close* the NRI measurement.

FITTING GUIDE

1. CREATE A MAP USING NRI DATA

- Access the *Fitting* tab to begin the fitting process.
- In the *Mapping* tab, right-click on any channel and select *Interpolation*; then, *Enable all*. All markers will change to unfilled or open arrows.
- On channels with measured tNRI, set M-Levels to tNRI values.
- Confirm *Live Speech* as the stimulation mode.
- Globally reduce the M-Levels slightly to ensure recipient comfort and *Start stimulation*.
- Gradually increase M-Levels to find recipient's most comfortable level (level 6 on the loudness scale).
- Consider loudness balancing across each electrode.
- Verify settings (i.e. Ling Sounds, soundfield detection, etc.).



2. FINALISE THE FITTING SESSION

- Continue with fitting process by managing programme settings in *Fine Tuning Tab*.
- *Save and close* the fitting session.

NEURAL RESPONSE IMAGING (NRI) RESOURCES

- Koch, D. B., Overstreet, E.H. (2003). Neural Response Imaging: Measuring Auditory-Nerve Responses from the Cochlear with the HiResolution™ Bionics Ear System. Advanced Bionics White Paper.
- He, S., Teagle, H., Buchman, C. (2017). The Electrically Evoked Compound Action Potential: From Laboratory to Clinic. *Frontiers in Neuroscience*, Volume 11, Article 339.
- Hughes, M., Audiology Online. *Fundamentals of Clinical ECAP Measures in Cochlear Implants Part 2: Measurement Techniques and Tips*.

This guide provides the fitting steps needed to upgrade an existing recipient to Marvel CI.

FITTING HARDWARE

Marvel CI sound processors (Naída CI M90 and Sky CI M90) are programmed in the Target CI fitting software, using either the Noahlink Wireless or CPI-3 programming interface.

FITTING GUIDE

When migrating client data from SoundWave 3.2 to Target CI, it is recommended that individual client files be migrated at the time that each recipient chooses to upgrade to Marvel CI. This ensures that the most recent recipient information is transferred to Target CI at the time of the upgrade.

1. VERIFY SETTINGS IN SOUNDWAVE 3.2

- Ensure that the recipient has a visit history for a Naída CI Q sound processor. Migration will not occur for sound processors prior to Naída CI Q. Only the most recent visit history will be migrated. If there is no Naída CI Q visit history for a given side, that side will not be migrated.
- Ensure the recipient's preferred programme is saved to Programme Slot 1, as information from Programme Slot 1 in the most recent SoundWave 3.2 Visit History will be migrated to Target CI¹.
- Note the client's date of birth in SoundWave 3.2. Close SoundWave 3.2 fitting software².

2. OPEN TARGET CI AND MIGRATE CLIENT DATA

If Target CI is used as standalone software, migrating client data will add a new client to the database.

If Target CI is installed as a Noah module, it's necessary to first enter the recipient demographic information into Noah, select the client, and open a new fitting session.

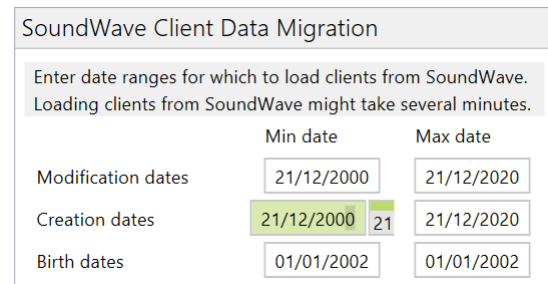
- In Target CI access the *File* menu and select *Migrate client data*³.
- Enter the required information in the *SoundWave Client Data Migration* window (Modification dates, Creation dates, Birth dates).
 - Enter the date of birth accurately.
 - Enter a wide *Modification*⁴ and *Creation* date under the *Min date* e.g. dd/mm/2000, then click *Start*.
- Verify the client's name. Confirm that the appropriate sound processor is chosen for the upgrade.
- Click *Start* and follow any prompts.
- The session is now available in the client file. The *Notes* section of the client details will indicate the session was migrated^{5,6}.

For paediatric Marvel CI upgrades:

- Target CI will ask if the clinician wants to apply *Junior mode* default settings (based on the client's age) to the map.
- Be sure to select *Cancel* to preserve the map parameters when managing Marvel CI upgrades. As selecting *Apply junior mode* will reset all map parameters (including setting M- and T-Levels to zero).

3. CONNECT TO THE HEARING INSTRUMENT

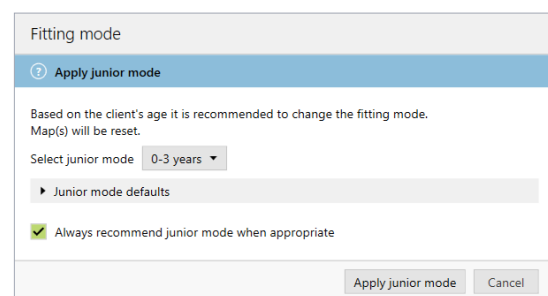
- Connect to the hearing instrument via Noahlink Wireless or CPI-3.
- If using the Noahlink Wireless, ensure that a fully charged rechargeable battery is used. Remove and re-attach the battery to put the sound processor into pairing mode. Click the *Connect* button within the 3-minute pairing window.
- Verify the side for which the device is intended to be used.
- Once device connection is successful, *Close* to proceed.



SoundWave Client Data Migration

Enter date ranges for which to load clients from SoundWave. Loading clients from SoundWave might take several minutes.

	Min date	Max date
Modification dates	21/12/2000	21/12/2020
Creation dates	21/12/2000 21	21/12/2020
Birth dates	01/01/2002	01/01/2002



Fitting mode

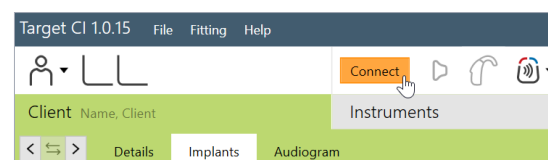
Apply junior mode

Based on the client's age it is recommended to change the fitting mode. Map(s) will be reset.

Select junior mode: 0-3 years

Always recommend junior mode when appropriate

Apply junior mode Cancel



Target CI 1.0.15 File Fitting Help

Client Name, Client

Instruments

Details Implants Audiogram

1. The SoundWave 3.2 file must have a Visit History and Intellilink™ enabled in order to migrate the recipient information.
 2. It is important to close both SoundWave 3.2 and Target CI between migration. This ensures that the most current data is migrated from SoundWave 3.2 to Target CI.
 3. Migrate one patient file at a time.
 4. Modification date is the date the most recent visit history was created.
 5. Client files will not be migrated if the recipient has no active implants or is identified as a test patient.
 6. If the SoundWave file contains a C1 implant, the C1 data will not be migrated. If the recipient is bilateral, only data for a non-C1 implant will be migrated.

4. CONNECT TO THE INTERNAL DEVICE

- Place the headpiece on the recipient's head to achieve lock with the implant. Lock must be achieved prior to making any changes to the *Implants* tab. If lock is not achieved, the sound processor will not stimulate the implant and the fast blinking red LED will be observed.

5. SELECT THE APPROPRIATE ATTACHMENT

- Under the *Instruments* tab, go to *Acoustic parameters* and ensure that *T-Mic/Standard* is selected as the appropriate attachment.

6. MEASURE IMPEDANCES AND NEURAL RESPONSE IMAGING (NRI)

- Impedances will run automatically. Under *Client*, access the *Impedance* tab to run impedances.

7. VERIFY THE MAP SETTINGS AND COMFORT

- Under the *Fitting* tab, access *Mapping* to verify the electrical parameters like M-Levels and T-Levels, Strategy, Pulse Width, IDR, etc. The settings in the table below should be considered.
- Verify comfort using *Live Speech stimulation*.

The following settings from the SoundWave 3.2 data migration should be considered:

SETTINGS PRESERVED FROM SOUNDWAVE

- M-Levels / T-Levels
- ClearVoice – If Enabled in SoundWave 3.2, will be set to Medium in Target CI.
- SoftVoice
- IDR
- Disabled / Spanned / Clipped electrodes
- Strategy
- Filter type
- RF (Set to AutoVoltage or Manual)
- Electrical gain settings

RE-EVALUATE IN TARGET CI

- Acoustic parameters** – The audiogram must be manually entered in Target CI.
- Pulse Width** – May be impacted by New Impedance Measurement.

SETTINGS DIFFERENT IN TARGET CI

- Programme structure** – AutoSense OS now available
- T-Mic + Processor Mic** – This microphone option is not available for Marvel CI

CANNOT BE MODIFIED IN TARGET CI

- AGC (AGC II)
- QuickSync is always enabled
- Volume Min/Max ($\pm 20\%$)
- Sensitivity (not available)

8. FINE TUNING

- Access the *Fine tuning* tab to verify the programme settings. Confirm settings in the *Map options* tab, as desired.
- Access the *Programme options* tab to fine tune individual programs further, if desired.

9. MANAGE DEVICE OPTIONS

- Access the *Device options* tab to manage Manual controls, Bluetooth®, Signals & alerts, Indicator light, Startup and Datalogging, as needed, based on each recipient's unique preferences.
- For ease of discovering the device during Bluetooth pairing, access the *Bluetooth* tab and label each side with the recipient's name.

10. SAVE AND CLOSE THE SESSION

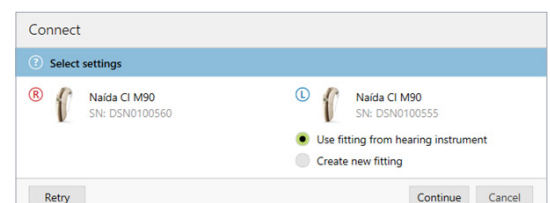
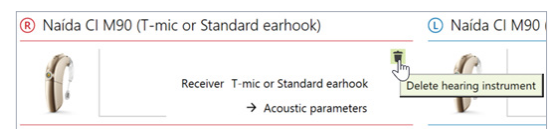
- Select *Save & close* to finalise the fitting session.
- Run and review the sound processor *Battery estimation*, if desired.
- Add any notes to the fitting session, if desired.
- Follow the prompts to *Save* the fitting session to the Hearing instruments and/or the Database. Select *Close* to complete the session.

CONSIDERATIONS FOR BILATERAL RECIPIENTS UPGRADING ONLY ONE SIDE TO MARVEL CI

- When migrating a recipient's SoundWave 3.2 file into Target CI, data from both sides are migrated over. For a simpler fitting experience, it may be helpful to delete the hearing instrument on the side that you do not intend to upgrade, in the *Hearing Instruments* tab.
- Access the *Fine Tuning* tab. Under *Automatic programmes*, ensure *Speech in loud noise* is not enabled (this programme requires a compatible hearing instrument on the contralateral ear).

When upgrading the second side to Marvel CI:

- Simply repeat the migration of the recipient's SoundWave 3.2 file into Target CI.
- When connecting to the hearing instruments, select *Use fitting from hearing instrument* on the side that was previously upgraded. Select *Continue* to proceed with the fitting.



Target CI is designed for easier, faster, and smarter fitting. Target CI is the first hearing care software to allow the fitting of a sound processor and compatible hearing aid at the same time in one fitting software. It provides a streamlined workflow for an efficient bimodal fitting experience.

COMPATIBILITY

The Naída Link M Bimodal Solution allows recipients to take advantage of any usable acoustic hearing in the contralateral ear:

- The Naída Link M hearing aid is compatible with the Naída CI M90 sound processor.
- The Sky Link M hearing aid is compatible with the Sky CI M sound processor.

FITTING HARDWARE

Marvel CI sound processors and hearing aids can be programmed in the Target CI fitting software, using the Noahlink Wireless.

FITTING GUIDE

Open Target CI and follow the steps below to navigate the fitting of both Marvel devices in one session. Work through the tabs from left to right to complete the required fitting steps.

1. CREATE THE CLIENT FILE

For a New client:

- Select *New client*. Enter the client details¹ and *Save*.
- Select *New session* to open a new fitting session.

For an Existing client:

- Search and select the client's file; then select *Open Session*².

2. CONNECT TO THE HEARING INSTRUMENTS

- Connect to both hearing instruments via Noahlink Wireless.
- Ensure that fully charged batteries are used for both devices. Remove and re-attach the battery to put the devices into pairing mode. Click the *Connect* button within the 3-minute pairing window.
- Verify the sides for which each device is intended to be used.
- Once the device connections are successful, *Close* to proceed.

3. CONNECT TO THE INTERNAL DEVICE

- Place the headpiece on the recipient's head to achieve lock with the implant.
- For a new client, create a new implant record by clicking on the implant icon and follow the prompts to add a new implant.
- Add the required implant information, then select *Save*.

4. MEASURE IMPEDANCES AND NEURAL RESPONSE IMAGING (NRI)

- Under *Client* access the *Impedance* tab to run impedances and conditioning.
- Access the *NRI* tab to measure NRI, if desired.

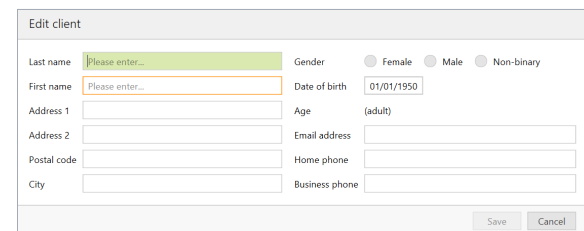
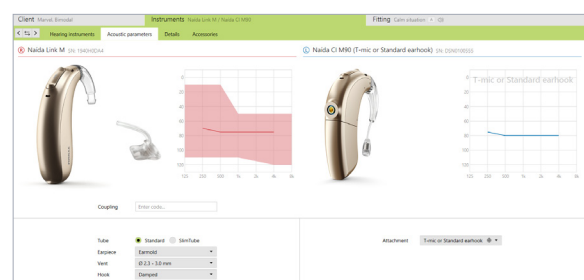
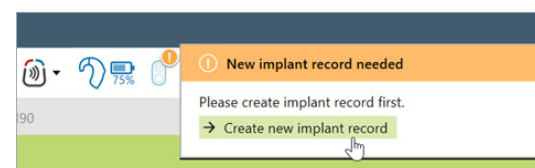
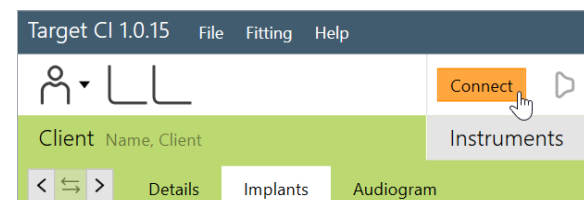
5. ENTER THE AUDIOGRAM

- Access the *Audiogram* tab to enter the client's latest audiogram³. Select the transducer type used.
- Optional: AudiogramDirect allows the measurement of an audiogram via the hearing aid and acoustic coupling. To access it, click *AudiogramDirect*, then *Start* and follow the prompts.

6. SELECT THE APPROPRIATE ATTACHMENTS

- Under the *Instruments* tab, access the *Acoustic Parameters*, select the *Attachment* for the sound processor.
- For the hearing aid, select the appropriate earpiece option.

1. Always enter the client's Date of birth so that the appropriate default settings can be applied.
2. Open session should be used at all follow-up visits to allow access to past impedance and NRI data.
3. If using Noah, enter client details and audiogram in Noah, prior to accessing Target CI.

1. PERFORM THE FEEDBACK AND REAL EAR TEST

- Under the *Fitting* tab, access *Feedback & real ear test*.
- Instruct the patient to remain quiet for the duration of the measurement.
- Select *Start* to run the feedback management test.

2. PERFORM GLOBAL TUNING AND SELECT FITTING FORMULA

- Access the *Global tuning* tab to confirm the fitting formula and to view acoustic gain⁴.
- Consider using the *Adaptive Phonak Digital Bimodal fitting formula*, as appropriate.

3. CREATE A MAP AND VERIFY SOUND QUALITY OF THE SOUND PROCESSOR

- Under *Fitting*, access the *Mapping* tab to set the appropriate map parameters (i.e. stimulation strategy, pulse width, etc.).
- Select the *Stimulation mode* type to measure M-Levels. T-Levels will default to 10% of the set M-Levels.
- To start and stop stimulation, click the play button, or the “unmute” and “mute” control in the dashboard, or press the S-key and spacebar on the keyboard.
- Verify comfort using *Live Speech stimulation*.
- If desired, create progressively louder levels under *Global device options*.

4. FINE TUNE THE HEARING AID SETTINGS

- Access the *Fine tuning* tab, then the *Gain & MPO* tab to manage acoustic settings for the hearing aid.

5. FINE TUNE BOTH DEVICES IN PROGRAM OPTIONS

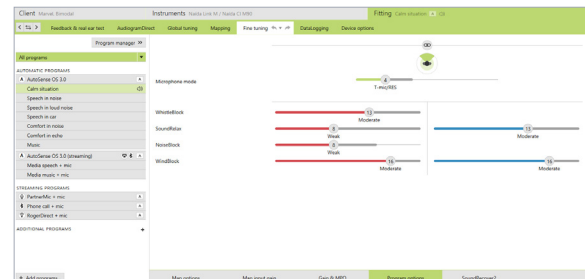
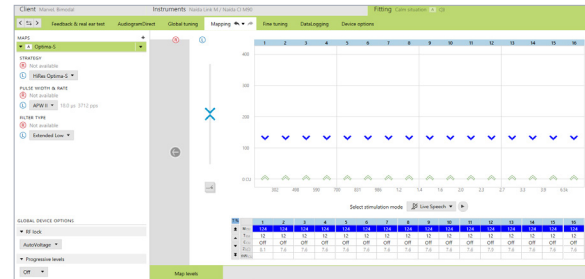
- Access the *Programme options* tab to fine tune individual programmes further, if desired⁵.
- Microphone mode and comfort features can be adjusted for each individual programme, if desired.
- Add any *Additional programmes [+]*, if needed, based on the client's unique listening needs.

6. MANAGE DEVICE OPTIONS

- Access the *Device options* tab to manage Manual controls, Bluetooth®, Signals & alerts, Indicator light, Startup and Datalogging, as needed, based on each recipient's unique preferences.
- For ease of discovering the device during Bluetooth pairing, access the *Bluetooth* tab and label each side with the recipient's name.
- Consider assigning the Bluetooth Side to the side with better hearing and/or longer battery life.

7. SAVE & CLOSE THE SESSION

- Select *Save & close* to finalise the fitting session.
- Run and review the sound processor *Battery estimation*, if desired.
- Add any notes to the fitting session, if desired.
- Follow the prompts to *Save* the fitting session to the Hearing instruments and/or the Database.
- Select *Close* to complete the fitting session.



FOR MORE INFORMATION

If further support or information regarding product availability is required, please contact your local AB representative.

4. The gain level and compression settings are based on the user's experience.
5. By default, the settings are applied to both the CI and HA; however, settings for each device can be customised by unlinking the devices.

The M Acoustic Earhook coupled with the Marvel CI sound processor is designed for CI candidates and recipients who have aidable low frequency hearing in the implanted ear. This solution provides acoustic amplification of the low frequencies via hearing aid technology, in combination with electrical stimulation of the high frequencies in the same ear via cochlear implant technology. M Acoustic Earhook takes advantage of natural acoustic hearing to provide the benefits of combined stimulation to recipients with unilateral or bilateral Marvel CI(s).

COMPATIBILITY

The M Acoustic Earhook is compatible with the Naída™ CI M90 and Sky CI™ M90 sound processors.

COMPONENTS

1. M Acoustic Earhook
2. Receiver
3. Sound processor
4. M Battery
5. Front microphone
6. Back microphone
7. Multi-function button with status LED
8. CeruShield™ Disk
9. Pin removal tool
10. Connector pin



EARPIECE OPTIONS



Custom SlimTip¹

Custom fit recommended for moderate or greater hearing loss for better retention, comfort and protection of the receiver.

¹. Ordered from Phonak. Availability varies by region.



Power dome

Suitable for moderate hearing loss. Offers a tighter fit than the Vented dome.



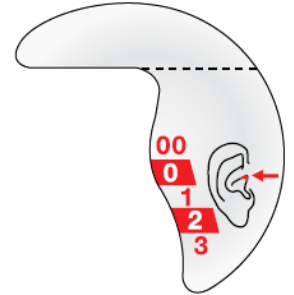
Vented dome

Suitable for mild-to-moderate hearing loss. Beneficial if occlusion is a concern.

ASSEMBLING THE M ACOUSTIC EARHOOK

Follow the steps below to setup the device appropriately:

- The M Acoustic Earhook is [available in 5 different lengths](#) (00, 0, 1, 2, 3) for either the left or right ear.
- The [Measurement Tool](#) helps to determine the appropriate length of the Acoustic Earhook to accommodate different ear shapes and sizes.
- The [Pin Removal Tool](#) is used for attaching the M Acoustic Earhook to and from the sound processor.
- Confirm that a [CeruShield wax filter](#) is inside the receiver. The receiver ships with a wax filter already inserted.
- Select a [suitable earpiece option](#) to attach to the receiver of the M Acoustic Earhook. Ensure a comfortable fit and seal in the ear canal for good retention. When mounting the earpiece on to the receiver, there is a tactile click upon attachment.



Measurement Tool

CARE AND MAINTENANCE

Earwax Protection

- The M Acoustic Earhook is equipped with a CeruShield wax filter to protect the receiver from earwax damage.
- Check the earwax protection regularly and exchange it if it looks dirty or if sound quality is reduced.
- The CeruShield earwax filter should be replaced at least every four to eight weeks.



CeruShield Disk

General Care

- When not in use, store the sound processor and M Acoustic Earhook in the equipment case provided.
- Ensure the M Acoustic Earhook is not placed within proximity of the headpiece magnet, as the magnet may damage the receiver.
- Visually inspect the device daily for earwax and moisture deposits in the M Acoustic Earhook.
- Wipe the earpiece daily with a dry tissue.
- If a dome is used, it should be replaced every three months, or when it becomes brittle.
- To clean the M Acoustic Earhook:
 - Remove the dome from the receiver.
 - Using a lint-free cloth or moist cleansing wipe, gently clean the dome and receiver unit. Never use cleaning agents such as household detergents.
 - Prior to reattaching the dome to the receiver, ensure that all parts are completely dry.

FOR MORE INFORMATION

Refer to the M Acoustic Earhook Instruction For Use. If further support is required, please contact your local AB representative. They will provide information regarding regulatory approval and product availability in your region.

The M Acoustic Earhook allows recipients to take advantage of any usable acoustic hearing in the implanted ear.

FITTING HARDWARE

Marvel CI sound processors with M Acoustic Earhook are programmed in the Target CI fitting software, using either the Noahlink Wireless or CPI-3 programming interface.

FITTING GUIDE

Open Target CI and follow the steps below to navigate fitting of Naída™ CI M90 or Sky CI™ M90 sound processors with the M Acoustic Earhook. Work through the tabs from left to right to complete the required fitting steps.

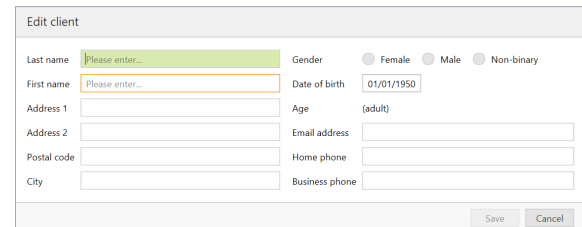
1. CREATE THE CLIENT FILE

For a New client:

- Select *New client*. Enter the client's details¹ and *Save*.
- Select *New session* to open a new fitting session.

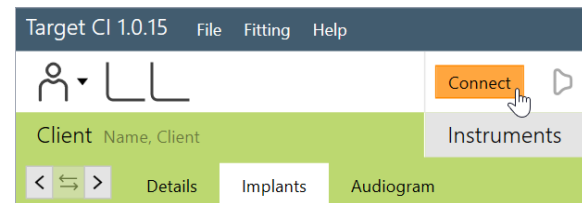
For an Existing client:

- Search and select the client's file; then select *Open Session*².



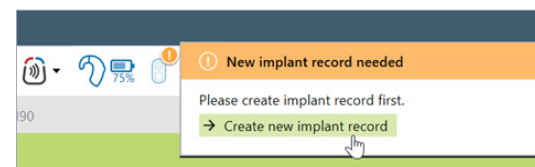
2. CONNECT TO THE HEARING INSTRUMENTS

- Connect to the hearing instrument(s) via Noahlink Wireless or CPI-3.
- If using the Noahlink Wireless, ensure that a fully charged rechargeable battery is used. Remove and reattach the battery to put the sound processor into pairing mode. Click the *Connect* button within the 3-minute pairing window.
- Verify the sides for which each device is intended to be used.
- Once the device connection is successful, *Close* to proceed.



3. CONNECT TO THE INTERNAL DEVICE

- Place the headpiece on the recipient's head to achieve lock with the implant.
- For a new client, create a new implant record by clicking on the implant icon and follow the prompts to add a new implant.
- Add the required implant information, then select *Save*.



4. MEASURE IMPEDANCES AND NEURAL RESPONSE IMAGING (NRI)

- Under *Client*, access the *Impedance* tab to run impedances and conditioning.
- Access the *NRI* tab to measure NRI, if desired.

5. ENTER THE RECIPIENT'S LATEST AUDIOGRAM

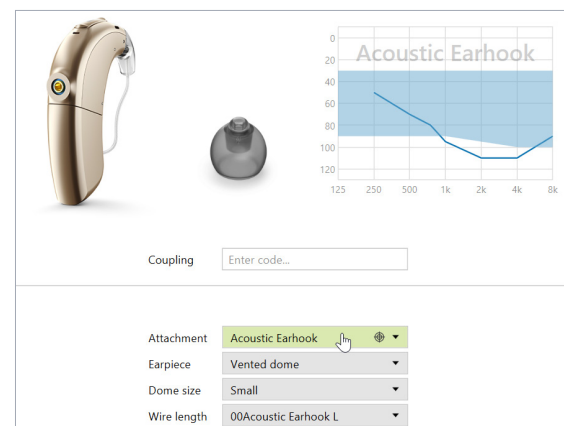
- Access the *Audiogram* tab to enter the client's latest audiogram³. Select the transducer type used.
- AudiogramDirect allows the measurement of an audiogram via the M Acoustic Earhook. To access it, click *AudiogramDirect*, then *Start* and follow the prompts.

6. SELECT THE APPROPRIATE ATTACHMENTS

- Under the *Instruments* tab, access the *Acoustic Parameters*, select *Acoustic Earhook*, the appropriate earpiece, dome size, and wire length.
- For optimal fitting, *SlimTip* is recommended (order from Phonak).

7. PERFORM THE FEEDBACK AND REAL EAR TEST

- Under the *Fitting* tab, access *Feedback & real ear test*.
- Instruct the patient to remain quiet for the duration of the measurement.
- Select *Start* to run the feedback management test.



1. Always enter the client's Date of birth so that the appropriate default settings can be applied.
 2. Open session should be used at all follow-up visits to allow access to past impedance and NRI data.
 3. If using Noah, enter the client's details and audiogram in Noah, prior to accessing Target CI.

1. PERFORM GLOBAL TUNING AND SELECT FITTING FORMULA

- Access the *Global tuning* tab to confirm the fitting formula and to view acoustic gain.
- Consider using the *Adaptive Phonak Digital Bimodal fitting formula*, as appropriate.

2. CREATE A MAP FOR THE ELECTRIC MODE

- Under *Fitting*, access the *Mapping* tab, set the appropriate electric parameters (i.e. stimulation strategy, pulse width, etc.).
- Select the *Stimulation mode* type to measure M-Levels. T-Levels will default to 10% of the set M-Levels.

If electrodes are extra-cochlear:

- Disable electrodes which are suspected to be located outside the cochlea.
- Disable the first electrode located inside the cochlea (e.g. if electrodes 15 and 16 are outside the cochlea, disable electrodes 14 -16 in the map).
- Check M-Level on remaining active electrodes using tone burst stimulation. If the recipient reports sound as uncomfortably loud or unpleasant (e.g. tinny, shrill), reduce M-Level to a comfortable level⁴.

3. SET ACOUSTIC AND ELECTRIC CUTOFF FREQUENCIES

- Select the *Acoustic* tab to access acoustic and electric cutoffs.
- Cutoffs will default to the point at which recipient's threshold exceeds 70 dB HL⁵.

4. VERIFY SOUND QUALITY AND COMFORT

- Click the dropdown next to the *Mute/Unmute* icon, to stimulate *Electric only*, *Acoustic only*, or *Electric + Acoustic* together.
- Verify sound quality and comfort using live speech stimulation.

5. FINE TUNING

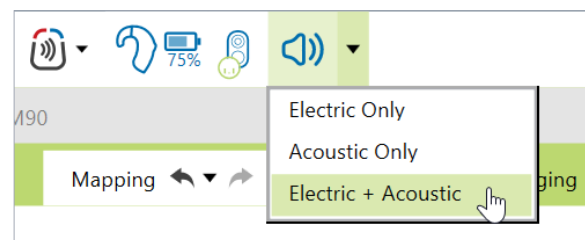
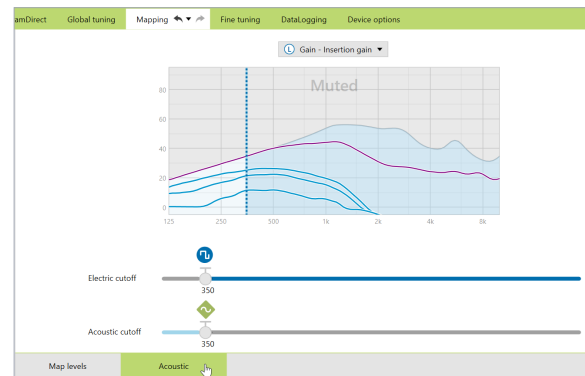
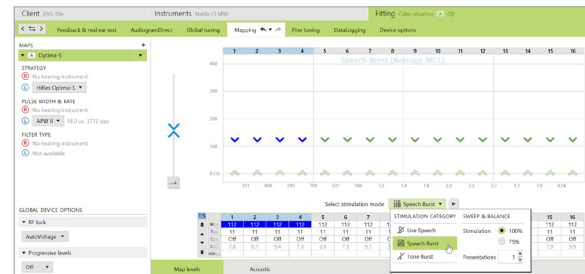
- Access *Fine tuning* to confirm settings, as desired.
- Access the *Gain & MPO tab* to set acoustic gains and maximum acoustic earhook output.

6. MANAGE DEVICE OPTIONS

- Access the *Device options* tab to set controls and alerts according to the recipient's preference.
- For ease of discovering the device during Bluetooth® pairing, access the *Bluetooth* tab and label each side with the recipient's name.

7. SAVE & CLOSE THE SESSION

- Select *Save & close* to complete the fitting session.
- Run and review the sound processor *Battery estimation*, if desired.
- Add any notes to the fitting session, if desired.
- Follow the prompts to *Save* the fitting session to the Hearing instruments and the Database.
- Select *Close* to complete the fitting session.



FOR MORE INFORMATION

If further support or information regarding product availability is required, please contact your local AB representative.

4. Additional electrodes should be disabled if any of the following are noted with individual electrode stimulation: non-auditory percept, abnormal or absent loudness growth, or atonal or abnormal stimulus sound quality.
5. To allow for more frequency boundary overlap, consider using a minimum acoustic cutoff of 500 Hz, or set the acoustic cutoff 2 steps above the Target CI default cutoff frequency, whichever is higher. When the electric cutoff frequency is changed, this will change the frequency assignment of the electrical channels within the map.

Marvel CI sound processors (Naída CI M90 and Sky CI M90) are designed to help you stay connected with your family and friends, by providing a powerful hearing experience in any listening situation. This guide provides the basic information needed to help build confidence with your new device.

WHAT IS AUTONSENSE OS?

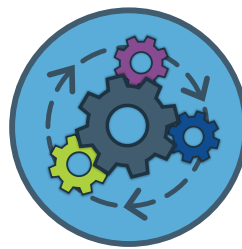
AutoSense OS™ 3.0 operating system is a sophisticated, **easy to use automatic programme** in the Marvel CI sound processors and Naída Link M hearing aids. It automatically senses your surroundings and adapts to provide optimum clarity and comfort in the different listening situations, without requiring manual programme changes.

TIPS FOR SUCCESS



STARTUP PROGRAMME

When your device is powered on, you will hear a melody* as the device goes into the automatic startup programme.



AUTOMATICALLY ADAPTS TO CHANGING ENVIRONMENTS

The device will seamlessly adapt to your surroundings and adjust automatically from quiet, to noise and while streaming music or media.



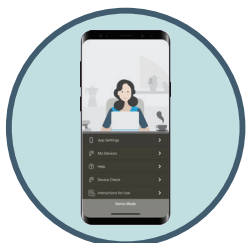
BE PATIENT

It may take a few days or weeks to get used to the new sound quality, just like with all new technologies. Allow the brain time to adapt to the new sound. Try out the following listening exercises to build your confidence.



ALWAYS FACE THE PERSON YOU WISH TO HEAR

When in noisy environments, the directional microphones will activate. It is designed to focus to the front, while making sounds from the back and sides to be perceived as softer. Hence, it is important to always face the person you wish to hear, especially in group conversations.



AB REMOTE APP

You can adjust the volume on the device or the AB Remote app, if desired. As well as customise the balance of the streamed signal versus the environmental sounds.



WIRELESS SOLUTIONS

If you are still struggling to hear in noise, consider using a wireless solution like Roger devices to improve hearing in challenging listening situations like meetings and restaurants.

*The startup melody will only be audible if enabled in the fitting software by the clinician.

EXPERIENCE THE BENEFIT

Try the following activities with a family member or friend to help you adjust to the sound quality.

Listening Activity	Rate your experience and add a comment regarding the experience 1 = Poor ; 2 = Fair ; 3 = Good ; 4 = Very Good ; 5 = Excellent
Conversation with one person in a quiet situation. E.g. in the clinic or at home. Observe the speakers voice and the sounds around you.	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
Group conversation in a quiet situation. Always face the person you wish to hear.	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
Conversation with one person in a noisy restaurant. When in noise, the directional microphones will activate. It is designed to focus to the front, while making sounds from the back and sides to be perceived as softer. Always face the person you wish to hear.	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
Group conversation in a noisy situation. When in noise, the directional microphones will activate and focus to the front while reducing background noise. Always face the person you wish to hear in the group.	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
Go for a walk outdoors. Observe the environmental sounds around you like birds, traffic, etc.	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
Conversation in the car. Listen to the driver or other passengers.	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
Listen to music via the speaker and/or Bluetooth® streaming. Start with your favourite songs, and follow the lyrics.	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5
Listen to a podcast via Bluetooth streaming. Find an interesting podcast or audio book to stream directly to your device using Bluetooth.	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Sonova AG is under license.

We want you to get the most out of your Marvel CI device and enjoy a powerful hearing experience in any listening situation. If you are still struggling to adapt to the new sound quality after a few weeks, please inform your audiologist. You may require additional programming. You can rate the listening activities in the table above and take it along to the clinic, so the clinician is informed about your experiences in the various listening situations.

For more information, please visit [AdvancedBionics.com/MarvelCI](https://www.advancedbionics.com/MarvelCI)

This guide provides the clinician with the steps to programme a replacement Marvel CI sound processor or hearing aid in Target CI.

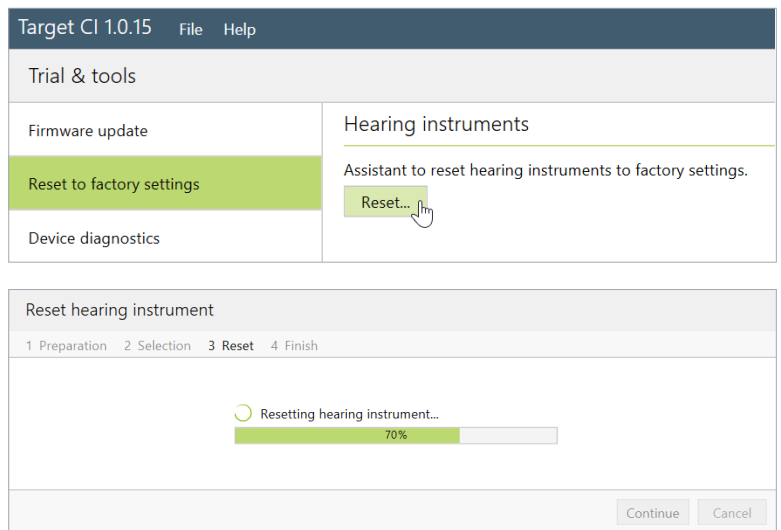
RESET TO FACTORY SETTINGS IF USING A LOANER MARVEL DEVICE

If using a Marvel device that was previously programmed for a different recipient, it is advisable to reset to factory settings first. This step will clear all patient and programme information previously stored on the device. Reset one hearing instrument at a time. If you are using a new hearing instrument, you can skip this step.

- Open Target CI and select *Trial & tools*.
- Select *Reset to factory settings*, then select *Reset* under Hearing instruments.
- Select the preferred programming interface – *Noahlink Wireless* or *CPI-3*.
- Turn the hearing instrument off and on again (i.e. remove and re-attach the battery to the device). Click *Continue*.

Note: Any data previously saved on the device will be lost. However, Reset to factory settings will not remove any previous Roger license installations.

- Select the detected hearing instrument, click *Continue*.
- The reset may take several minutes. Be patient and do not disconnect the device or close the software. The progress bar is a visual indicator to monitor progress. Click *Continue*.
- Once the Hearing instrument is successfully reset, click *Close*. The device has now been reset to factory settings.



PROGRAMMING THE REPLACEMENT MARVEL DEVICE

OPEN TARGET CI AND SELECT THE CLIENT FILE

- Open the most recent fitting session.

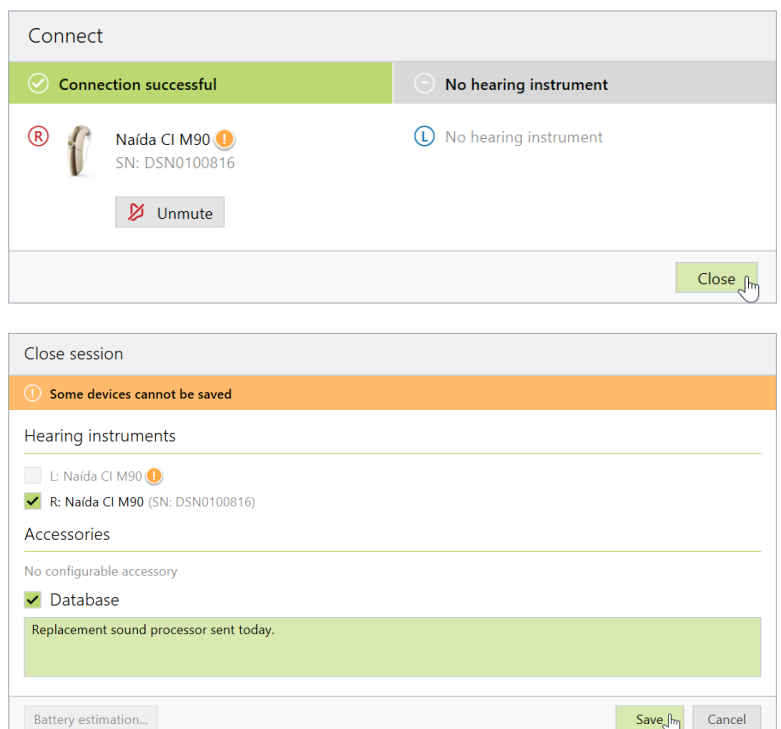
Note: If the *Apply Junior mode* message pops up when programming a replacement Sky CI M, be sure to select *Cancel* to preserve the map parameters. Selecting *Apply Junior mode* will reset all map parameters, including setting M- and T-Levels to zero.

CONNECT TO THE HEARING INSTRUMENT

- Connect to the hearing instrument via Noahlink Wireless or CPI-3.
- If using the Noahlink Wireless, ensure that a fully charged rechargeable battery is used. Remove and re-attach the battery to put the sound processor into pairing mode. Select the *Connect* button within the 3-minute pairing window.
- Verify the side for which the device is intended to be used.
- Once device connection is successful, *Close* to proceed.

SAVE AND CLOSE THE SESSION

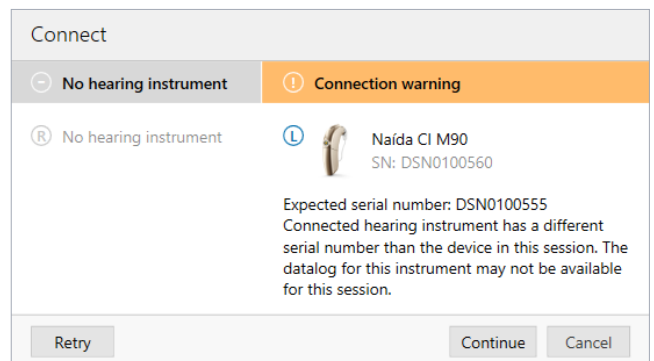
- Select *Save & close* to finalise the fitting session.
- Add any notes to the fitting session, if desired.
- *Save* the fitting session to the Hearing instruments and/or the Database.
- Select *Close* to complete the fitting session.



PROGRAMMING A BACK-UP MARVEL CI SOUND PROCESSOR

Follow the steps below to program a back-up Marvel CI sound processor.

- Programme the primary Marvel CI sound processor; then *Save & close* session.
- Open the session that was just created with the primary Marvel CI.
- Put the back-up Marvel CI into pairing mode by attaching a fully charged rechargeable battery to this back-up device.
- Connect to the hearing instrument via Noahlink Wireless or CPI-3.
- Verify the side for which the device is intended to be programmed.
- A *Connection warning* notification will pop-up indicating that the connected device has a different serial number than the device in this session (see below for more details). Select *Continue* to proceed.
- Be sure to select *Use fitting from session*; then follow the prompts to proceed.
- Once device connection is successful, select *Close* to proceed
- Select *Save & close session* to save the same settings and programs to the back-up Marvel CI sound processor and database.



Target CI Connection Warning Notification

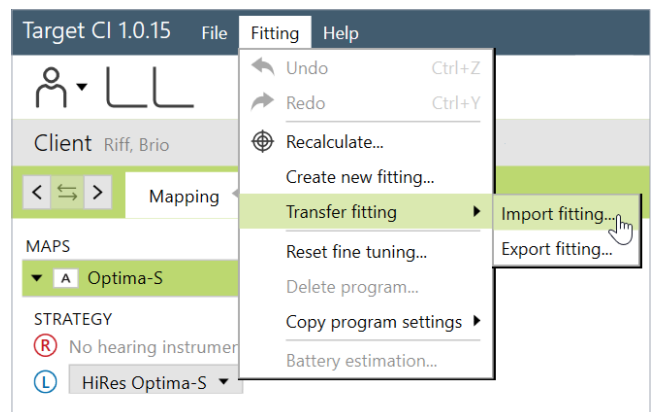
If the serial number of the device connected to the session does not match the serial number of the device stored in the session, the datalog report in Target CI will not be available.

- In the case of programming the back-up Marvel CI device, the clinician can ignore this message and proceed with the fitting session to program the back-up device.
- This notification will also be displayed at return visits when a Marvel CI device that has a different serial number than the one used in the previous fitting session is connected. In this case, there are two resolutions:
 - a. Disconnect the device and connect the device with matching serial number to session, if available.
 - b. Instead of starting by opening the existing session, rather start a new session and choose to read settings from the hearing instrument (Note: previous NRI and impedance data will not be available).

IF THE REPLACEMENT MARVEL CI DEVICE IS A DIFFERENT TYPE

If programming a replacement Marvel CI sound processor that is different from the original device type issued to the recipient (e.g. programming Naída CI M to replace the Sky CI M, or vice versa), then use the *Transfer fitting* function within Target CI.

- Open Target CI, select the client whose device is to be programmed from the client list.
- Select *Open session* to open the client's most recent fitting session.
- Connect to the device via Noahlink Wireless or CPI-3.
- Go to the *Fitting* menu. Select *Transfer fitting*; then *Import fitting*.
- The transfer fitting assistant transfers fitting data between different hearing instrument types. Select *Continue* to proceed.
- Import the fitting session that should be loaded onto the replacement processor. Select the fitting session from the list; then select *Continue* to proceed.
- Confirm transferrable programmes and settings; select *Continue* to proceed.
- Select *Close* to complete the transfer fitting process.



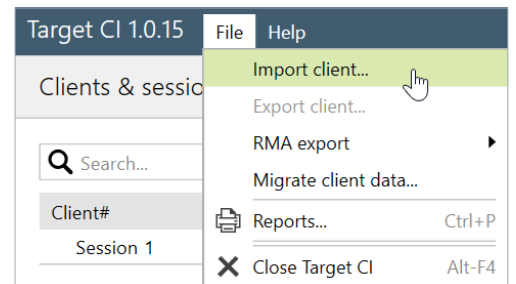
If further support is required, please contact your local AB representative.

This guide provides the clinician with the steps to import and export the client file from Target CI.

HOW TO IMPORT THE CLIENT FILE INTO TARGET CI

If a Marvel CI user transfers from one clinic to another, then the clinician can obtain and import the client's Target CI file into their own Target CI database. The imported file will provide the client's full fitting history.

- Go to *File*, select *Import clients*.
- Click *Browse*, select the file you wish to import into Target CI, then click *Import Client*.
- If the client file was anonymised, it will appear in Target CI as an anonymised number. For example: "Anonymised19600101". The client name may be edited after the anonymised file is imported into Target CI.

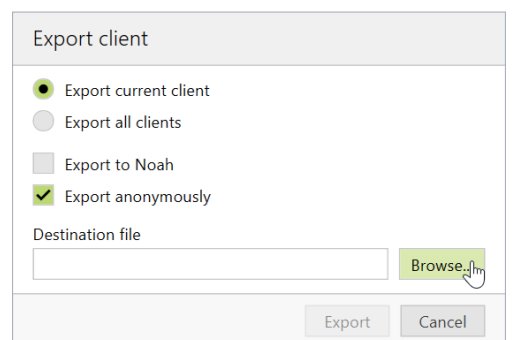
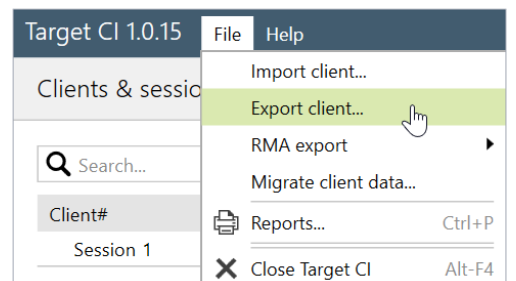


Note: If the Target CI client file is not available to import when seeing a transfer client, then the current device settings can still be accessed by connecting to the patient's hearing instrument and selecting *Use fitting from hearing instrument*.

HOW TO EXPORT A CLIENT FILE FROM TARGET CI

If a Marvel CI user transfers from one clinic to another, the clinician can export the client's Target CI file and send it to the new clinic. It is recommended that client data be exported from within Target CI, rather than Noah, in order to maintain data privacy.

- Select the *Client file* to be exported. Do not open the client file.
- Go to *File*, then select *Export client*.
- Select the preferred export client file option:
 - *Export current client* (default) to only export the individual client file.
 - *Export all clients* if you want to move all clients to another installation (and don't want to use a database back-up). This option only appears in stand-alone mode.
 - *Export to Noah* to make this file a .nha file, in order to import into Noah. It can be used together with the above *Export all* option if you wish to move the stand-alone patients to Noah.
 - *Export anonymously* (default) will remove the client's name from the file and replace it with an anonymised number. Consider whether the person receiving the file will need the name within the file or not.
- Click *Browse* to select the *Destination file* location to be saved, then click *Export*.
- Once the export is complete, simply open the folder to locate the file to be sent.

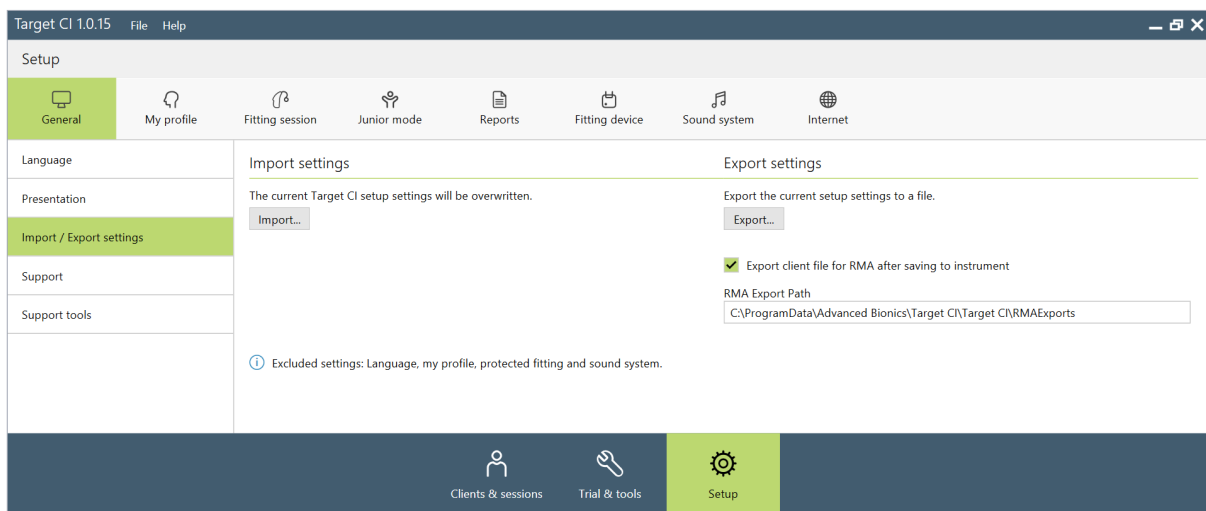
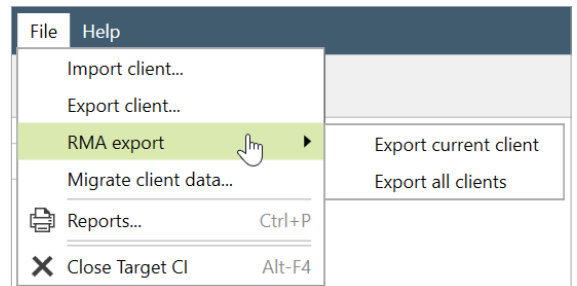


Note: Consider creating a shortcut from the desktop to the *C:\ProgramData\Advanced Bionics\Target CI\Target CI\RMAExports* file for easy file location in future.

FOR REGIONS WITH AB EXPRESS AND PROCESSOR DIRECT SERVICES

AB Express and Processor Direct allow a clinician to send fitting information to AB to support repairs. These services may not be available in all regions. Check with your local AB representative.

- Select the *Client file* to be exported. Do not open the client file.
- Go to *File*, then select *RMA export*.
- Select the appropriate export option and follow the prompts:
 - *Export current client* (default) to only export the individual client file when using the Processor Direct Service.
 - *Export all clients* if you want to export all clients.
- The files are exported to the file path in *Setup* (Note: this file path is fixed).
- To access the RMA export file, go to *Setup*, then under *General* select *Import/Export settings*.
- In *Setup*, the checkbox indicates that a file is exported automatically after saving to the hearing instrument.
- Once in the RMAExports folder, the clinician can either upload the selected client file manually to AB (in Europe this may be called AB4You) or the AB Express will automatically pull the file from this RMAExports folder.



- This data export is fully encrypted and saved to the following location: **C:\ProgramData\Advanced Bionics\Target CI\Target CI\RMAExports**
 - No identifying information will be available in the file name, so it will be important to retrieve the file immediately after exporting it.
 - **Important:** Although the file can be renamed as long as the .rma extension is preserved, renaming the file may breach cybersecurity compliance of anonymising patient data.

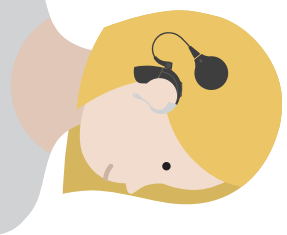
If further support is required, please contact your local AB representative.



**ADVANCED
BIONICS**
POWERFUL CONNECTIONS

Marvel CI Connectivity QUICK REFERENCE GUIDE

Marvel CI provides numerous ways for recipients to stream audio from their favourite devices and connect with the ones they love. With Marvel CI, recipients can stream using Bluetooth®, Roger™, and AirStream technologies. This clinical resource is designed to identify which streaming options are available for the recipient based on which hearing instrument the recipient is using with Marvel CI.



NAÍDA CI M90 on one side

BLUETOOTH

ROGER

AIRSTREAM

RECOMMENDED ON THE OTHER SIDE

Naida CI M90

Bilateral/Bimodal streaming
via integrated Bluetooth

Bilateral/Bimodal streaming (Roger mic input only)*
Microphones: Roger iN or Roger*
Receivers: Roger installed into each device via Roger iN microphone
or via Roger X + Roger installer

Bilateral/Bimodal streaming
with Phonak TV Connector
and Phonak PartnerMic

Phonak Naida Link M

Unilateral streaming to the selected
hearing instrument via integrated
Bluetooth

Bilateral/Bimodal streaming (Roger mic input only)*
Microphones: Roger iN or Roger*
Receivers: Roger installed into each device via Roger iN microphone
or via Roger X + Roger installer

Bilateral/Bimodal streaming
with Phonak TV Connector.
Unilateral streaming to the
paired hearing instrument
with Phonak PartnerMic

Sky CI M90

**Phonak Paradise or
Phonak Marvel HI**

Unilateral streaming to Naida CI M90
via integrated Bluetooth

Bilateral streaming (Roger mic input only)*
Microphones: Roger iN or Roger*
Receivers: Roger installed into Naida CI M90 via Roger iN microphone
or via Roger X + Roger installer and Roger 17 for Naida CI Q90

Bilateral streaming with
Phonak TV Connector when
Naida CI Connect is attached
to Naida CI Q90.
Unilateral streaming to Naida CI
M90 with Phonak PartnerMic

Naida CI Q90

OR
To Naida CI Q90 via Naida CI Connect,
Roger 17, or Phonak ComPilot

Unilateral streaming to Naida CI M90
via integrated Bluetooth

Bilateral streaming (Roger mic input only)*
Microphones: Roger iN or Roger*
Receivers: Roger installed into Naida CI M90 via Roger iN microphone
or via Roger X + Roger installer and Roger 10 or Roger 15 attached to
Naida Link Q

Phonak Naida Link Q

OR
To Phonak Naida Link Q via Roger 10,
Roger 15 or Phonak ComPilot

Unilateral streaming to Naida CI M90
via integrated Bluetooth

Bilateral streaming (Roger mic input only)*
Microphones: Roger iN or Roger*
Receivers: Roger installed into Naida CI M90 via Roger iN microphone
or via Roger X + Roger installer. Roger 02 is integrated into Chorus.

Chorus

OR
To Chorus via integrated Roger

Unilateral streaming to
Naida CI M90 via Phonak TV
Connector and Phonak
PartnerMic

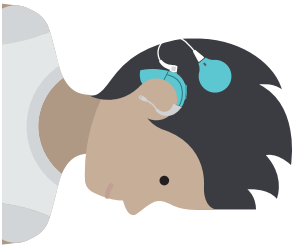
OTHER HEARING INSTRUMENTS

*Bluetooth on Roger microphone should be disabled because Phonak Marvel and Paradise technologies have integrated Bluetooth.



**ADVANCED
BIONICS**
POWERFUL CONNECTIONS

Marvel CI Connectivity QUICK REFERENCE GUIDE



SKY CI M90 on one side

BLUETOOTH

ROGER

AIRSTREAM

RECOMMENDED ON THE OTHER SIDE

Sky CI M90

Bilateral/Bimodal streaming
via integrated Bluetooth

Bilateral/Bimodal streaming (Roger mic input only)*
Microphones: Roger iN or Roger*
Receivers: Roger installed into each device via Roger iN microphone
or via Roger X + Roger installer

Bilateral/Bimodal streaming
with Phonak TV Connector
and Phonak PartnerMic

Phonak Sky Link M

Unilateral streaming to the selected
hearing instrument via integrated
Bluetooth

Bilateral/Bimodal streaming (Roger mic input only)*
Microphones: Roger iN or Roger*
Receivers: Roger installed into each device via Roger iN microphone
or via Roger X + Roger installer

Bilateral/Bimodal streaming
with Phonak TV Connector.
Unilateral streaming to the
paired hearing instrument
with Phonak PartnerMic

Phonak Paradise or
Phonak Marvel HI

Unilateral streaming to Sky CI M90
via integrated Bluetooth

Bilateral streaming (Roger mic input only)*
Microphones: Roger iN or Roger*
Receivers: Roger installed into Sky CI M90 via Roger iN microphone
or via Roger X + Roger installer and Roger 17 for Naída CI Q90

Bilateral streaming with
Phonak TV Connector when
Naída CI Connect is attached
to Naída CI Q90.
Unilateral streaming to Sky CI
M90 with Phonak PartnerMic

OTHER HEARING INSTRUMENTS

Unilateral streaming to Sky CI M90
via integrated Bluetooth

Bilateral streaming (Roger mic input only)*
Microphones: Roger iN or Roger*
Receivers: Roger installed into Sky CI M90 via Roger iN microphone
or via Roger X + Roger installer and Roger 10 or Roger 15 attached
to Naída Link Q

Phonak Naída Link Q

OR
To Phonak Naída Link Q via Roger 10,
Roger 15 or Phonak ComPilot

Unilateral streaming to Sky CI M90
via integrated Bluetooth

Bilateral streaming (Roger mic input only)*
Microphones: Roger iN or Roger*
Receivers: Roger installed into Sky CI M90.
Roger 02 is integrated into Chorus

Chorus

OR
To Chorus via integrated Roger

Unilateral streaming to
Sky CI M90 via Phonak TV
Connector and Phonak
PartnerMic

*Bluetooth on Roger microphone should be disabled because Phonak Marvel and Paradise technologies have integrated Bluetooth.



MAPPING KEYBOARD BINDINGS

KEY	ACTION
Spacebar	Stop All Stimulation
Page Down	Adjust All Markers Down
Page Up	Adjust All Markers Up
Down Arrow	Adjust Markers Down (M, T, Clipping)
Up Arrow	Adjust Markers Up (M, T, Clipping)
L or Ctrl + Left Arrow	Bilateral Window: Focus Left Side
R or Ctrl + Right Arrow	Bilateral Window: Focus Right Side
0-9	Data Entry
Alt + Left Arrow	Move Entire Channel Selection to the Left
Alt + Right Arrow	Move Entire Channel Selection to the Right
Left Arrow	Move Selection Left
Right Arrow	Move Selection Right
Ctrl + A	Select All Markers
C	Select Clipping Marker
G (goes to Map Input Gain tab)	Select Gain Marker
M	Select M Marker
T	Select T Marker
Shift + Left Arrow	Select Multiple Channels to the Left
Shift + Right Arrow	Select Multiple Channels to the Right
S	Toggle Stimulation On/Off
Ctrl + Z	Undo
Ctrl + Y	Redo
Shift + Tab	Move Numerical Data Entry Selection Left
Tab	Move Numerical Data Entry Selection Left

NRI KEYBOARD BINDINGS

KEY	ACTION
Spacebar	Stop All Stimulation
Page Down	Adjust All Markers Down
Page Up	Adjust All Markers Up
Down Arrow	Adjust Markers Down
Up Arrow	Adjust Markers Up
0-9	Data Entry
Alt + Left Arrow	Move Entire Channel Selection to the Left
Alt + Right Arrow	Move Entire Channel Selection to the Right
Left Arrow	Move Selection Left
Right Arrow	Move Selection Right
Ctrl + A	Select All Markers
H	Select High Marker
L	Select Low Marker
Shift + Left Arrow	Select Multiple Channels to the Left
Shift + Right Arrow	Select Multiple Channels to the Right
S	Toggle Measurement On/Off

🏠 **ADVANCED BIONICS LLC** – 28515 Westinghouse Place - Valencia, CA 91355, United States
T: +1.877.829.0026 - T: +1.661.362.1400 - F: +1.661.362.1500 info.us@advancedbionics.com

EC REP **ADVANCED BIONICS GMBH** - Feodor-Lynen-Strasse 35 – 30625 Hannover, Germany

ADVANCED BIONICS UK - 2 Breaks House, Mill Court, Great Shelford, Cambridge, CB22 5LD
T: +44.1223.847.888 – F: +44.1223.847.898 info.uk@advancedbionics.com

For information on additional AB locations, please visit [advancedbionics.com/contact](https://www.advancedbionics.com/contact)

Advanced Bionics - A Sonova brand

Please contact your local AB representative for regulatory approval and availability in your region.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Sonova AG is under license.