

Grand Rounds by ReSound: A Guide to Improved Hearing Aid Outcomes in Complex Cases

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Learning Outcomes

After this course, participants will be able to modify hearing aid programming for severe and steeply sloping hearing losses.

After this course, participants will be able to propose alternative programming options for reverse slope hearing loss.

After this course, participants will be able to manipulate hearing aid programming for musicians.

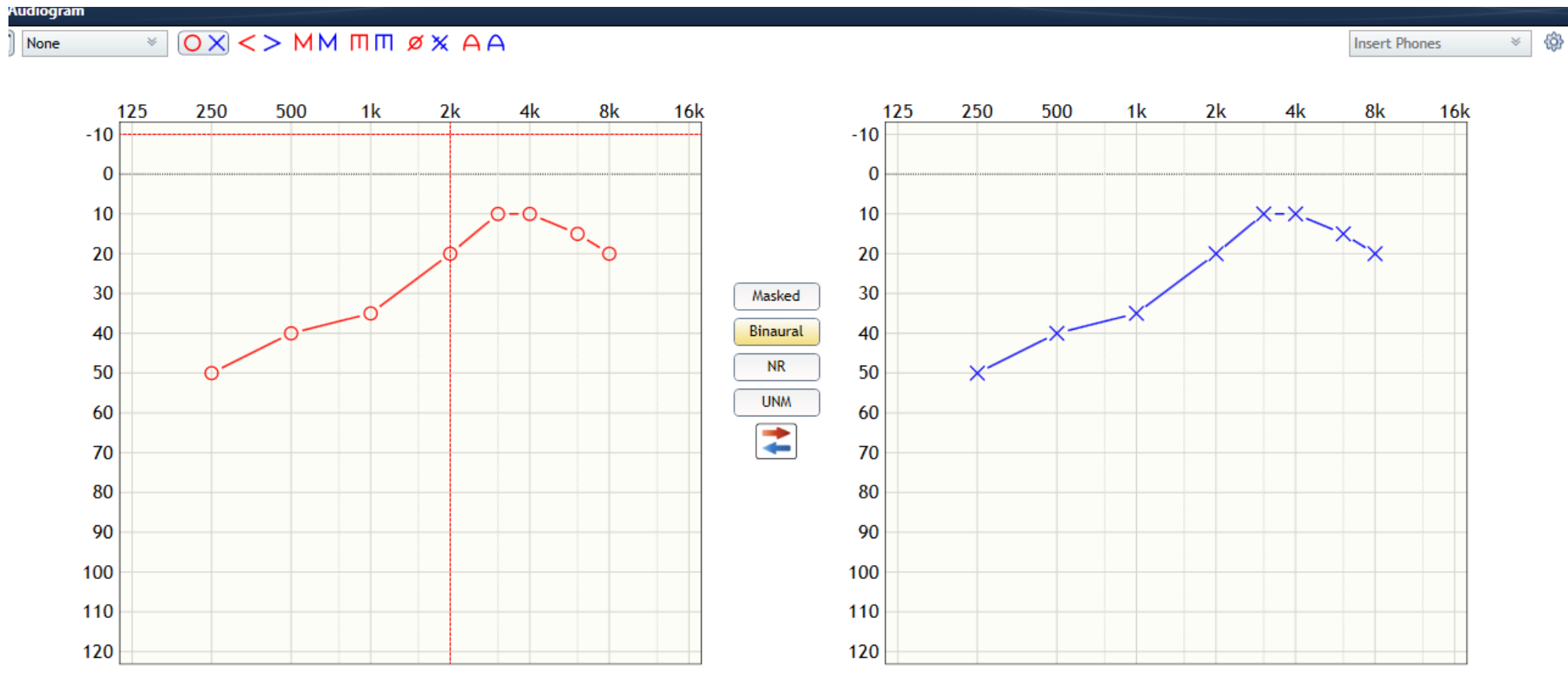


Risks/Benefits

- 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.



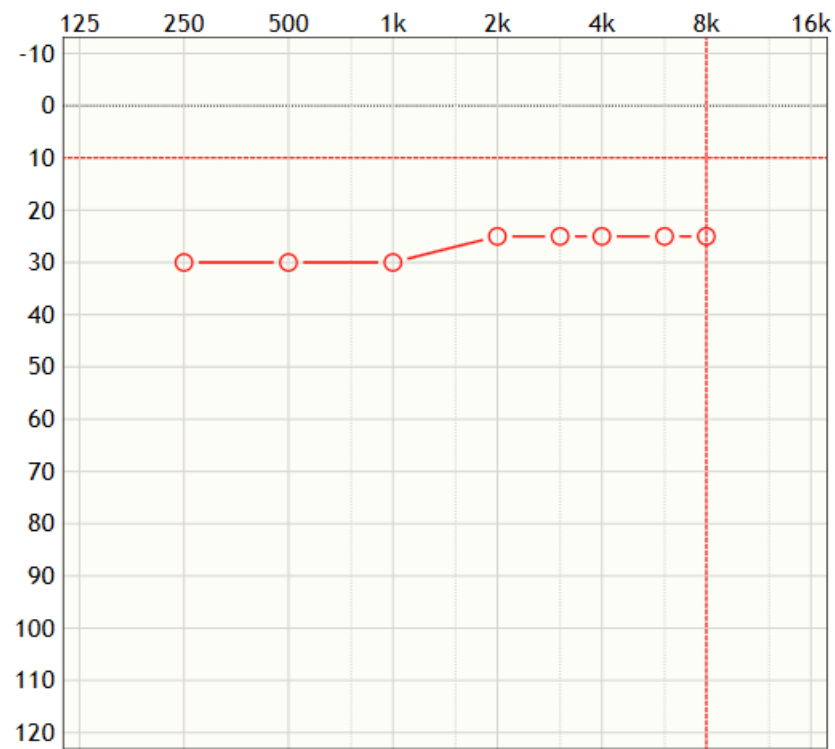
What to do with those reverse slope cases...



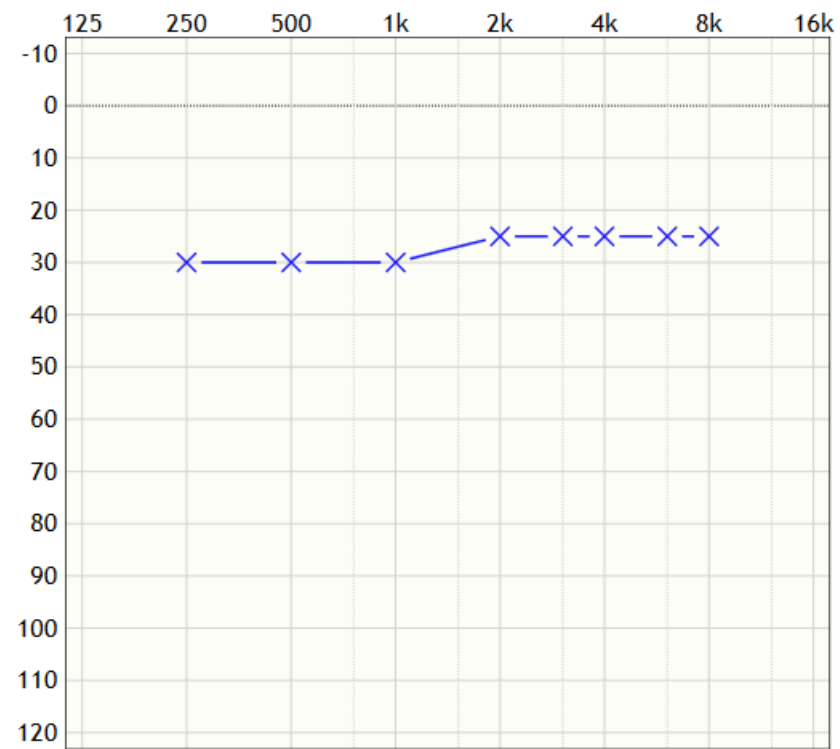
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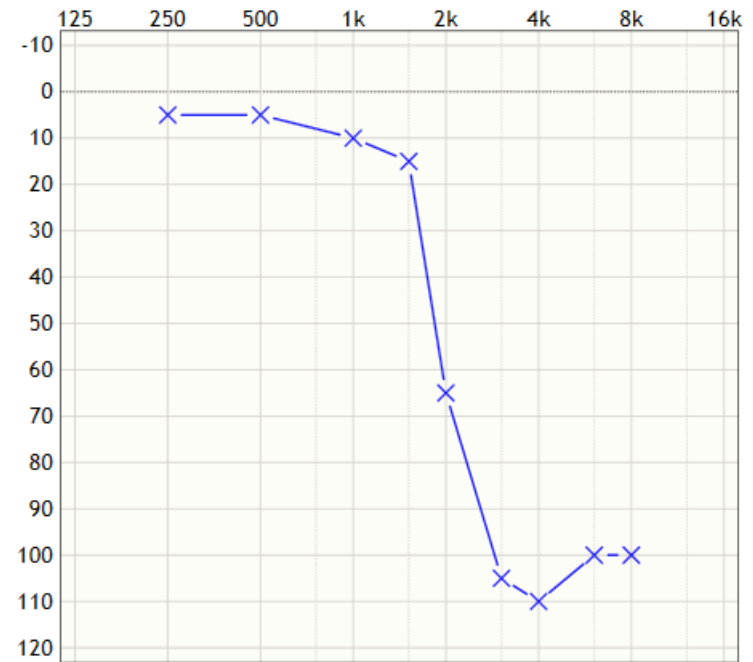
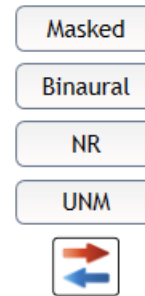
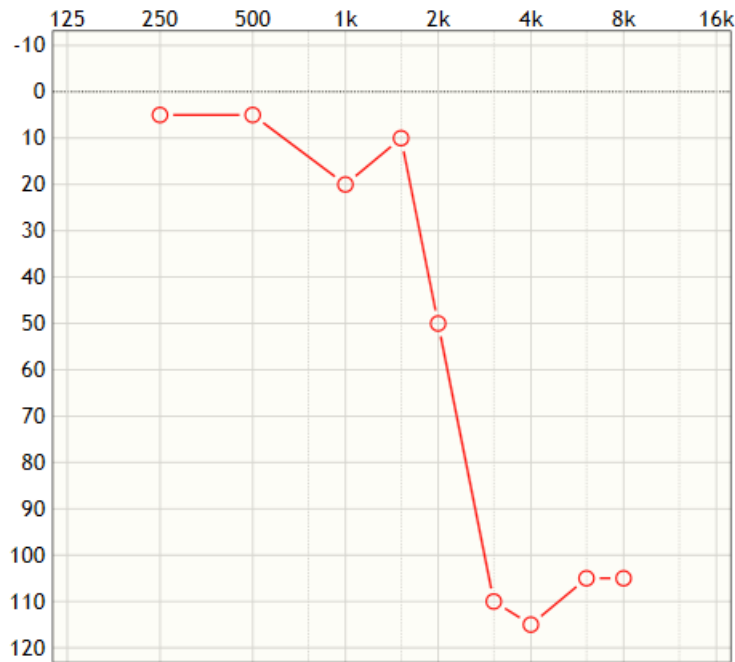
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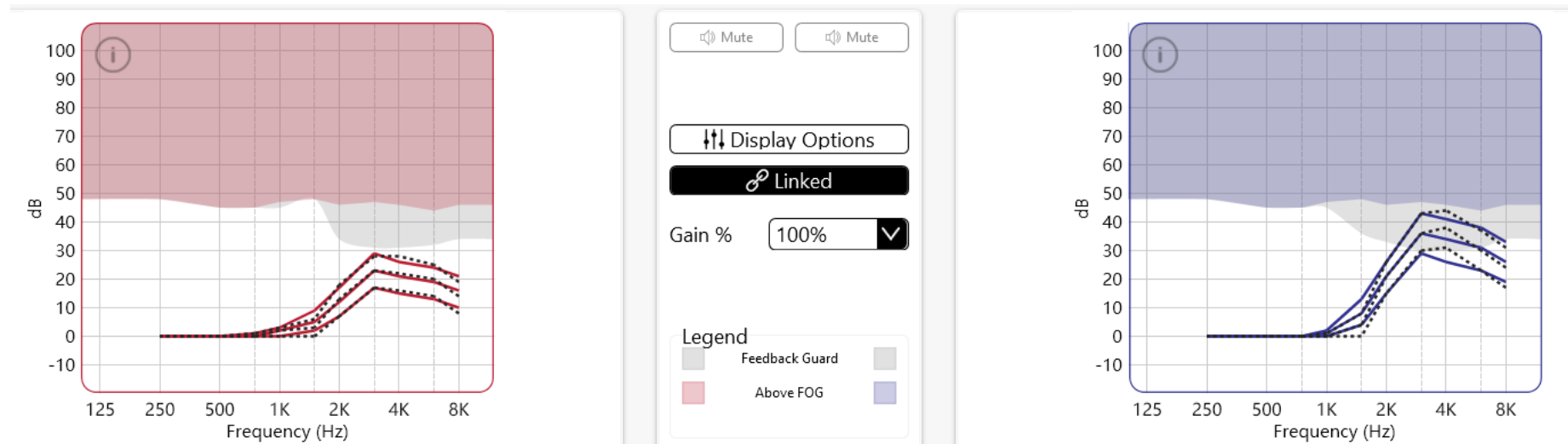


Masked
Binaural
NR
UNM



What to do with those steeply sloping losses...

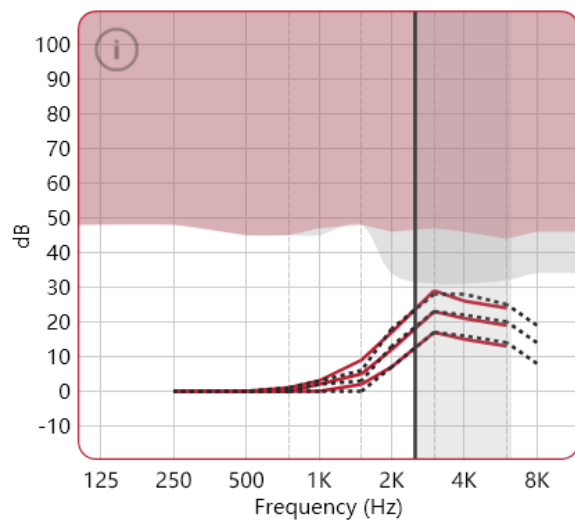




Sound shaper = Frequency Compression

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

Speech Comfort Tinnitus Sound Generator CROS



Mute Mute

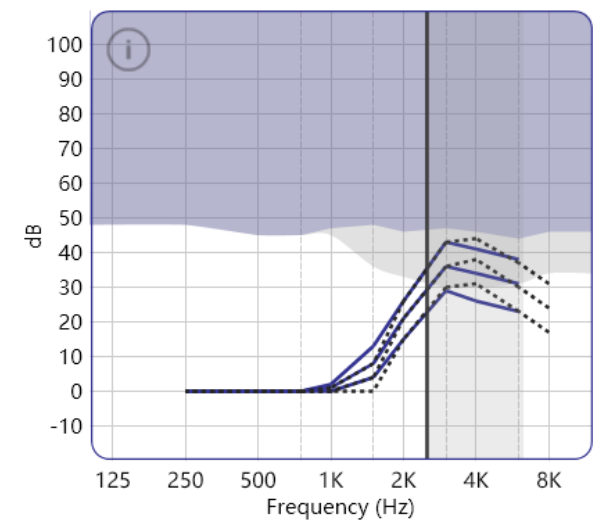
Display Options

Linked

Gain % 100%

Legend

- Feedback Guard
- Above FOG

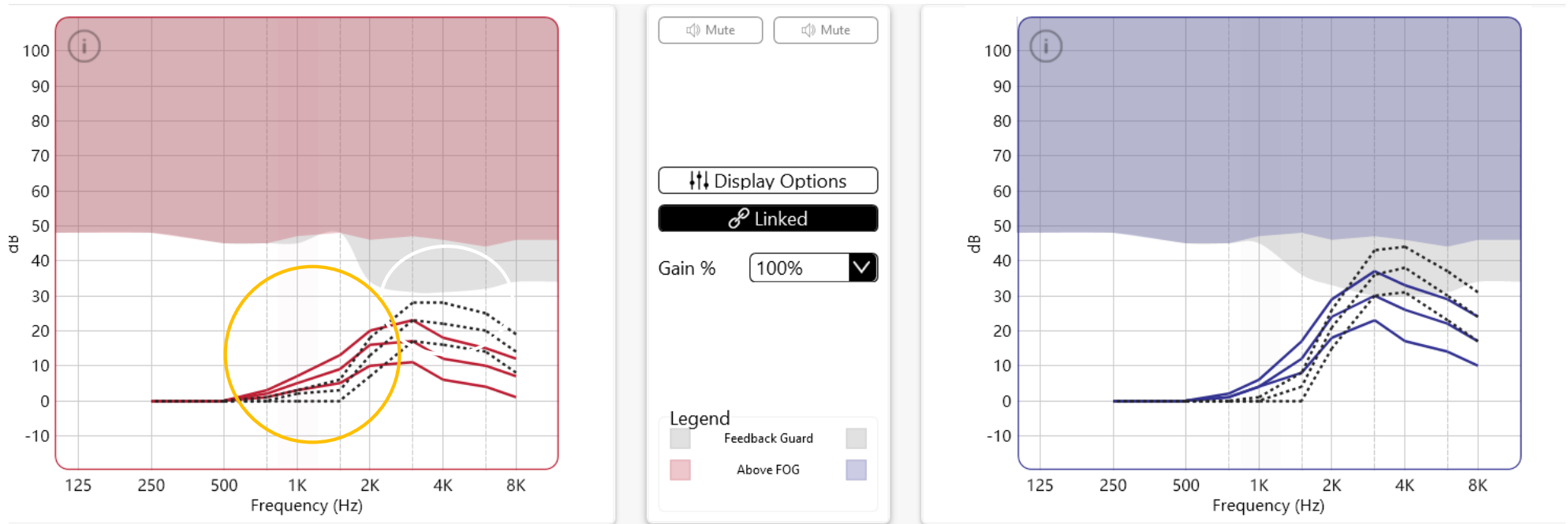


Off Very Mild (5K) Mild (4K) **Moderate (3.5K)** Strong (2.5K)

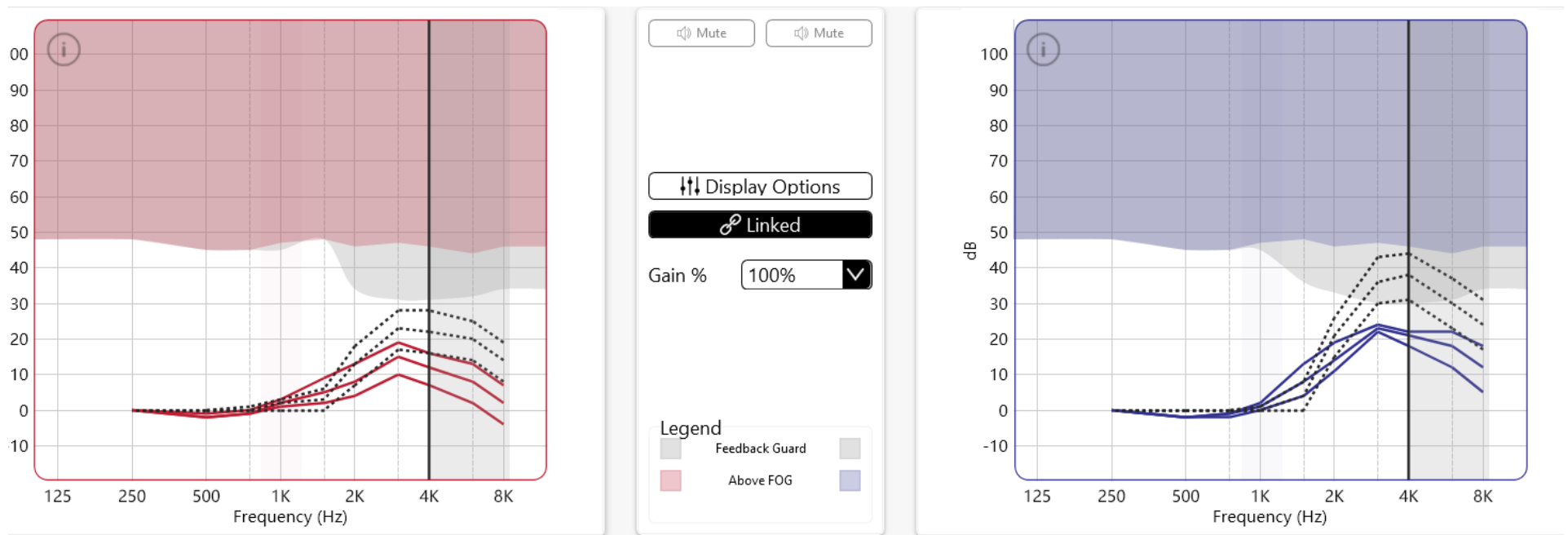
Sound Shaper ⓘ

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

Turn down the highs to achieve comfort (if need be),
but try and provide more gain in the mids to
compensate



Maybe a little of both?



Why is programming different for musicians?

- Speech understanding is the main goal of HAs
- WDRC, noise processing, DFS, and directional microphones distort music, leading to:
 - Poor pitch discrimination
 - Poor melodic intonation (distortion)
 - Poor instrument identification (timbre)
- Music has a greater dynamic range than speech and easily gets over 100 dB SPL
- There is no standard protocol for optimizing music appreciation in HAs
- Few patients ask for help, and often the ones that ask are told nothing can be done

Instrument consideration:

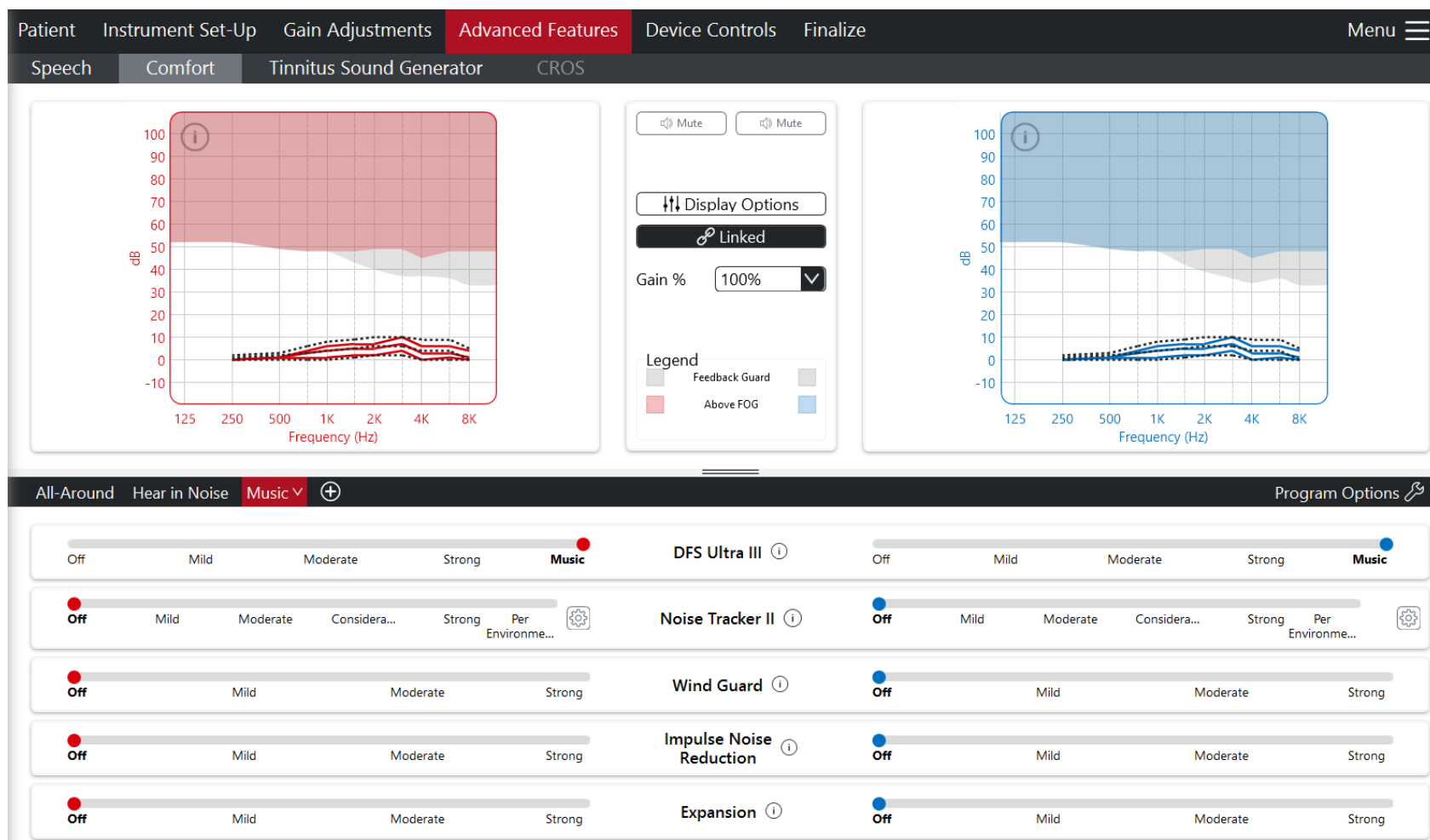
- Rhythm instruments (drums):
Provide more LF gain
- Guitar: Looking for edgier sound, more HF gain
- Brass/ Woodwinds/ Keys:
Looking for edgier sound, more HF gain

Testing considerations:

- Test ultra high freqs to check for harmonics
- Test MCLs and UCLs at each frequency



Advanced Features in Music program



Flatter frequency response, higher MPO



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
Feedback Guard
Above FOG

All-Around
Hear in Noise
Music
+

Program Options

All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
50	0	1	4	6	7	7	10	6	6	4
65	0	1	3	4	5	5	7	3	3	1
80	0	1	1	1	2	2	4	0	1	0
CR	1	1	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.1
MPO	97	101	102	102	106	108	108	109	108	109

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1

2

3

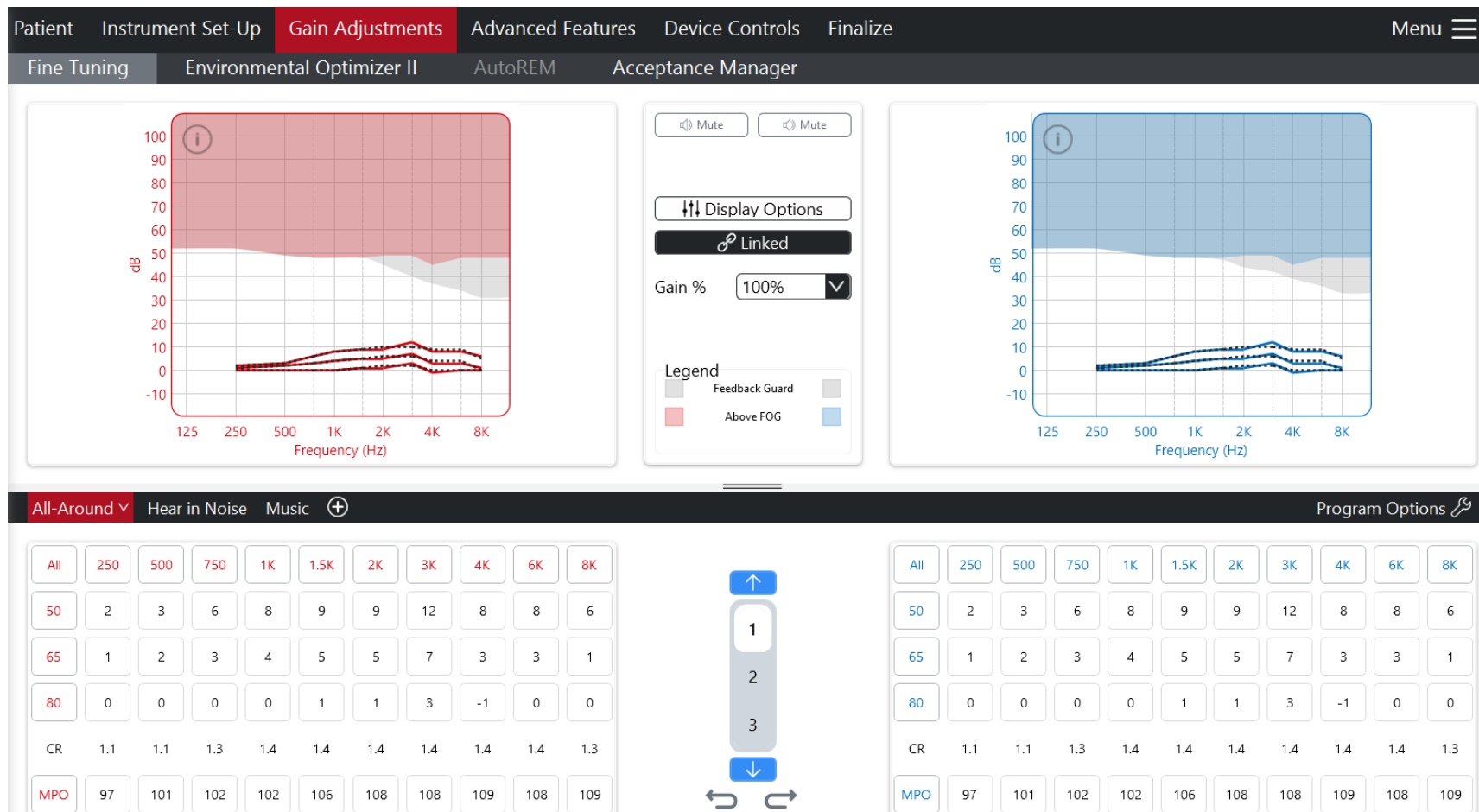
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Less Compression



Less Compression

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

Fine Tuning
Environmental Optimizer II
AutoREM
Acceptance Manager

Mute
Mute
Display Options
Linked
Gain % 100%
Legend: Feedback Guard (grey), Above FOG (red)

All-Around
Hear in Noise
Music
+

Program Options

All	250	500	750	1K	1.5K	2K	3K	4K	6K	8K
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1
2
3

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Other considerations...

Listen to your patient! We don't always know better!

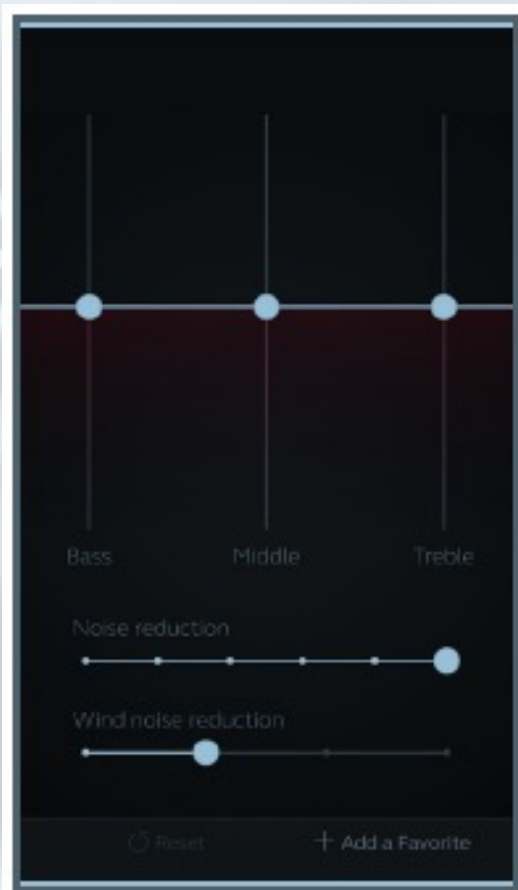
No frequency compression

Refer to audiologists who are experienced fitting musicians

ReSound GN



Suggestions for ReSound Smart 3D app use



- Use Music program for streaming
- Consider increasing streaming bass boost
- Use bass/mid/treble to give patient ownership of finding what sounds best
- Frequency cutoffs for bass/mid/treble
 - Bass: 125-1000 Hz
 - Mid: 1000-3000 Hz
 - Treble: 3000-9500 Hz

Thank you!