



Programming Target CI

A Sonova brand

D000038268 RevA



Target CI Fitting Software



HAPPY



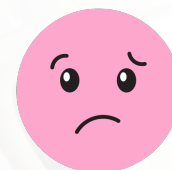
SCARED



ANGRY



NERVOUS



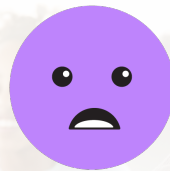
SHY



EXCITED



TIRED



WORRIED



SICK



SAD



Target CI Fitting Software

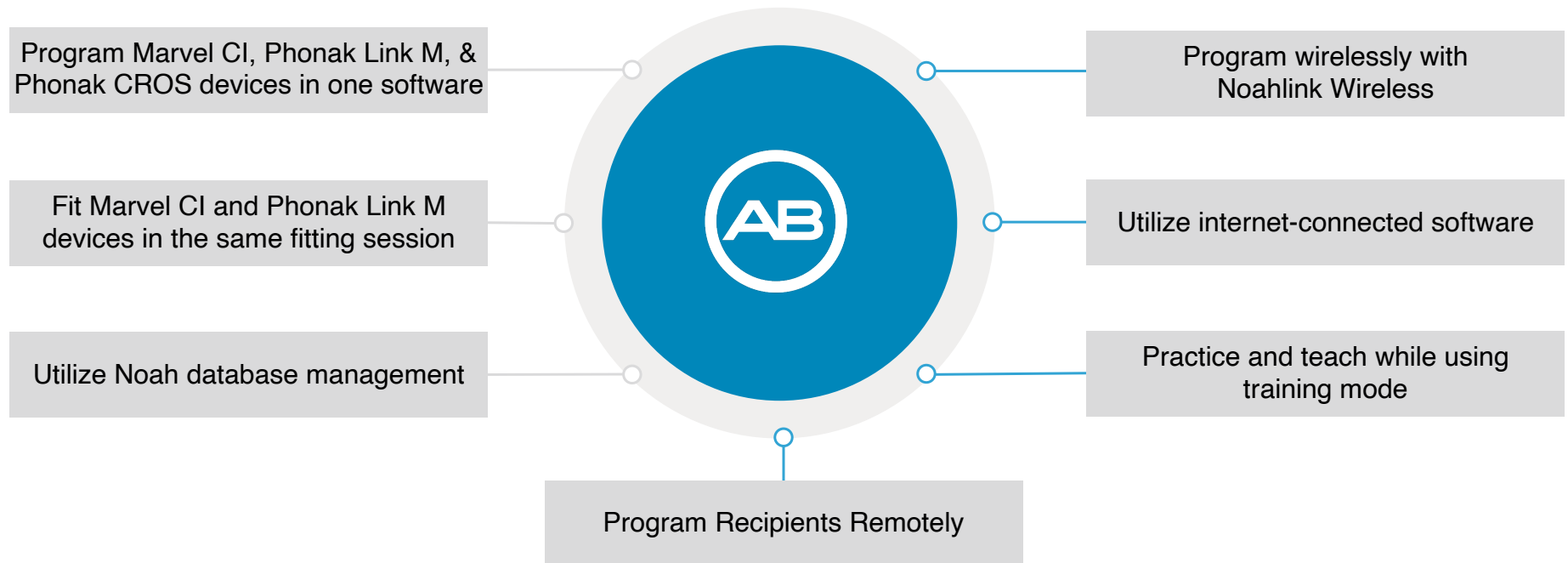
By the end of this session, you will be able to:

- Create a map for your patient.
- Explain the steps to conduct an initial activation in a timely manner.
- Identify a resource that will support clinical management of patients programmed in Target CI.





Target CI Fitting Software



TARGET CI



ADVANCED
BIONICS
POWERFUL CONNECTIONS



Initial Activation



Case Study

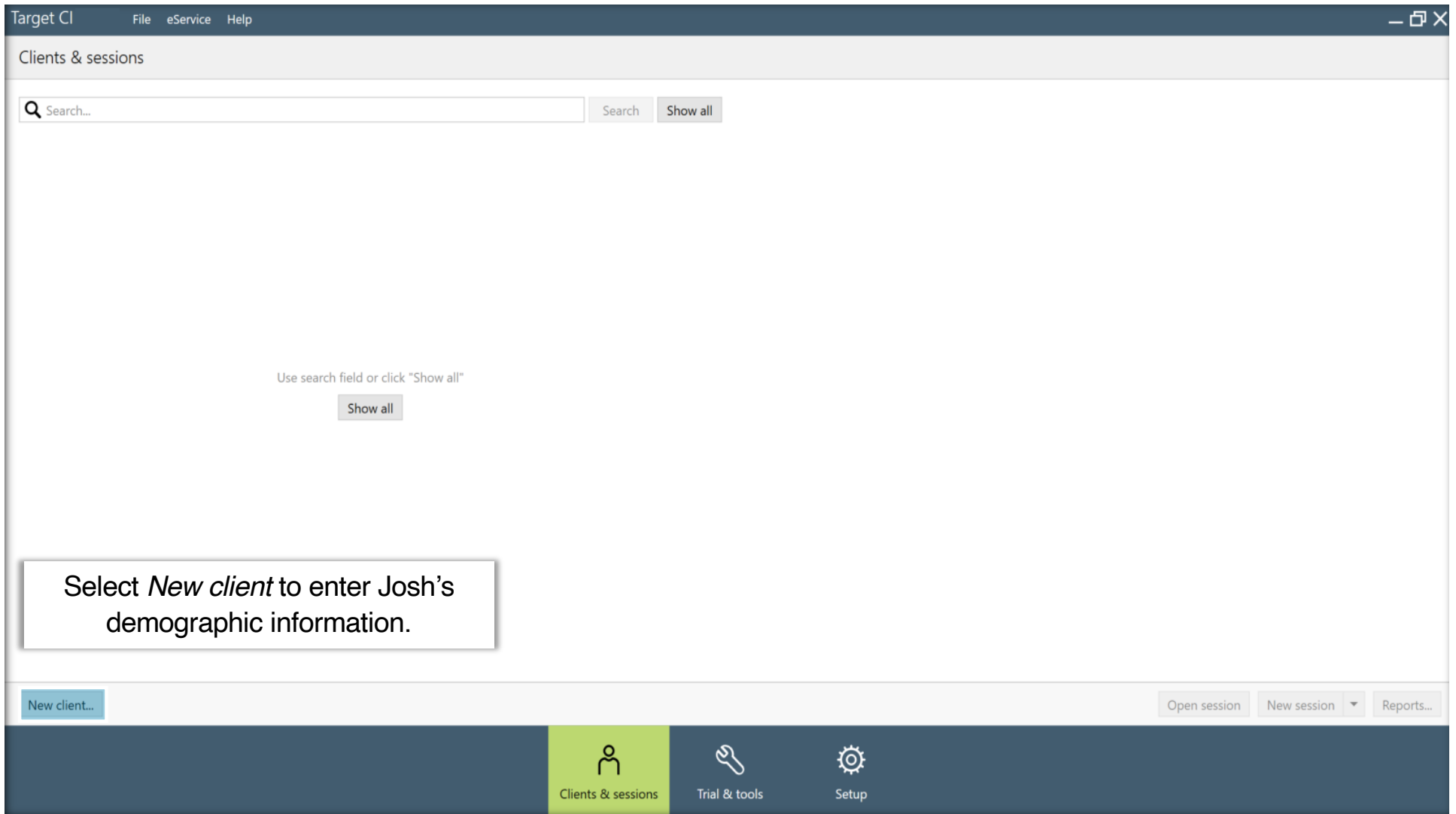
Intital Activation

Let's meet our new client, Josh Inn.

Josh has a bilateral severe-to-profound hearing loss. He was recently implanted in his left ear with an Advanced Bionics cochlear implant.

He is being seen at his cochlear implant center for the initial activation of his sound processor. He's a bit nervous about what to expect during this visit; however, he is also excited about the prospect of hearing better. He is ready to get started.





Target CI

FileeServiceHelp

—

□

×

Clients & sessions

Q Search...

Search

Show all

Client#

Last name

First name

0000089

Inn

Josh

✎

🗑

Inn, Josh

1/1/1986

eSolutions

⊖ No "Remote Support" ID available

Start "Remote Support"⚙

No session available

New session

Select *New session* to open Josh's client file and begin the programming session.

New client...

Open session

New session ▾

Reports...

👤

Clients & sessions

🔧

Trial & tools

⚙

Setup

Target CI

FileFittingeServiceHelp

Client Inn, Josh

Connect

Hearing instruments

Acoustic parameters

Instruments

Fitting

Save & close

Notifications

Select *Connect* to connect to Josh's CI via Noahlink Wireless.

No hearing instrument

No hearing instrument

Family

Styles

Features

Search...

▶ Naída CI M

2

▶ Sky CI M

1

▶ CROS

1

▶ Naída Link M

1

▶ Sky Link M

1

Show only new hearing instruments

Preview

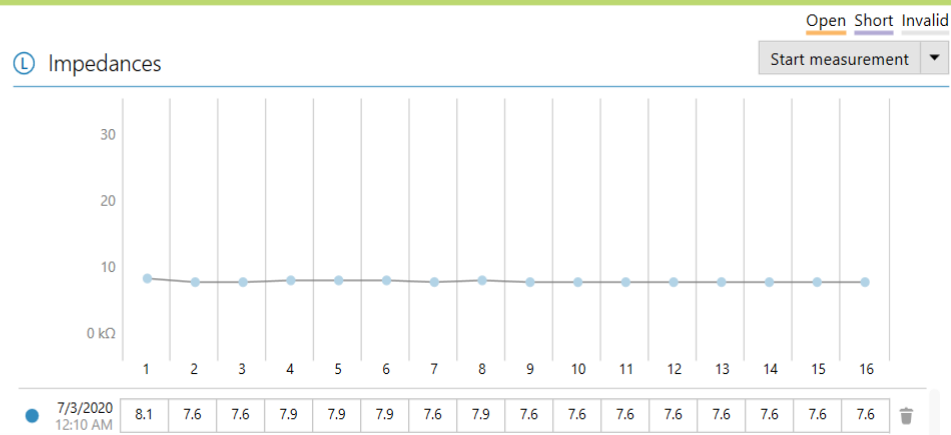
No device to preview

Target CI
File
Fitting
Help

Connect

Client Inn, Josh
Instruments Naída CI M90
Fitting Calm situation A

<
↔
>
Details
Implants
Impedances
NRI
Audiogram



AB Advantage



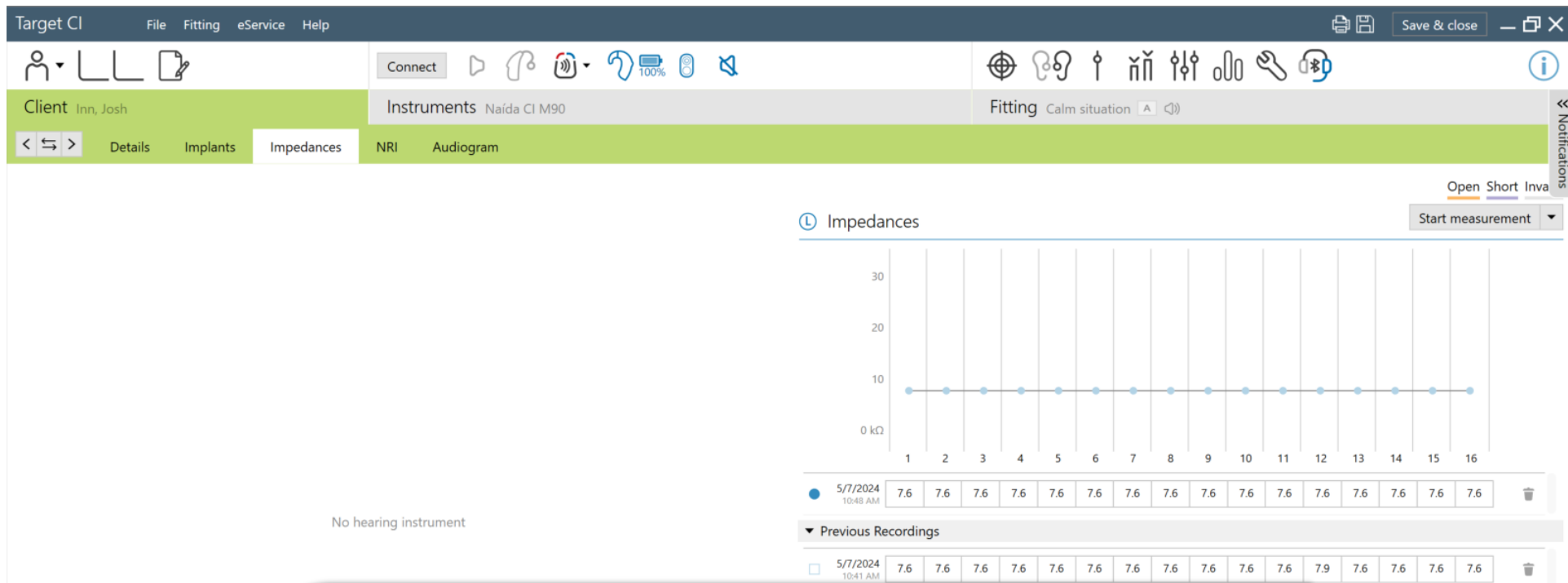
AB Advantage

Advanced Bionics was the first to offer automatic impedances to assist professionals with cochlear implant fitting.

In Target CI, impedances run automatically when connected to the implant for the first time during the fitting session.

Impedances provide information about the status of the electrode.

Impedance values are shown here.



See how this benefits Josh.



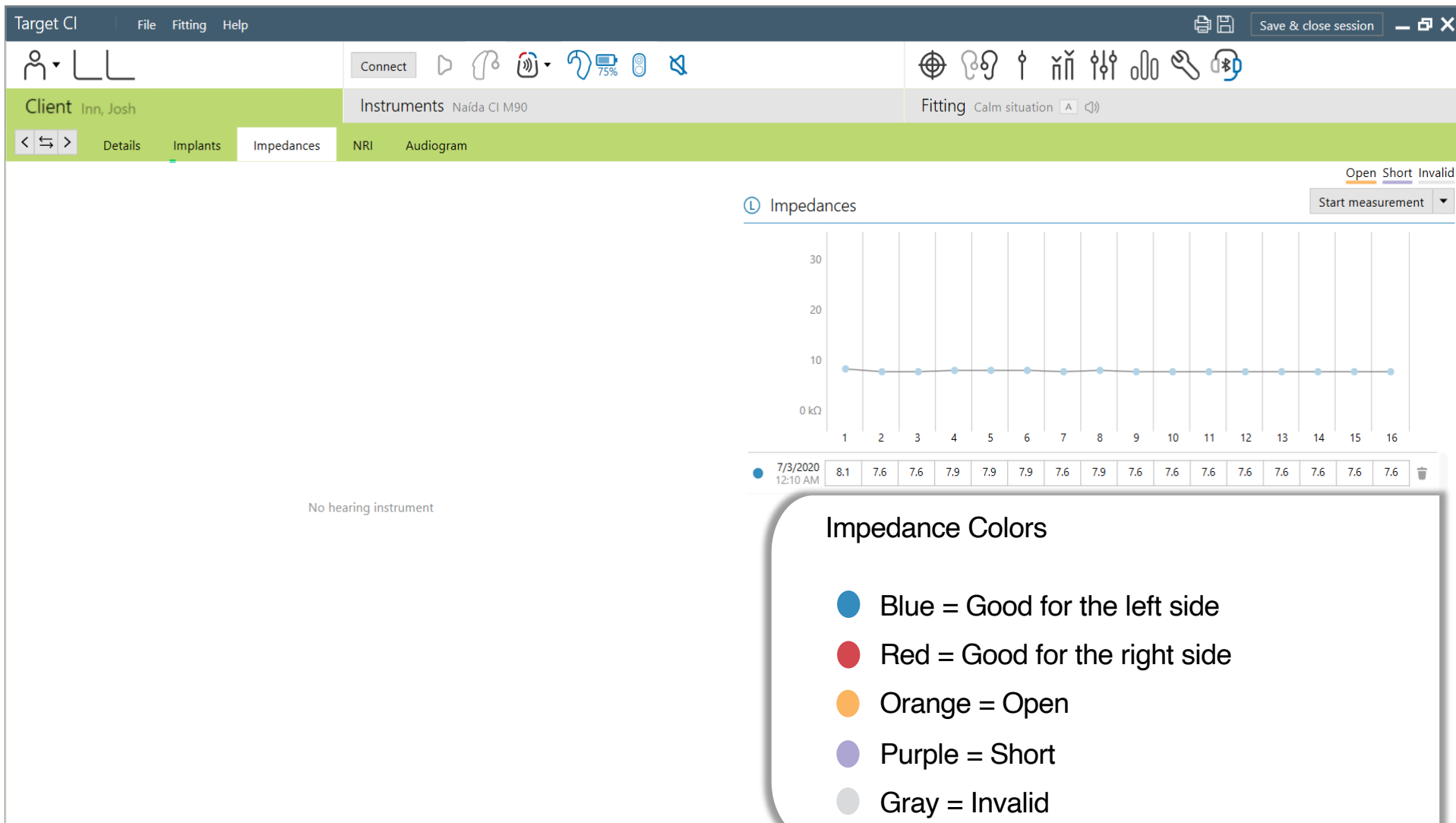
Josh

Electrode Conditioning

Conditioning electrodes introduces a very low-level stimulation to all electrode contacts to stabilize impedances prior to programming.

Conditioning should be completed:

- Prior to intraoperative testing
- Prior to initial stimulation
- Prior to stimulating an electrode that has been turned off for a period of time



Target CI

File Fitting Help

Save & close session

Client Inn, Josh

Instruments Naída CI M90

Fitting Calm situation A

Mapping

Fine tuning

DataLogging

Device options

MAPS

Optima-S

STRATEGY

No hearing instrument

HiRes Optima-S

PULSE WIDTH & RATE

No hearing instrument

APW II 18.0 μ s 3712 pps

FILTER TYPE

No hearing instrument

Extended Low

Client Inn, Josh

Let's learn the difference between a map and a program in Target CI.

Map

- Includes the electrical parameters
- Created and customized in the *Mapping* tab

Program

- Includes map settings and front-end processing features
- Created and customized in the *Fine tuning* tab

100

0 CU

302

498

590

700

831

986

1.2

1.4

1.6

2.0

2.3

2.7

3.3

3.9

6.5k

Select stimulation mode

Live Speech

T %	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
M _{CU}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
T _{CU}	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C _{CU}	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Z _{kΩ}	8.1	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
tNRI _{CU}																

Map levels

Target CI

FileFittingHelp

Save & close session

ClientInn, Josh

Mapping

MAPS

Optima-S

STRATEGY

No hearing instrument

HiRes Optima-S

PULSE WIDTH & RATE

No hearing instrument

APW II18.0 μs3712

FILTER TYPE

No hearing instrument

Extended Low

GLOBAL DEVICE OPTIONS

RF lock

AutoVoltage

Progressive levels

Off

Connect

75%

FittingCalm situationA

ABADVANCED BIONICS

POWERFUL CONNECTIONS

10TOO LOUD

9

8LOUD

7

6MOST COMFORTABLE

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

5

4SOFT

3

2VERY SOFT

1

0NO SOUND

45678910111213141516

Speech Burst (Average MCL)

7008319861.21.41.62.02.32.73.33.96.5k

Select stimulation modeSpeech Burst

4	5	6	7	8	9	10	11	12	13	14	15	16
10	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0
Ccu	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
ZkΩ	8.1	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
tNRIcu												

Map levels

Measure M-Levels.

M-Levels should be set at
Most Comfortable Loudness levels.

(Level 6 on the Loudness Scale)

Target CI

FileFittingHelp

Save & close session

ClientInn, Josh

InstrumentsNaída CI M90

FittingCalm situationA

Mapping

Fine tuning

DataLogging

Device options

MAPS

Optima-S

STRATEGY

No hearing instrument

HiRes Optima-S

PULSE WIDTH & RATE

No hearing instrument

APW II18.0 μs 3712 pps

FILTER TYPE

No hearing instrument

Extended Low

GLOBAL DEVICE OPTIONS

RF lock

AutoVoltage

Progressive levels

Off

Measure M-Levels across all channels.

Speech Burst (Average MCL)

Select stimulation mode

Speech Burst

T %	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
M _{CU}	120	120	120	120	130	130	130	130	135	135	135	135	125	125	125	125
T _{CU}	12	12	12	12	13	13	13	13	14	14	14	14	12	12	12	12
C _{CU}	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Z _{kΩ}	8.1	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
tNRI _{CU}																

Map levels

Target CI

FileFittingHelp

Save & close session

Client Inn, Josh

Connect

75%

Instruments Naída CI M90

Fitting Calm situation A

<

>

Mapping

Fine tuning

DataLogging

Device options

MAPS

A

Optima-S

STRATEGY

No hearing instrument

HiRes Optima-S

PULSE WIDTH & RATE

No hearing instrument

APW II 18.0 μs 3712 pps

FILTER TYPE

No hearing instrument

Extended Low

GLOBAL DEVICE OPTIONS

RF lock

AutoVoltage

Progressive levels

Off

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

400

300

200

100

0 CU

302

498

590

700

831

986

1.2

1.4

1.6

2.0

2.3

2.7

3.3

3.9

6.5k

Speech Burst (Average MCL)

The software will automatically set T-Levels to 10% of M-Levels.

Select stimulation mode

Speech Burst

T %

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

M_{CU}

120

120

120

120

130

130

130

130

135

135

135

135

125

125

125

125

T_{CU}

12

12

12

12

13

13

13

13

14

14

14

14

12

12

12

12

C_{CU}

Off

Off

Off

Off

Off

Off

Off

Off

Off

Off

Off

Off

Off

Off

Off

Z_{kΩ}

8.1

7.6

7.6

7.6

7.6

7.6

7.6

7.6

7.6

7.6

7.6

7.6

7.6

7.6

7.6

7.6

tNRI_{CU}

Map levels

STRATEGY

(R) No hearing instrument

(L) HiRes Optima-S ▾

FILTER TYPE

 No hearing instrument

 Extended Low ▾

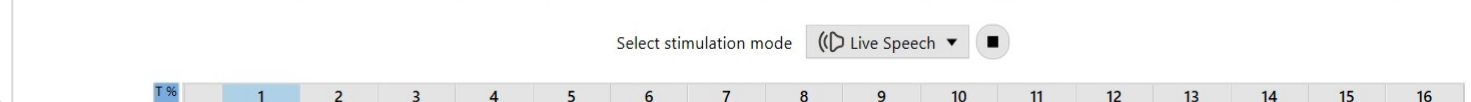
GLOBAL DEVICE OPTIONS

▼ RF lock

AutoVoltage ▼

▼ Progressive levels

Off ▼



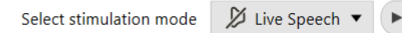
Map levels



Fitting Calm situation **A**

Extended Low ▼

5 CU ▼

[illegible]

Map levels

Target CI

File Fitting Help

Save & close session

Client Inn, Josh

Instruments Naída CI M90

Fitting Calm situation A C

Mapping

Fine tuning

DataLogging

Device options

MAPS

STRAT

PULSE

FILTER

GLOBA

RF

Auto

Pro

Off

Progressive levels provide incrementally increasing stimulation levels to maps. This is helpful when a patient is in the acclimatization phase of CI stimulation.

- Progressive levels can be turned on and off globally for all maps.
- Progressive levels can be programmed to increase in 5 or 10 CU step sizes.
- There will always be 4 additional progressive levels applied, for a total of 5 levels (including the baseline setting).

Progressive levels

5 CU

- Gray Progressive level markers quickly show the M-Level range when Progressive levels are enabled.
- Recipients use the Marvel CI multi-function button or the AB Remote mobile app to increase and/or decrease progressive levels within each program.

16

125

12

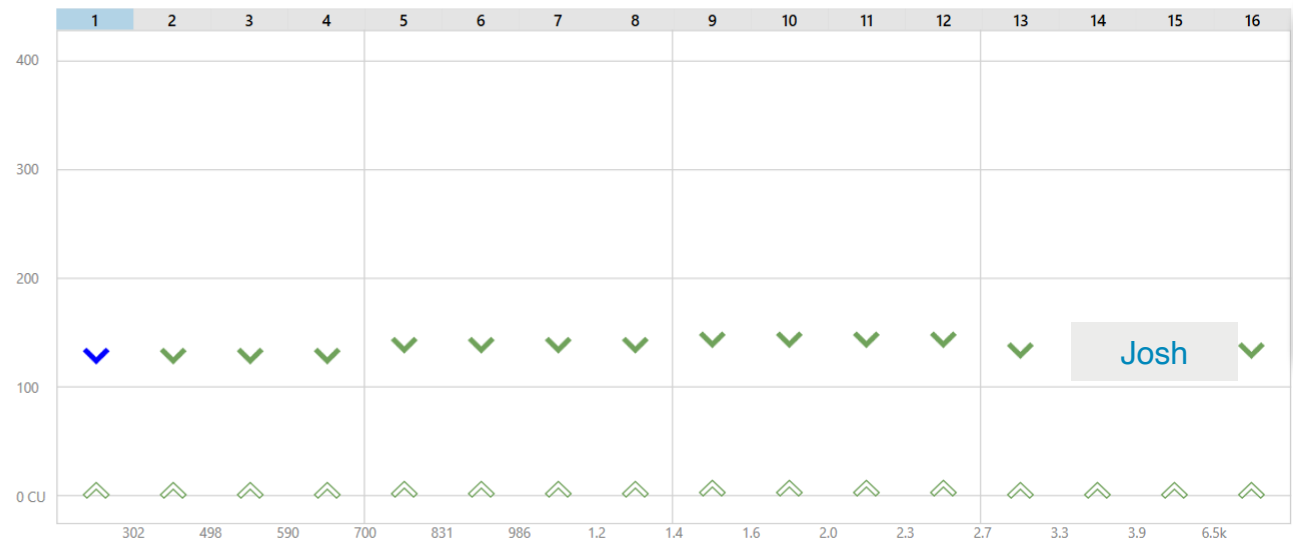
Off

7.6

+

Extended Low ▼

Off ▼



Select stimulation mode Live Speech

[illegible]

Map levels

Target CI

FileFittingeServiceHelp

Save & close

ClientInn, Josh

Connect

100%

InstrumentsNaída CI M90

FittingCalm situationA

<>

Mapping

Fine tuning

DataLogging

Device options

HEARING INSTRUMENTS

L: DSN0100553

ROGER RECEIVER

L: No Roger receiver installed

SERVICES

Reports...

Hearing instrument support

BehaviorStandardStreamingPhone call

SHORT PRESS

Progressive levels
5 steps

LONG PRESS

Program change
AutoSense OS 3.0 (Startup)
Button down has same function

Let's select *Bluetooth* to manage Bluetooth settings.

BUTTON FUNCTIONS

✓

Volume

✓

Program change

✓

Accept/end call

Mute/unmute mic (not for phone call)

Manual controls

Bluetooth

Signals & alerts

Indicator light

Startup

DataLogging

Notifications

Target CI

FileFittingHelp

Save & close session

ClientInn, Josh

Connect

75%

InstrumentsNaída CI M90

FittingCalm situationA

<>

Mapping

Fine tuning

DataLogging

Device options

HEARING INSTRUMENTS

L: DSN0101004

ROGER RECEIVER

R: No Roger receiver installed

L: (02) installed

(03) installed

SERVICES

Reports...

Hearing instrument support

Behavior(Standard)

SHORT PRESS

Progressive levels
± 5 steps

LONG PRESS

Program change
AutoSense OS 3.0 (Startup)
Button down has same function

BLUETOOTH NAME

Josh's CI

BLUETOOTH PHONE CALL

Fixed bandwidth

Adaptive bandwidth

Delete pairings

Manual controls

Bluetooth

Signals & alerts

Indicator light

Startup

DataLogging

Let's select *Signals & alerts* to manage internal alarms.

Target CI

FileFittingHelp

Save & close session

ClientInn, Josh

Connect

75%

InstrumentsNaída CI M90

FittingCalm situationA

<>

Mapping

Fine tuning

DataLogging

Device options

HEARING INSTRUMENTS

L: DSN0101004

ROGER RECEIVER

R: No Roger receiver installed

L: (02) installed

(03) installed

SERVICES

Reports...

Hearing instrument support

⌚ Behavior (Standard)



SHORT PRESS

Progressive levels

±5 steps

LONG PRESS

Program change

AutoSense OS 3.0 (Startup)

Button down has same function

Signals and alerts can be demonstrated and personalized for each recipient's device.

No hearing instrument

INTENSITY

Medium

FREQUENCY

Medium

ENABLE

General alerts

Volume control

Program changes

Ring tones

DEMO

Manual controls

Bluetooth

Signals & alerts

Indicator light

Startup

DataLogging

Target CI
File
Fitting
Help

Inn, Josh

Connect

50%

Save & close session

Client
Inn, Josh
Instruments
Naída CI M90
Fitting
Calm situation
A
CJ

Mapping
Fine tuning
DataLogging
Device options

HEARING INSTRUMENTS

L: DSN0101004

ROGER RECEIVER

R: No Roger receiver installed
L: (02) installed
(03) installed

SERVICES

Reports...

Hearing instrument support

Behavior
(Standard)

SHORT PRESS

Progressive levels
± 5 steps

LONG PRESS

Program change
AutoSense OS 3.0 (Startup)
Button down has same function

STARTUP PROGRAM

A
AutoSense OS 3.0

STARTUP DELAY

No additional delay

Startup melody

Manual controls
Bluetooth
Signals & alerts
Indicator light
Startup
DataLogging

The *Indicator light*, *Startup*, and *DataLogging* tabs allow clinicians to customize additional settings.

Target CI

FileFittingHelp

Save & close session



Client Inn, Josh

Instruments Naída CI M90

Fitting Calm situation A

Mapping

Fine tuning

DataLogging

Device options

HEARING INSTRUMENTS

 L: DSN0101004

SERVICES

Reports...

Product support

Close session

Select the items to save

Hearing instruments

☒ L: Naída CI M90 (SN: DSN0101004)

Accessories

No configurable accessory

☒ Database

Optional session note...

Battery estimation...

Save

Cancel

No hearing instrument

Manual controls

Bluetooth

Signals & alerts

Indicator light

Startup

DataLogging

(Startup) e function

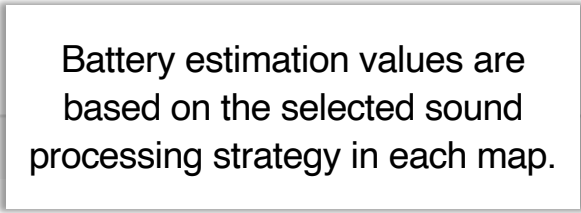
DATALOGGING

On

Off

Ensure the boxes are checked to save session data to the hearing instrument(s) and to the database.

Choose *Battery estimation* to obtain an estimate of battery life for each battery size option.



Target CI

FileFittingeServiceHelp

Save & close

Connect

ClientInn, Josh

InstrumentsNaida CI M90

FittingCalm situationA

<>

Mapping

Fine tuning

DataLogging

Device options

HEARING INSTRUMENTS

L: DSN0100553

ROGER RECEIVER

L: No Roger receiver installed

SERVICES

Reports...

Hearing instrument support

Close session

Successfully saved

Hearing instruments

L: Naida CI M90 (SN: DSN0100553)Battery level: High

"Remote Support" enabled

Database

Optional session note...

Close session

No hearing instrument

Startup)
function

PROGRAM

A AutoSense OS 3.0

STARTUP DELAY

12 seconds additional de...Startup melody

Manual controls

Bluetooth

Signals & alerts

Indicator light

Startup

DataLogging

Notifications

Remote Programming will be available for subsequent programming sessions for Josh.

Target CI

FileFittingeServiceHelp

Save & close

Connect

ClientInn, Josh

InstrumentsNaida CI M90

FittingCalm situationA

<>

Mapping

Fine tuning

DataLogging

Device options

HEARING INSTRUMENTS

L: DSN0100553

ROGER RECEIVER

L: No Roger receiver installed

SERVICES

Reports...

Hearing instrument support

Close session

Successfully saved

Hearing instruments

L: Naida CI M90 (SN: DSN0100553)Battery level: High

"Remote Support" enabled

Database

Optional session note...

Close session

No hearing instrument

Startup function

PROGRAM

A AutoSense OS 3.0

STARTUP DELAY

12 seconds additional de...Startup melody

Manual controls

Bluetooth

Signals & alerts

Indicator light

Startup

DataLogging

Notifications

Select *Close session* to complete the programming session for Josh.

Clients & sessions

Q Search...

Search

Show all

Client#	Last name	First name	
▼ 0000089	Inn	Josh	 
Session 1	5/7/2024		

Inn, Josh 1/1/1986

eSolutions

 Not paired to phone

Start "Remote Support" 

Session 1 5/7/2024 10:20 AM



No audiogram



No audiogram



Naida CI M90
SN: DSN0100553

The Target CI programming session is now complete.

TARGET CI



Two-Ear Solutions



Bimodal Hearing Solution

Target CI
File
Fitting
Help

Connect
75%

Save & close session

Client
Inn, Josh

Instruments
Naída Link M / Naída CI M90

Fitting
Calm situation
A

Hearing instruments
Acoustic parameters
Details
Accessories

Naída Link M
SN: SN30047190

Naída CI M90 (T-mic or standard earhook)
SN: SN39278855

Frequency response graph for Naída Link M. The x-axis represents frequency in Hz (125, 250, 500, 1k, 2k, 4k, 8k) and the y-axis represents sound pressure level in dB (0, 20, 40, 60, 80, 100, 120). The graph shows a red line representing the hearing aid's output, which starts at approximately 40 dB at 125 Hz and decreases to about 120 dB at 4k Hz. A shaded red area indicates the range of frequencies and intensities covered by the device.

Frequency response graph for Naída CI M90 (T-mic or standard earhook). The x-axis represents frequency in Hz (125, 250, 500, 1k, 2k, 4k, 8k) and the y-axis represents sound pressure level in dB (0, 20, 40, 60, 80, 100, 120). The graph shows a blue line representing the hearing aid's output, which starts at approximately 100 dB at 250 Hz and decreases to about 120 dB at 4k Hz. A shaded blue area indicates the range of frequencies and intensities covered by the device.

Acoustic code

XXXXXX

Tube

Standard
SlimTube

Earpiece

Earmold

Vent

Ø 0.6 - 0.8 mm

Hook

Damped

Attachment

T-mic or standard earhook



CI + CROS

Target CI

FileFittingeServiceHelp

Close training

Connect

Client

Test, Test

Instruments

CROS P-13 / Naída CI M90

Fitting

Calm situation

A

<

>

Hearing instruments

Acoustic parameters

Details

Accessories

Ⓜ

CROS P-13

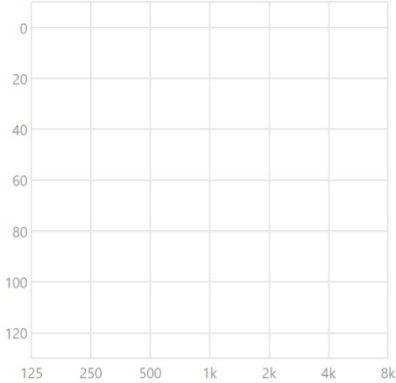
SN: SN74618558

⌚

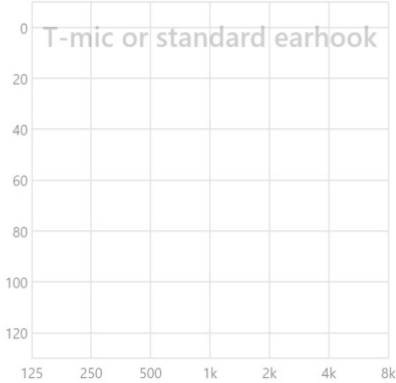
Naída CI M90 (T-mic or standard earhook)

SN: SN92978538









Earpiece

Open dome

Closed dome

Power dome

CROS Tip

SlimTip

—select—

Attachment

T-mic or standard earhook

Target CI

FileFittingeServiceHelp

Close training

Connect

75%

Client

Test, Test

Instruments

CROS P-13 / Naída CI M90

Fitting

Calm situation

A

<

↔

>

CROS balance

Mapping

Fine tuning

DataLogging

Device options

HEARING INSTRUMENTS

R: SN48063073

L: SN24575354

ROGER RECEIVER

L: No Roger receiver installed

SERVICE

Re

He

Behavior

Standard

Streaming

Phone call

SHORT PRESS

L: Volume
±5 steps

R: CROS balance*

* An increase will increase CROS and
reduce hearing instrument side and vice
versa

LONG PRESS

Program change
AutoSense OS 3.0 (Startup)
Button down has same function

BUTTON FUNCTIONS

Volume

Program change

Accept/end call

Mute/unmute mic (not for phone call)

Manual controls

Bluetooth

Signals & alerts

Indicator light

Startup

DataLogging

CROS Mute

In the Manual controls tab, settings for the multifunction button can be adjusted.

CROS recipients, like Jake, may choose for the Mute button to be enabled so that CROS can be muted in environments where the noise is on the CROS side or when Jake is taking a call by holding the phone to his ear.

Mute is disabled by default.



Bilateral CIs

Target CI

FileHelp

Clients & sessions

Q Search...

SearchShow all

Client#	Last name	First name
▶ 0000002	Bimodal	Bimodal
▶ 0000005	Recipient	Naida CI M
▶ 0000009	O	JW
▶ 0000006	MC	C
▶ 0000007	Test	Test
▶ 0000010	Test	Bilateral
▼ 0000011	Inn	Josh
Session 1	7/20/2020	

Inn, Josh 4/1/1985

Session 1 7/20/2020 1:39 PM

R

No audiogram



Naida CI M90
SN: DSN0100560

L

No audiogram



Naida CI M90
SN: DSN0100555

The basic steps of fitting Marvel CI bilaterally are similar to fitting Marvel CI unilaterally.

Let's use Josh's client file to highlight unique features of fitting Marvel CI bilaterally in Target CI.



New client...

Open session

New session

Reports...

Clients & sessions

Trial & tools

Setup

Target CI

FileFittingHelp

Save & close session

ClientBilateral, Bob

Connect

100%

100%

InstrumentsNaída CI M90

FittingCalm situationA

<>

Mapping

Fine tuning

DataLogging

Device options

HEARING INSTRUMENTS

R: DSN0100555

L: DSN0100560

SERVICES

Reports...

Product support

Behavior (Standard)



SHORT PRESS

Volume
±5 steps

LONG PRESS

Program change
AutoSense OS 3.0 (Startup)
Button down has same function

Josh's left Marvel CI is selected as the *Bluetooth side*, so his voice will be picked up by that Marvel CI. Both of Josh's Marvel CIs receive audio from his Bluetooth phone.



BLUETOOTH NAME

Josh's right CI

BLUETOOTH SIDE

Left

BLUETOOTH NAME

Josh's left CI

BLUETOOTH PHONE CALL

Fixed bandwidth

Adaptive bandwidth

Delete pairings

Manual controls

Bluetooth

Signals & alerts

Indicator light

Startup

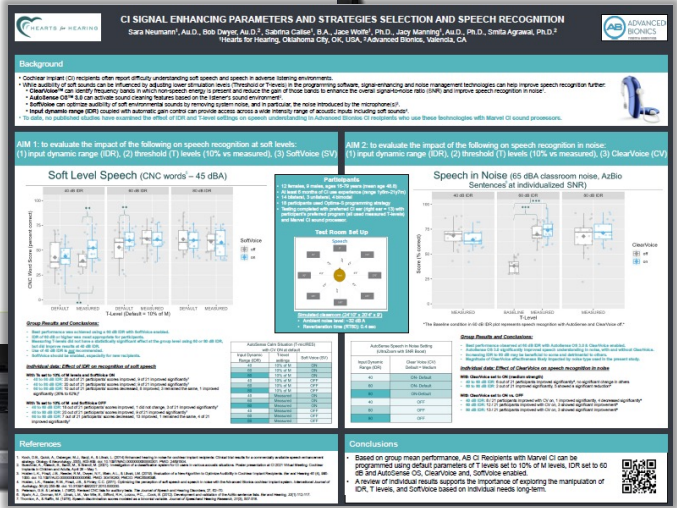
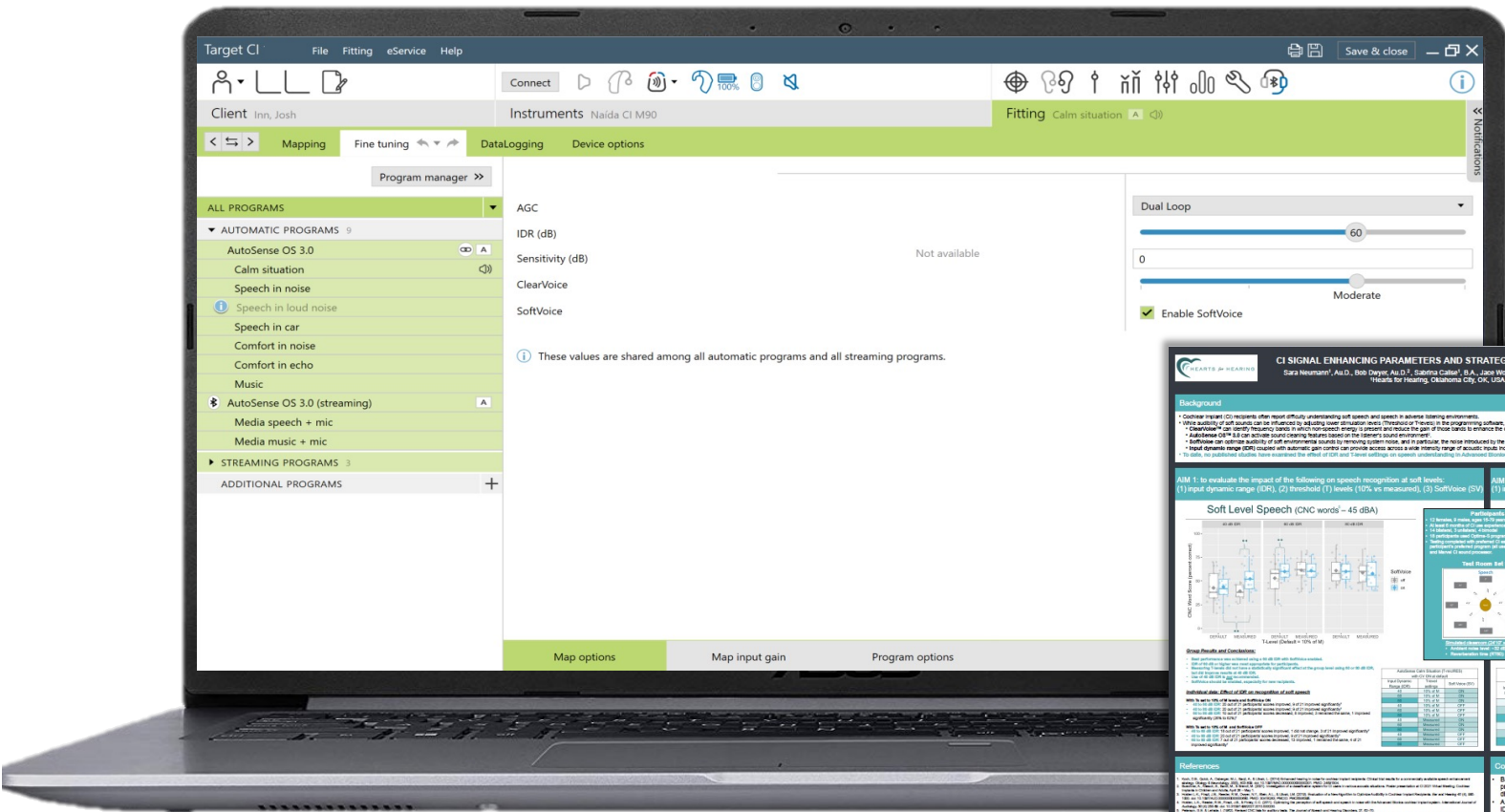
DataLogging



Research



Target CI Fitting Software



Neumann, S., et al, 2024.



Questions?



References

1. Neumann, S., Dwyer, B., Calise, S., Wolfe, J., Manning, J., & Agrawal, S. (2024, February 15-17). CI signal enhancing parameters and strategies selection and speech recognition [Poster presentation]. American Auditory Society Meeting, Scottsdale, AZ, United States.