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- Choose # of pages per sheet from dropdown menu
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ReSound Enzo IA: Audiological Considerations for Super Power Fittings

Megan Bishop, Au.D.



Webinar FAQs

How to ask a question:

- Use the Q&A

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Learning Outcomes

After this course, participants will be able to:

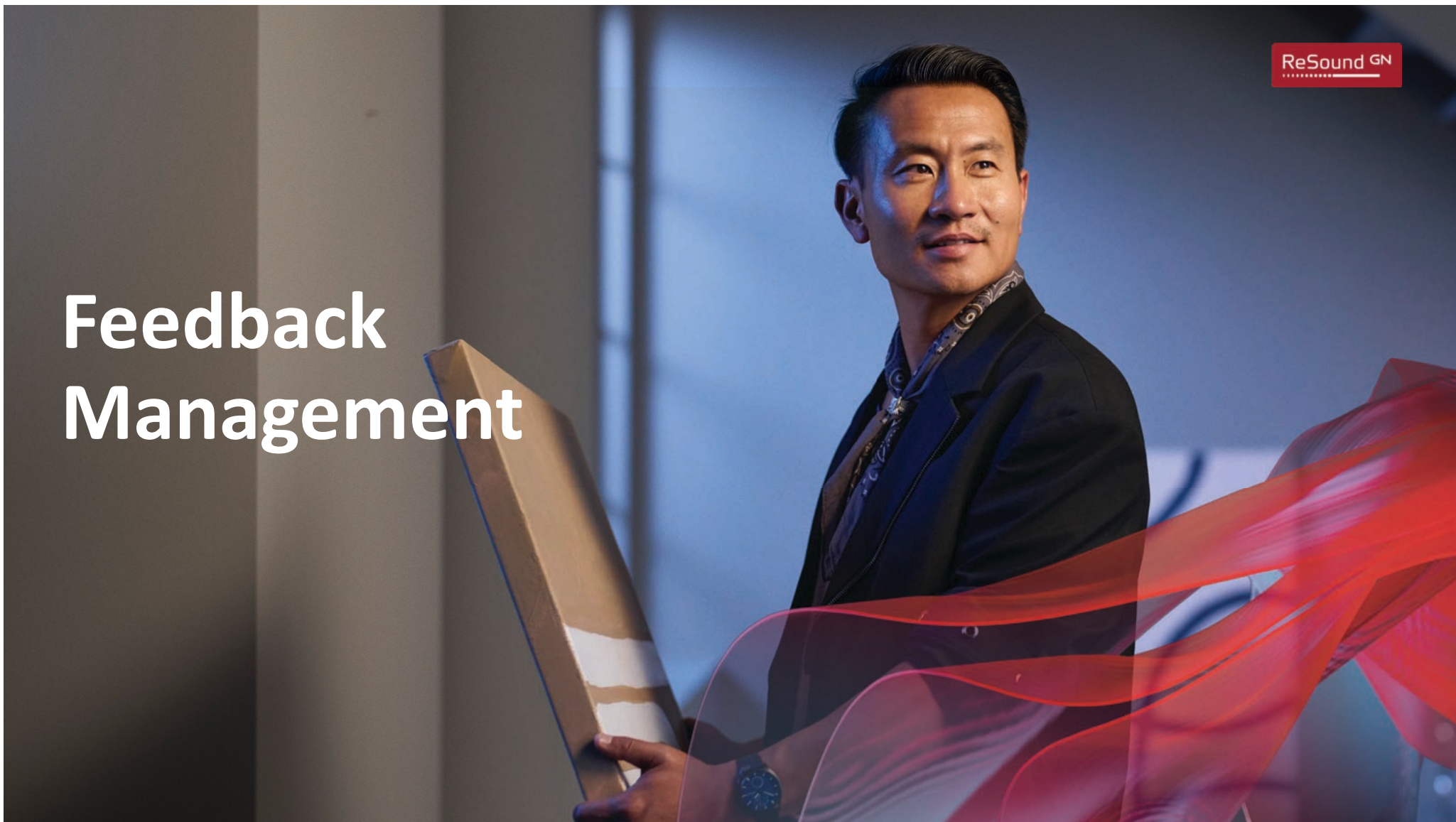
- Decide which compression mode should be applied to a given patient profile
- Recall the different aspects of DFS Ultra III
- Explain which advanced features should be applied for specific patient complaints

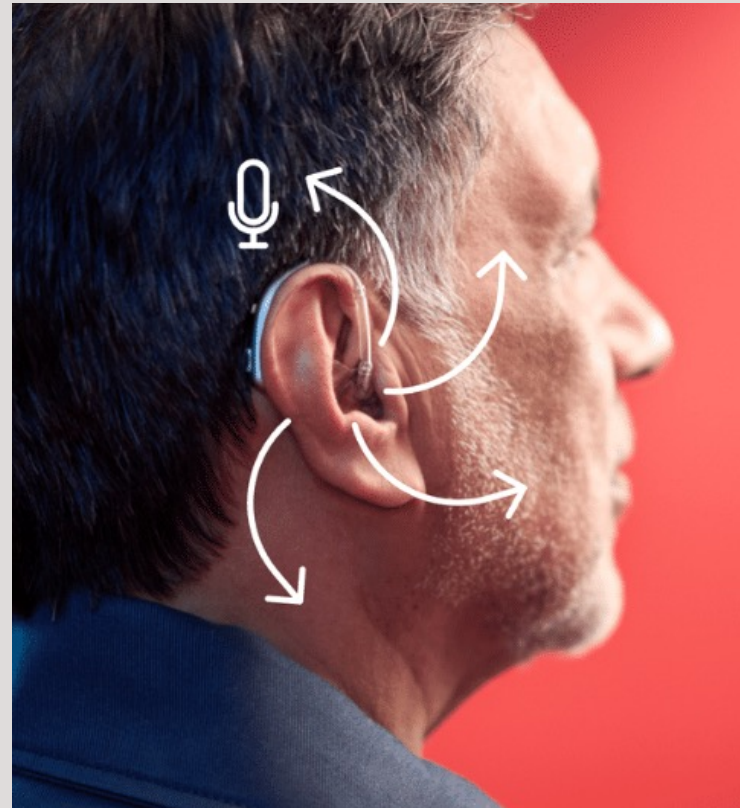
Limitations/Risks

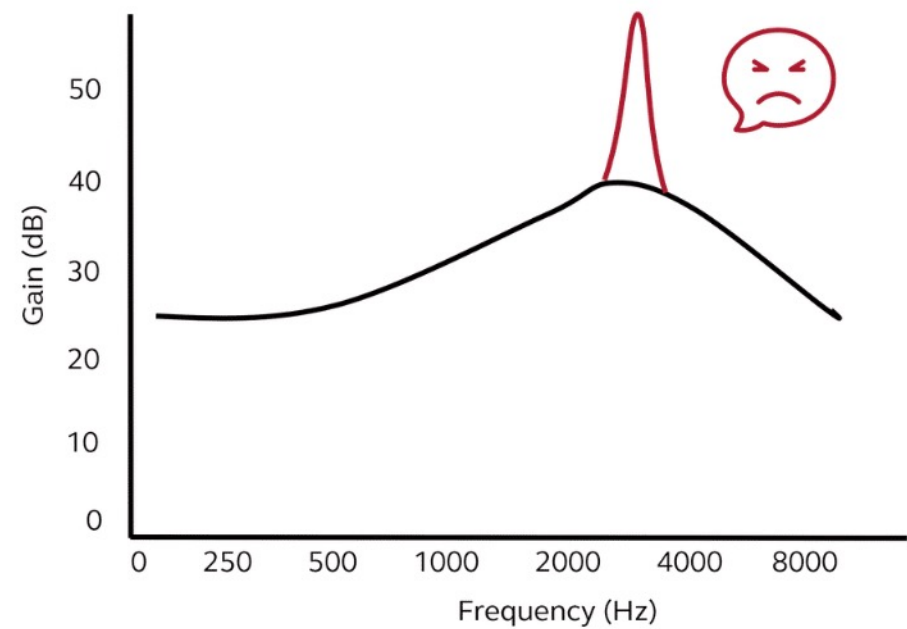
- The applicability and accuracy of the course content may vary by the clinical, geographical, and cultural context; you should evaluate the course accordingly.
- As healthcare is rapidly evolving, new findings may change the validity of the information presented in this course. Providers should always consult the latest research and guidelines from professional associations.
- The interventions discussed in this course may be limited in generalizability, requiring practitioners to consider specific individual and population factors.
- The course may not cover all possible risk factors, diagnostic methods, or treatment options, and complex cases may require additional considerations.
- Healthcare providers should apply cultural competence and sensitivity to ensure effective and respectful care based on their patients' diverse needs.
- Providers should always evaluate the limitations of diagnostic and screening tools, considering their potential for false results as well as any ethical implications.
- It is the responsibility of course participants to critically evaluate the evidence from multiple sources to guide professional practice.

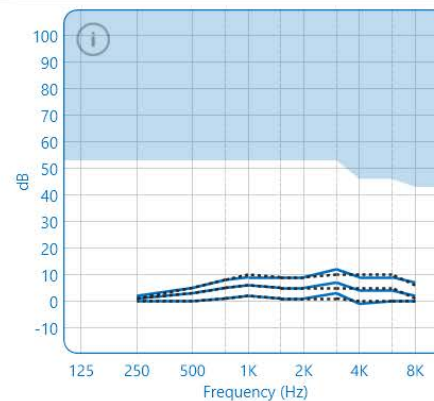
Feedback Management

ReSound GN









All-Around ▾ Hear in Noise (+)

Program Options

Auto DFS

Off	Mild	Moderate	Considerable	Strong
-----	------	----------	--------------	--------

Per
Environme...

Noise Tracker II ⓘ

Off	Mild	Moderate	Considerable	Strong
-----	------	----------	--------------	--------

Per
Environme...

Off **Mild** Moderate Strong

Wind Guard ⓘ

Off **Mild** Moderate Strong

Off **Mild** Moderate Strong

Impulse Noise Reduction ⓘ

Off **Mild** Moderate Strong

Off Mild Moderate Strong

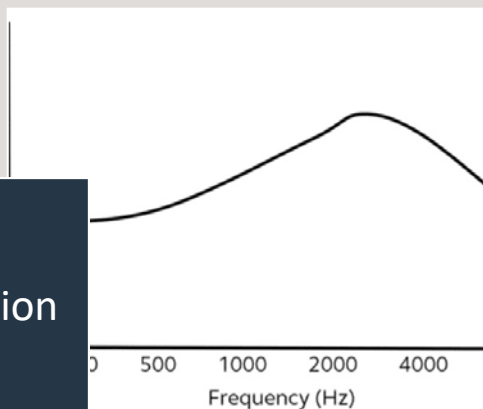
Expansion ⓘ

Off Mild Moderate Strong

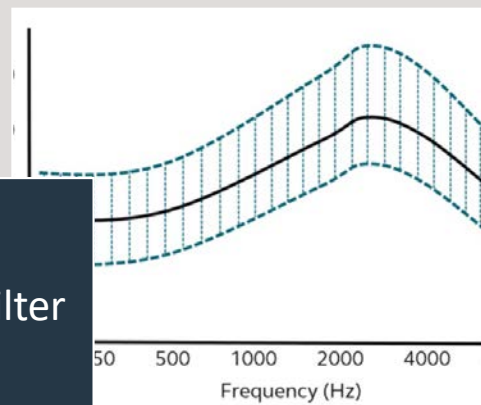
Calibrate DFS

Save

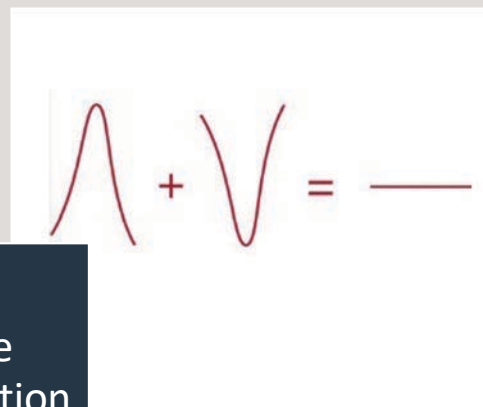
Calibration



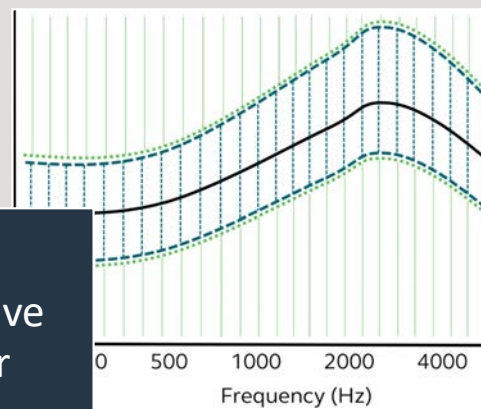
Static Filter



Phase Cancellation

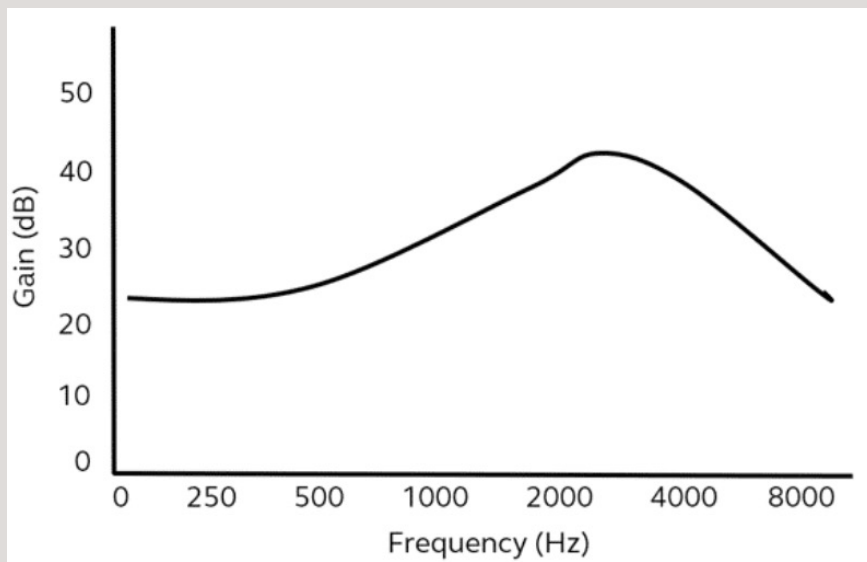


Adaptive Filter



Feedback Management

Calibration

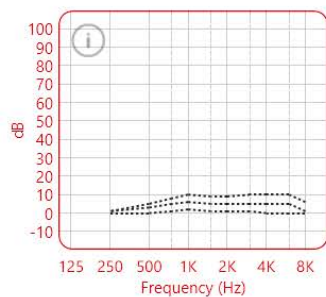


Calibration



● Right Instrument

ReSound Vivia 9 VI960S-DRWC (microRIE) **2 MP** Receiver



Unmute

Unmute

☒ Both Ears

☐ Right Ear

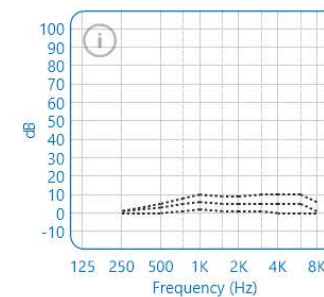
☐ Left Ear

Target Curves

☒ 50 ☒ 65 ☒ 80

● Left Instrument

ReSound Vivia 9 VI960S-DRWC (microRIE) **2 MP** Receiver



☐ Right Instrument

☐ Left Instrument



Please inform the patient that the calibration tone may be loud. Ensure the environment is as quiet as possible during calibration, including surrounding noise and talking. Please note if you continue without calibration, the patient may experience feedback.

Update Domes

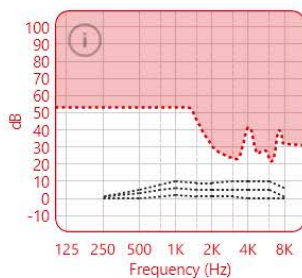
Calibrate

Continue



● Right Instrument

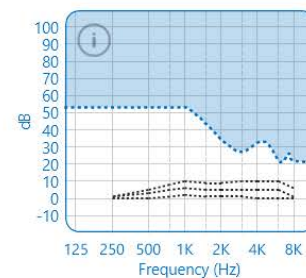
ReSound Vivia 9 VI960S-DRWC (microRIE) **2 MP** Receiver



✓ Right Instrument

● Left Instrument

ReSound Vivia 9 VI960S-DRWC (microRIE) **2 MP** Receiver



✓ Left Instrument



Please inform the patient that the calibration tone may be loud. Ensure the environment is as quiet as possible during calibration, including surrounding noise and talking. Please note if you continue without calibration, the patient may experience feedback.

Calibrate

Patient Information ^

Vivia
ReSound
First Time User

Instruments ^

Connect

Curve View

- ☒ Gain View
☐ Output View

Target Curves

☒ 50 ☒ 65 ☒ 80

Input Curves

☒ 50 ☒ 65 ☒ 80

☐ Vent Corrections

☒ DFS Calibration

VI960S-DRWC
(microRIE)

2 MP Receiver

VI960S-DRWC
(microRIE)

2 MP Receiver

Mute

Mute

Media Player v

« Collapse Sidebar

ReSound GN

Patient Instrument Set-Up Gain Adjustments Advanced Features Device Controls Finalize

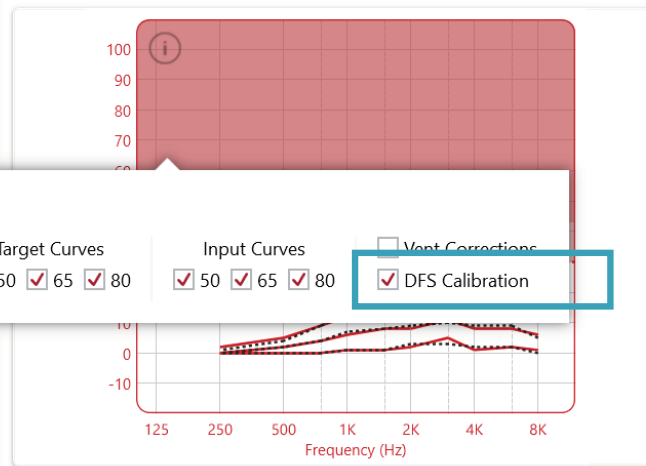
Fine Tuning

Environmental Optimizer II

AutoREM

Acceptance Manager

Menu ≡



Mute Mute

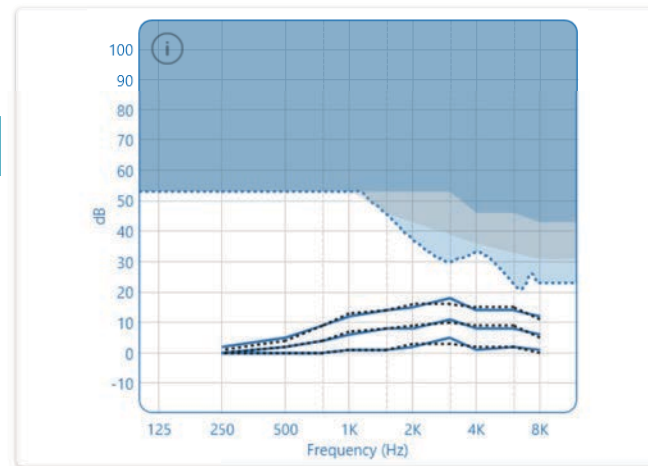
Display Options

Linked

Gain % 100%

Legend

- Feedback Guard
- Above FOG
- Calibration



All-Around v Hear in Noise +

Program Options

All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
50	2	5	9	12	14	15	18	14	14	12
65	0	2	4	6	8	8	11	8	8	6
80	0	0	0	1	1	2	5	1	2	1
CR	1	1.2	1.4	1.7	1.8	1.8	1.8	1.8	1.8	1.6
MPO	96	101	103	105	108	111	112	114	111	112

Handles: 6 10

1 2 3

Use Instrument MPO

All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
50	2	5	9	12	14	15	18	14	14	12
65	0	2	4	6	8	8	11	8	8	6
80	0	0	0	1	1	2	5	1	2	1
CR	1	1.2	1.4	1.7	1.8	1.8	1.8	1.8	1.8	1.6
MPO	96	101	103	105	108	111	112	114	111	112

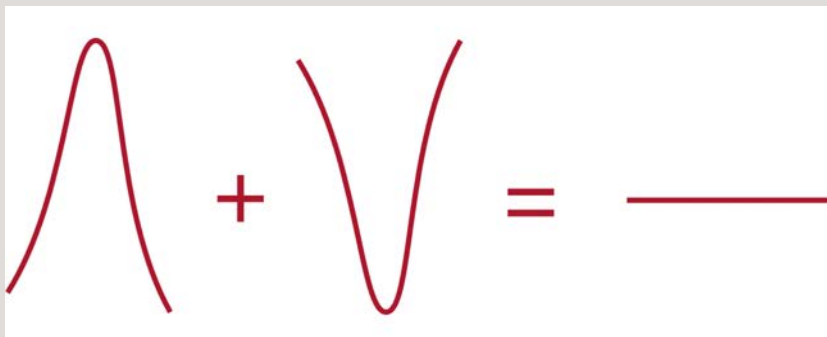
Handles: 6 10

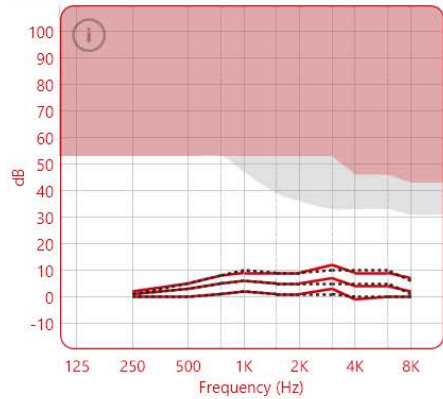
Calibrate DFS

Save

Feedback Management

Phase cancellation



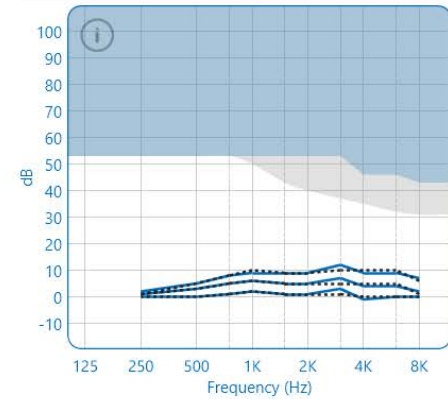


Gain %

Legend

Feedback Guard

Above FOG

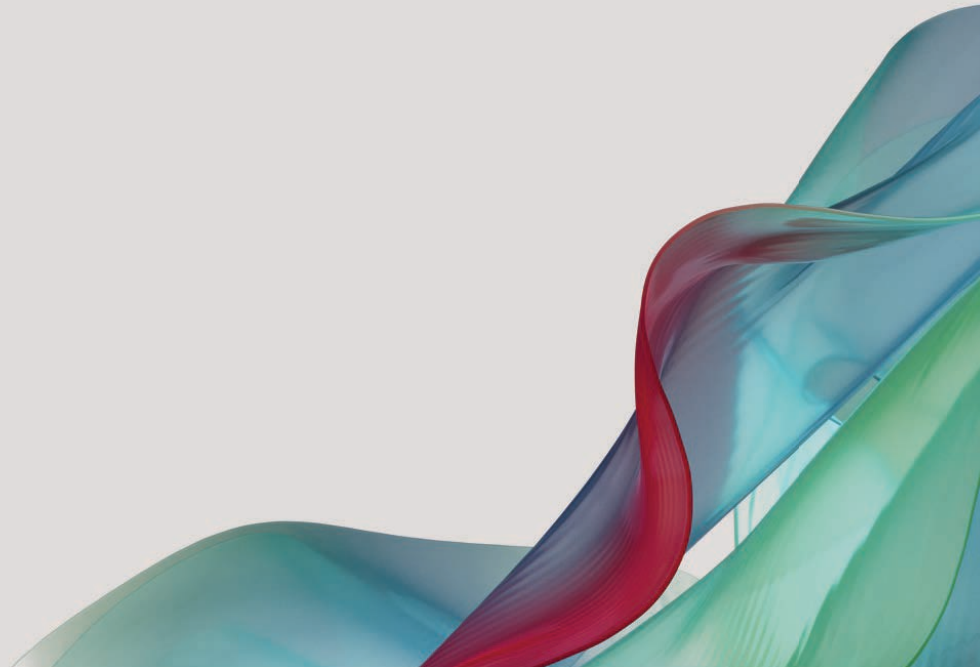


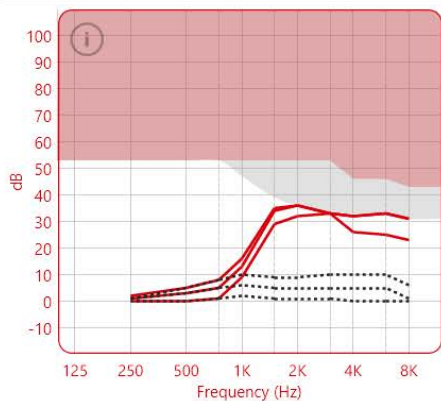
Off Mild Moderate Strong Music	DFS Ultra III Off Mild Moderate Strong Music
Off Mild Moderate Considerable Strong Per Environme...	Noise Tracker II Off Mild Moderate Considerable Strong Per Environme...
Off Mild Moderate Strong	Wind Guard Off Mild Moderate Strong
Off Mild Moderate Strong	Impulse Noise Reduction Off Mild Moderate Strong
Off Mild Moderate Strong	Expansion Off Mild Moderate Strong

Calibrate DFS

Save

Feedback Guard





Unmute Unmute

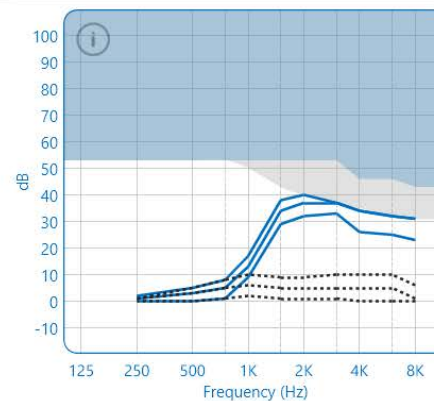
Display Options

Linked

Gain % 100%

Legend

- Feedback Guard
- Above FOG



All-Around Hear in Noise

Program Options

All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
50	2	5	8	16	35	36	33	32	33	31
65	1	3	5	13	34	36	33	32	33	31
80	0	0	1	9	29	32	33	26	25	23
CR	1	1.2	1.3	1.4	1.3	1.1	1	1.4	1.4	1.6
MPO	96	102	103	104	106	107	108	110	111	112

Handles: 6 10

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Use Instrument MPO

All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
50	2	5	8	17	38	40	37	34	32	31
65	1	3	5	13	34	37	37	34	32	31
80	0	0	1	9	29	32	33	26	25	23
CR	1	1.2	1.3	1.4	1.4	1.3	1.2	1.8	1.3	1.6
MPO	96	102	103	104	106	107	108	110	111	112

Handles: 6 10

Calibrate DFS

Save

Patient Instrument Set-Up

Target Rule

Binaural Correction

AutoRelate...

Reset to Initial Fit

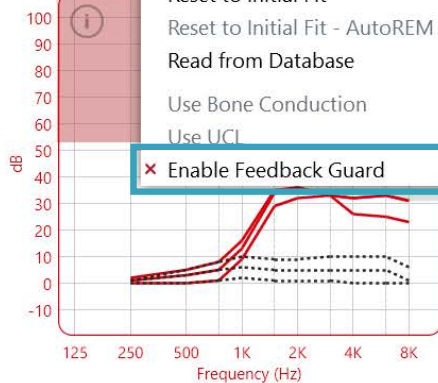
Reset to Initial Fit - AutoREM

Read from Database

Use Bone Conduction

Use UCI

✖ Enable Feedback Guard



Unmute Unmute

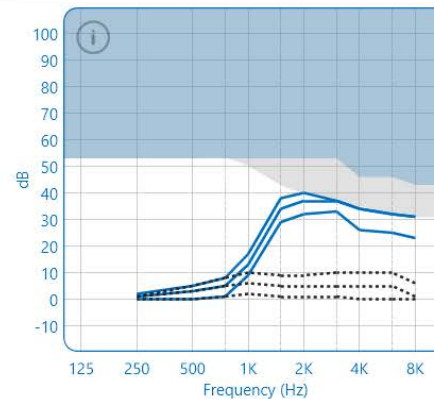
Display Options

Linked

Gain % 100%

Legend

- Feedback Guard
- Above FOG



All-Around Hear in Noise

Program Options

All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
50	2	5	8	16	35	36	33	32	33	31
65	1	3	5	13	34	36	33	32	33	31
80	0	0	1	9	29	32	33	26	25	23
CR	1	1.2	1.3	1.4	1.3	1.1	1	1.4	1.4	1.6
MPO	96	102	103	104	106	107	108	110	111	112

Handles: 6 10

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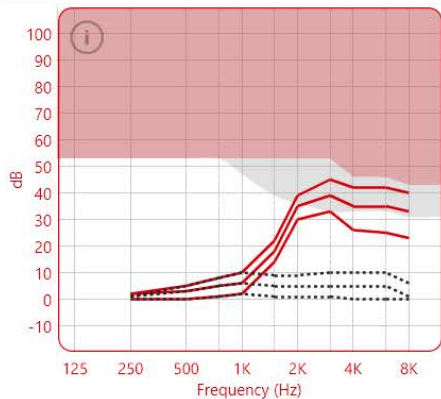
Use Instrument MPO

All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
50	2	5	8	17	38	40	37	34	32	31
65	1	3	5	13	34	37	37	34	32	31
80	0	0	1	9	29	32	33	26	25	23
CR	1	1.2	1.3	1.4	1.4	1.3	1.2	1.8	1.3	1.6
MPO	96	102	103	104	106	107	108	110	111	112

Handles: 6 10

Calibrate DFS

Save



Unmute Unmute

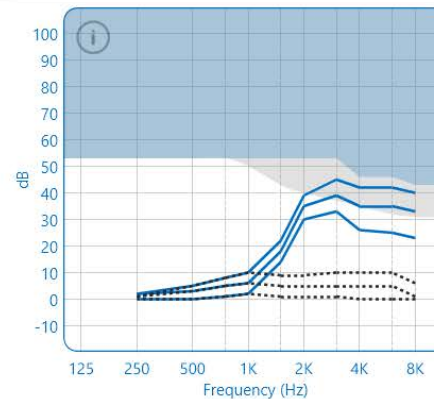
Display Options

Linked

Gain % 100%

Legend

- Feedback Guard
- Above FOG



All-Around Hear in Noise

Program Options

All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
50	2	5	8	10	22	39	45	42	42	40
65	2	3	5	6	18	35	39	35	35	33
80	0	0	1	2	14	30	33	26	25	23
CR	1	1.2	1.3	1.4	1.4	1.4	1.5	2.4	2.4	2.3
MPO	96	102	103	104	106	107	108	110	111	112

Handles: 6 10

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Use Instrument MPO

All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
50	2	5	8	10	22	39	45	42	42	40
65	2	3	5	6	18	35	39	35	35	33
80	0	0	1	2	14	30	33	26	25	23
CR	1	1.2	1.3	1.4	1.4	1.4	1.5	2.4	2.4	2.3
MPO	96	102	103	104	106	107	108	110	111	112

Handles: 6 10

Calibrate DFS

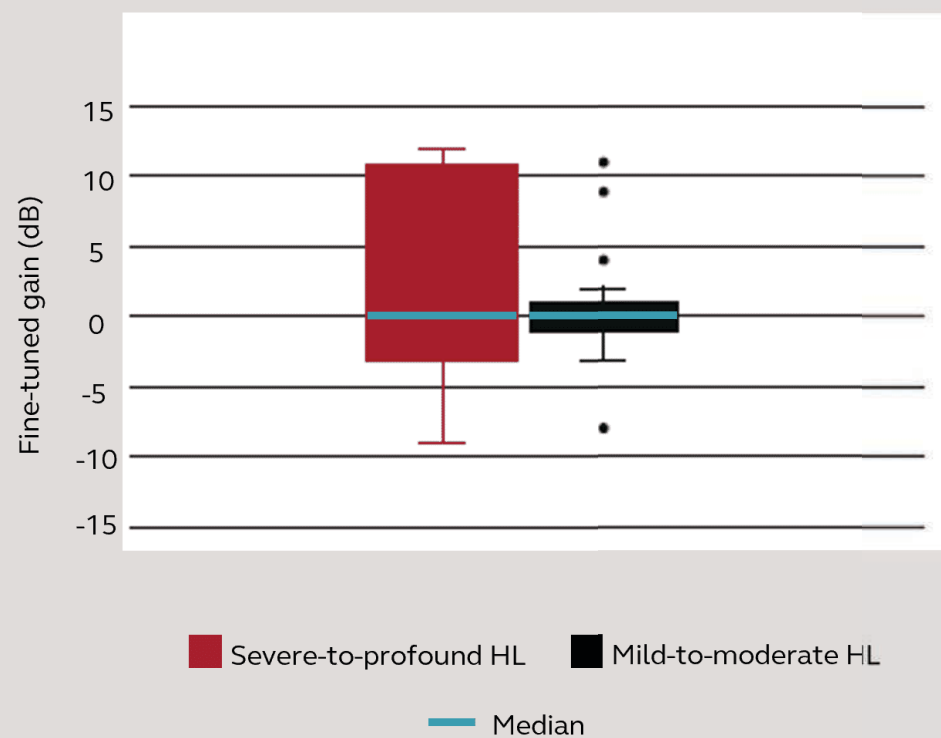
Save

Gain Considerations

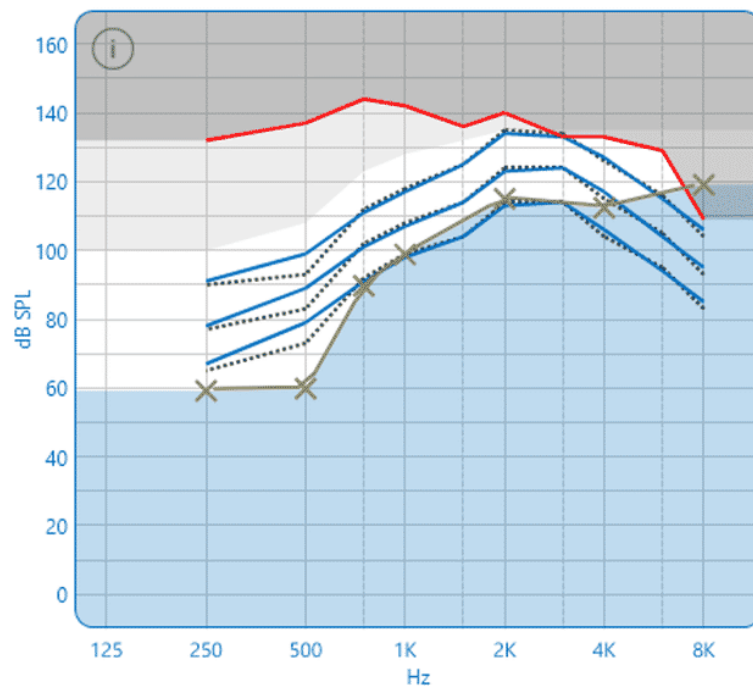
ReSound GN



Gain Considerations



Gain Considerations: Headroom



Patient Information ^

Vivia
ReSound
First Time User

Instruments ^

Connect

● Rig

Not Connected

VI960S-DRWC (microRIE)

2 MP Receiver

Mute

VI960S-DRWC (microRIE)

2 MP Receiver

Mute

Media Player v

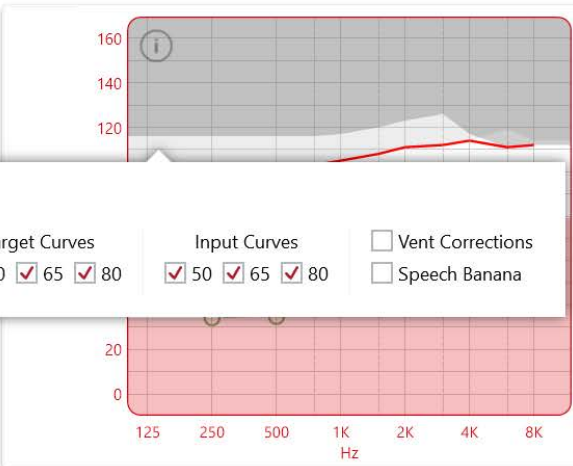
« Collapse Sidebar



Patient Instrument Set-Up Gain Adjustments Advanced Features Device Controls Finalize

Menu ☰

Fine Tuning Environmental Optimizer II AutoREM Acceptance Manager



Mute Mute

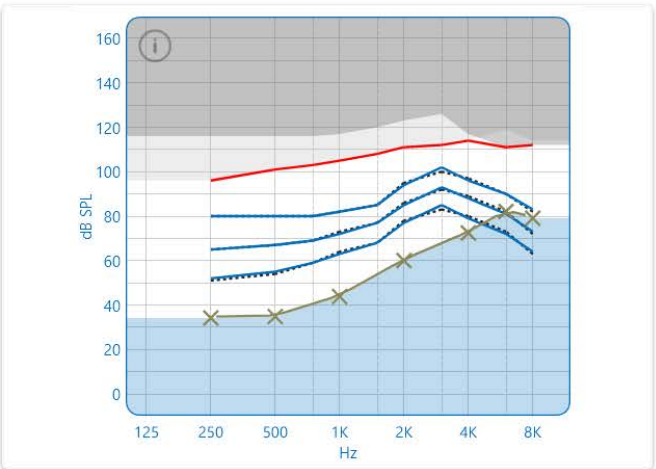
Display Options

Linked

Gain % 100%

Legend

- Above Prescribed MPO
- Above Instrument MPO
- Below Threshold
- Current MPO



All-Around v Hear in Noise +

Program Options ⚙

All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
50	52	55	59	63	68	77	85	79	72	64
65	65	67	69	72	77	85	93	88	81	73
80	80	80	80	82	85	94	102	96	90	83
CR	1	1.2	1.4	1.7	1.8	1.8	1.8	1.8	1.8	1.6
MPO	96	101	103	105	108	111	112	114	111	112

Handles: 6 10

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Use Instrument MPO

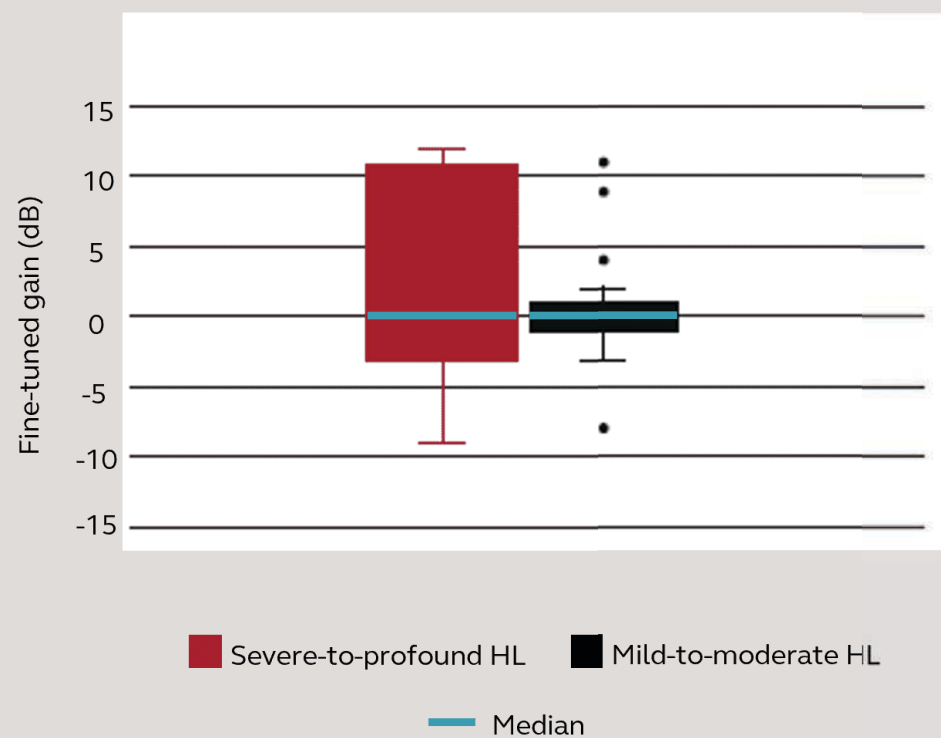
All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
50	52	55	59	63	68	77	85	79	72	64
65	65	67	69	72	77	85	93	88	81	73
80	80	80	80	82	85	94	102	96	90	83
CR	1	1.2	1.4	1.7	1.8	1.8	1.8	1.8	1.8	1.6
MPO	96	101	103	105	108	111	112	114	111	112

Handles: 6 10

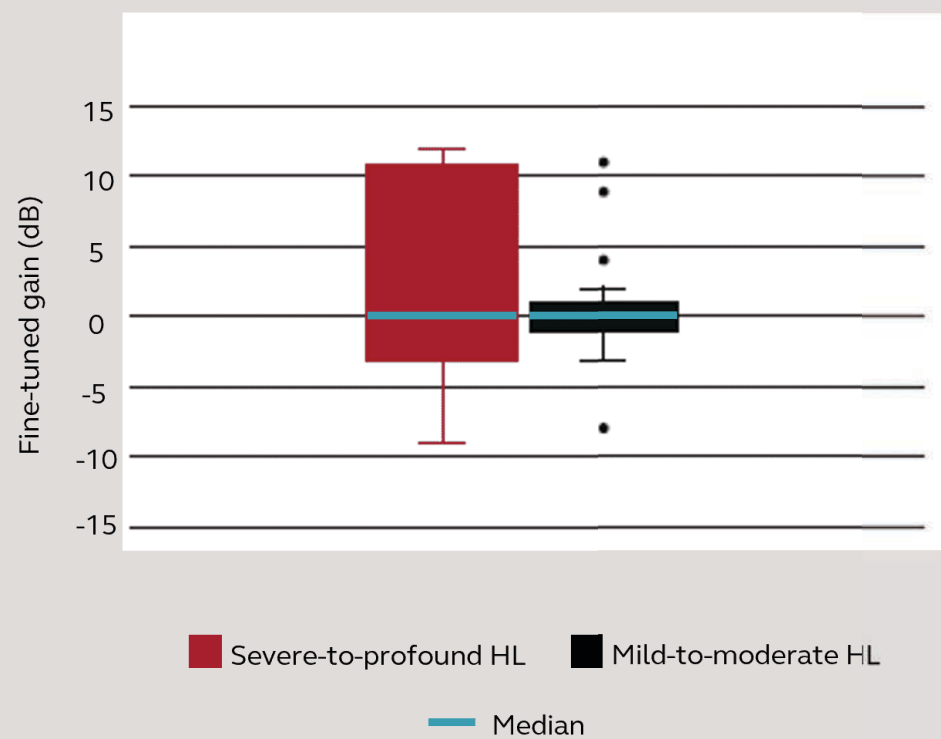
Calibrate DFS

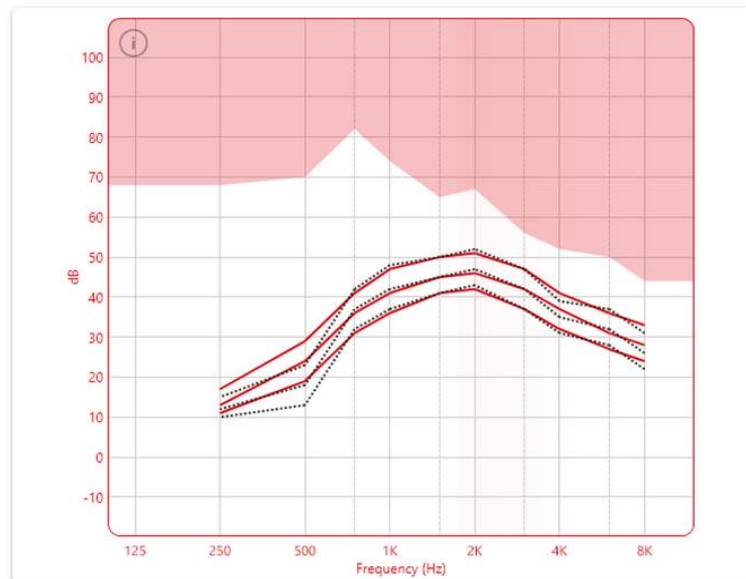
Save

Gain Considerations



Gain Considerations: MPO

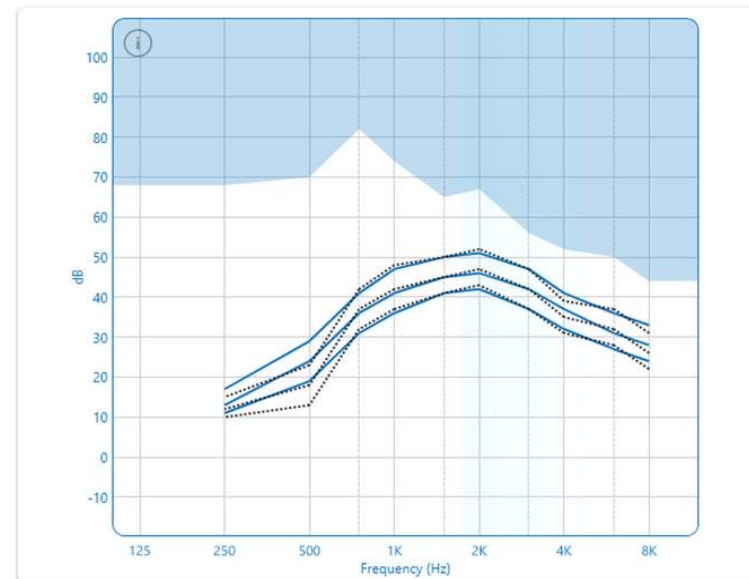




☒ Linked

Gain %

Legend
■ Above FOG



[All-Around](#) ▾ | [Hear in Noise](#) ⊕

[Program Options](#)

All	250	500	750	1K	1.5K	2K	3K	4K	5K	8K
50	17	29	41	47	51	51	47	41	36	33
65	13	24	36	41	46	46	42	37	31	28
80	11	19	31	36	42	42	37	32	27	24
CR	1.2	1.5	1.5	1.6	1.4	1.4	1.5	1.4	1.4	1.4
MPO	100	108	123	128	132	135	133	133	129	109

Handles: Compression:

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2
3

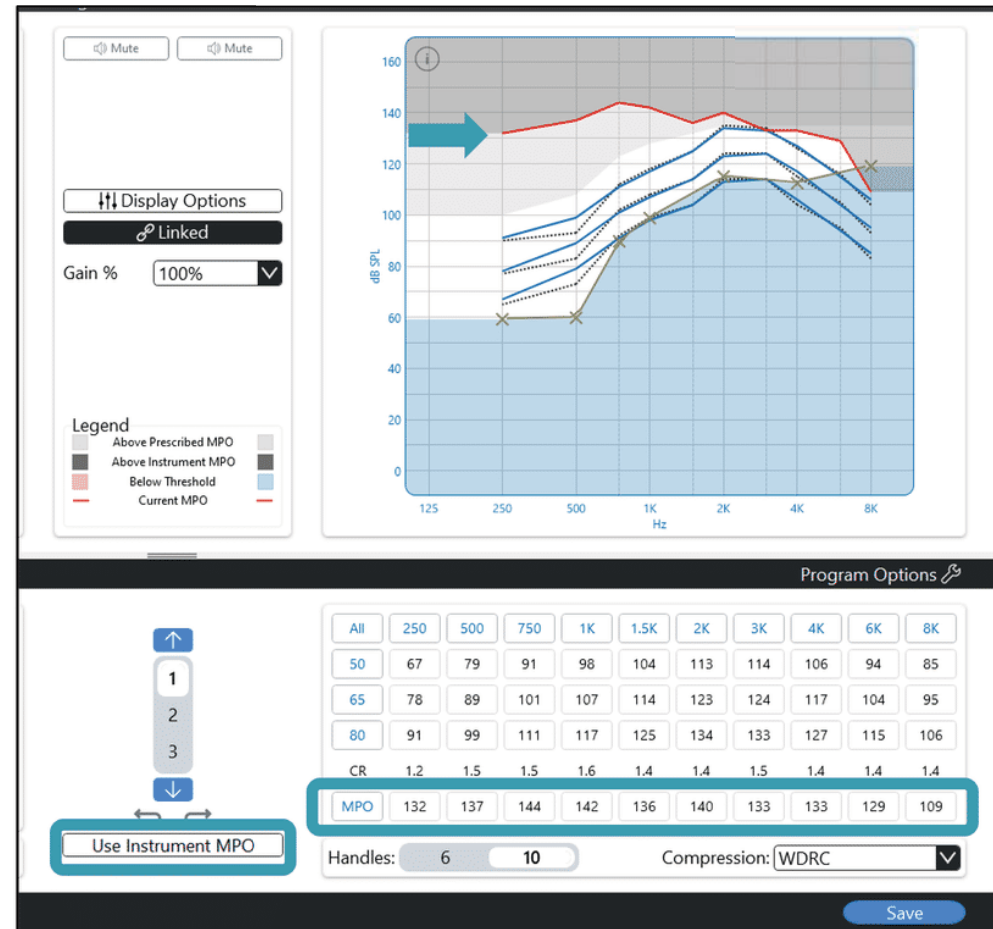
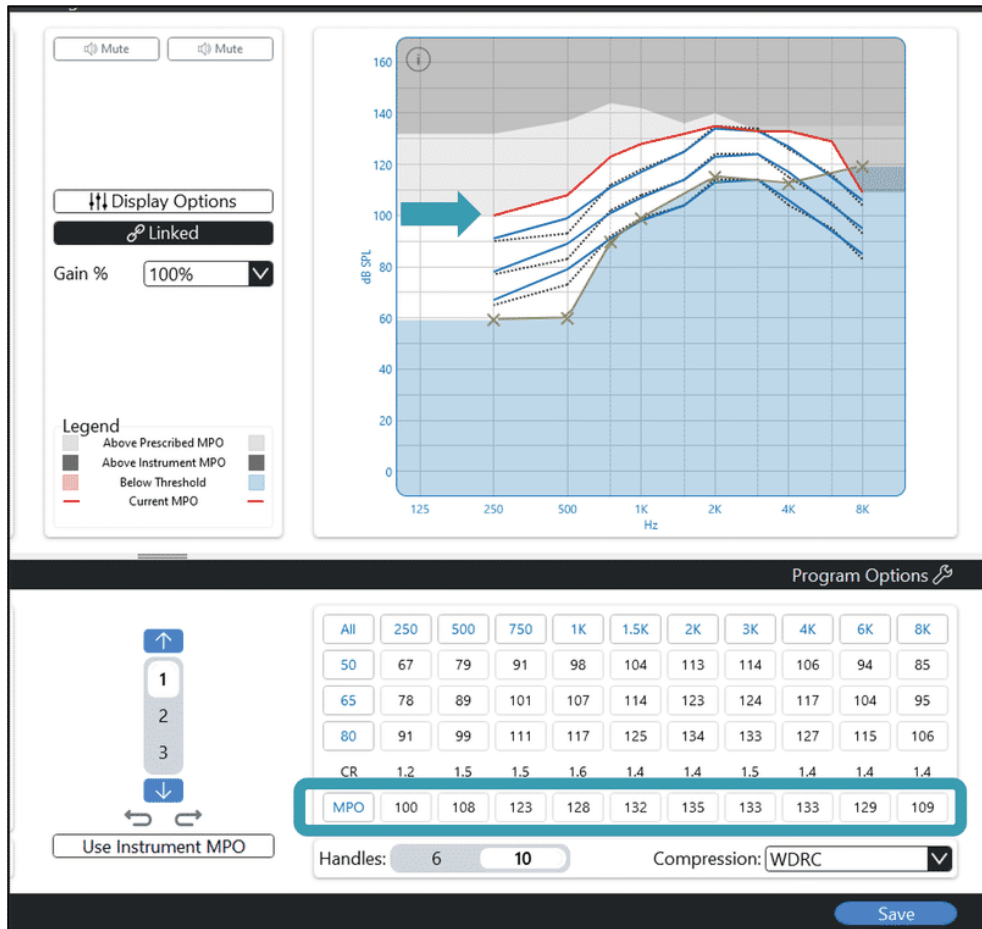
Use

All	250	500	750	1K	1.5K	2K	3K	4K	5K	8K
50	17	29	41	47	51	51	47	41	36	33
65	13	24	36	41	46	46	42	37	31	28
80	11	19	31	36	42	42	37	32	27	24
CR	1.2	1.5	1.5	1.6	1.4	1.4	1.5	1.4	1.4	1.4
MPO	100	108	123	128	132	135	133	133	129	109

Handles: Compression:

[Calibrate DFS](#)

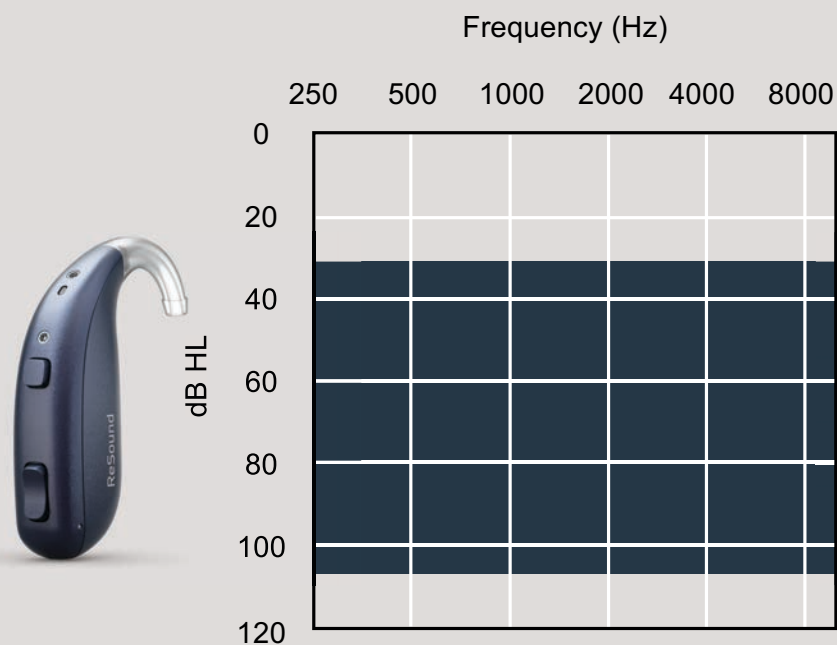
[Save](#)



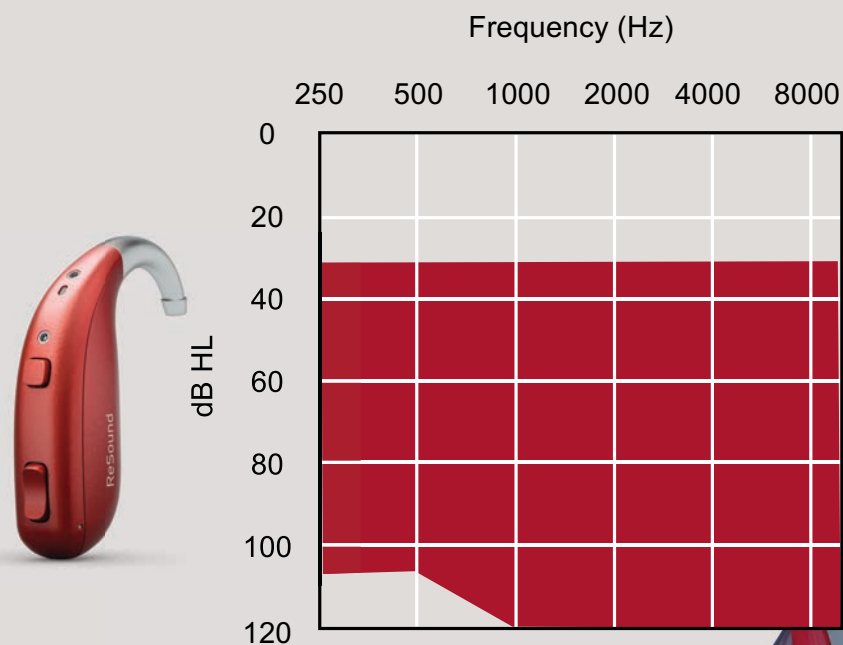
ReSound Enzo™ IA

More sound. More power.

ReSound GN



● Plastic hook
Available to order



● Metal hook
Default

Dynamic Range of Hearing

	Environment	Subjective Loudness
	Very Loud	Very Loud
	Loud	Loud
	Comfortable	Comfortable
	Soft	Soft
	Very soft	Very soft

Dynamic Range of Hearing

	Environment	Subjective Loudness
	Very Loud	Very Loud
	Loud	Loud
	Comfortable	Soft, barely audible
	Soft	Inaudible
	Very soft	

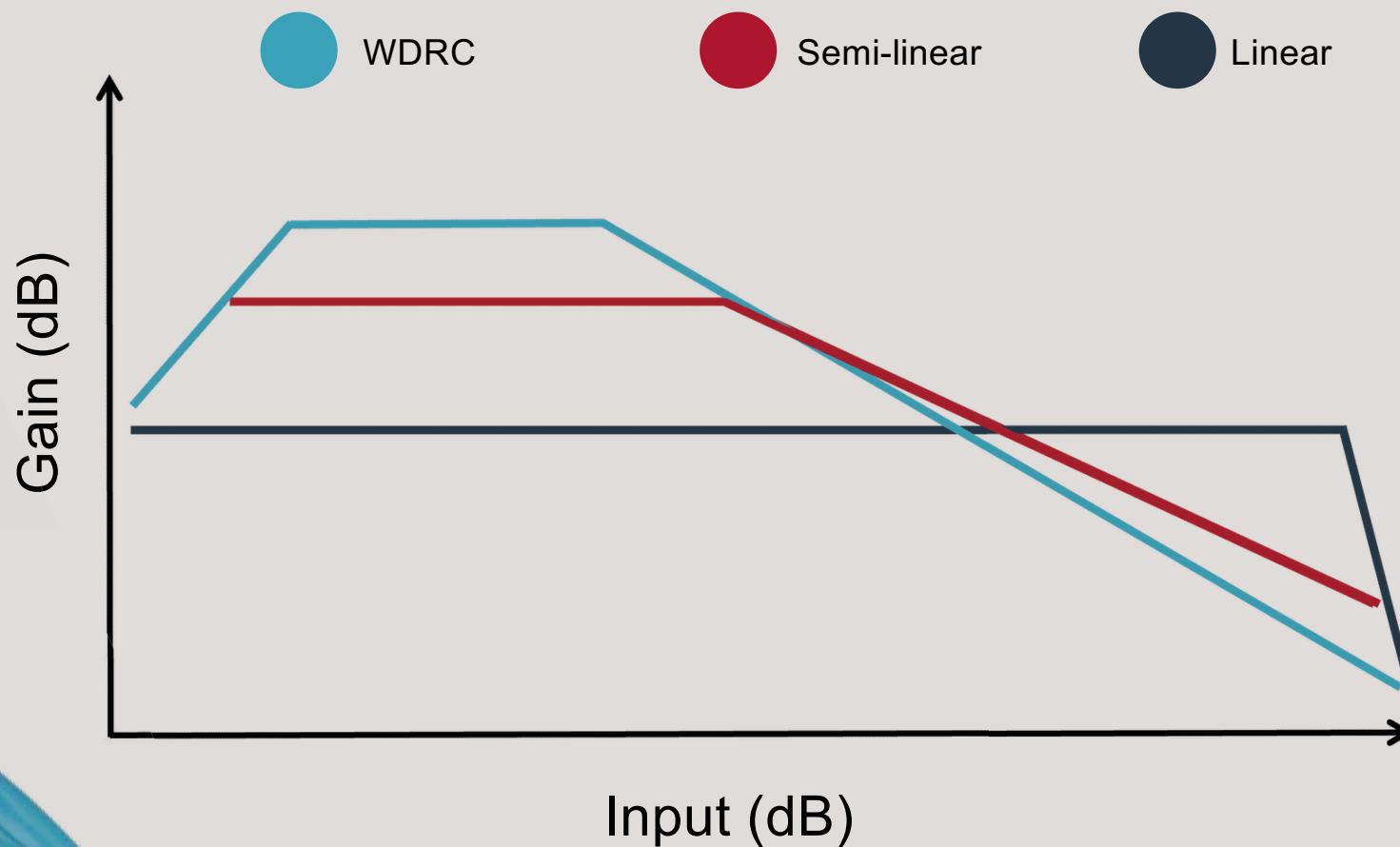
Compression
mode

Compression
time constants

Compression
limiting in
linear fitting



Compression Modes



Compression Modes

ReSound GN

WDRC

- New patients and experienced WDRC patients

Semi-Linear

- Previous patients of linear amplification to ease adjustment to WDRC

Linear

- Previous patients of linear amplification who have strong preferences for this type of processing



Compression Modes

All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
50	67	79	91	98	104	113	114	106	94	85
65	78	89	101	107	114	123	124	117	104	95
80	91	99	111	117	125	134	133	127	115	106
CR	1.2	1.5	1.5	1.6	1.4	1.4	1.5	1.4	1.4	1.4
MPO	132	137	144	142	136	140	133	133	129	109

Handles: 6 10

Compression: WDRC
Linear
Semi-Linear
WDRC

Which compression mode will you select for Marcus?

WDRC

Semi-Linear

Linear

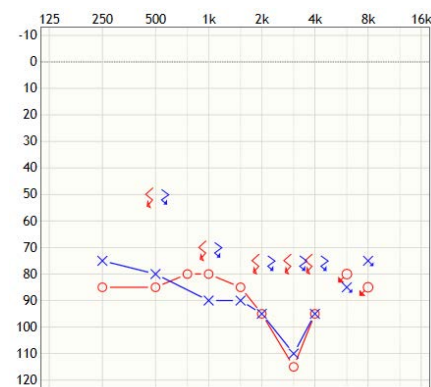
Marcus, 58 yrs old

ReSound GN

Has worn hearing aids since childhood. He is scheduled for fitting of ReSound Enzo IA 998, binaurally next week.

Marcus is currently wearing ReSound Enzo 998 fit in 2015. He is programmed at Linear Compression.

He is looking forward to his new hearing aids and has asked if his new hearing aids can be programmed to be more comfortable as he's noticed some discomfort with loud sounds.

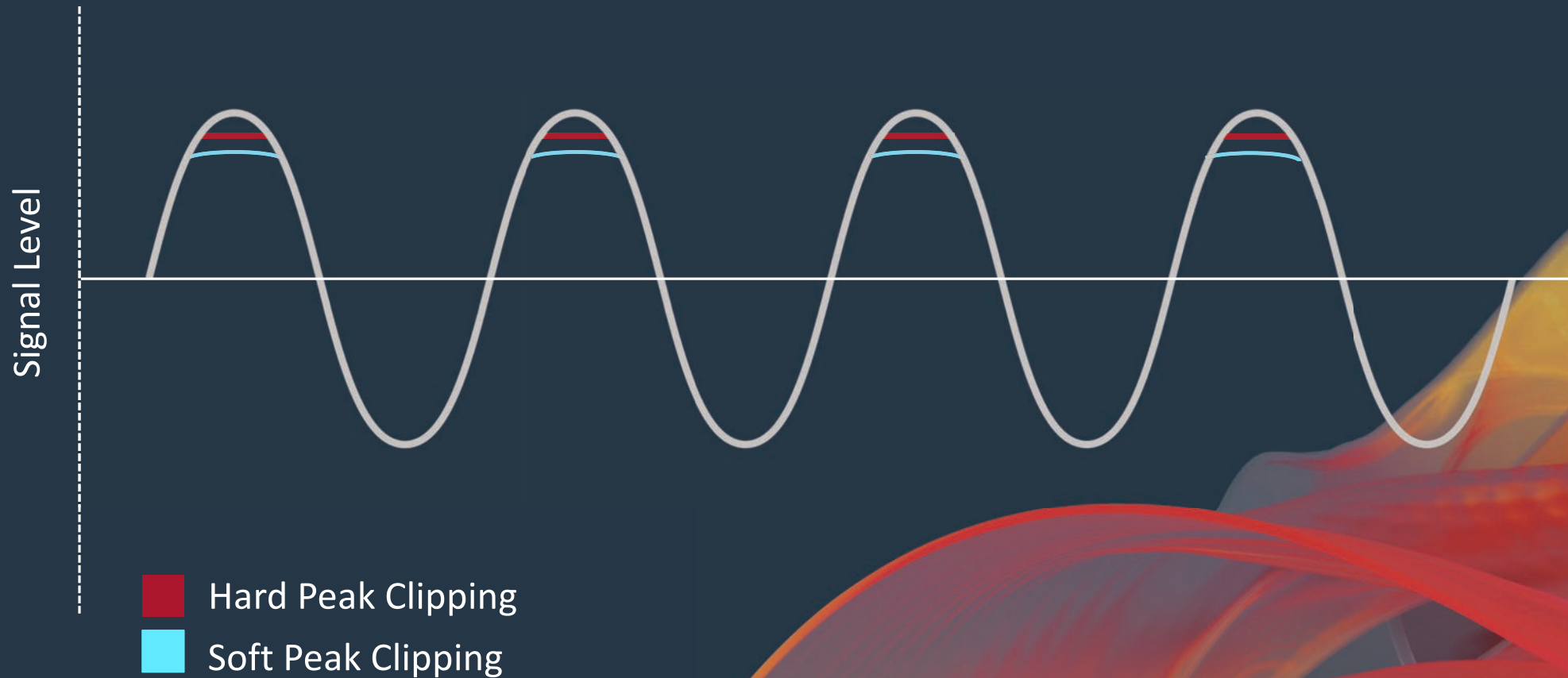


WRS R	80%
WRS L	72%
WRS Binaural	88%

Compression Limiting

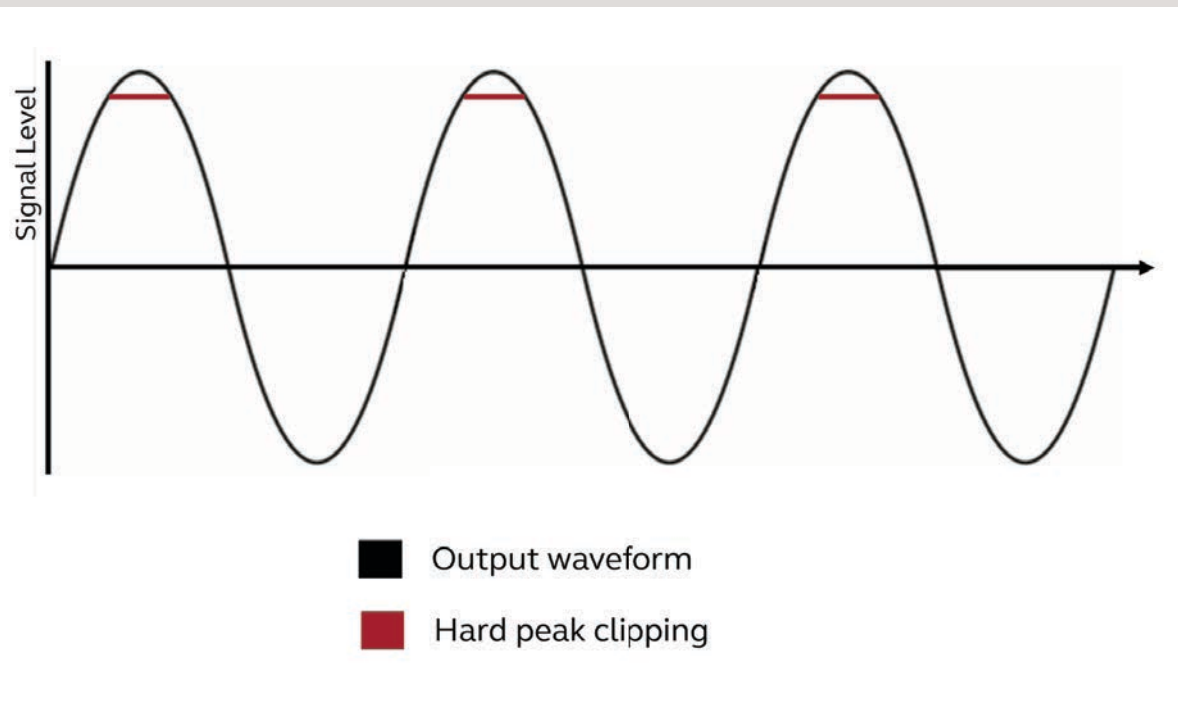
Peak Clipping

ReSound GN



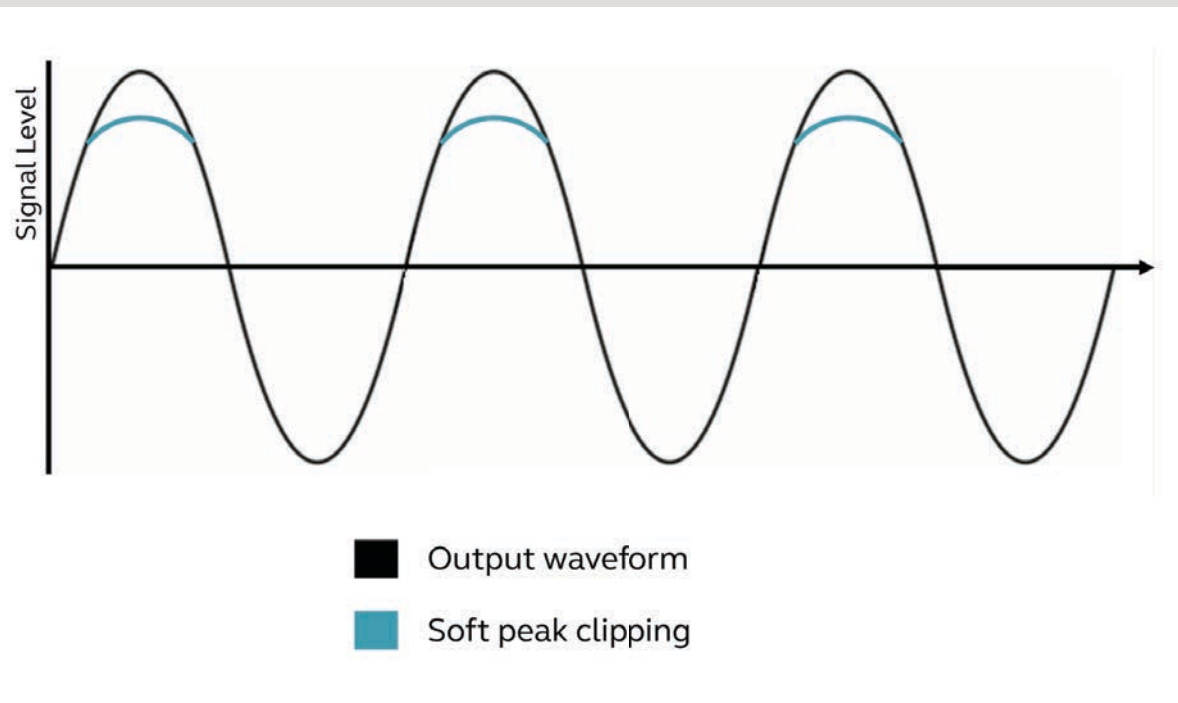
Compression Limiting

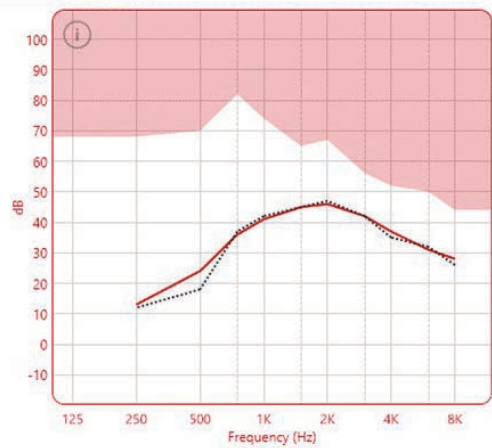
Hard Peak Clipping



Compression Limiting

Soft Peak Clipping





Mute Mute

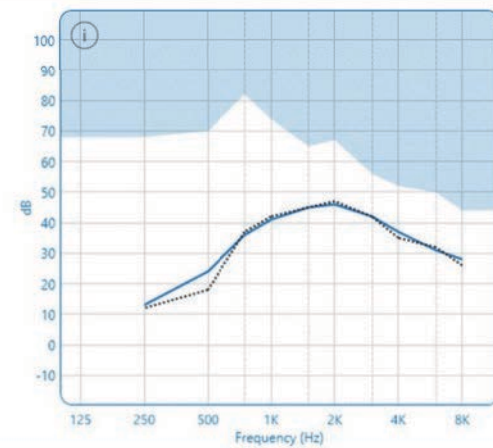
Display Options

Linked

Gain % 100%

Legend

- Above FOG



All-Around Hear in Noise

Program Options

Auto DFS

Noise Tracker II

Wind Guard

Impulse Noise Reduction

Expansion

Low Frequency Boost

Soft Peak Clipping

Hard Peak Clipping

Compression Limit Mode

Soft Peak Clipping

Hard Peak Clipping

Calibrate DFS

Save

Which compression limiting may be best for Annabelle?

Hard Peak Clipping

Soft Peak Clipping

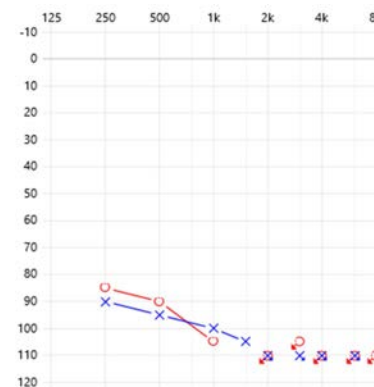
Annabelle, 45 yrs old

ReSound GN

Has worn hearing aids for 35 years. She has only had 3 pairs of hearing aids in that time.

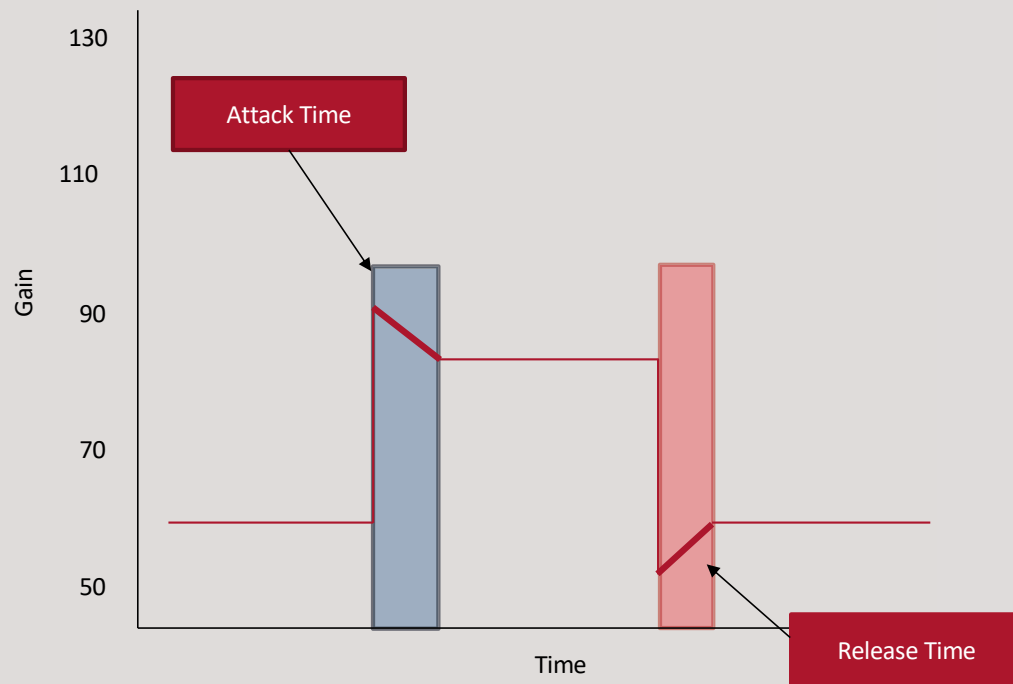
Annabelle is anxious about her new hearing aids and has asked if they will be as loud as her current and previous aids.

She has tried new technology in the past, but is disappointed when the volume isn't loud enough.



WRS R	40%
WRS L	32%
WRS Binaural	48%

Compression Time Constants



Time constants are the attack and release times of the compression system



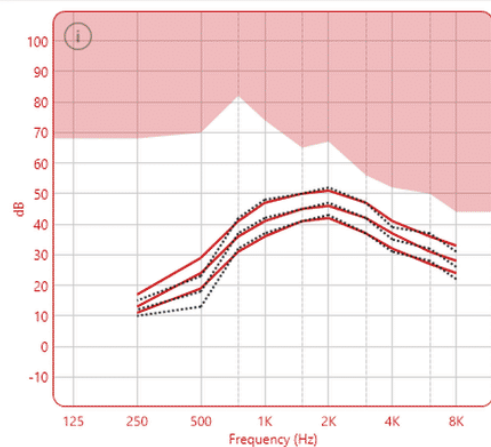
Attack time is the delay between the onset of a loud signal and the reduction of gain to target value



Release time is delay to return to the normal steady gain state



Faster attack & release times **prioritize speech clarity** in noisy environments, while **slower** attack & release times **prioritize comfort**



Mute Mute

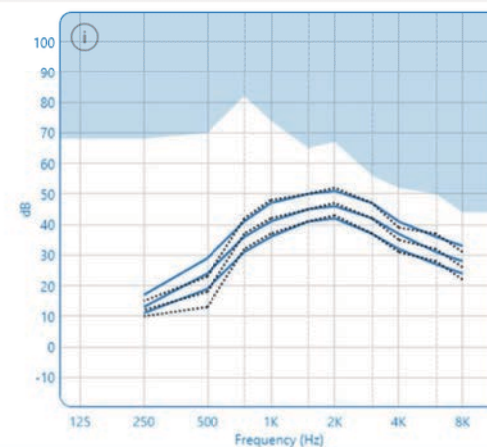
Display Options

Linked

Gain % 100%

Legend

Above FOG



360 All-Around

Directionality

360 All-Around

Very Low Low **Medium** High

Directional Mix

Very Low Low **Medium** High

Syllabic Fast Moderate Slow

Time Constants

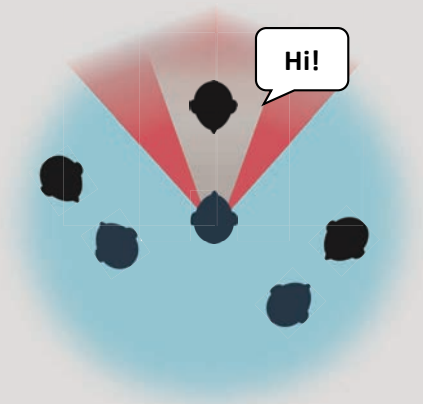
Syllabic Fast Moderate Slow

Off Very Mild (5K) Mild (4K) Moderate (3.5K) Strong (2.5K)

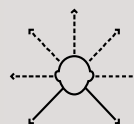
Sound Shaper

Off Very Mild (5K) Mild (4K) Moderate (3.5K) Strong (2.5K)

Directional Mix



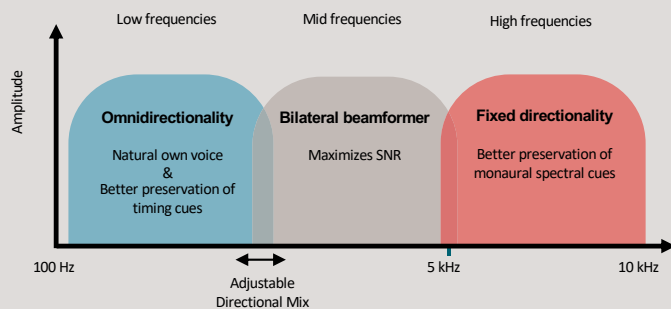
Preserves own voice perception, naturally, without additional processing



Maintains spatial awareness. Hear other conversations and details and in all directions.

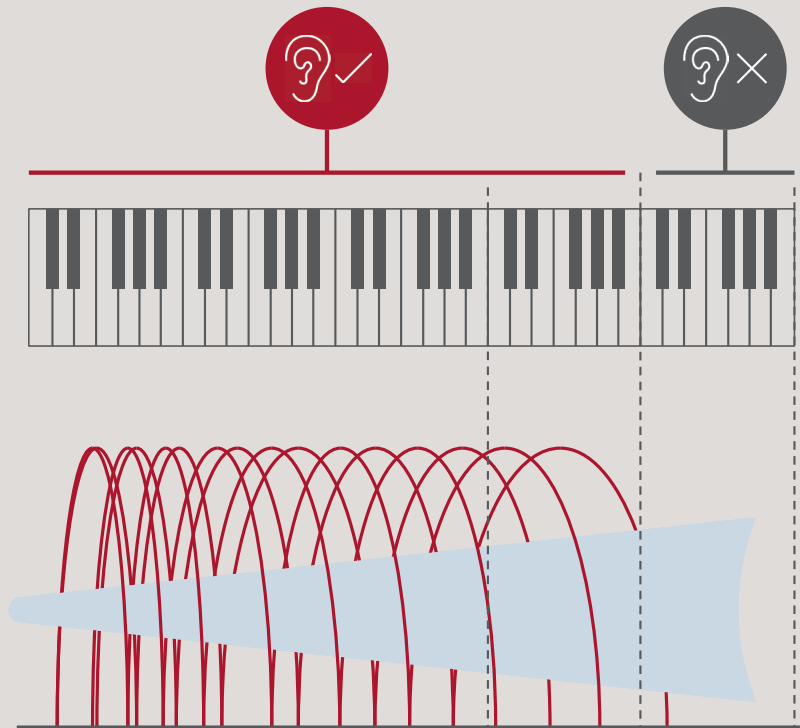


Improves 1:1 hearing in the toughest environments



Sound Shaper

ReSound GN



Allows audibility for high-frequency sounds by **compressing** them into an audible region



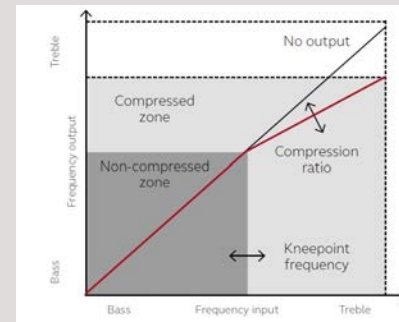
4 settings available

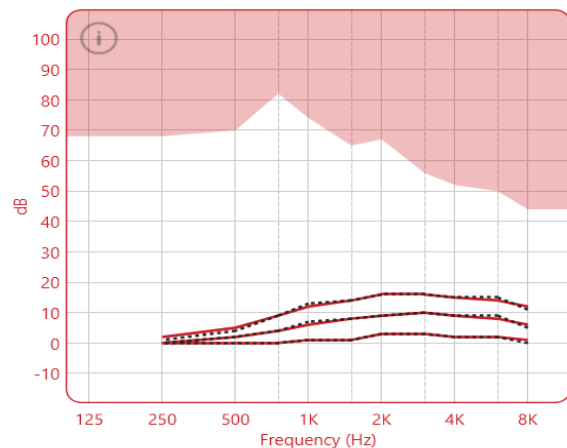
Very mild: 5000 Hz, 1:33 CR

Mild: 4000 Hz, 1:33 CR

Moderate: 3500 Hz, 2:1 CR

Strong: 2500 Hz, 2:1 CR





Mute Mute

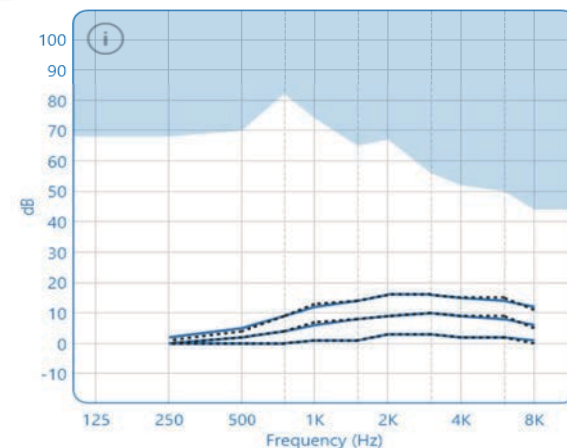
Display Options

Linked

Gain % 100%

Legend

Above FOG



Auto DFS

Noise Tracker II

Wind Guard

Impulse Noise Reduction

Expansion

Low Frequency Boost

Off Mild Moderate Considera... Strong Per Environ...

Off Mild Moderate Strong

Off Mild Moderate Strong

Off Mild Moderate Strong

Off Mild Moderate Strong

Off Mild Moderate Strong

Calibrate DFS

Save

Low Frequency Boost

Value	250 Hz	500 Hz	750 Hz	1 kHz
	0 dB	0 dB	0dB	0dB
Mild	3 dB	6 dB	3dB	1 dB
Moderate	6 dB	9 dB	5 dB	2 dB
Strong	9 dB	12 dB	8 dB	3 dB

- Low frequency boost adds low frequency offsets to the fitting

Your patient has a steeply sloping hearing loss and reports a distorted sound quality for some speech sounds.

**Change to
Linear
compression**

**Increase DFS
Ultra III**

**Consider
activating Sound
Shaper**

**Increase Time
Constants**

Your patient is asking for more sound, more volume and you have maxed out MPO and gain. He is willing to deal with a little bit of feedback periodically for more volume.

ReSound GN

**Turn off DFS
Ultra III**

**Turn off
Feedback Guard**

**Activate Sound
Shaper**

**Decrease Time
Constants**

Your patient is the last hold out in analog devices. You've tried to update him to new technology but he returns the devices complaining of clarity and a mushy sound quality

ReSound GN

**Change to
Linear
compression**

**Increase DFS
Ultra III**

**Consider
activating Sound
Shaper**

**Increase Time
Constants**

The patient is looking for more perception of volume and a stronger sound quality. They have reported sounds are “thin.”

ReSound GN

**Decrease Time
Constants**

**Increase Low
Frequency Boost**

**Consider
activating Sound
Shaper**

Increase MPO

Q&A

ReSound GN

