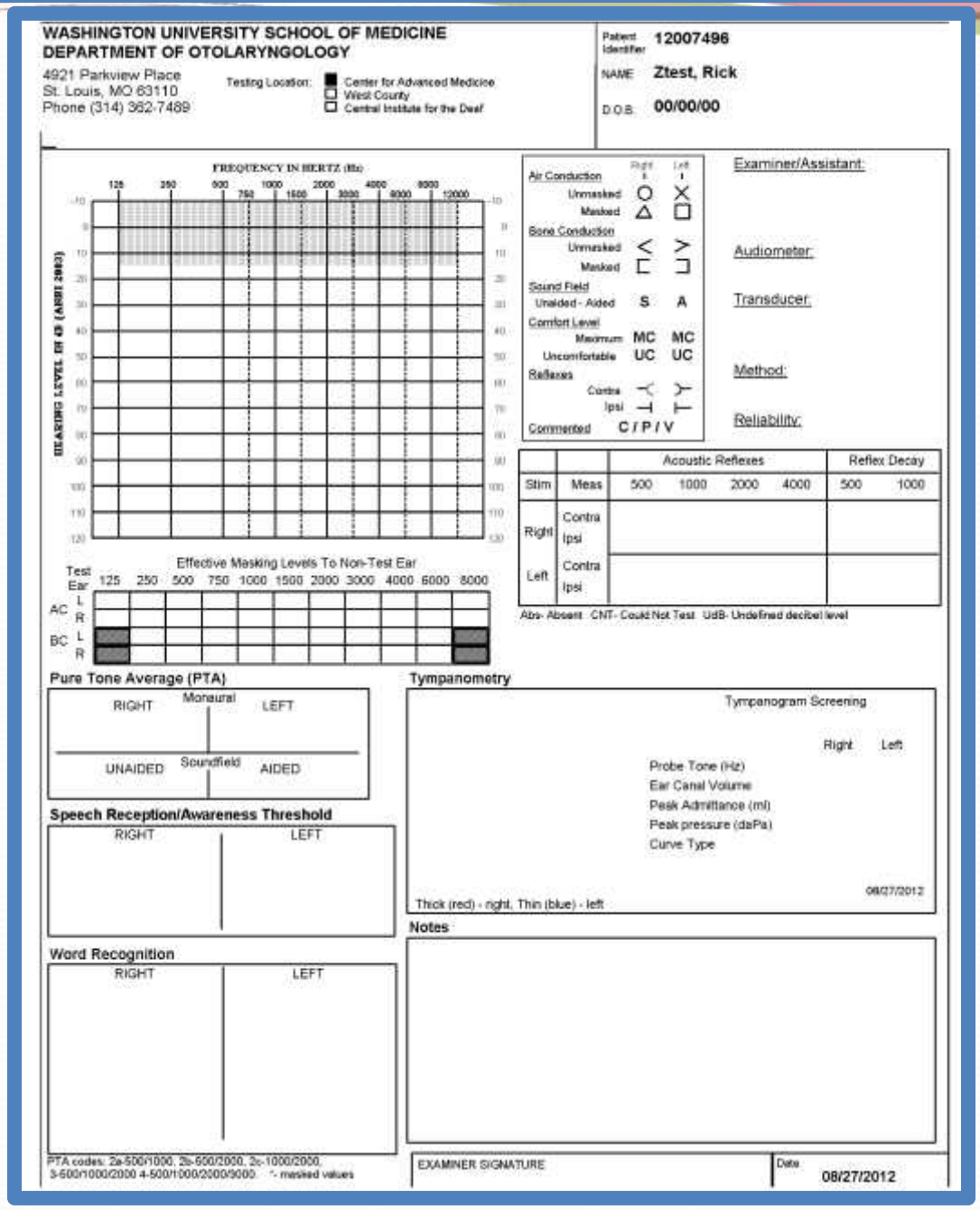
Counseling Patients on Fitting Options

Michael Valente


COUNSELING

Review the Audiogram

Computerized Audiogram Using AudBase into EMR



WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
DEPARTMENT OF OTOLARYNGOLOGY

4921 Parkview Place
St. Louis, MO 63110
Phone (314) 362-7489

Testing Location: ■ Center for Advanced Medicine ☐ West County ☐ Central Institute for the Deaf

Patient Identifier 12007496
NAME Ztest, Rick
D.O.B. 00/00/00

FREQUENCY IN HERTZ (Hz)
125 250 500 750 1000 1500 2000 3000 4000 6000 8000
HEARING LEVEL IN dB (ANSI 2003)

	Right	Left
Air Conduction		
Unmasked	O	X
Masked	△	□
Bone Conduction		
Unmasked	<	>
Masked	[	]
Sound Field		
Unaided - Aided	S	A
Comfort Level		
Maximum	MC	MC
Uncomfortable	UC	UC
Reflexes		
Contra	⊀	⊁
Ipsi	⊣	⊢
Commented	C / P / V	

Examiner/Assistant:
Audiometer:
Transducer:
Method:
Reliability:

Effective Masking Levels To Non-Test Ear

Test Ear		125	250	500	750	1000	1500	2000	3000	4000	6000	8000
AC	L											
	R											
BC	L											
	R											

		Acoustic Reflexes				Reflex Decay	
Stim	Meas	500	1000	2000	4000	500	1000
Right	Contra						
	Ipsi						
Left	Contra						
	Ipsi						

Abs- Absent CNT- Could Not Test UdB- Undefined decibel level

Pure Tone Average (PTA)

RIGHT Monaural LEFT
UNAIDED Soundfield AIDED

Speech Reception/Awareness Threshold

RIGHT LEFT

Word Recognition

RIGHT LEFT

PTA codes: 2a-500/1000, 2b-500/2000, 2c-1000/2000,
3-500/1000/2000 4-500/1000/2000/3000 *- masked values

Tympanometry

Tympanogram Screening

Right Left
Probe Tone (Hz)
Ear Canal Volume
Peak Admittance (ml)
Peak pressure (daPa)
Curve Type

08/27/2012

Thick (red) - right, Thin (blue) - left

Notes

EXAMINER SIGNATURE

Date 08/27/2012

AUDIOLOGICAL RECORD

NAME Chuck Wagon

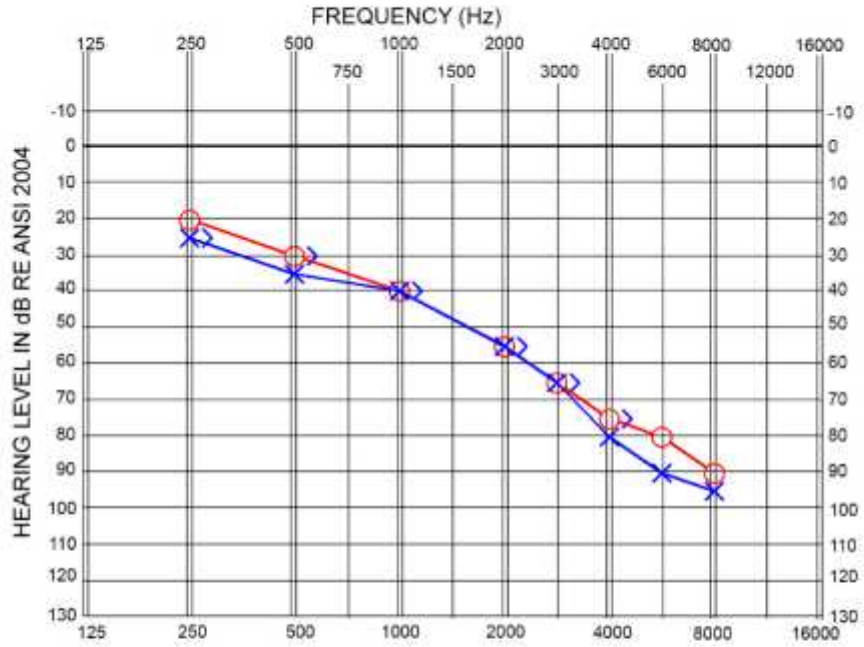
TEST DATE 10-14-2013

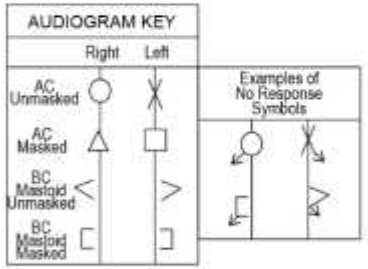
DOB 5-23-52 SEX Male

AUDIOLOGIST MV

AUDIOMETER GSI 61

EARPHONE Insert





Effective Masking Level in dB

RE in LE

AC/BC

AC/BC

SPEECH AUDIOMETRY

Speech tests via: (Circle) Recorded MLV

Word Recognition in % Correct

	PTA	SRT / SAT	EM	WRS	HL / EM		HL / EM
RT		40		92%	80 / 60		
LT		40		94%	80 / 60		

Word Recognition List R 1A R

NU-6 Female L 2A L

RELIABILITY: Good

VALIDITY: Acceptable

ACOUSTIC REFLEX THRESHOLDS

	Stim in	Meas in	500	1K	2K	4K	Decay 500	Decay 1K
IPSI (X)	RT	LT	80	85	85	95	--	--
	LT	RT	85	85	80	90	--	--
CONTRA (X)	RT	RT	85	85	85	90		
	LT	LT	80	90	90	90		

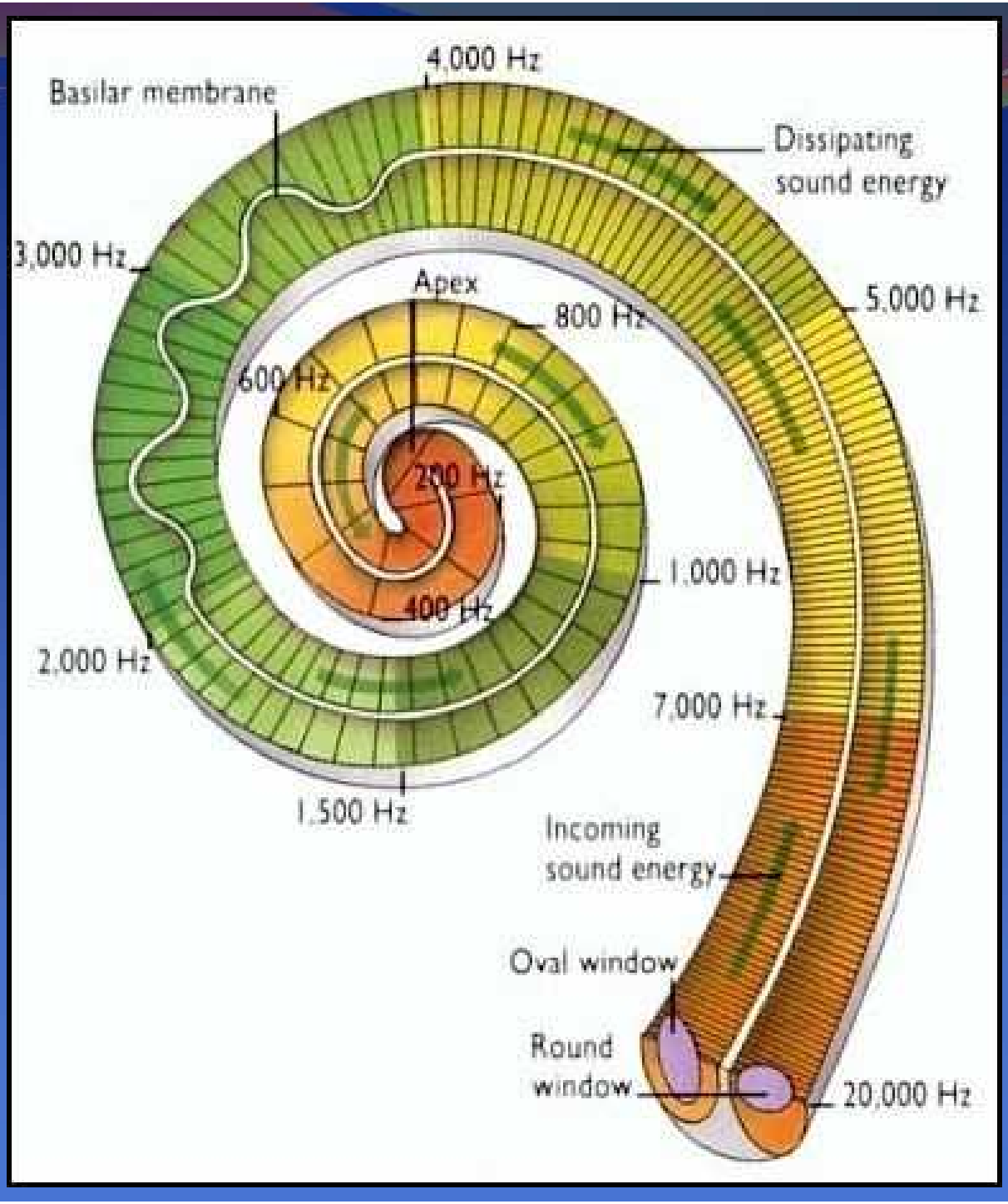
TYMPANOMETRY

Canal Volume (mL)	RT	LT
	1.2	1.4

Static Admittance (mL): Rt 0.8 Lt 1.0

Peak Pressure (daPa): Rt 0 Lt 0

Type: Rt A Lt A


4,000 Hz
Basilar membrane
Dissipating
sound energy
3,000 Hz
Apex
800 Hz
5,000 Hz
600 Hz
200 Hz
1,000 Hz
400 Hz
2,000 Hz
7,000 Hz
1,500 Hz
Incoming
sound energy
Oval window
Round
window
20,000 Hz

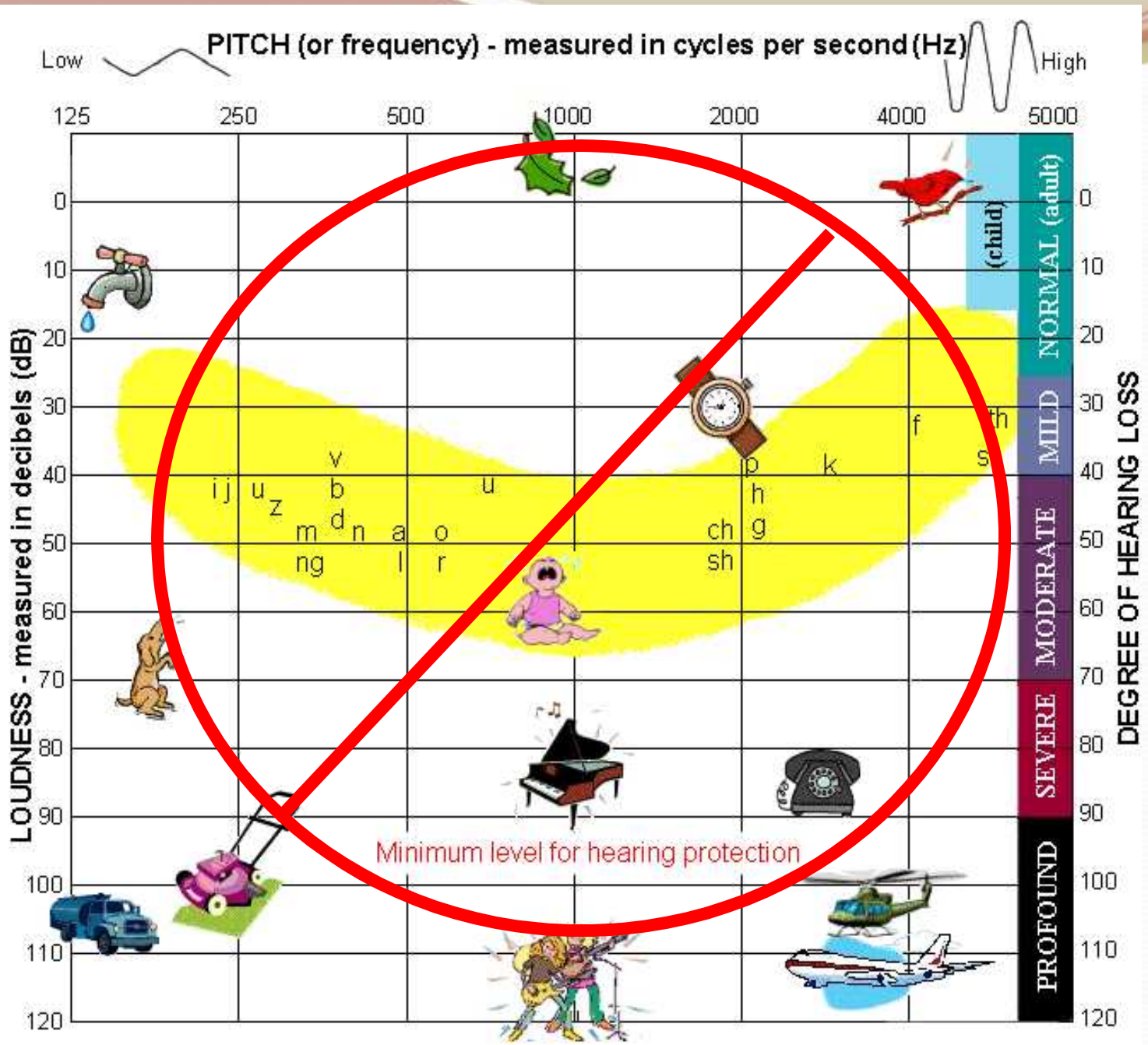
Using SII- Counsel on Impact of Hearing Loss on Speech Recognition

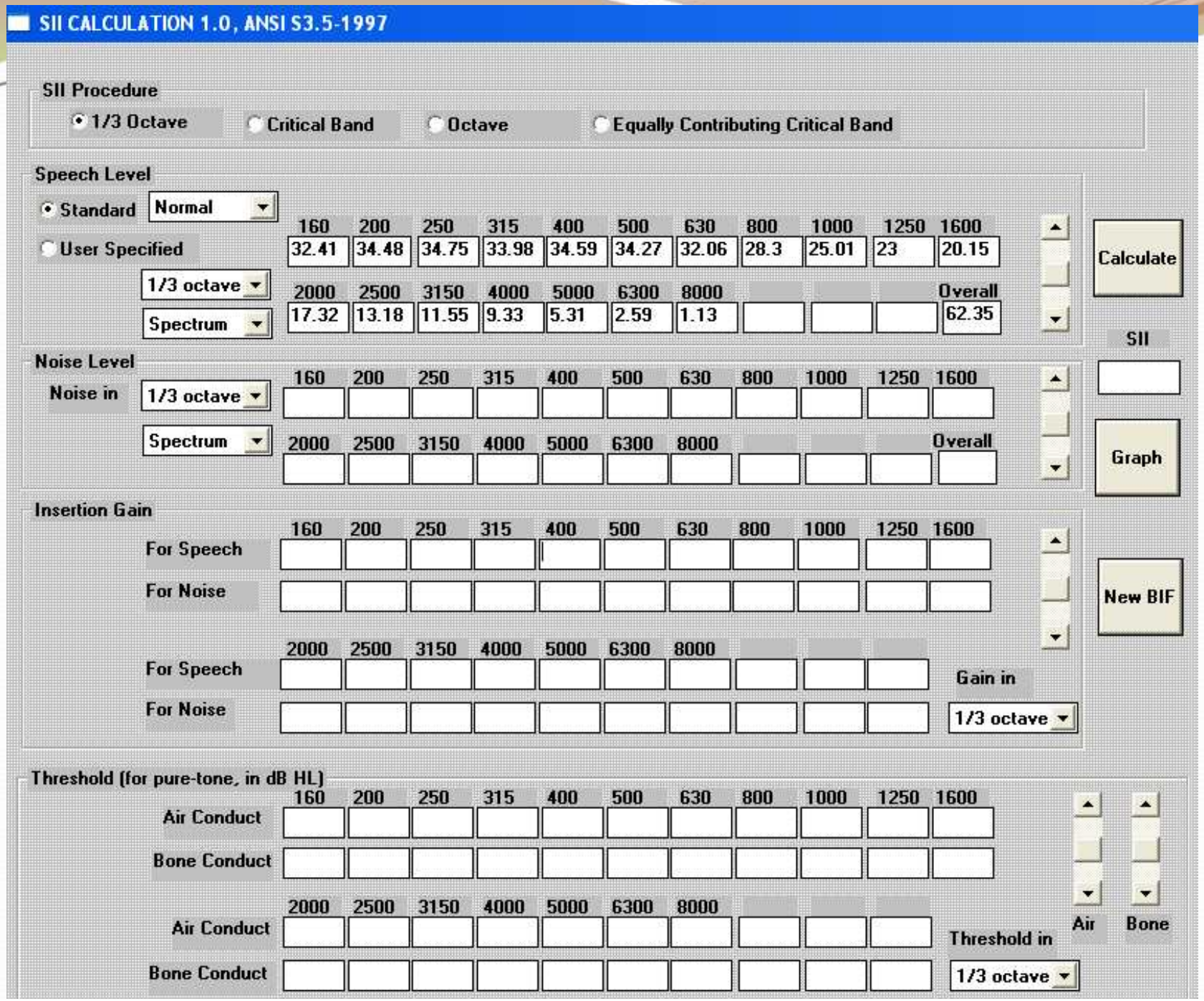
www.ssi.to

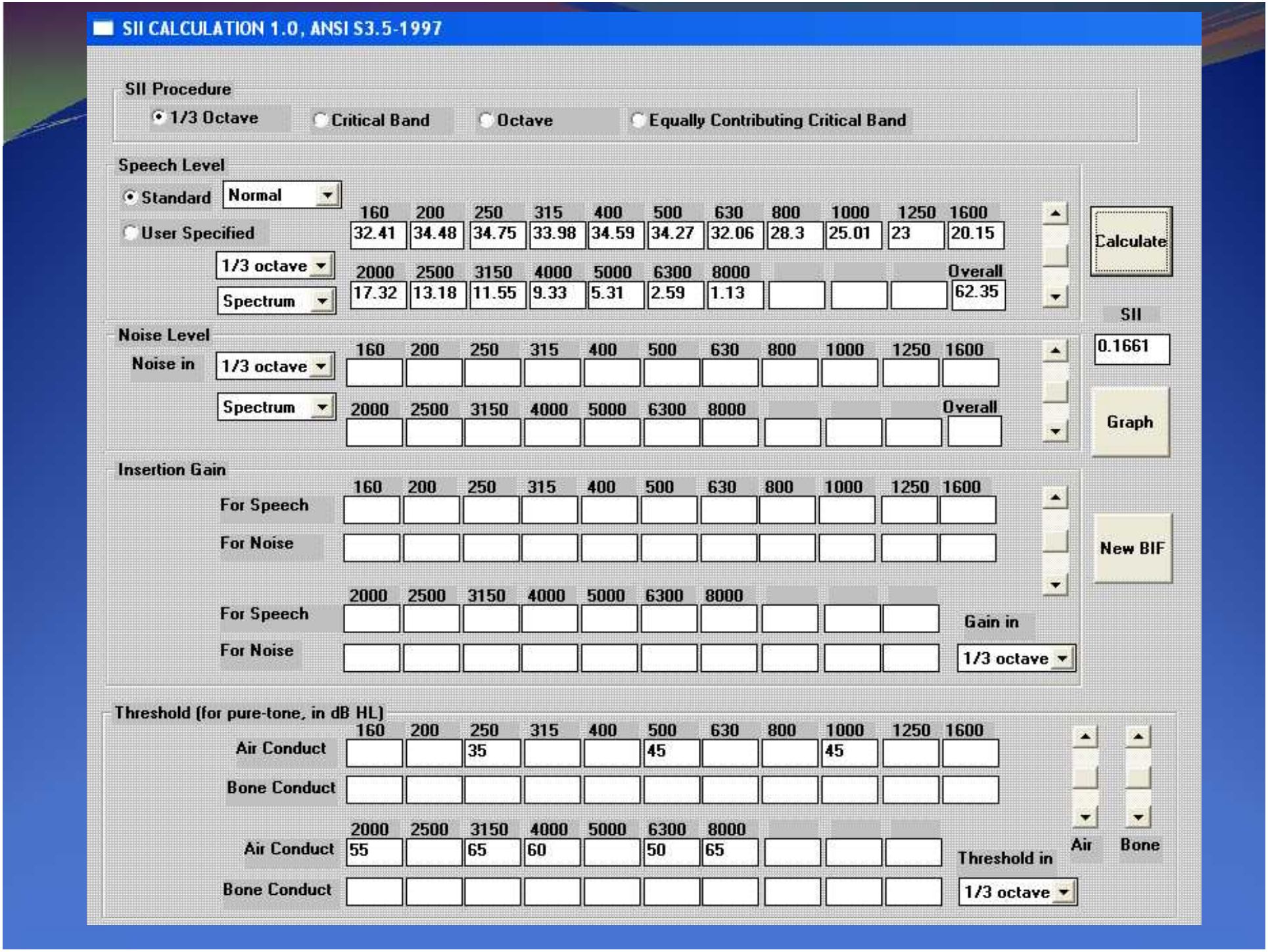
"Programs"

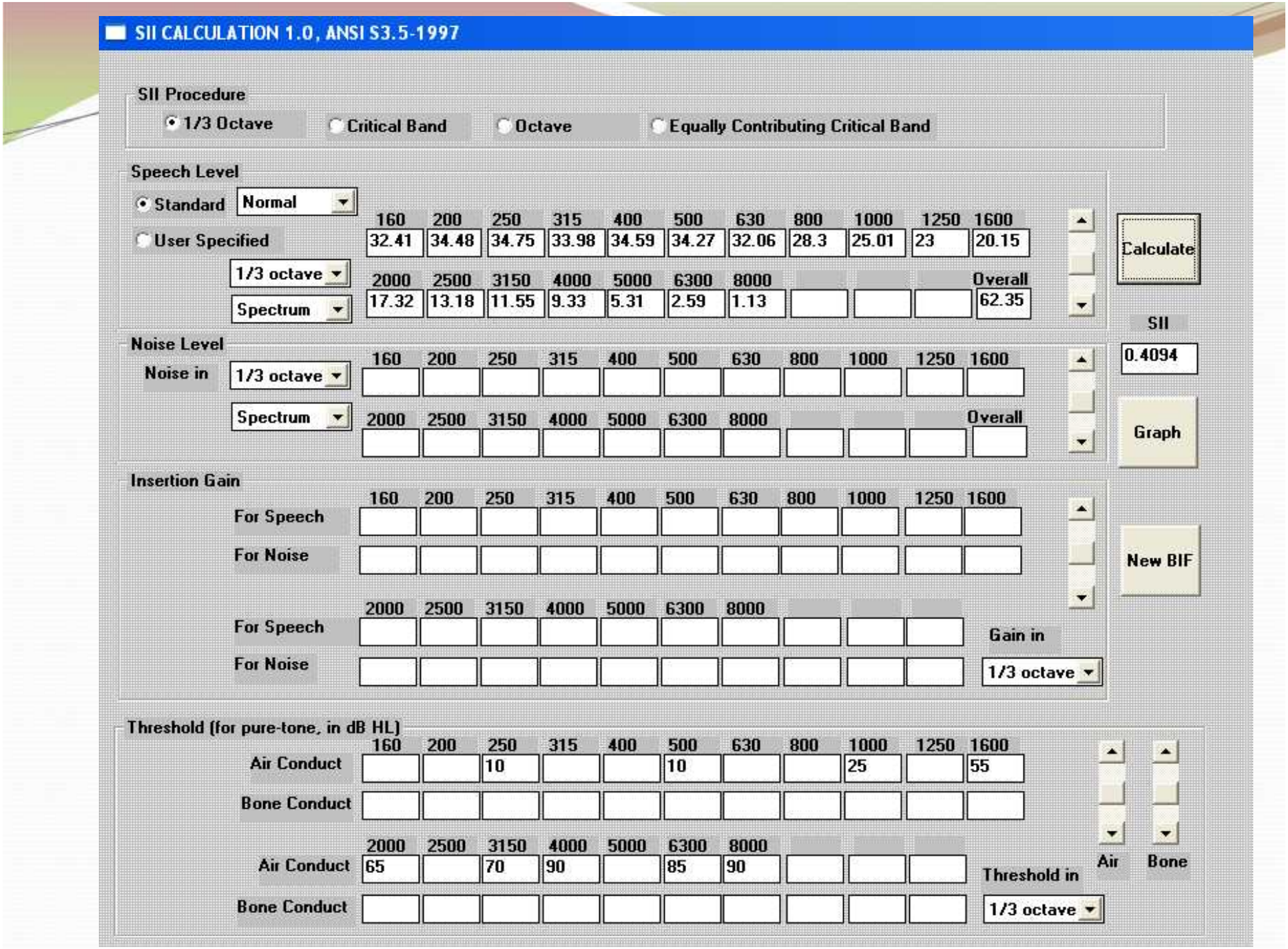
"Download"

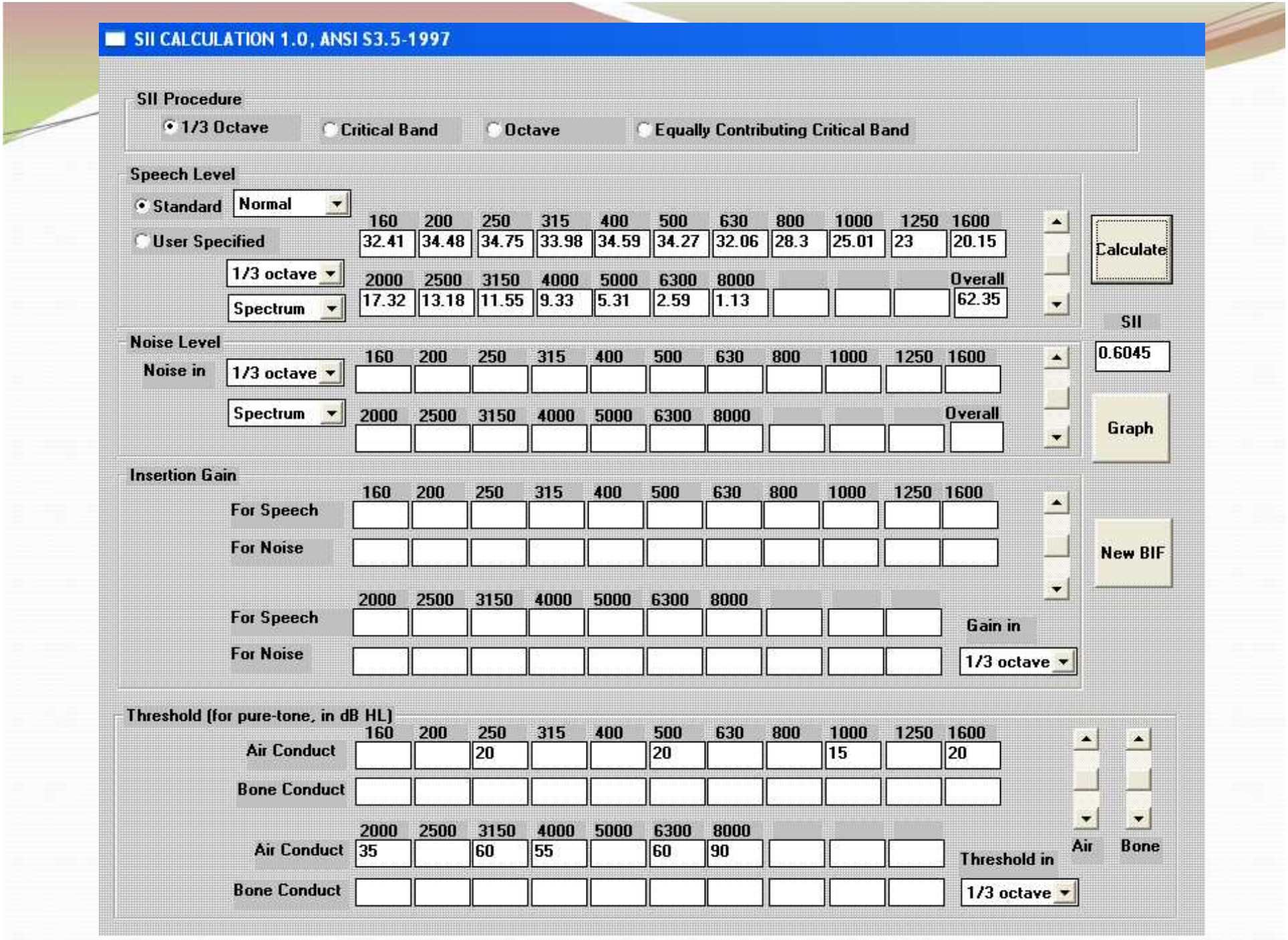
"Windows Executable Program"

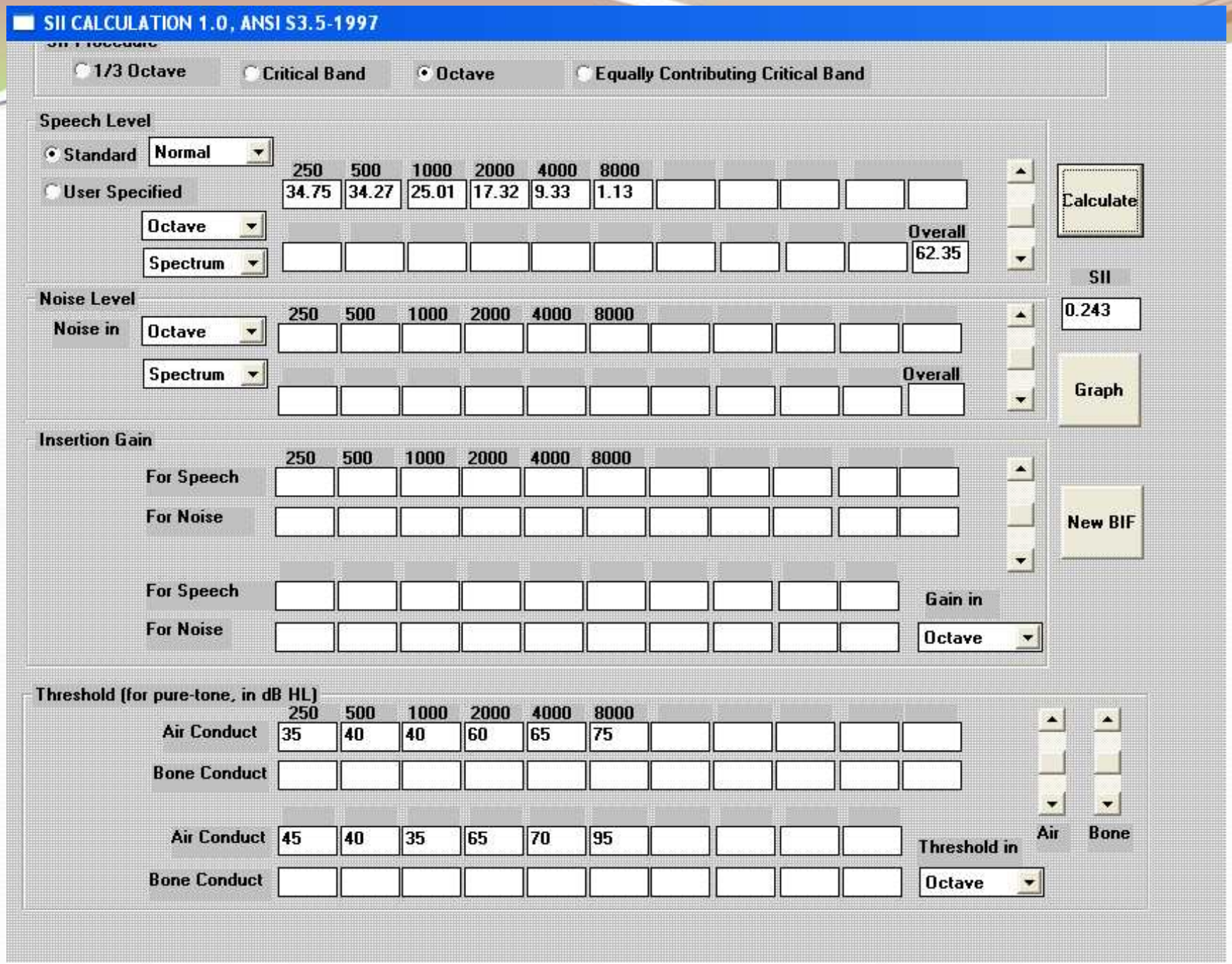

PITCH (or frequency) - measured in cycles per second (Hz)
Low
High
125
250
500
1000
2000
4000
5000
LOUDNESS - measured in decibels (dB)
DEGREE OF HEARING LOSS
0
10
20
30
40
50
60
70
80
90
100
110
120
NORMAL (adult)
(child)
MILD
MODERATE
SEVERE
PROFOUND
i j u z v b d m n ng a l o u p h k f th s ch g sh
Minimum level for hearing protection

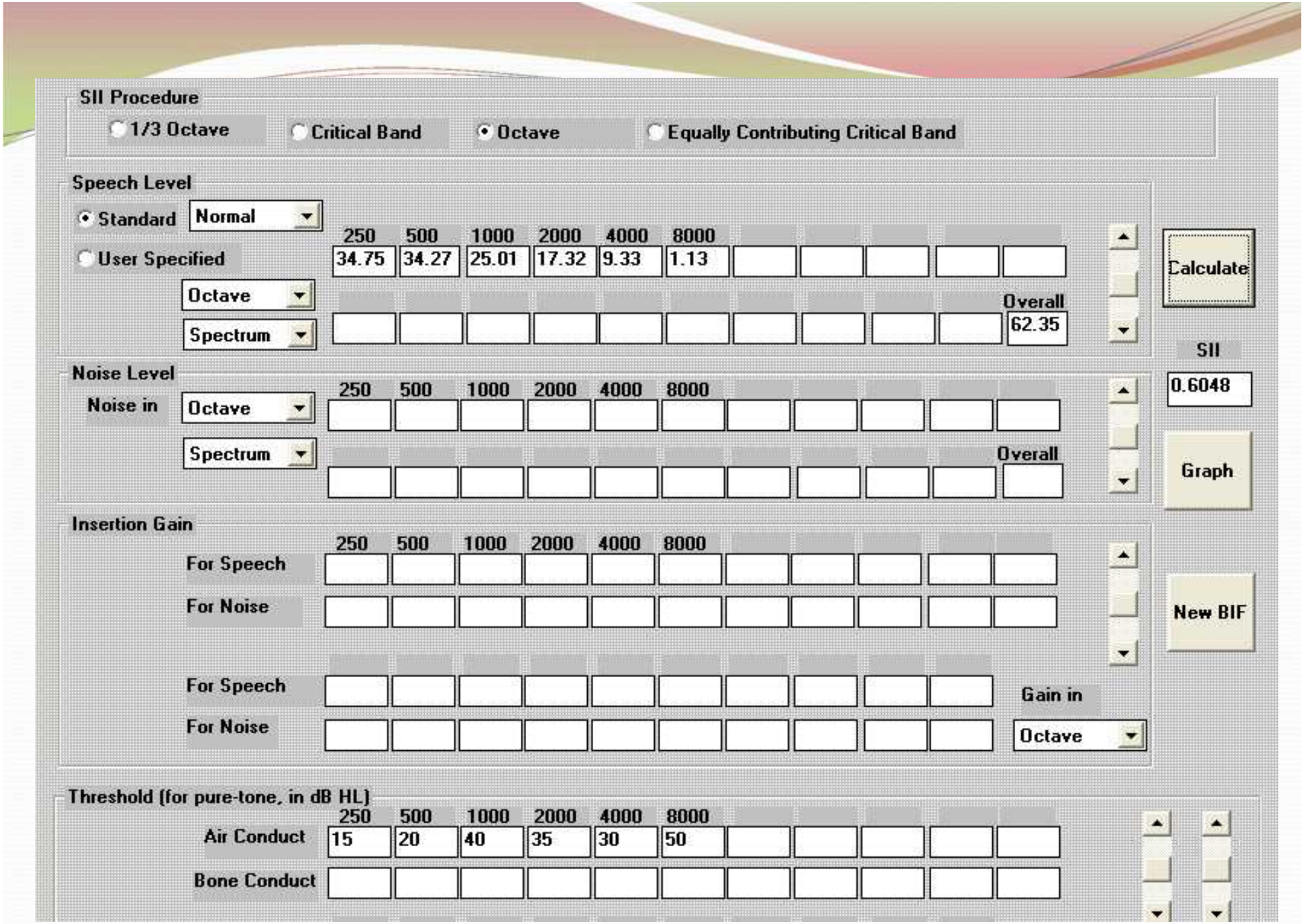

SII CALCULATION 1.0, ANSI S3.5-1997
SII Procedure
1/3 Octave
Critical Band
Octave
Equally Contributing Critical Band
Speech Level
Standard
Normal
User Specified
1/3 octave
Spectrum
160 200 250 315 400 500 630 800 1000 1250 1600
32.41 34.48 34.75 33.98 34.59 34.27 32.06 28.3 25.01 23 20.15
2000 2500 3150 4000 5000 6300 8000 Overall
17.32 13.18 11.55 9.33 5.31 2.59 1.13 62.35
Calculate
SII
Noise Level
Noise in
1/3 octave
Spectrum
160 200 250 315 400 500 630 800 1000 1250 1600
2000 2500 3150 4000 5000 6300 8000 Overall
Graph
Insertion Gain
For Speech
For Noise
160 200 250 315 400 500 630 800 1000 1250 1600
2000 2500 3150 4000 5000 6300 8000
Gain in
1/3 octave
New BIF
Threshold (for pure-tone, in dB HL)
Air Conduct
Bone Conduct
160 200 250 315 400 500 630 800 1000 1250 1600
2000 2500 3150 4000 5000 6300 8000
Threshold in
1/3 octave
Air
Bone

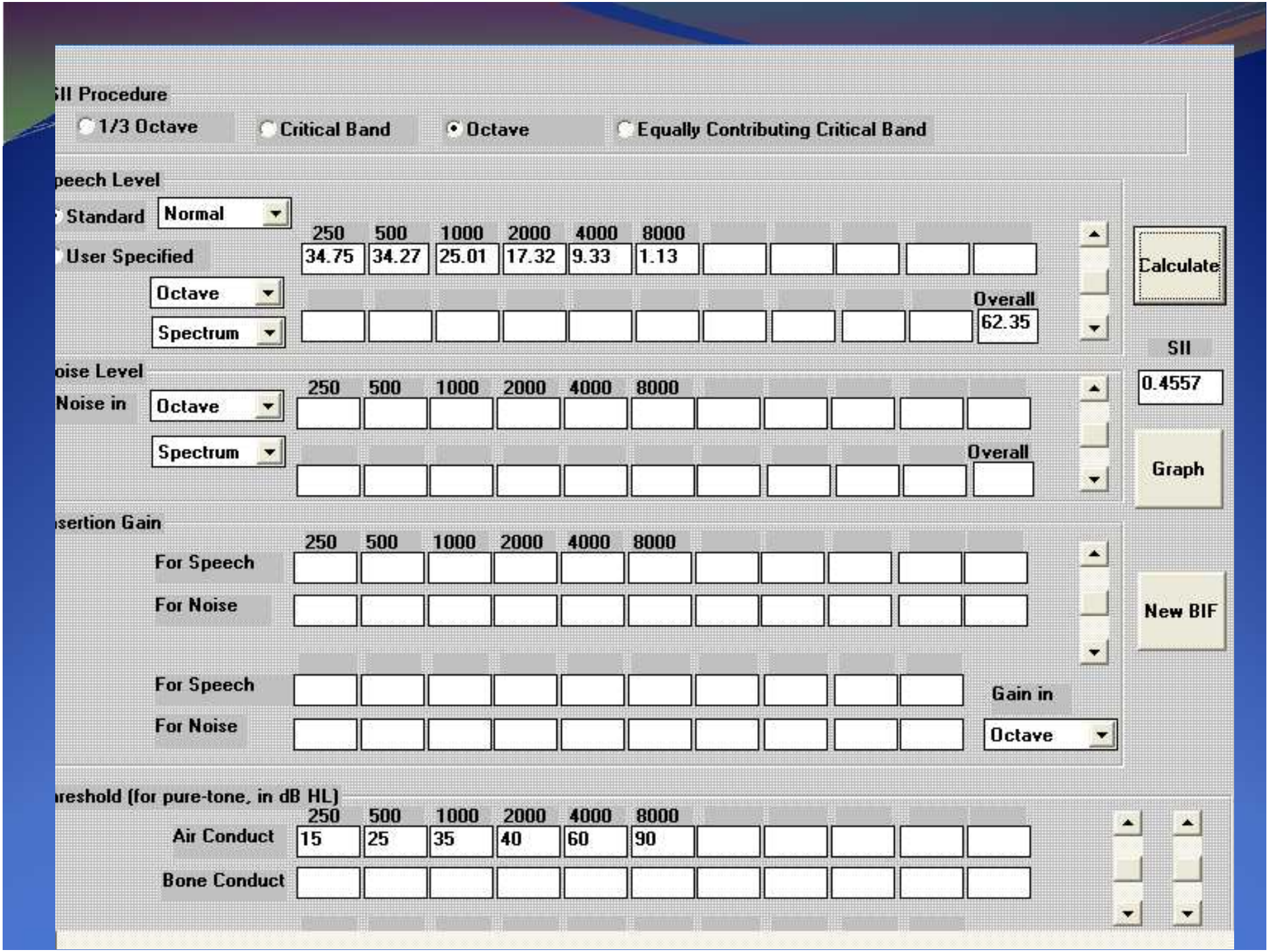

SII CALCULATION 1.0, ANSI S3.5-1997
SII Procedure
1/3 Octave
Critical Band
Octave
Equally Contributing Critical Band
Speech Level
Standard
Normal
User Specified
1/3 octave
Spectrum
160 200 250 315 400 500 630 800 1000 1250 1600
32.41 34.48 34.75 33.98 34.59 34.27 32.06 28.3 25.01 23 20.15
2000 2500 3150 4000 5000 6300 8000 Overall
17.32 13.18 11.55 9.33 5.31 2.59 1.13 62.35
Calculate
SII
0.1661
Noise Level
Noise in
1/3 octave
Spectrum
160 200 250 315 400 500 630 800 1000 1250 1600
2000 2500 3150 4000 5000 6300 8000 Overall
Graph
Insertion Gain
160 200 250 315 400 500 630 800 1000 1250 1600
For Speech
For Noise
New BIF
2000 2500 3150 4000 5000 6300 8000
For Speech
For Noise
Gain in
1/3 octave
Threshold (for pure-tone, in dB HL)
160 200 250 315 400 500 630 800 1000 1250 1600
Air Conduct
35
45
45
Bone Conduct
2000 2500 3150 4000 5000 6300 8000
Air Conduct
55 65 60 50 65
Bone Conduct
Threshold in
1/3 octave
Air
Bone

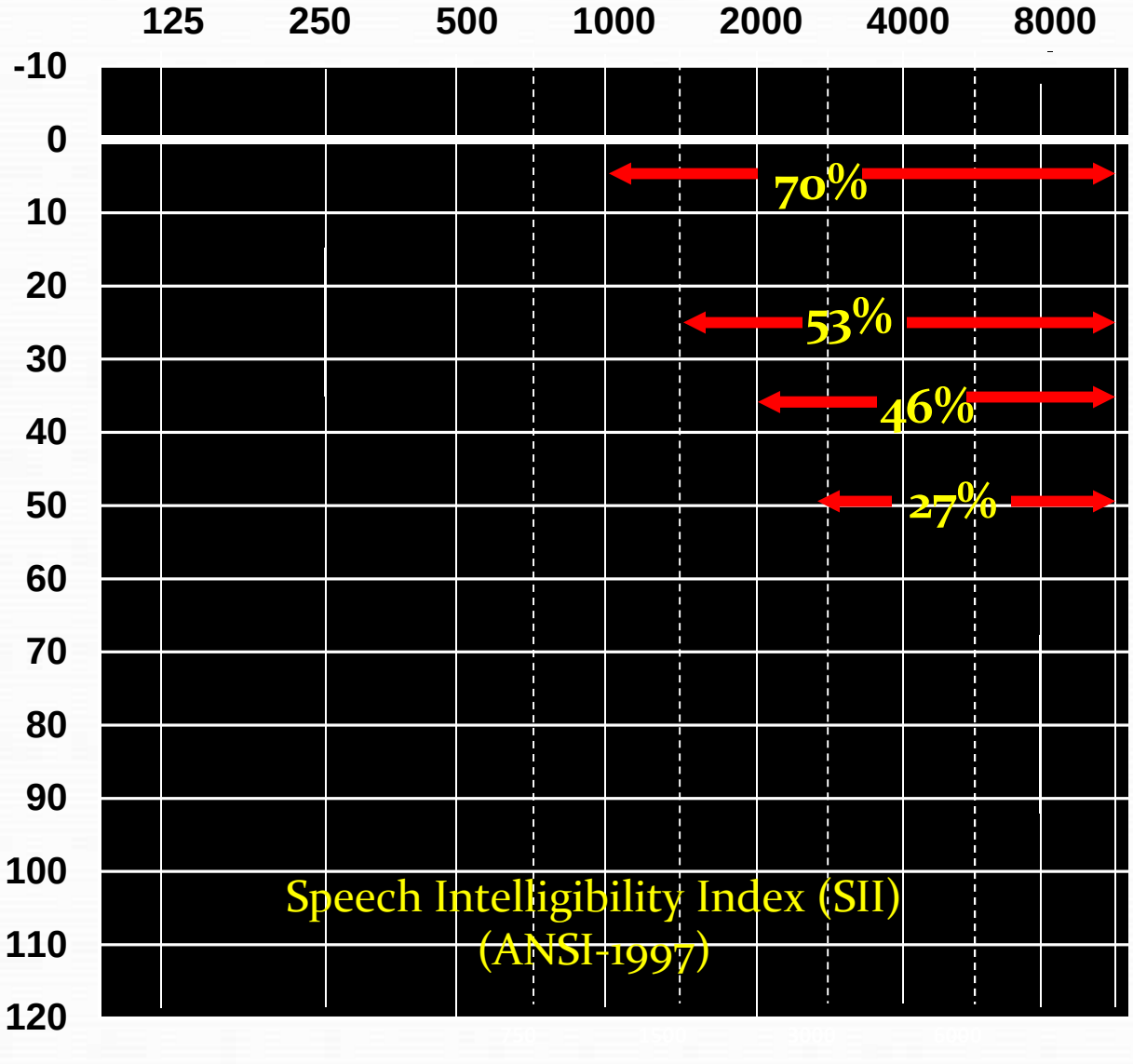

SII CALCULATION 1.0, ANSI S3.5-1997
SII Procedure
1/3 Octave
Critical Band
Octave
Equally Contributing Critical Band
Speech Level
Standard
Normal
User Specified
160 200 250 315 400 500 630 800 1000 1250 1600
32.41 34.48 34.75 33.98 34.59 34.27 32.06 28.3 25.01 23 20.15
1/3 octave
2000 2500 3150 4000 5000 6300 8000 Overall
17.32 13.18 11.55 9.33 5.31 2.59 1.13 62.35
Spectrum
Calculate
SII
0.4094
Noise Level
Noise in
1/3 octave
160 200 250 315 400 500 630 800 1000 1250 1600
Spectrum
2000 2500 3150 4000 5000 6300 8000 Overall
Graph
Insertion Gain
160 200 250 315 400 500 630 800 1000 1250 1600
For Speech
For Noise
New BIF
2000 2500 3150 4000 5000 6300 8000
For Speech
For Noise
Gain in
1/3 octave
Threshold (for pure-tone, in dB HL)
160 200 250 315 400 500 630 800 1000 1250 1600
Air Conduct
10 10 25 55
Bone Conduct
2000 2500 3150 4000 5000 6300 8000
Air Conduct
65 70 90 85 90
Bone Conduct
Threshold in
1/3 octave
Air
Bone

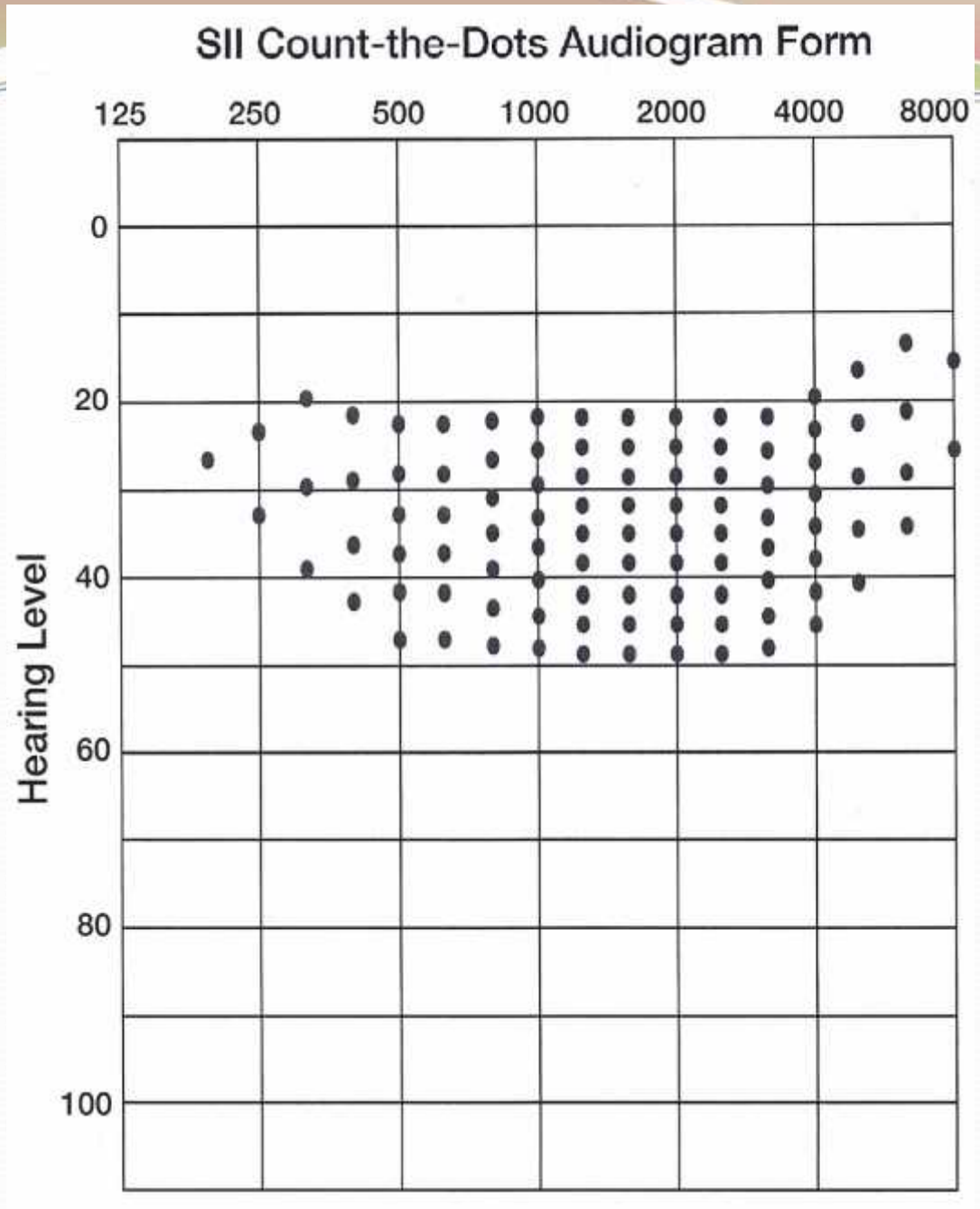

SII CALCULATION 1.0, ANSI S3.5-1997
SII Procedure
1/3 Octave
Critical Band
Octave
Equally Contributing Critical Band
Speech Level
Standard
Normal
User Specified
1/3 octave
Spectrum
160 200 250 315 400 500 630 800 1000 1250 1600
32.41 34.48 34.75 33.98 34.59 34.27 32.06 28.3 25.01 23 20.15
2000 2500 3150 4000 5000 6300 8000 Overall
17.32 13.18 11.55 9.33 5.31 2.59 1.13 62.35
Calculate
SII
0.6045
Graph
Noise Level
Noise in
1/3 octave
Spectrum
160 200 250 315 400 500 630 800 1000 1250 1600
2000 2500 3150 4000 5000 6300 8000 Overall
Insertion Gain
For Speech
For Noise
160 200 250 315 400 500 630 800 1000 1250 1600
2000 2500 3150 4000 5000 6300 8000
Gain in
1/3 octave
New BIF
Threshold (for pure-tone, in dB HL)
Air Conduct
Bone Conduct
160 200 250 315 400 500 630 800 1000 1250 1600
20 20 15 20
2000 2500 3150 4000 5000 6300 8000
35 60 55 60 90
Threshold in
1/3 octave
Air
Bone


SII CALCULATION 1.0, ANSI S3.5-1997
1/3 Octave
Critical Band
Octave
Equally Contributing Critical Band
Speech Level
Standard
Normal
User Specified
Octave
Spectrum
250 500 1000 2000 4000 8000
34.75 34.27 25.01 17.32 9.33 1.13
Overall
62.35
Calculate
SII
0.243
Noise Level
Noise in
Octave
Spectrum
250 500 1000 2000 4000 8000
Overall
Graph
Insertion Gain
For Speech
For Noise
250 500 1000 2000 4000 8000
For Speech
For Noise
Gain in
Octave
New BIF
Threshold (for pure-tone, in dB HL)
250 500 1000 2000 4000 8000
Air Conduct
35 40 40 60 65 75
Bone Conduct
Air Conduct
45 40 35 65 70 95
Bone Conduct
Threshold in
Octave
Air
Bone

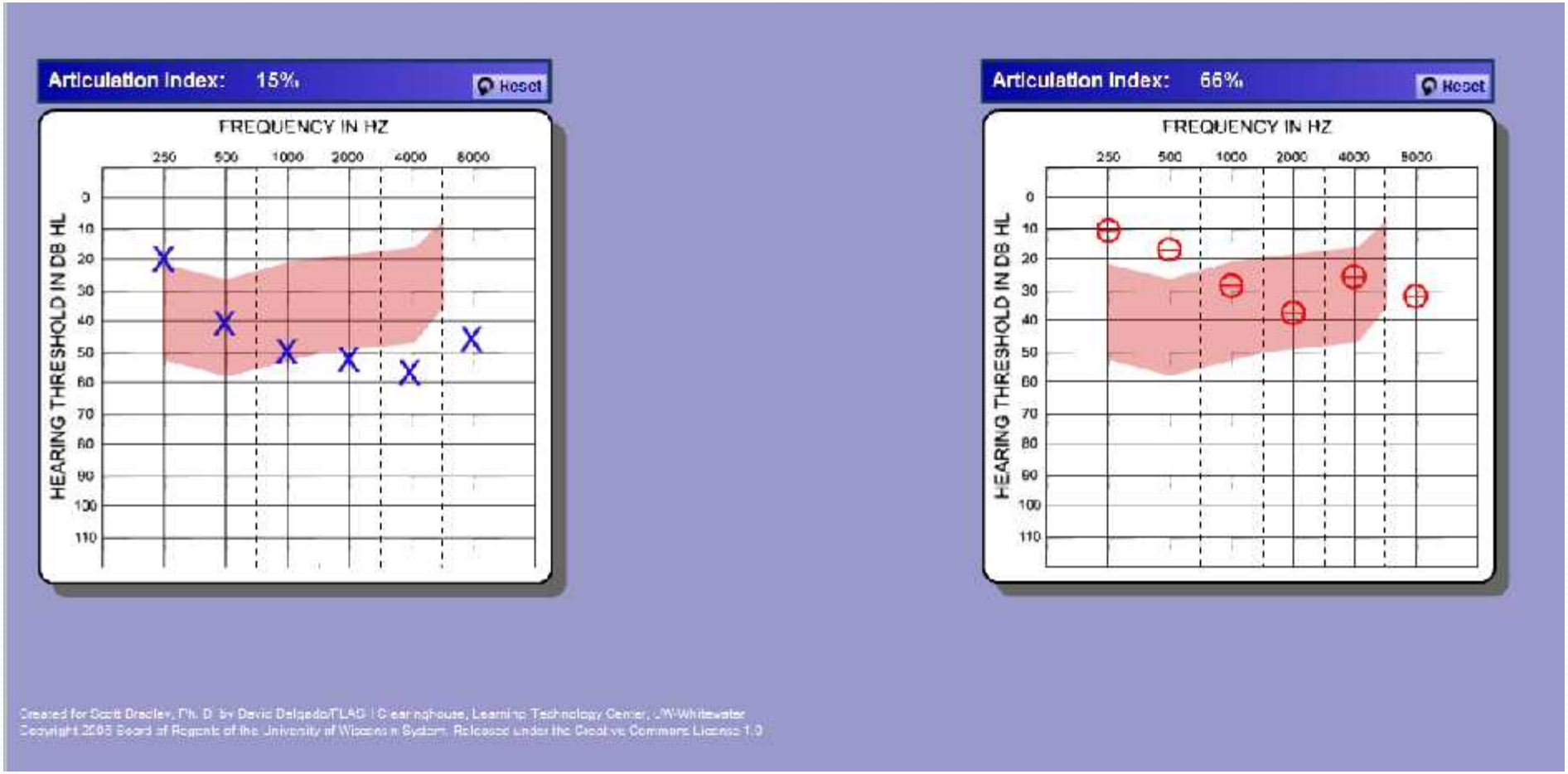

SII Procedure
1/3 Octave
Critical Band
Octave
Equally Contributing Critical Band
Speech Level
Standard
Normal
User Specified
Octave
Spectrum
250 500 1000 2000 4000 8000
34.75 34.27 25.01 17.32 9.33 1.13
Overall
62.35
Calculate
SII
0.6048
Noise Level
Noise in
Octave
Spectrum
250 500 1000 2000 4000 8000
Overall
Graph
Insertion Gain
250 500 1000 2000 4000 8000
For Speech
For Noise
For Speech
For Noise
Gain in
Octave
New BIF
Threshold (for pure-tone, in dB HL)
250 500 1000 2000 4000 8000
Air Conduct
15 20 40 35 30 50
Bone Conduct

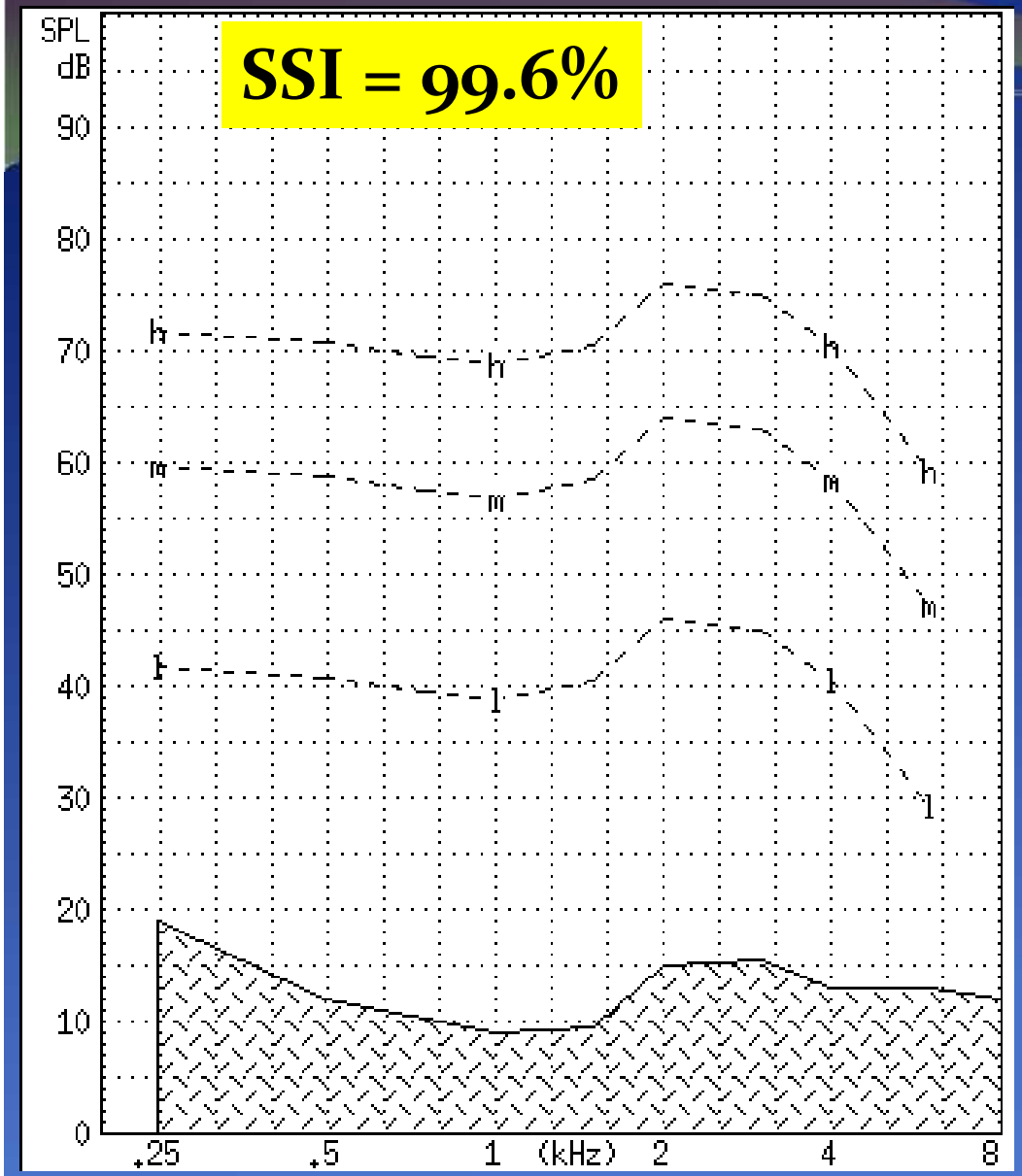

SII Procedure
1/3 Octave
Critical Band
Octave
Equally Contributing Critical Band
peech Level
Standard
Normal
User Specified
250 500 1000 2000 4000 8000
34.75 34.27 25.01 17.32 9.33 1.13
Octave
Spectrum
Overall
62.35
Calculate
SII
0.4557
oise Level
Noise in
Octave
Spectrum
250 500 1000 2000 4000 8000
Overall
Graph
sertion Gain
250 500 1000 2000 4000 8000
For Speech
For Noise
For Speech
For Noise
Gain in
Octave
New BIF
reshold (for pure-tone, in dB HL)
250 500 1000 2000 4000 8000
Air Conduct
15 25 35 40 60 90
Bone Conduct


FREQUENCY IN HERTZ
125
250
500
1000
2000
4000
8000
-10
0
10
20
30
40
50
60
70
80
90
100
110
120
70%
53%
46%
27%
Speech Intelligibility Index (SII)
(ANSI-1997)

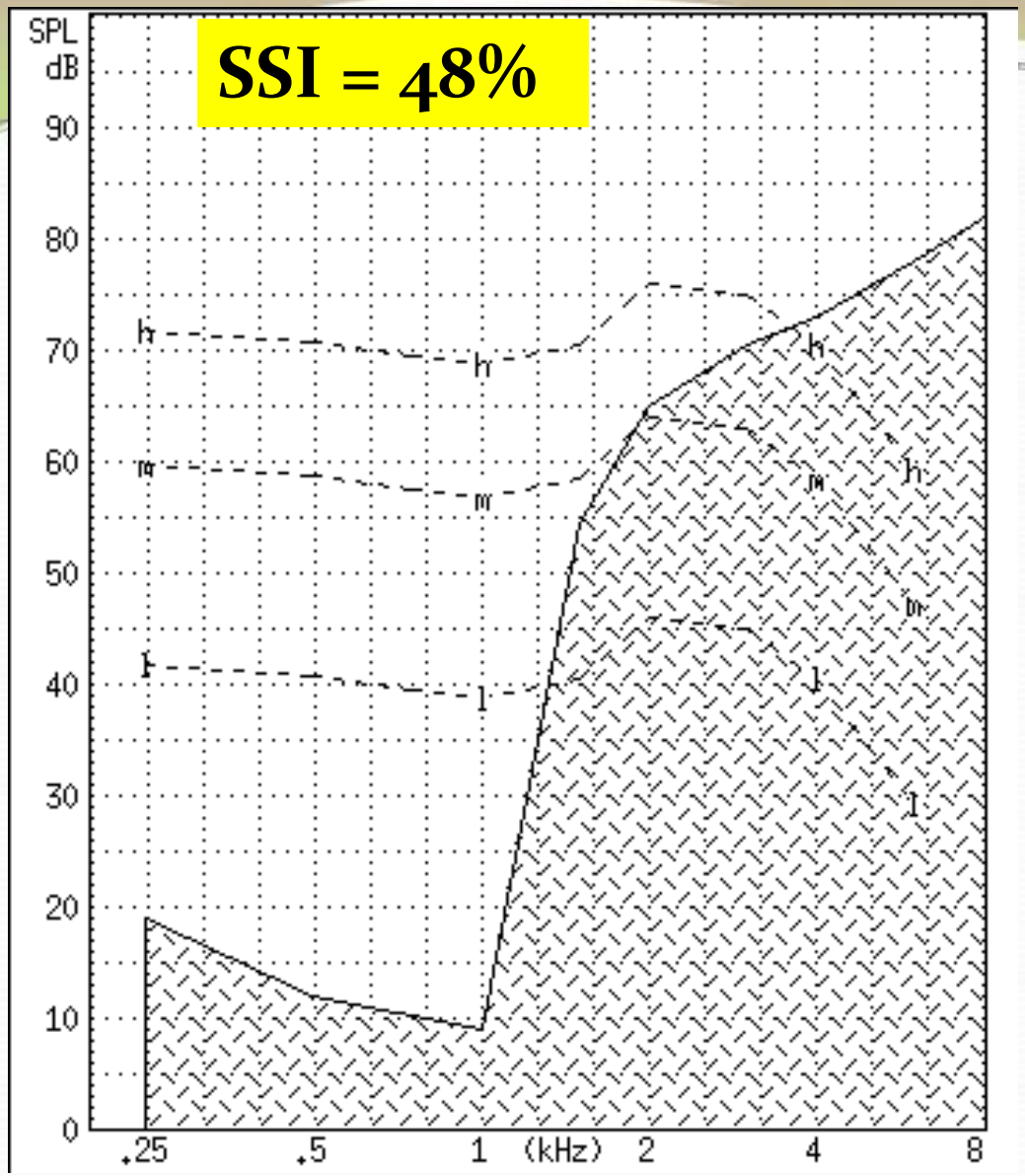

SII Count-the-Dots Audiogram Form
125
250
500
1000
2000
4000
8000
0
20
40
60
80
100
Hearing Level

http://facstaff.uww.edu/bradleys/radio/articindex/html/





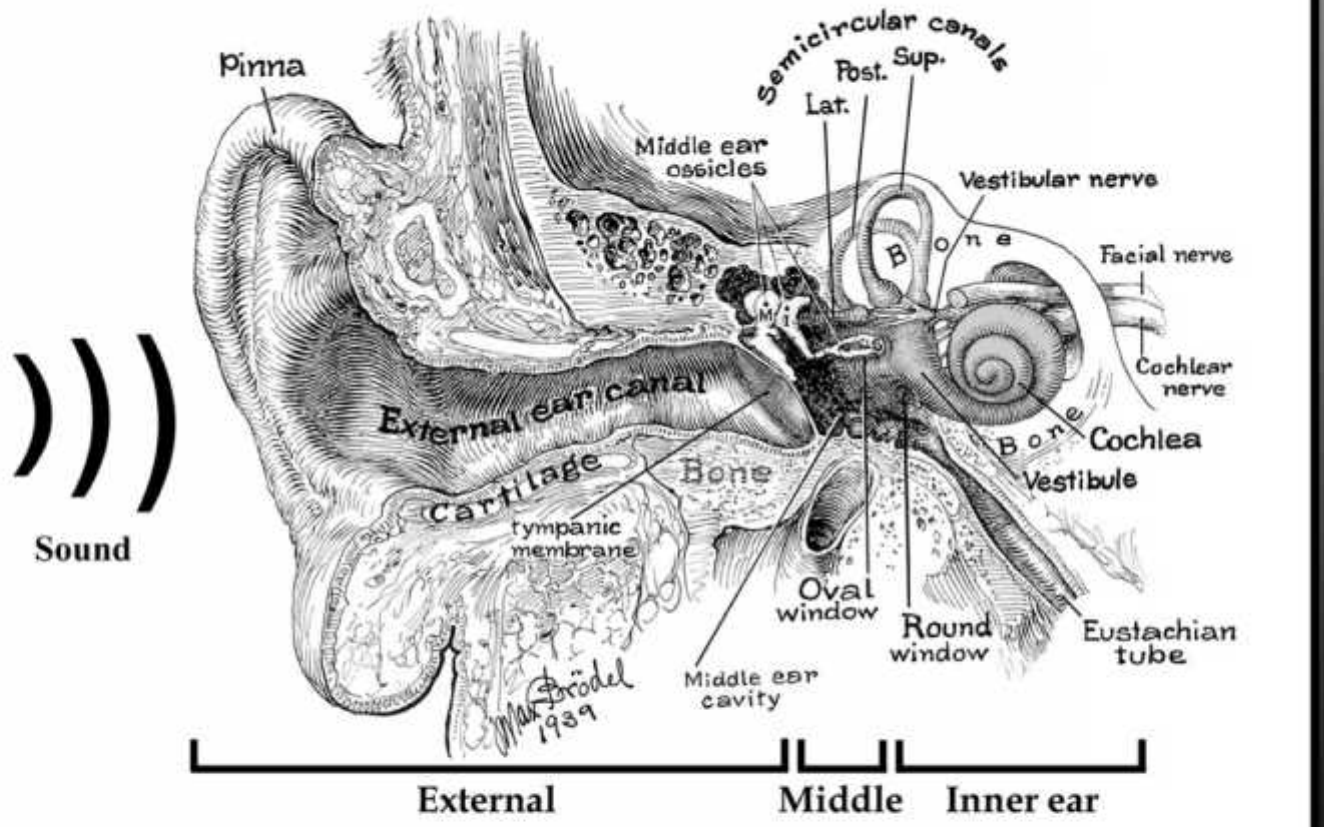
Freq	dB HL
250	0
500	0
1000	0
1500	0
2000	0
3000	0
4000	0
6000	0
8000	0



Freq	dB HL
250	0
500	0
1000	0
1500	45
2000	50
3000	55
4000	60
6000	65
8000	70

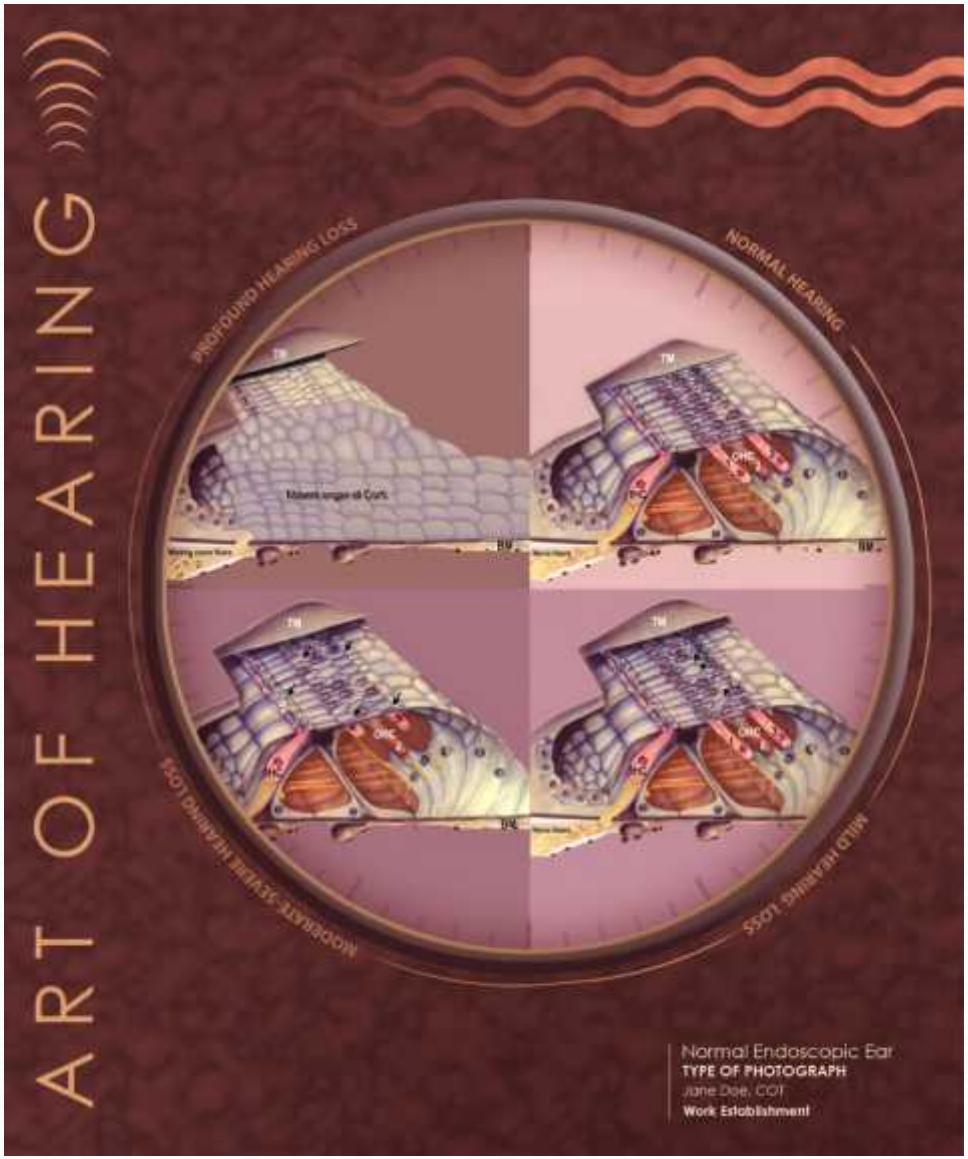
Counsel on Anatomy and Physiology of Patient's Hearing Loss

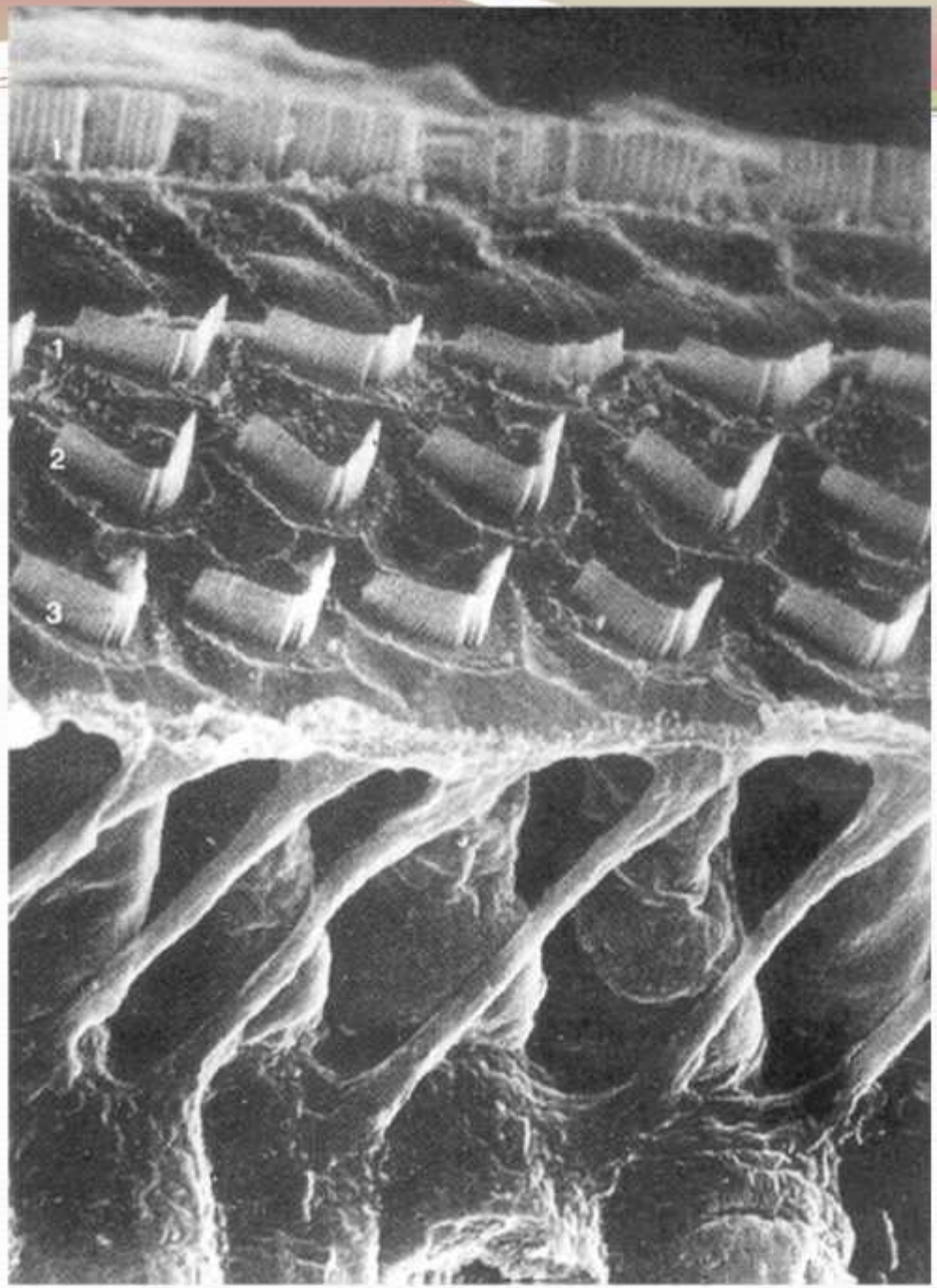
ART OF HEARING



Schematic image of the peripheral hearing apparatus, based upon a pen and ink drawing by Dr. Max Brödel

Photoshop CS modification of original drawing by:
Dr. Barbara A. Bohne
Washington University | Department of Otolaryngology


ART OF HEARING
PROFOUND HEARING LOSS
NORMAL HEARING
MODERATE-SEVERE HEARING LOSS
MILD HEARING LOSS
Normal Endoscopic Ear
TYPE OF PHOTOGRAPH
Jane Doe, COT
Work Establishment


1
1
2
3

a.
b.

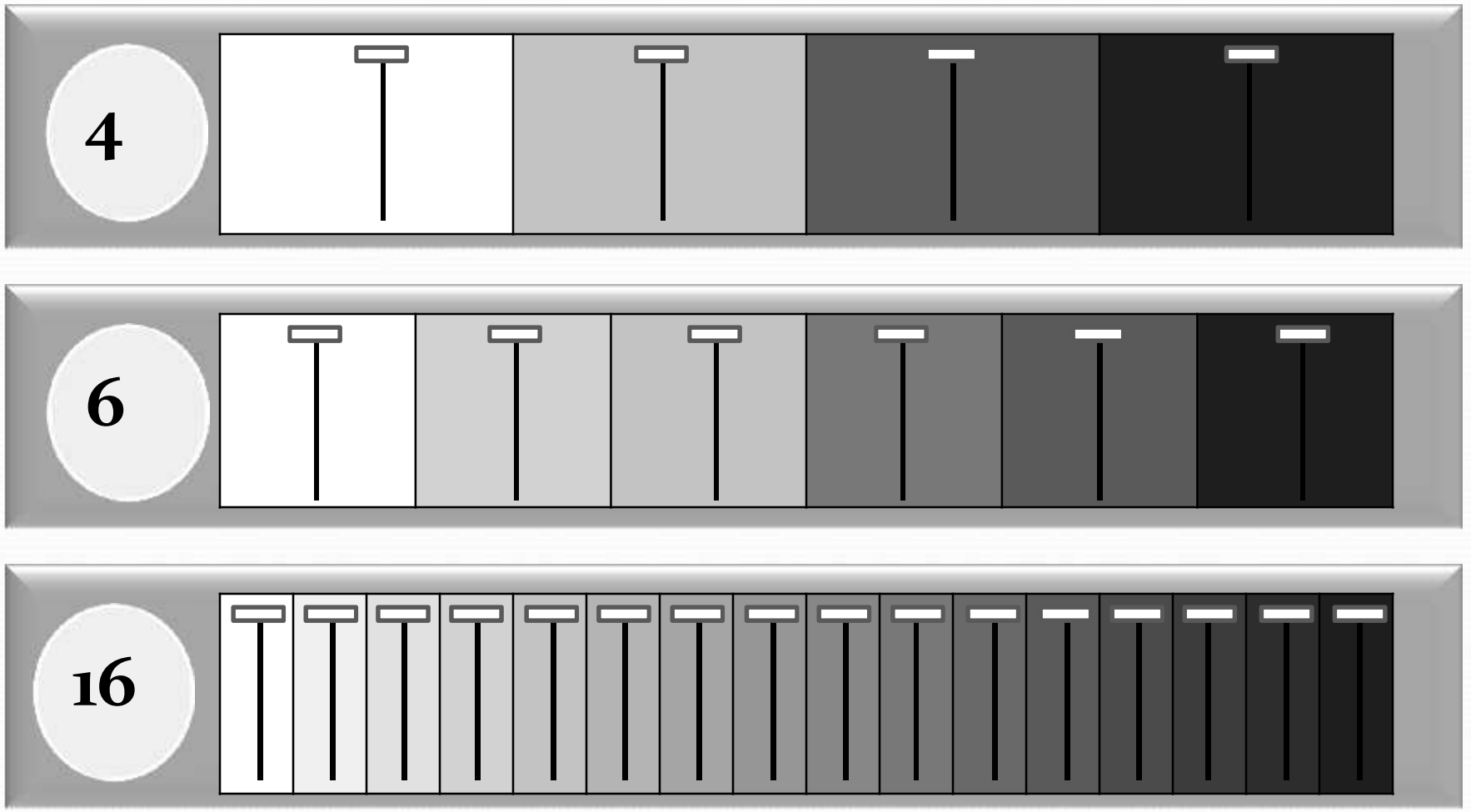
Counsel on differences in number of bands and channels:

a. Programming to target
b. Feedback Management
c. Noise Reduction
d. Effectiveness of directional microphone

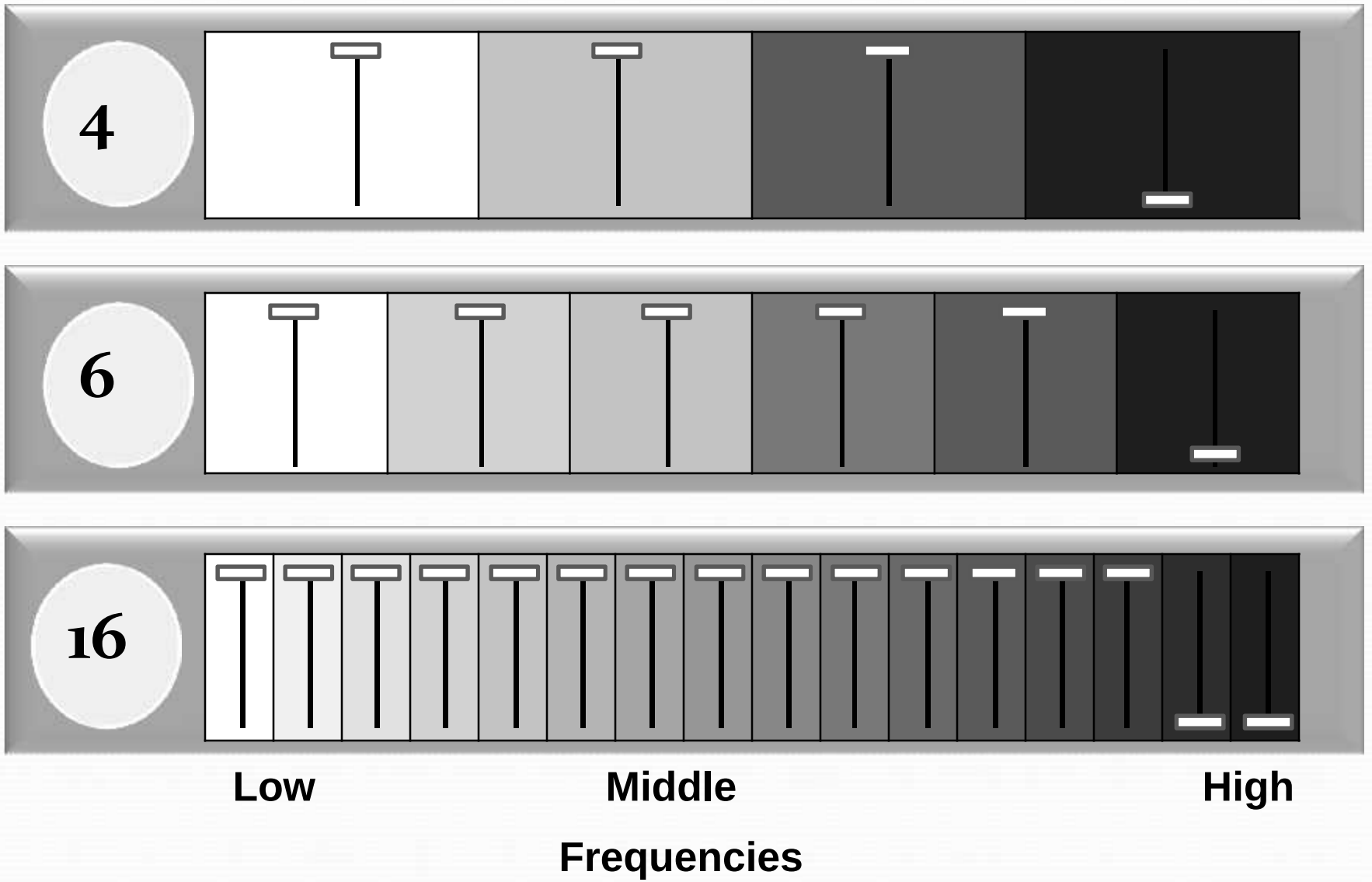
Counseling on Differences in Levels of Technology

Failed Attempts @ Counseling on Channels and Bands

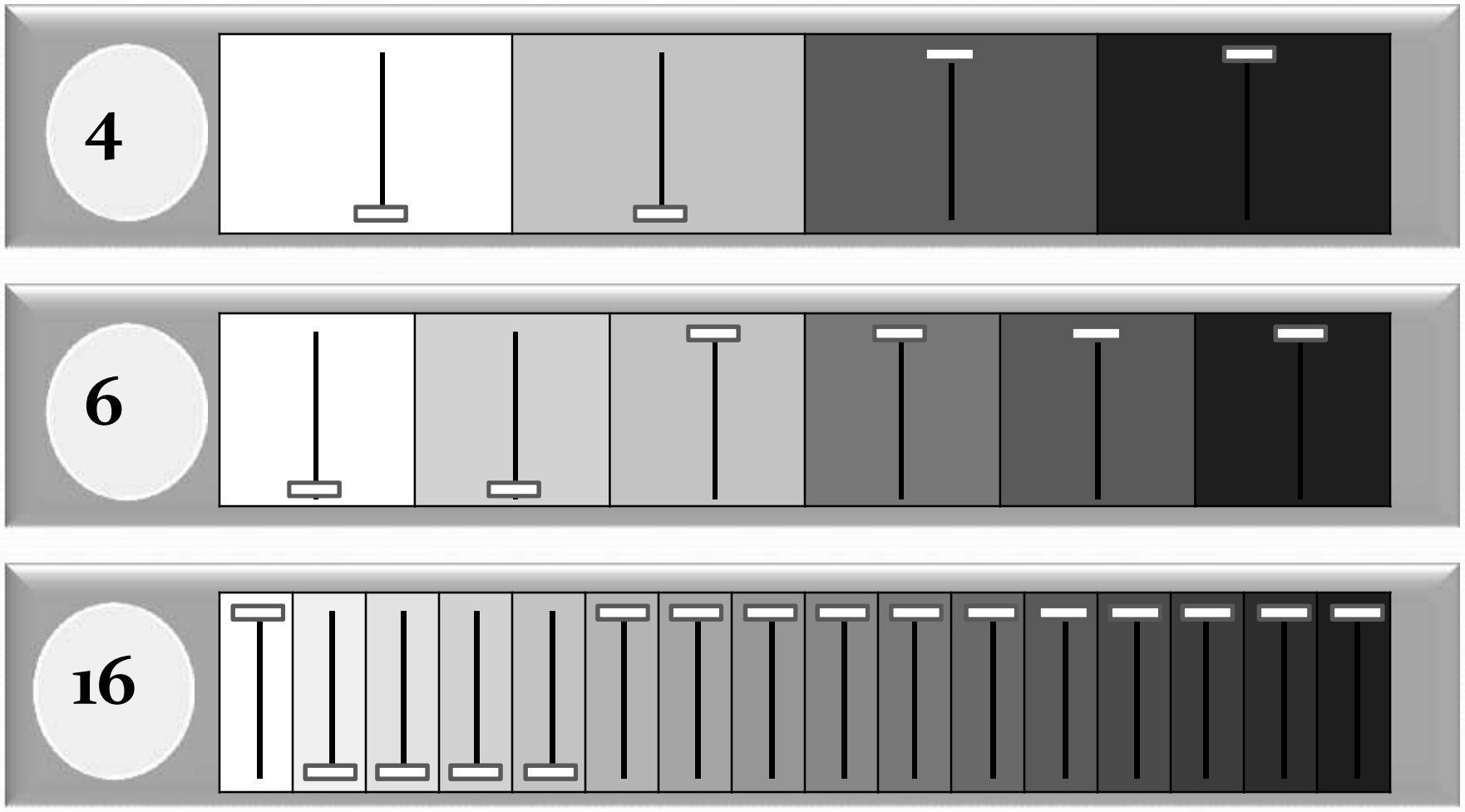
Bands/Channels



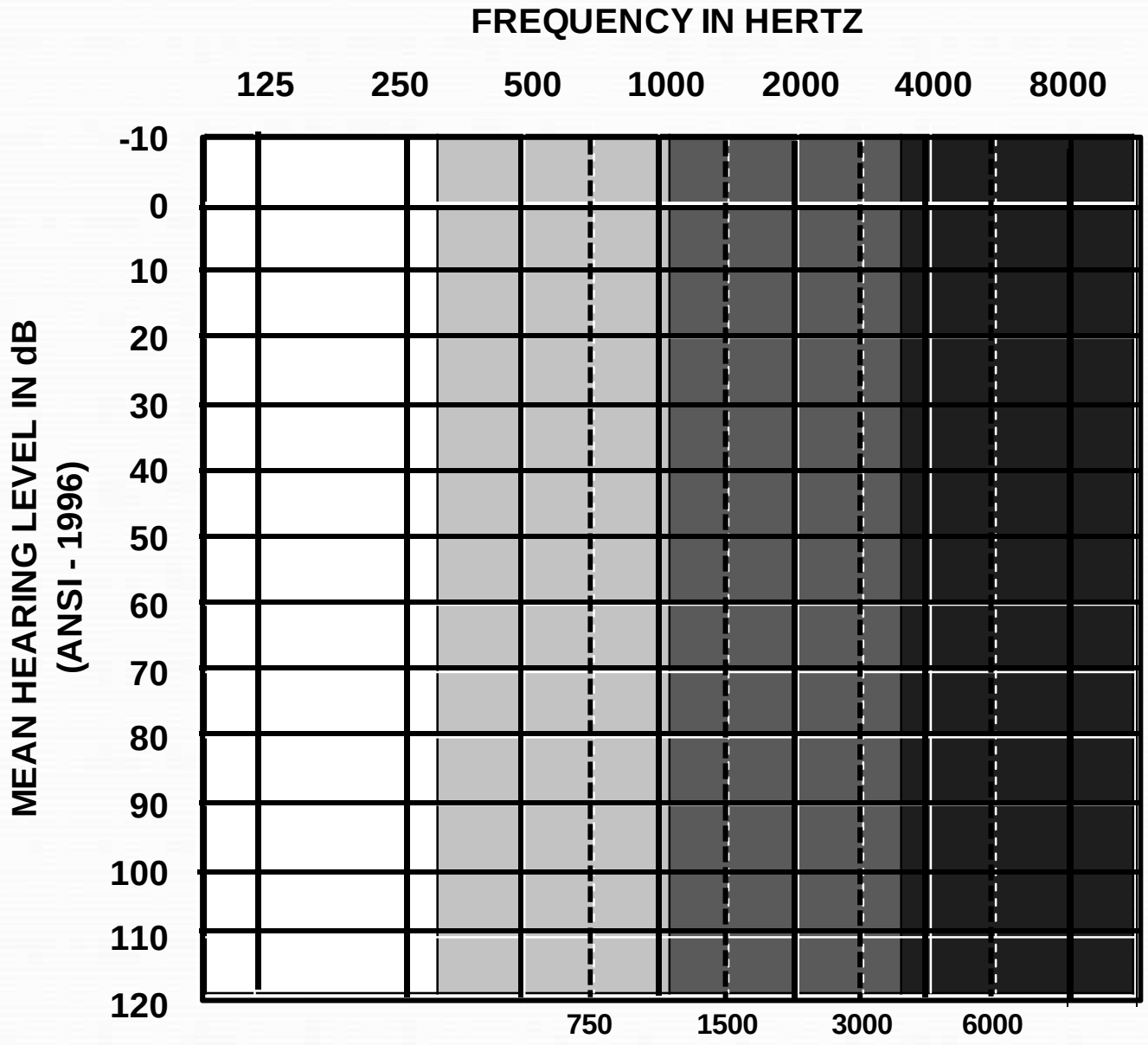
Feedback Cancellation



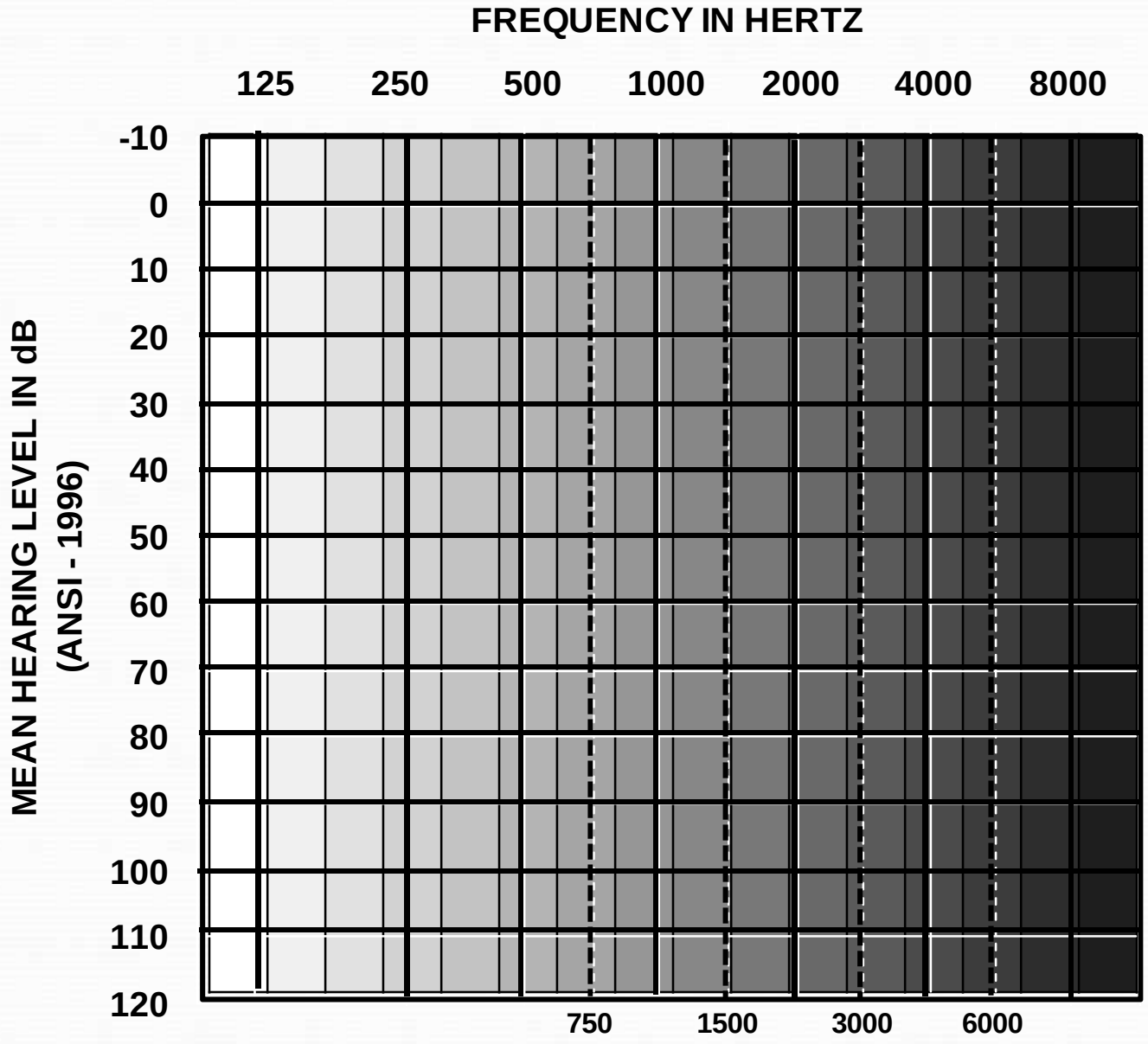
Noise Reduction



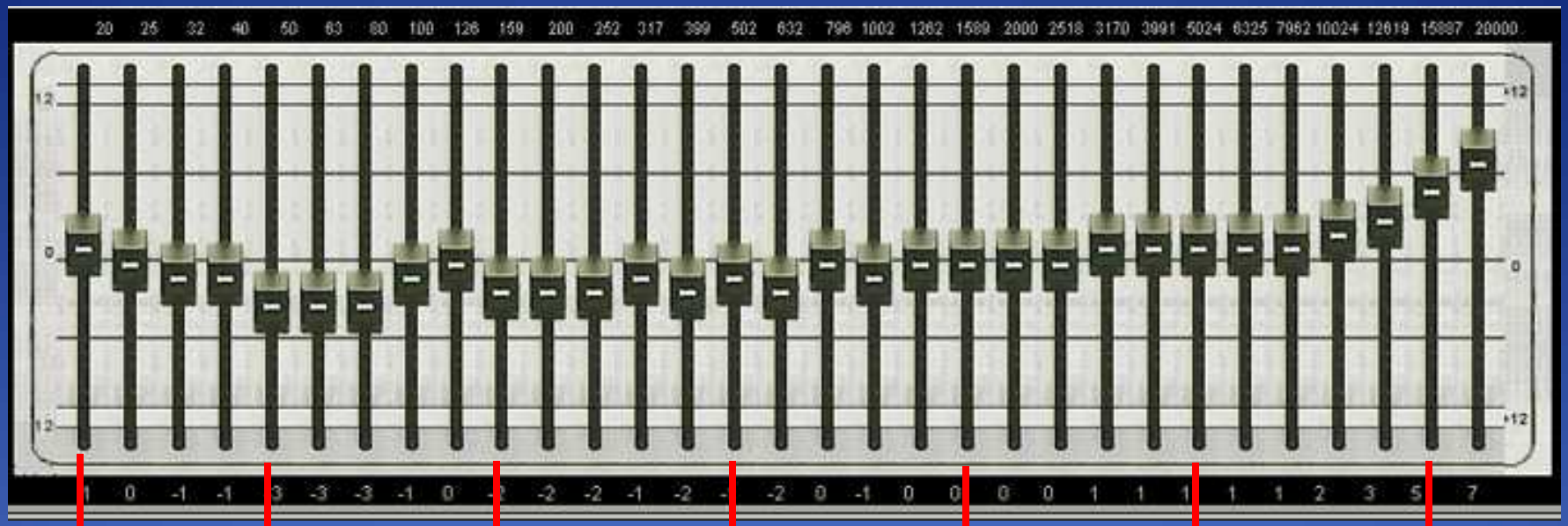
Bands/Channels



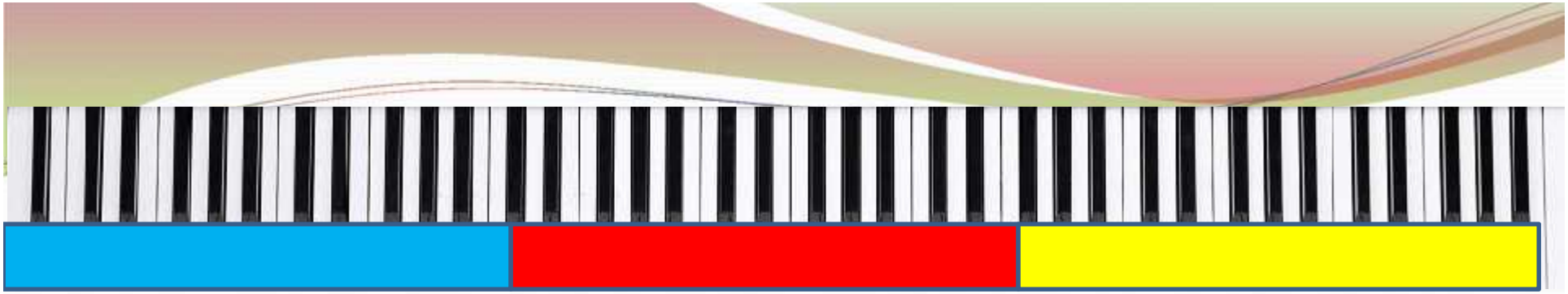
Bands/Channels



Graphic Equalizer – 31 Bands



200 500 1000 2000 3000 4000 8000



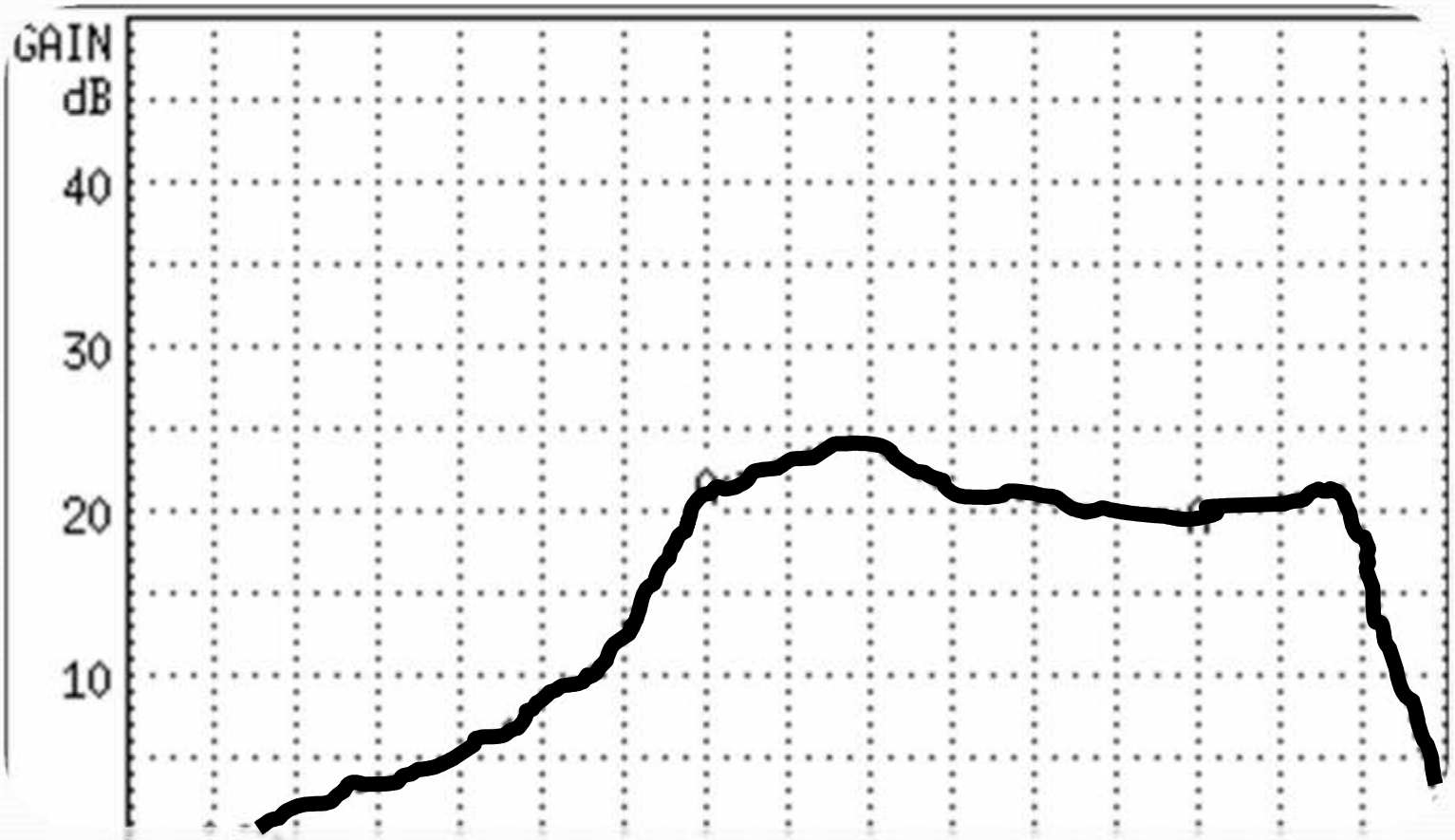
Three Bands

Six Bands

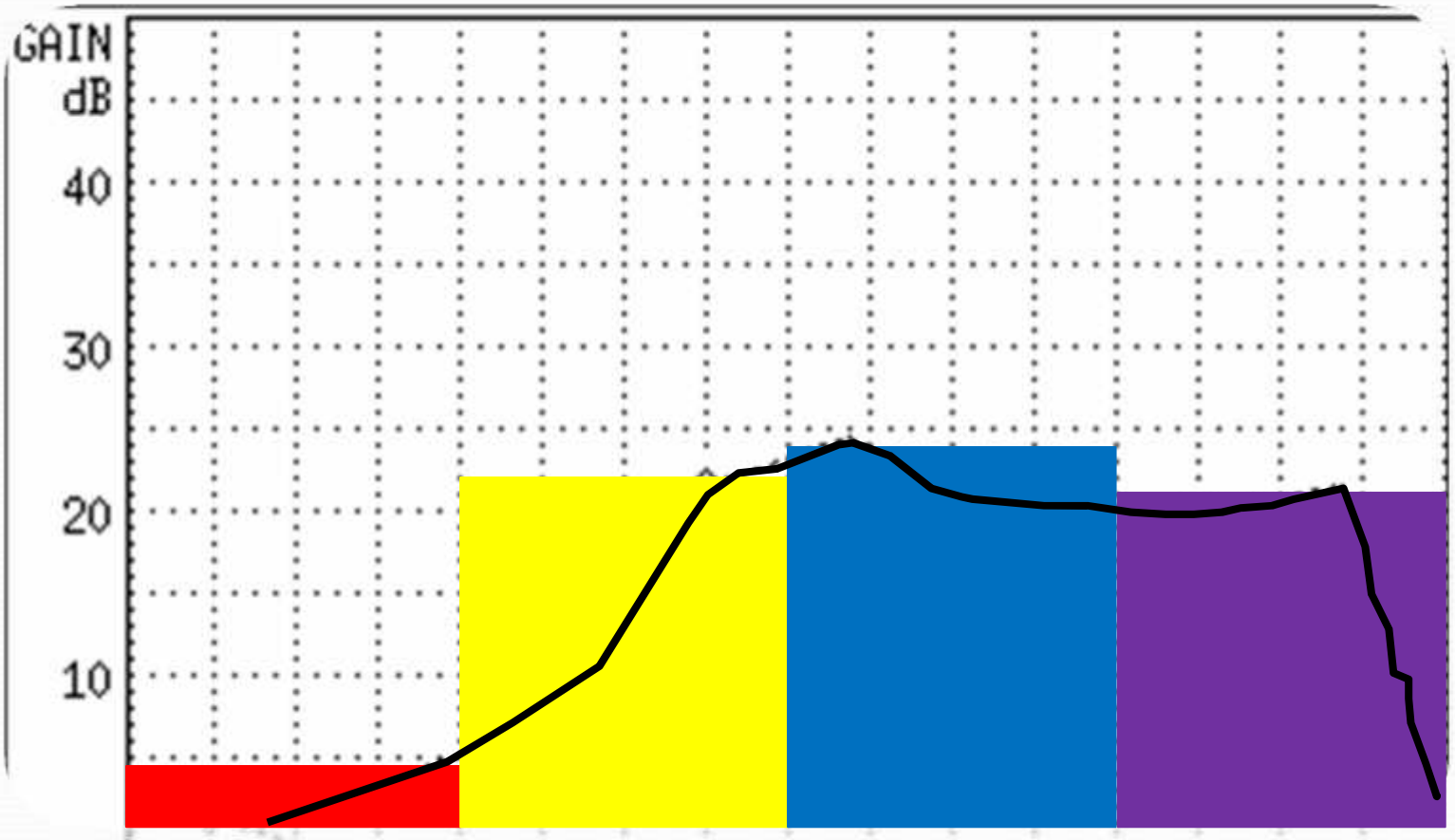
Twenty Bands

Success!

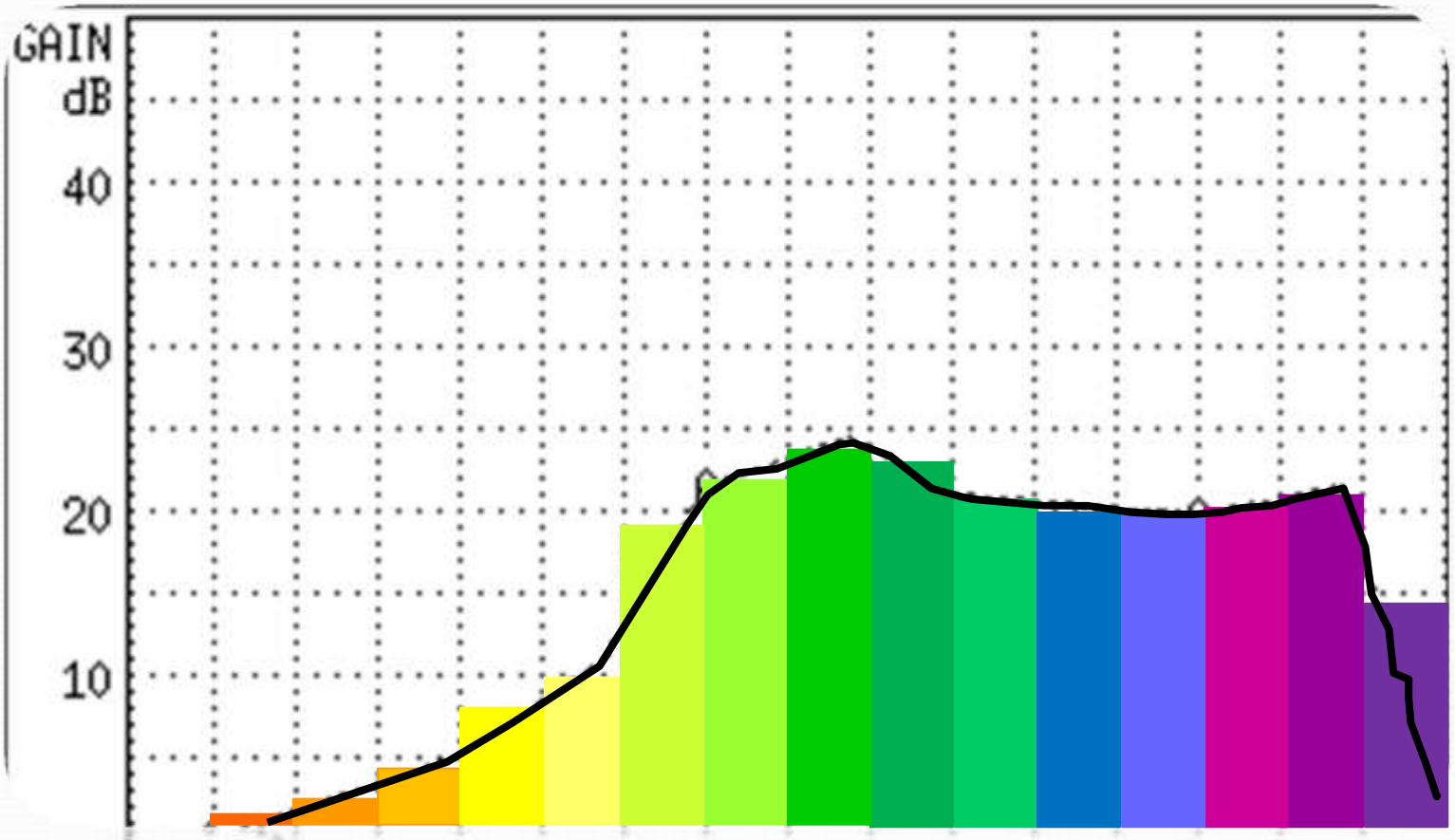
Real-Ear Measures

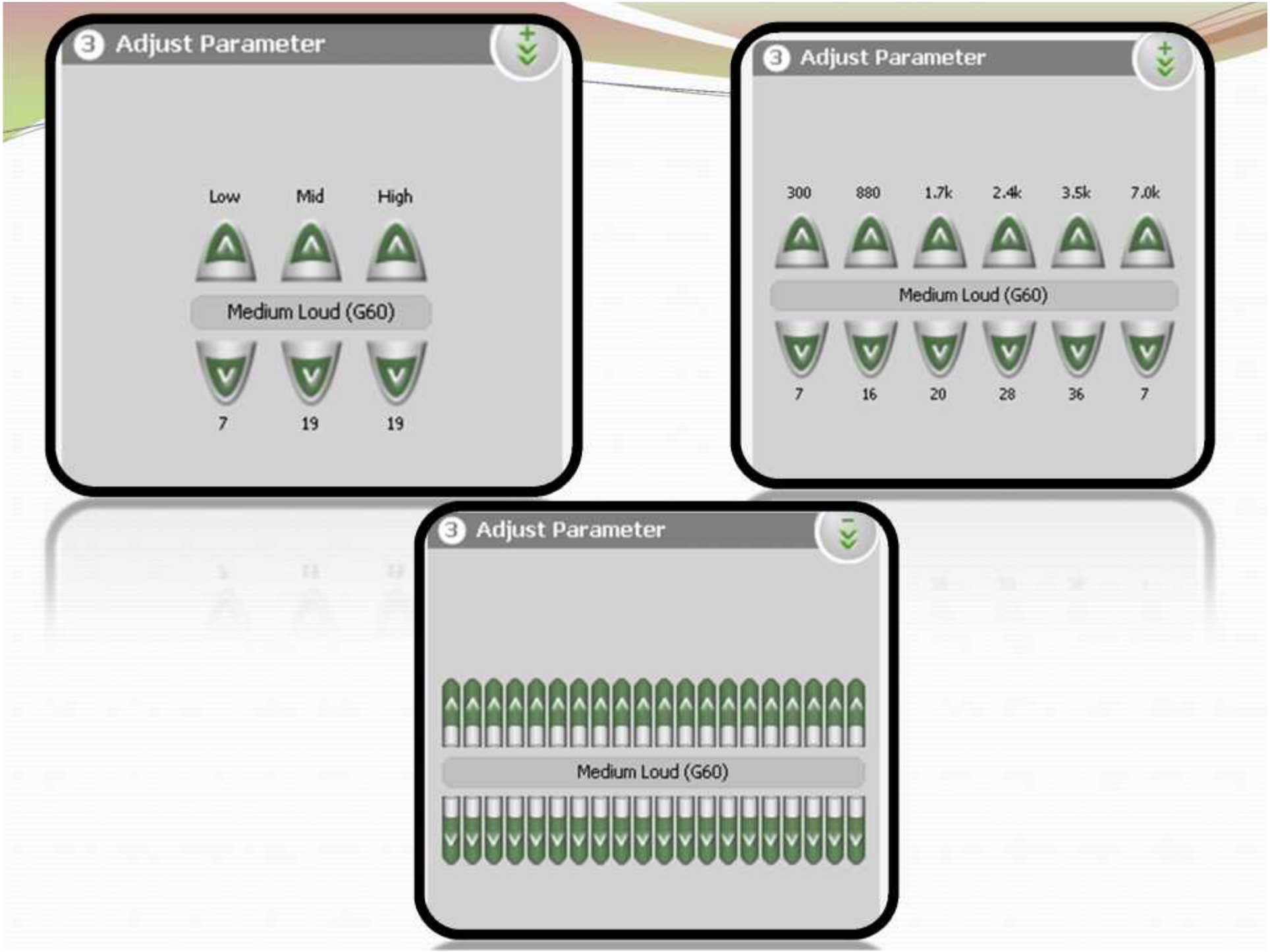


Real-Ear Measures



Real-Ear Measures

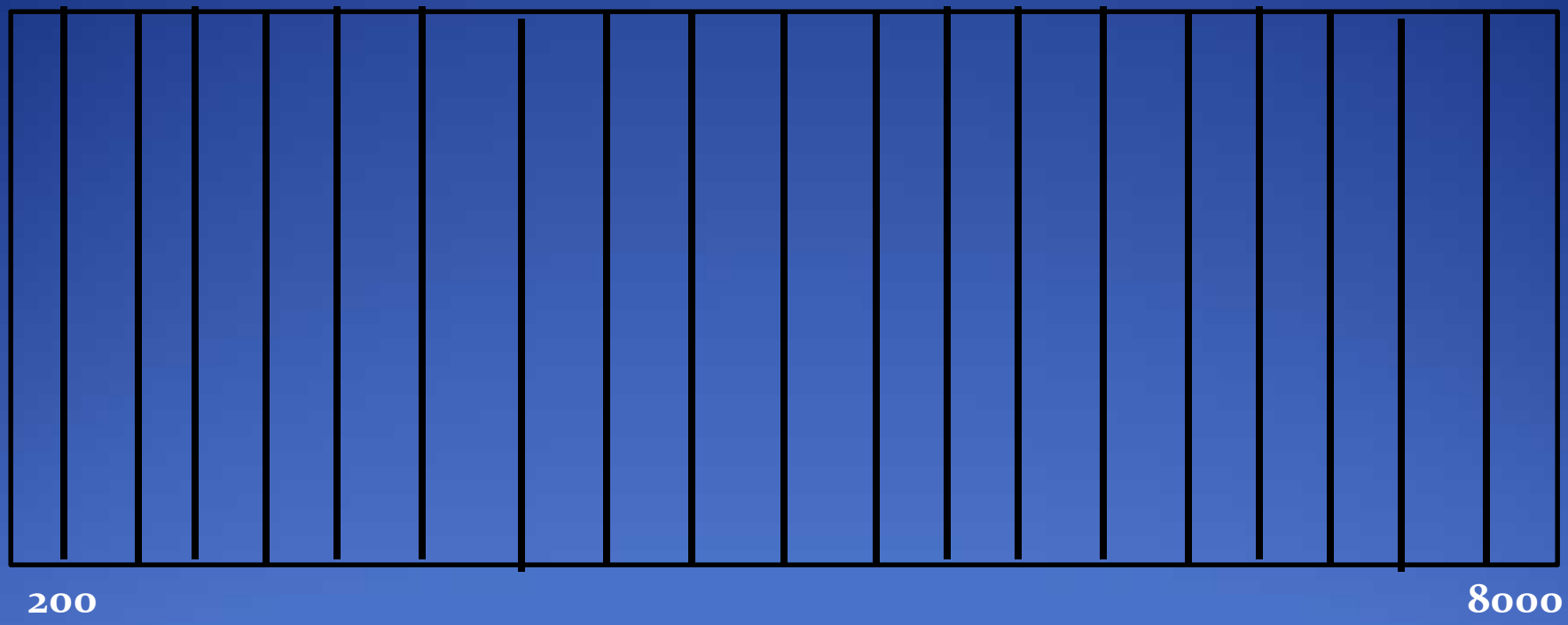


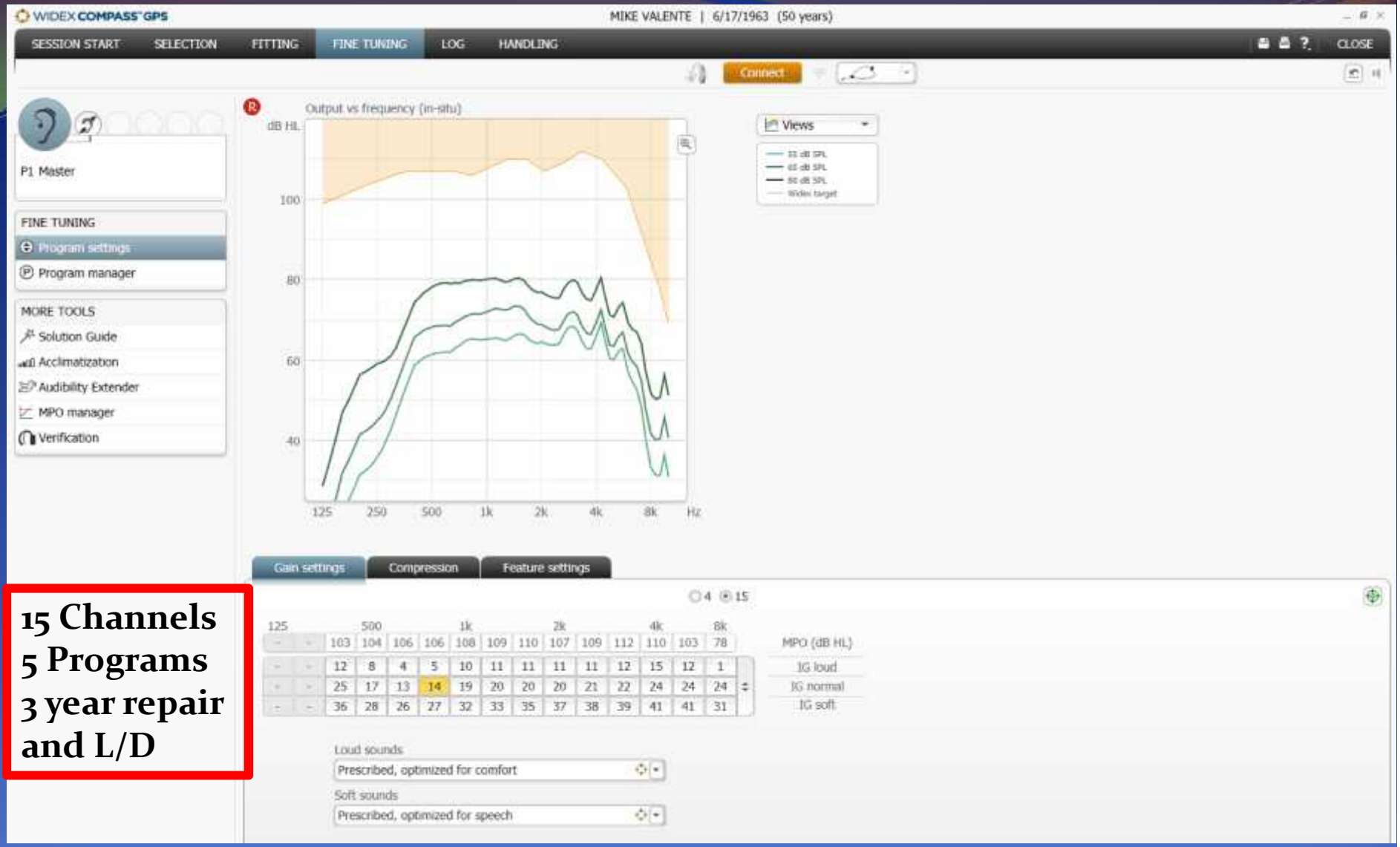

3 Adjust Parameter
Low
Mid
High
Medium Loud (G60)
7
19
19
3 Adjust Parameter
300
880
1.7k
2.4k
3.5k
7.0k
Medium Loud (G60)
7
16
20
28
36
7
3 Adjust Parameter
Medium Loud (G60)

Three Bands

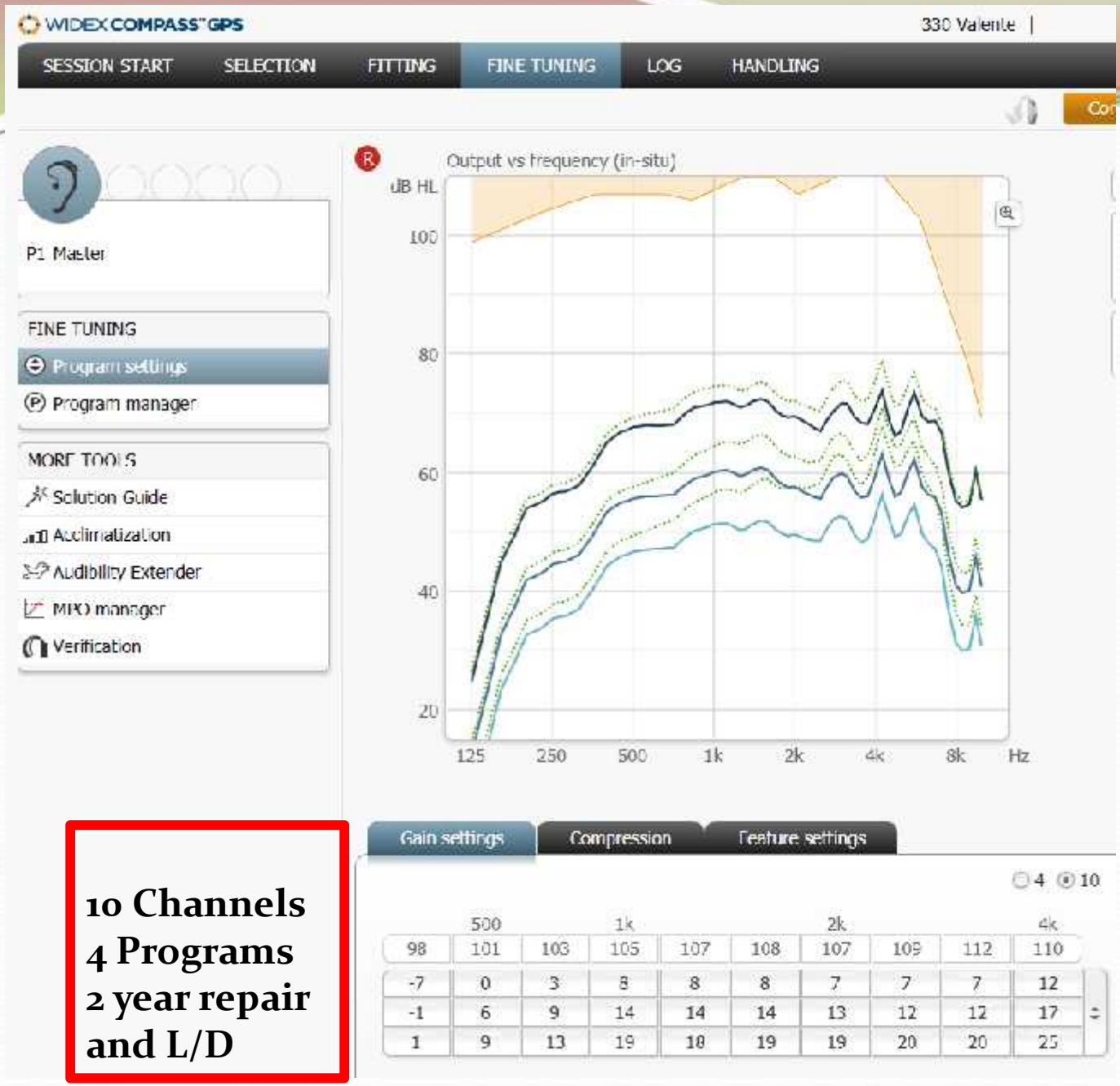
Five Bands

Twenty Bands



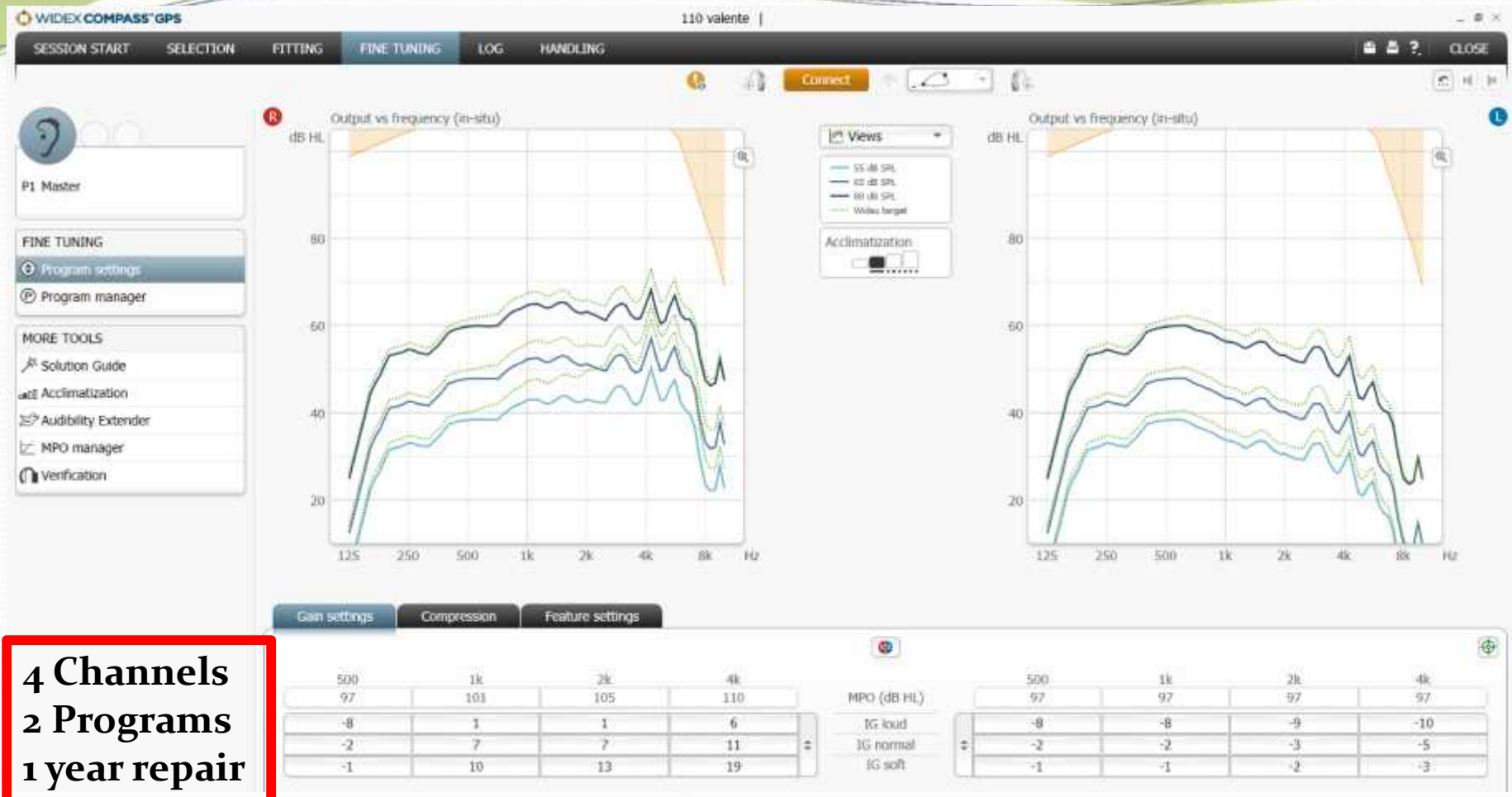


15 Channels
5 Programs
3 year repair and L/D

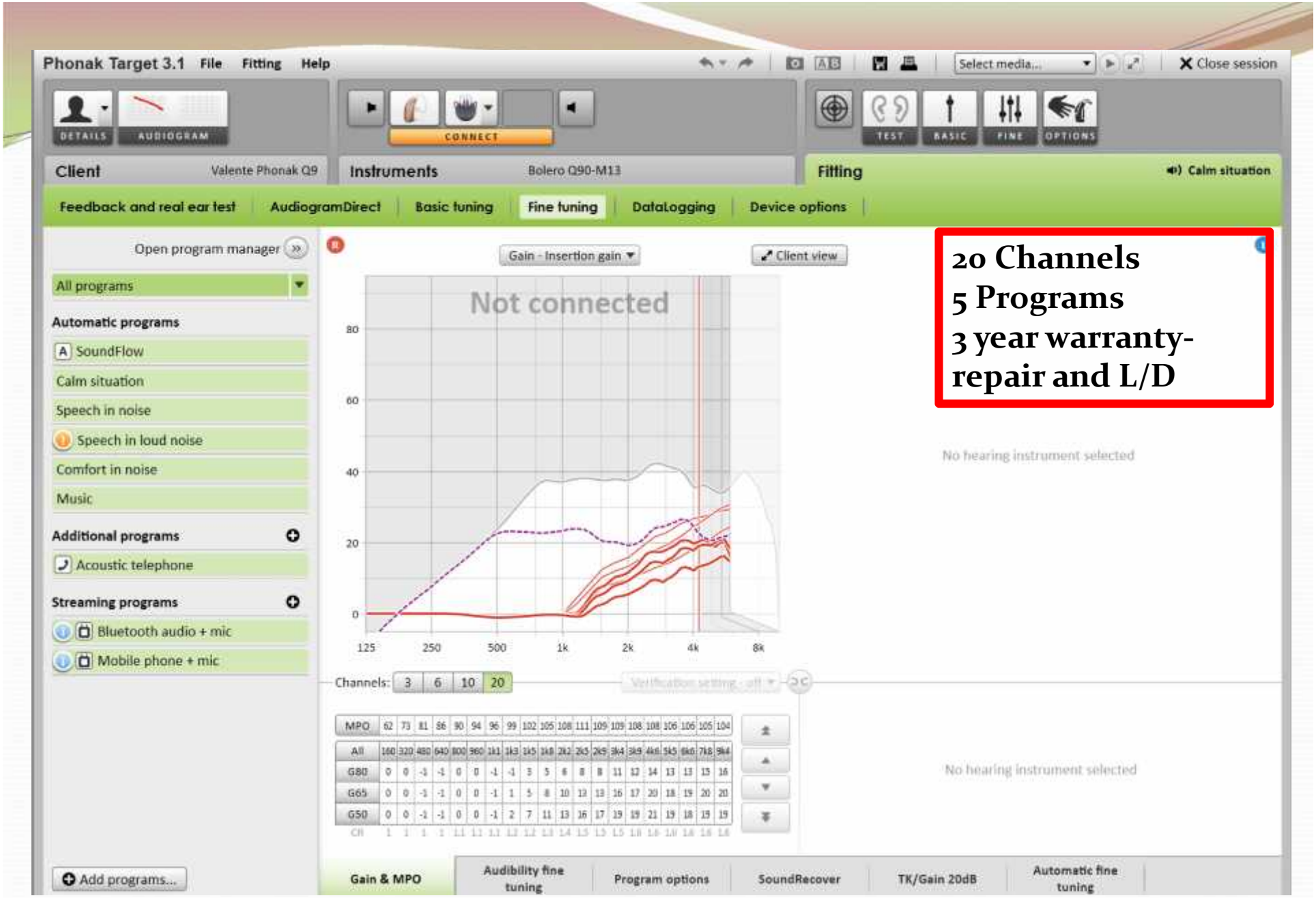


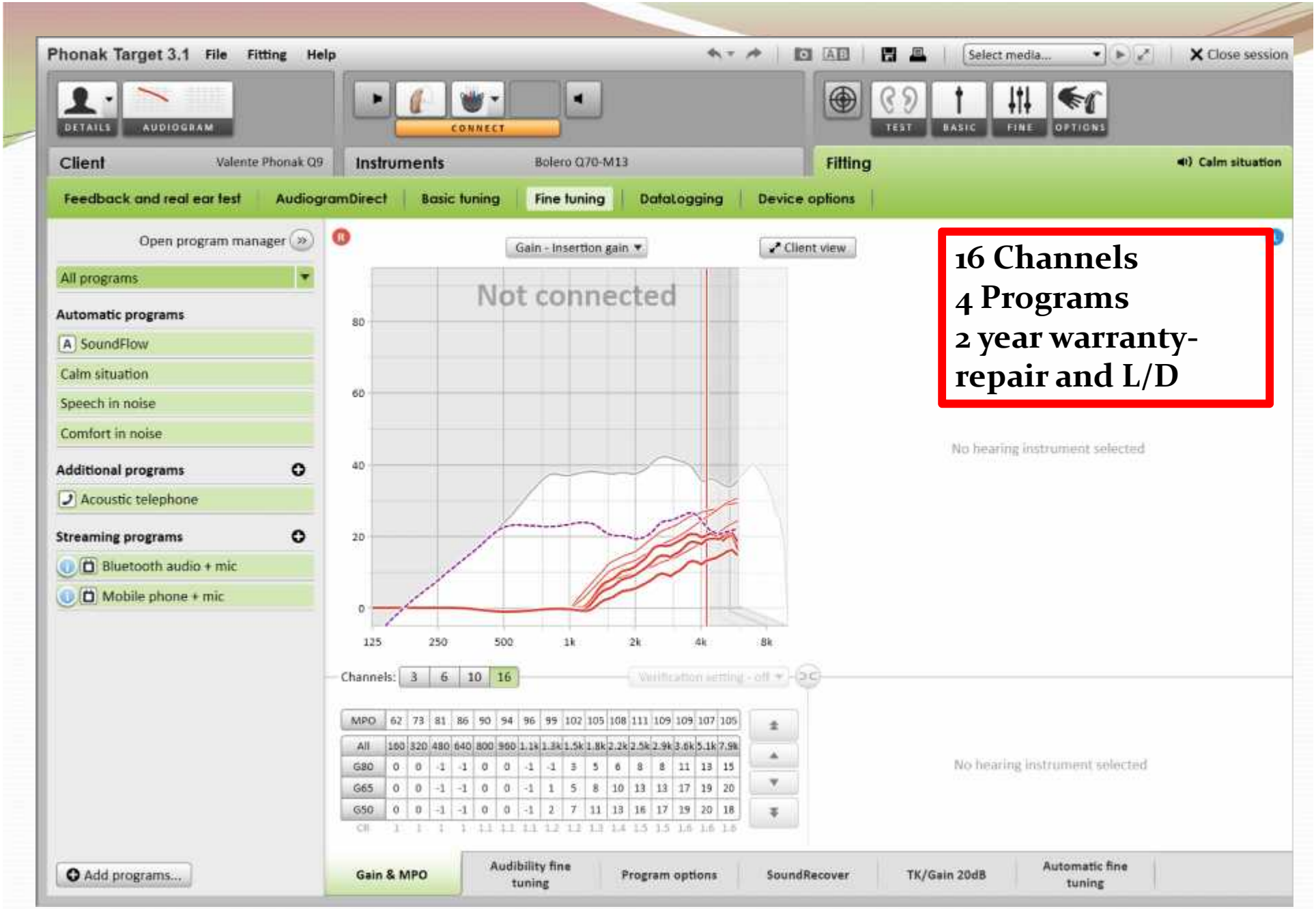
10 Channels
4 Programs
2 year repair and L/D

4 Channels
3 Programs
2 year repair and L/D



4 Channels
2 Programs
1 year repair and L/D


Phonak Target 3.1
File
Fitting
Help
Select media...
Close session
DETAILS
AUDIOGRAM
CONNECT
TEST
BASIC
FINE
OPTIONS
Client
Valente Phonak Q9
Instruments
Bolero Q90-M13
Fitting
Calm situation
Feedback and real ear test
AudiogramDirect
Basic tuning
Fine tuning
DataLogging
Device options
Open program manager
All programs
Automatic programs
SoundFlow
Calm situation
Speech in noise
Speech in loud noise
Comfort in noise
Music
Additional programs
Acoustic telephone
Streaming programs
Bluetooth audio + mic
Mobile phone + mic
Add programs...
Gain - Insertion gain
Client view
Not connected
80
60
40
20
0
125
250
500
1k
2k
4k
8k
Channels:
3
6
10
20
MPO
All
G80
G65
G50
Gain & MPO
Audibility fine tuning
Program options
SoundRecover
TK/Gain 20dB
Automatic fine tuning
No hearing instrument selected
No hearing instrument selected
20 Channels
5 Programs
3 year warranty-
repair and L/D


Phonak Target 3.1
File
Fitting
Help
Select media...
Close session
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AUDIOGRAM
CONNECT
TEST
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FINE
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Valente Phonak Q9
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Open program manager
All programs
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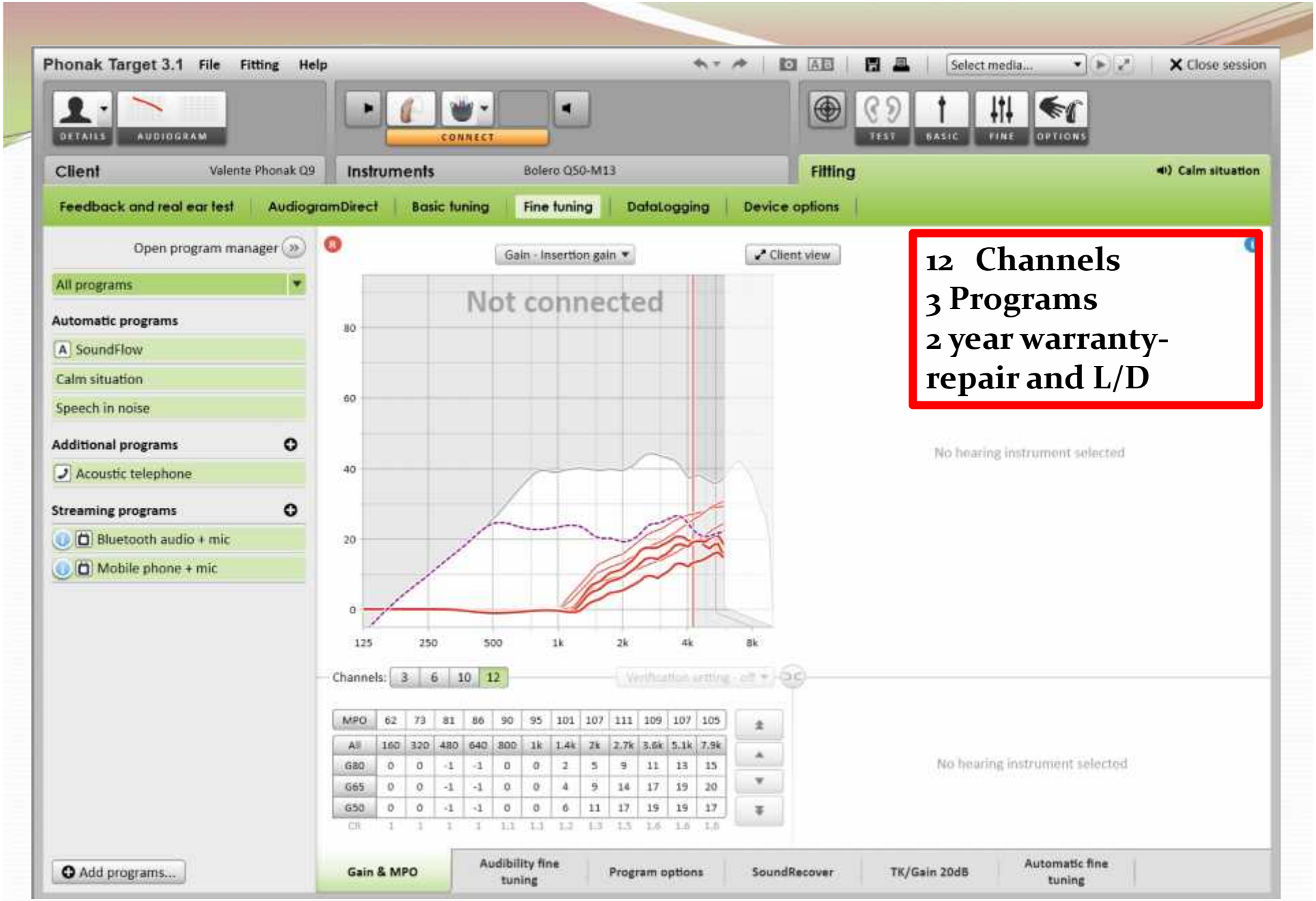
SoundFlow
Calm situation
Speech in noise
Comfort in noise
Additional programs
Acoustic telephone
Streaming programs
Bluetooth audio + mic
Mobile phone + mic
Add programs...
Gain - Insertion gain
Client view
Not connected
80
60
40
20
0
125
250
500
1k
2k
4k
8k
Channels:
3
6
10
16
MPO 62 73 81 86 90 94 96 99 102 105 108 111 109 109 107 105
All 160 320 480 640 800 960 1.1k 1.3k 1.5k 1.8k 2.2k 2.5k 2.9k 3.6k 5.1k 7.9k
G80 0 0 -1 -1 0 0 -1 -1 3 5 6 8 8 11 13 15
G65 0 0 -1 -1 0 0 -1 1 5 8 10 13 13 17 19 20
G50 0 0 -1 -1 0 0 -1 2 7 11 13 16 17 19 20 18
CR 1 1 1 1 1.1 1.1 1.1 1.2 1.2 1.3 1.4 1.5 1.5 1.6 1.6 1.6
16 Channels
4 Programs
2 year warranty-
repair and L/D
No hearing instrument selected
No hearing instrument selected
Gain & MPO
Audibility fine tuning
Program options
SoundRecover
TK/Gain 20dB
Automatic fine tuning


Phonak Target 3.1
File
Fitting
Help
Select media...
Close session
DETAILS
AUDIOGRAM
CONNECT
TEST
BASIC
FINE
OPTIONS
Client
Valente Phonak Q9
Instruments
Bolero Q50-M13
Fitting
Calm situation
Feedback and real ear test
AudiogramDirect
Basic tuning
Fine tuning
DataLogging
Device options
Open program manager
All programs
Automatic programs
SoundFlow
Calm situation
Speech in noise
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Client view
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80
60
40
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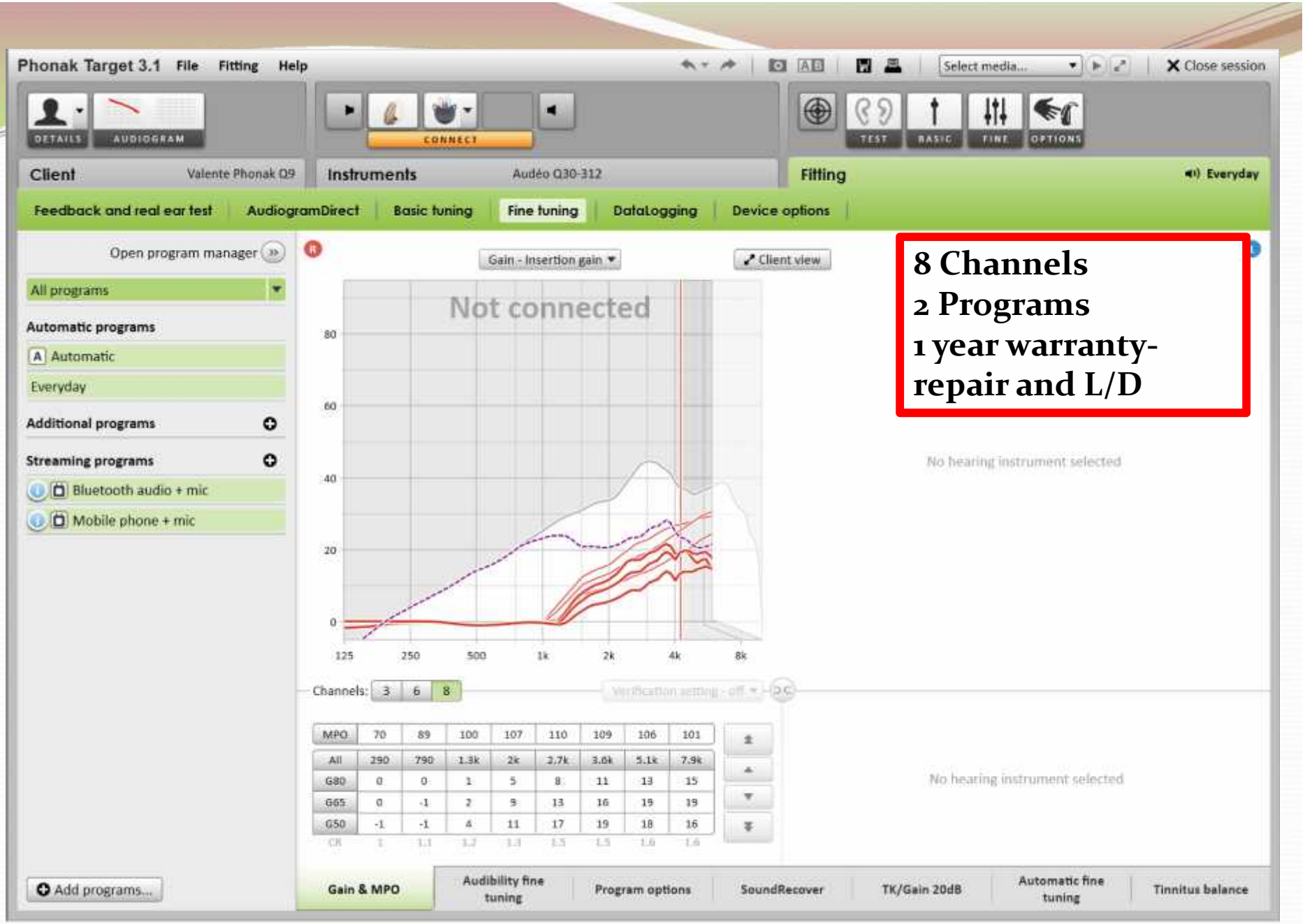
1k
2k
4k
8k
Channels: 3 6 10 12
MPO 62 73 81 86 90 95 101 107 111 109 107 105
All 160 320 480 640 800 1k 1.4k 2k 2.7k 3.6k 5.1k 7.9k
G80 0 0 -1 -1 0 0 2 5 9 11 13 15
G65 0 0 -1 -1 0 0 4 9 14 17 19 20
G50 0 0 -1 -1 0 0 6 11 17 19 19 17
12 Channels
3 Programs
2 year warranty-
repair and L/D
No hearing instrument selected
No hearing instrument selected
Add programs...
Gain & MPO
Audibility fine tuning
Program options
SoundRecover
TK/Gain 20dB
Automatic fine tuning


Phonak Target 3.1 File Fitting Help
Select media...
Close session
DETAILS
AUDIOGRAM
CONNECT
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FINE
OPTIONS
Client Valente Phonak Q9
Instruments Audéo Q30-312
Fitting
Everyday
Feedback and real ear test
AudiogramDirect
Basic tuning
Fine tuning
DataLogging
Device options
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All programs
Automatic programs
Automatic
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Additional programs
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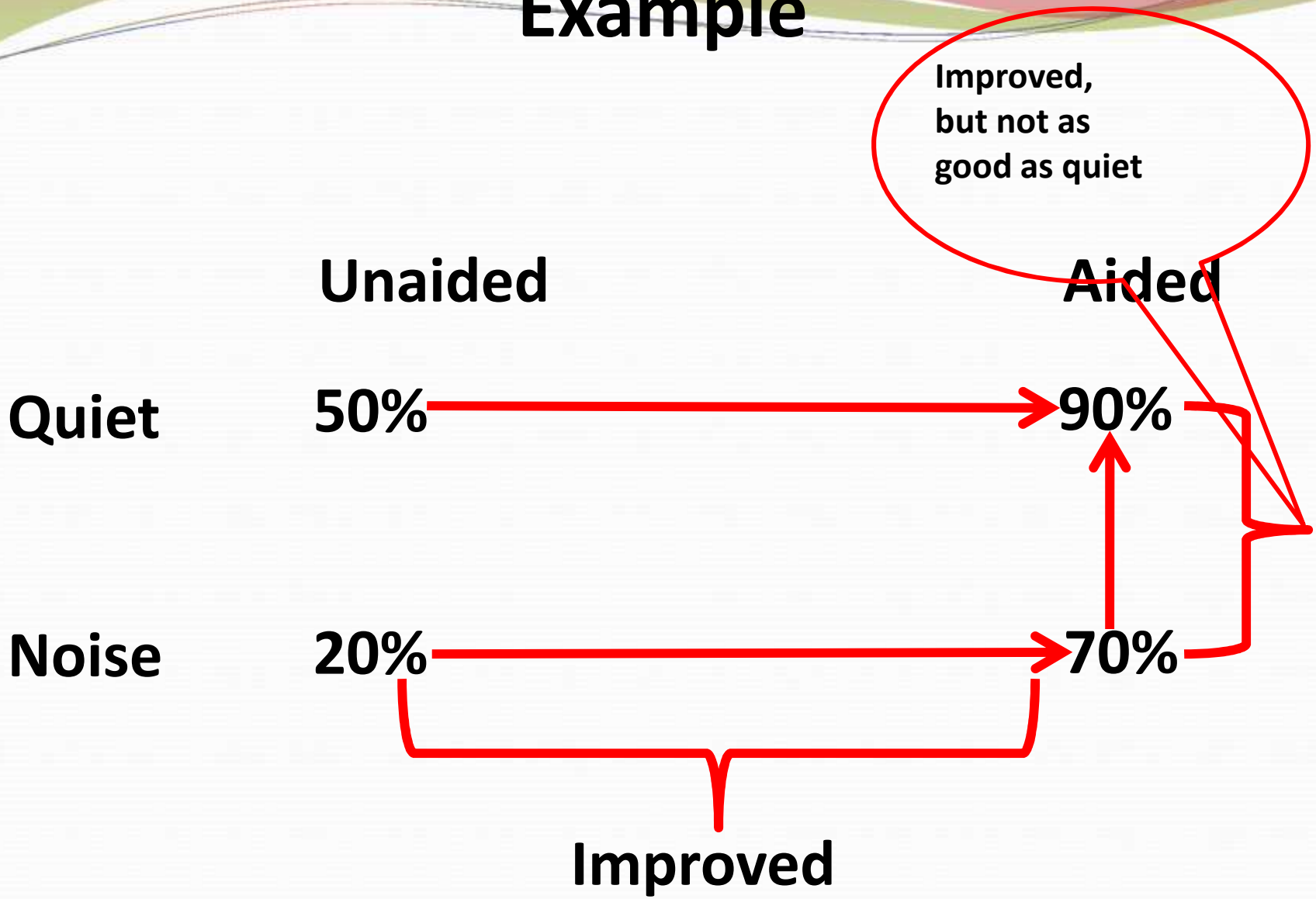
Channels: 3 6 8
MPO 70 89 100 107 110 109 106 101
All 250 750 1.3k 2k 2.7k 3.6k 5.1k 7.9k
G80 0 0 1 5 8 11 13 15
G65 0 -1 2 9 13 16 19 19
G50 -1 -1 4 11 17 19 18 16
8 Channels
2 Programs
1 year warranty-
repair and L/D
No hearing instrument selected
No hearing instrument selected
Add programs...
Gain & MPO
Audibility fine tuning
Program options
SoundRecover
TK/Gain 20dB
Automatic fine tuning
Tinnitus balance

Counsel on Realistic Expectations

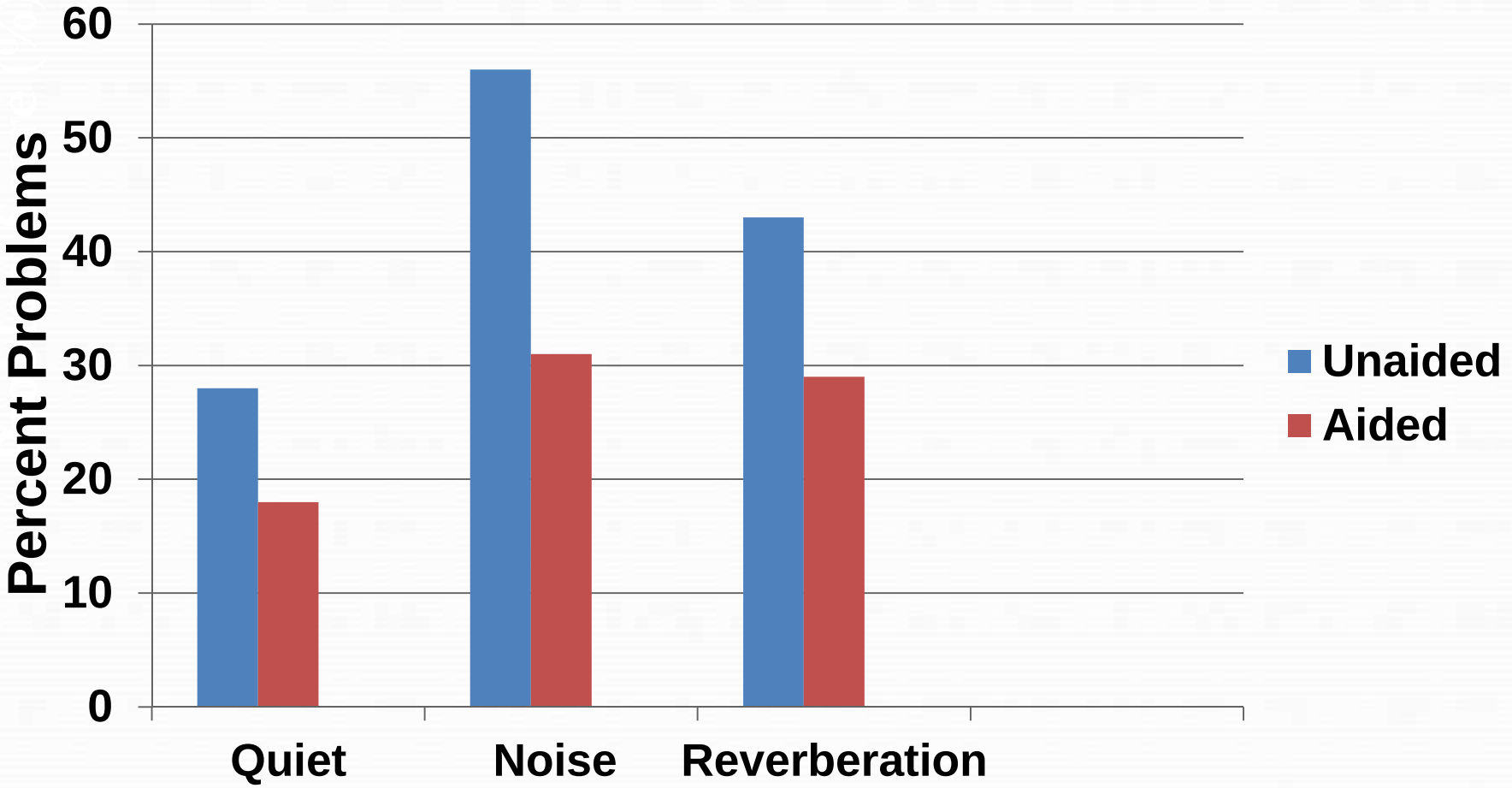
Expected Benefits

- ***In Quiet Listening***: Aided performance will be better than unaided performance
- ***In Noisy Listening***: aided performance will be better than unaided performance
- However, in noise, aided performance will not be as good as aided performance in quiet! Let's repeat that together!
- "Soft" (≤ 50 dB SPL) sounds will be "soft," "Average" (~ 65 dB SPL) sounds will be "comfortable," and "Loud" (≥ 80 dB SPL) sounds will be loud, but not be "uncomfortable"

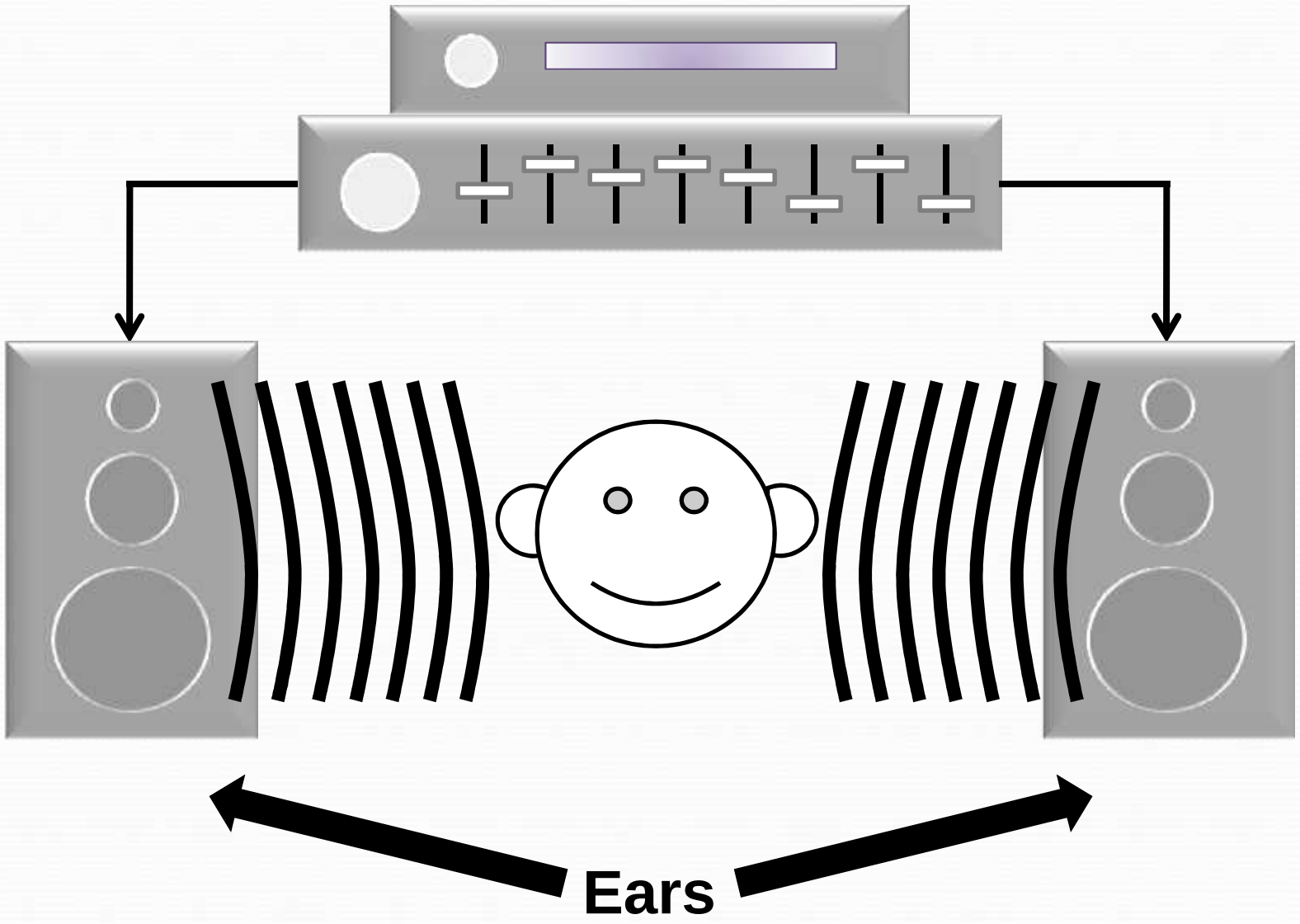
Example


Improved,
but not as
good as quiet
Unaided
Aided
Quiet
50%
90%
Noise
20%
70%
Improved

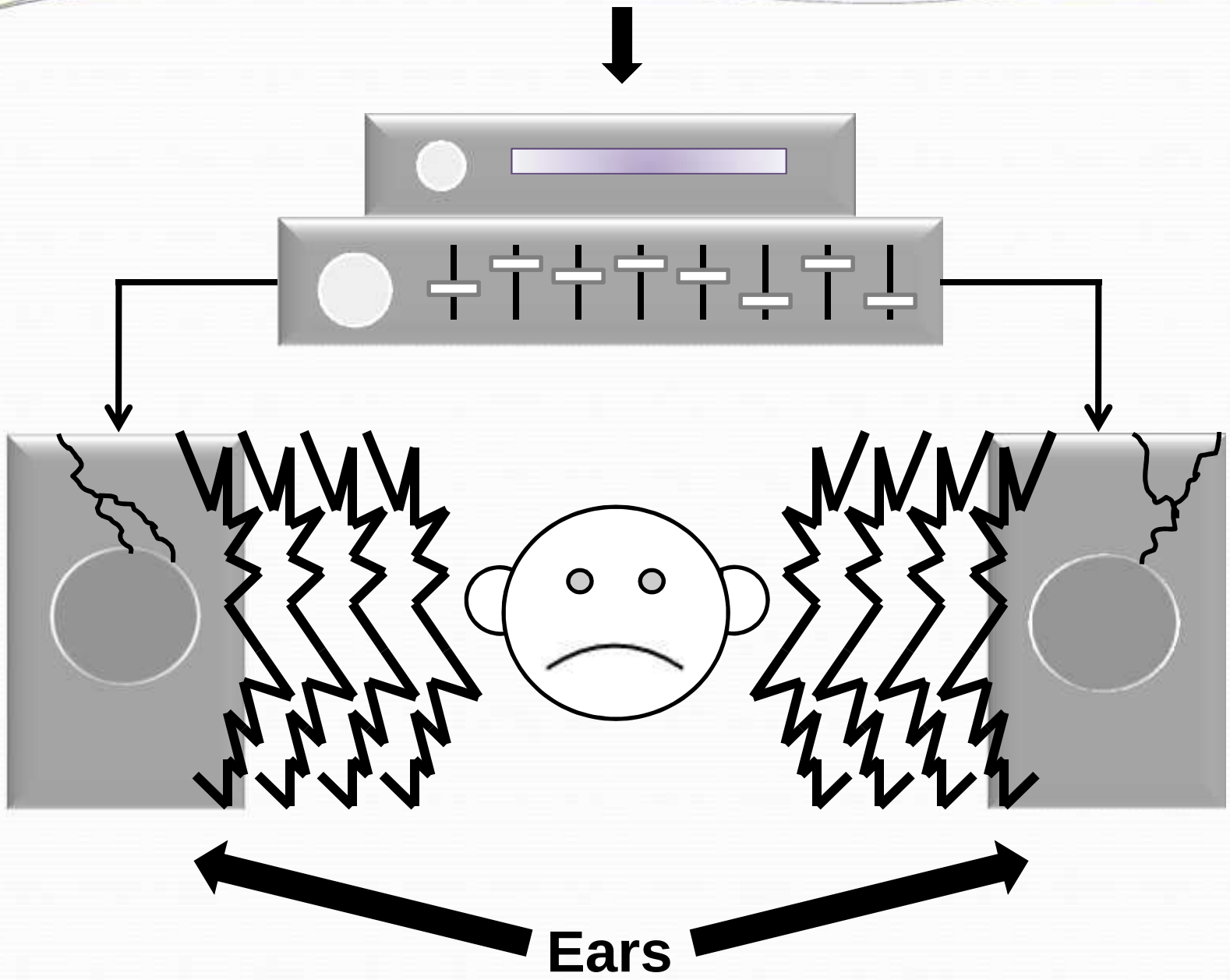
Realistic Benefits from Hearing Aids



Hearing Aids



Hearing Aids



Reasonable Expectations

Rose Allen
(www.audiologyonline.com)

1. Expect others to notice your hearing loss before you do!
   a. It's not them…it's you!
2. Expect your audiologist to be knowledgeable, courteous, and accommodating
   a. Case history
   b. Hearing test and hearing aid evaluation
3. Expect differing opinions
   a. There no single best hearing aid
   b. Expect recommendation for two hearing aids
4. Expect your audiologist to assess your hearing difficulties in several environments and define individual goals for you.
   a. COSI, COATS, APHAB
5. Expect to be offered a 30 day trial period and a non refundable fee if returned.
6. Expect a referral to a physician to rule out any medical condition that may contribute to your hearing loss.

7. Expect the hearing aids to cost more than you think they should

8. Expect your audiologist to evaluate the benefits provided by your hearing aids.
    1. Coupler
    2. Real ear
    3. Speech measures in quiet and/or noise

9. Expect an initial orientation session with your audiologist in which you will learn how to handle and care for your new aids.

10 Expect a period of adjustment (4-6 weeks)

11. Expect your voice to sound different.
    a. Occlusion effect
    b. Distance of mouth to microphone and other talkers to microphone

12. Expect a good, comfortable fit.

13. Expect multiple follow-up appointments for fine-tuning an no-cost.

14. Expect to be able to hear well, but not perfectly, in quiet one-to-one situations and most small group settings.

15. Expect an optimal "distance for hearing“ (~3 feet).

16. Expect to have difficulty hearing in noisy situations.

17. Your hearing aids may squeal (also called "whistle," or "feedback") under some circumstances.

18. Expect repairs.

19. Expect to buy batteries (7-10 days for some and up to 3-4 weeks for others).

20. Expect to purchase new hearing aids every 5 years

21. Most importantly, expect to enjoy the sounds of life again

MFi (Made for iPhone®)
Apple iPod®, iPad® and iPhone®

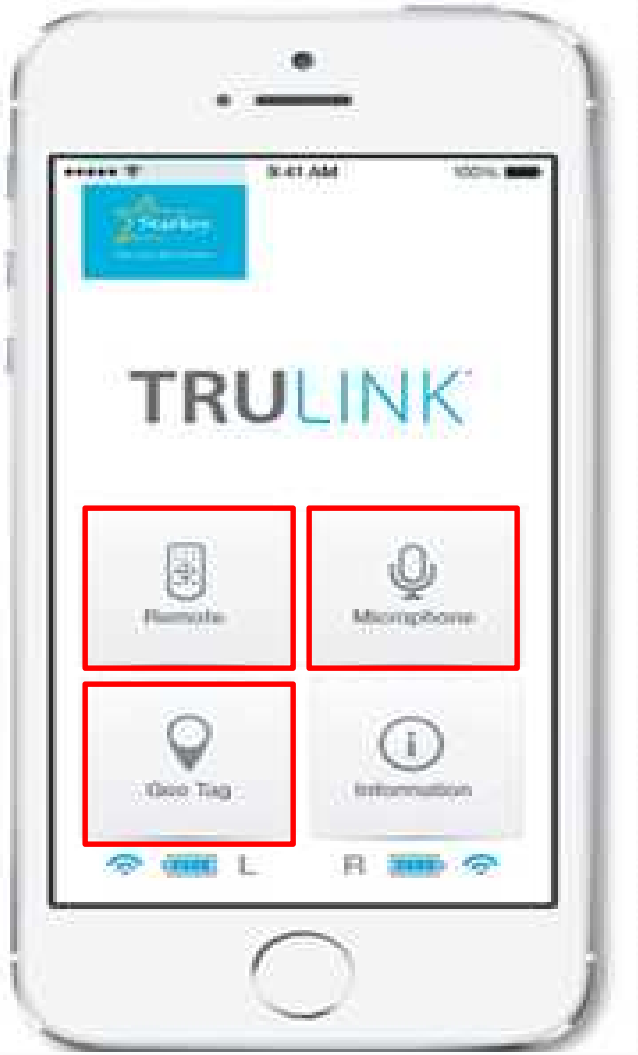
- ReSound= iPhone 5
- Starkey = iPhone 4 and 5
- Free apps from the iTune Store®
- GeoTag up to 16-20 listening situations of environments
- Instructions about your hearing aids
- Remote microphone
- “Find aid” function
- Record an environment to play back
- Remote Control = volume (both or separate)

  Bass/Treble

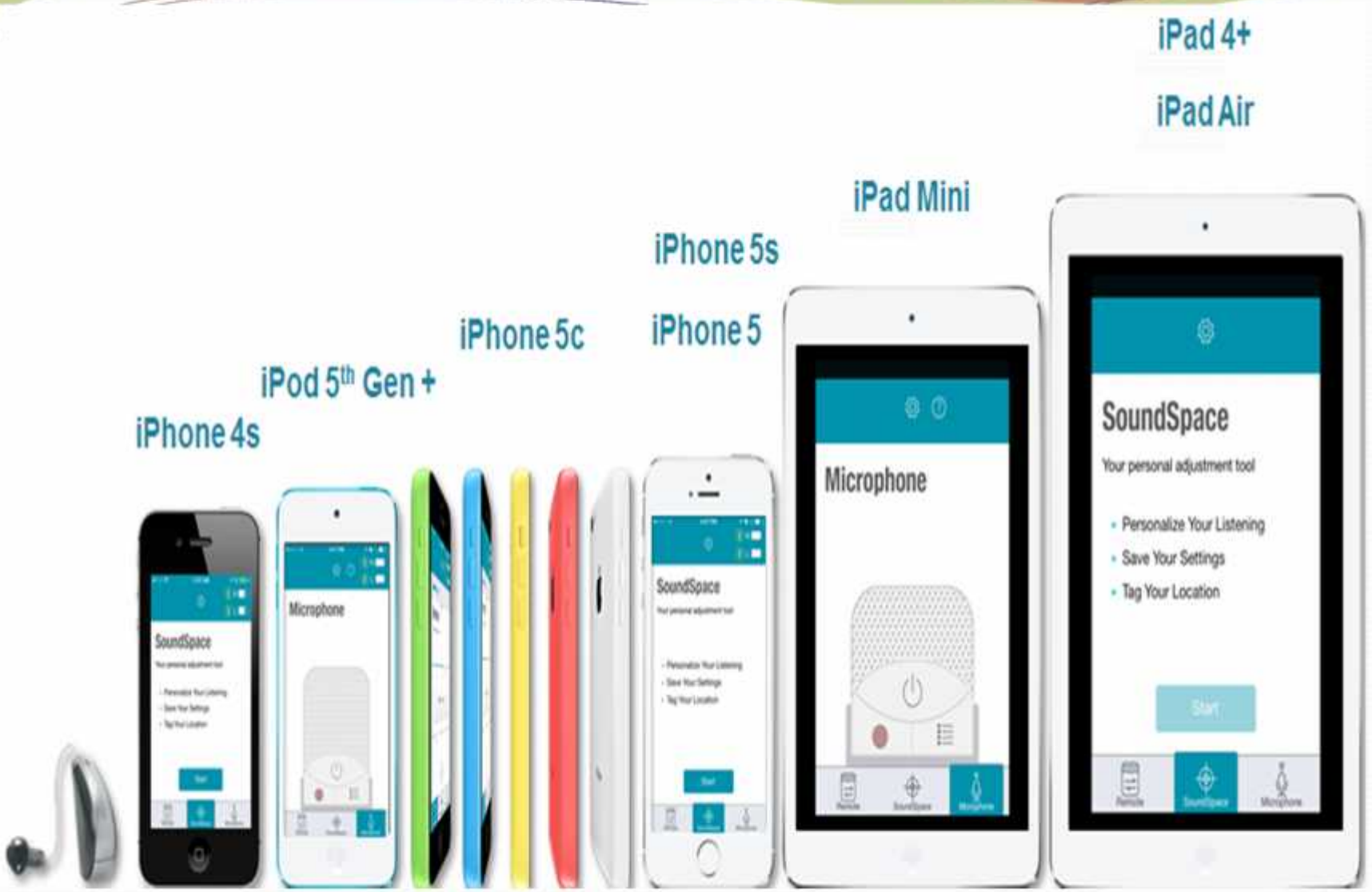
Starkey TRULINK APP

Remote Control

Geo Tag



Remote Microphone


iPad 4+
iPad Air
iPad Mini
iPhone 5s
iPhone 5
iPhone 5c
iPod 5th Gen +
iPhone 4s
SoundSpace
Microphone
SoundSpace
Your personal adjustment tool
Personalize Your Listening
Save Your Settings
Tag Your Location
Start

Remote Control

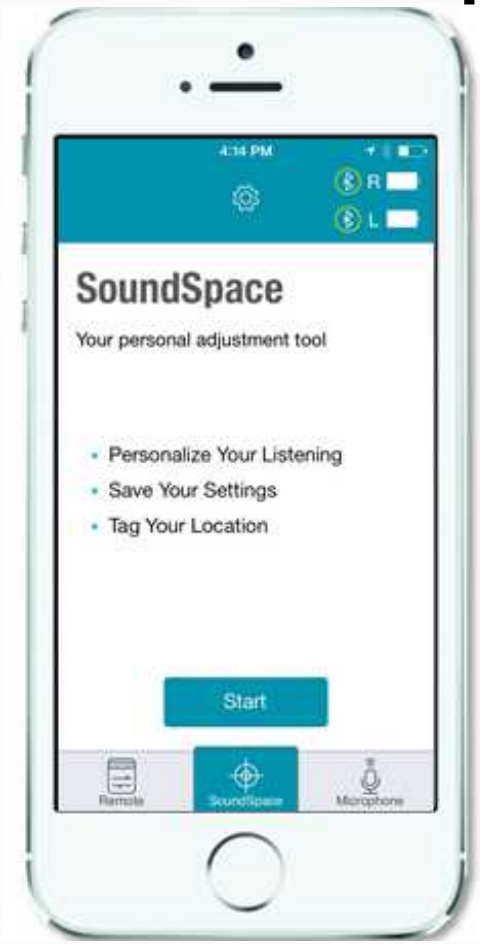
Change volume and switch memories

Right

Left

SoundSpace

Adjust sound quality to specific environments by moving a finger on the screen and save as another memory (program).



Louder

Bass

Softer

Treble

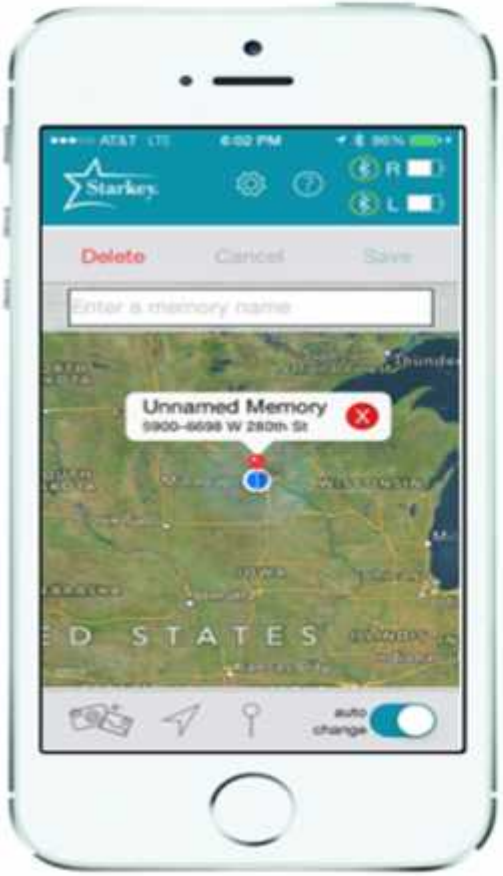
20 Memories:

a. 4 created by audiologist

b. GeoTag up to 16 TruLink Memories

c. Use iPhone GPS to know the location and automatically change to that memory when the patient is at the tagged location.

TruLink Memories

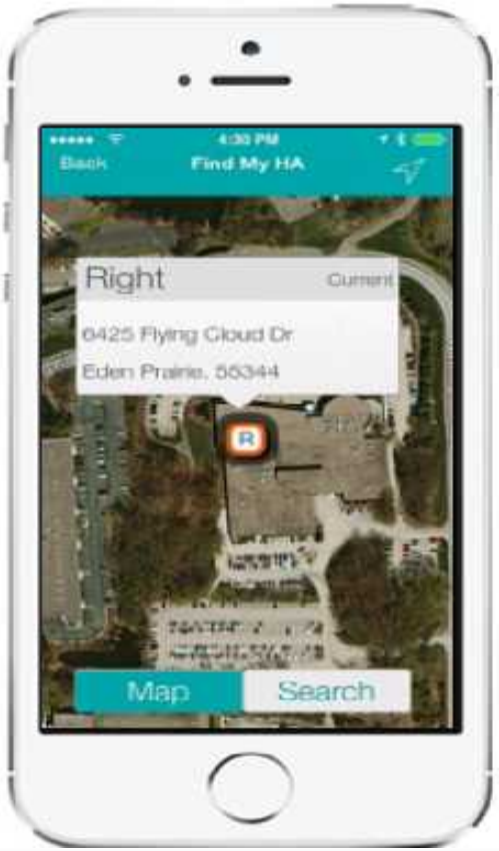


Label the memories

Live Microphone

Allow patient to record, playback and e-mail live sound sources to listen or send sample to audiologist to troubleshoot

a. Find lost hearing aids
b. Tracks hearing aid location
c. If the batteries "die" while aids are lost, TRULink will bring up the last location where the aids were active
d. Provide directions by turning on the feature and walk slowly with phone held out. The greater the signal, the closer to the hearing aids



Automatically changes to a setting designed to reduce the annoying sounds of driving and enhance your patient's "audio" driving experience.

At this point…..

- May program “demos” and fit patient. Have “demos” of virtually all our hearing aids, remotes, and major accessories. To do this, we limit our primary manufacturers to three.
- Provide brochures of the hearing aids, remote control(s), and accessories along with the charges. Provide web address for manufacturers.
- Emphasize that our staff does not receive “commission” as part of compensation at the medical school.
- May proceed to order aids if patient feels this is what he/she would like us to do.

At this point…..

- If the patient decides to “think about it,” or mention that he/she wants to “comparison shop,” we counsel the patient on the need for him/her to obtain hearing aids only at clinics where REM and a measure of validation is completed as part of the dispensing practice. If not, turn around and walk away.

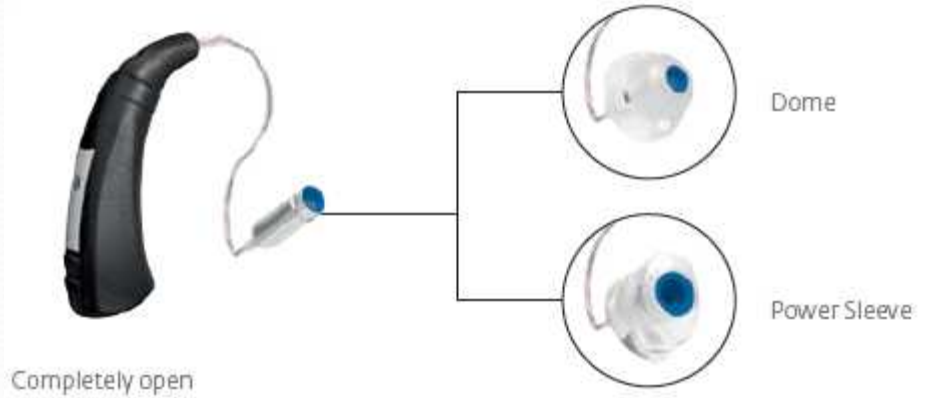
Excel Spreadsheet (Mandy Ortmann)

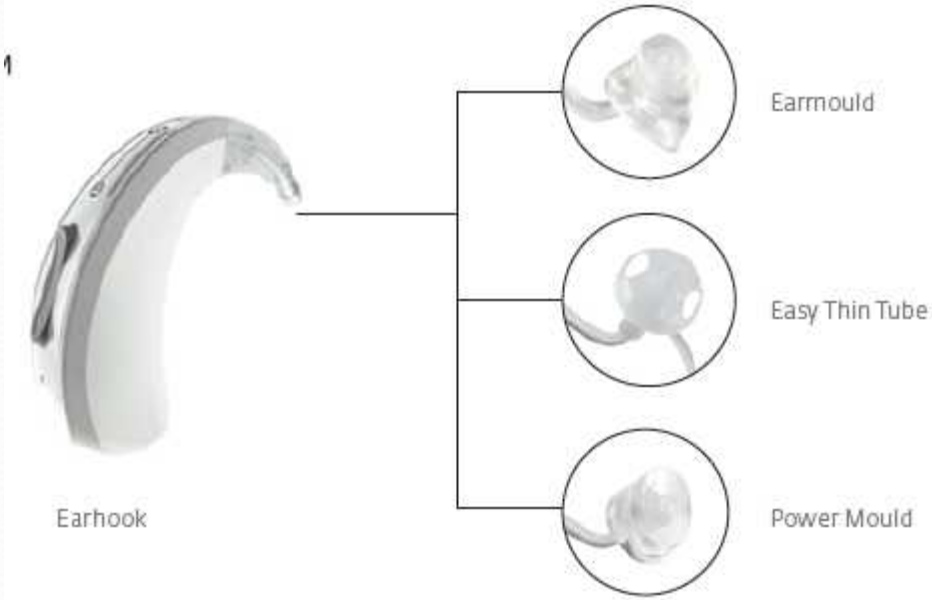
NAME:	MRN:	DOB:	1ST APPT	REASON FOR DELAY:	FOLLOW UP CALL:	OUTCOME:	LOCATION	PATIENT PURCHASED:
John Doe	11950553	4/3/1934	10/24/2012	thinking it over--traveling to NM will return 11/12--call 11/19/12	12/5 LM	called 12/31 scheduled HAE 1/8	Center for Advanced Medicine-MV	purchased 1/17/13

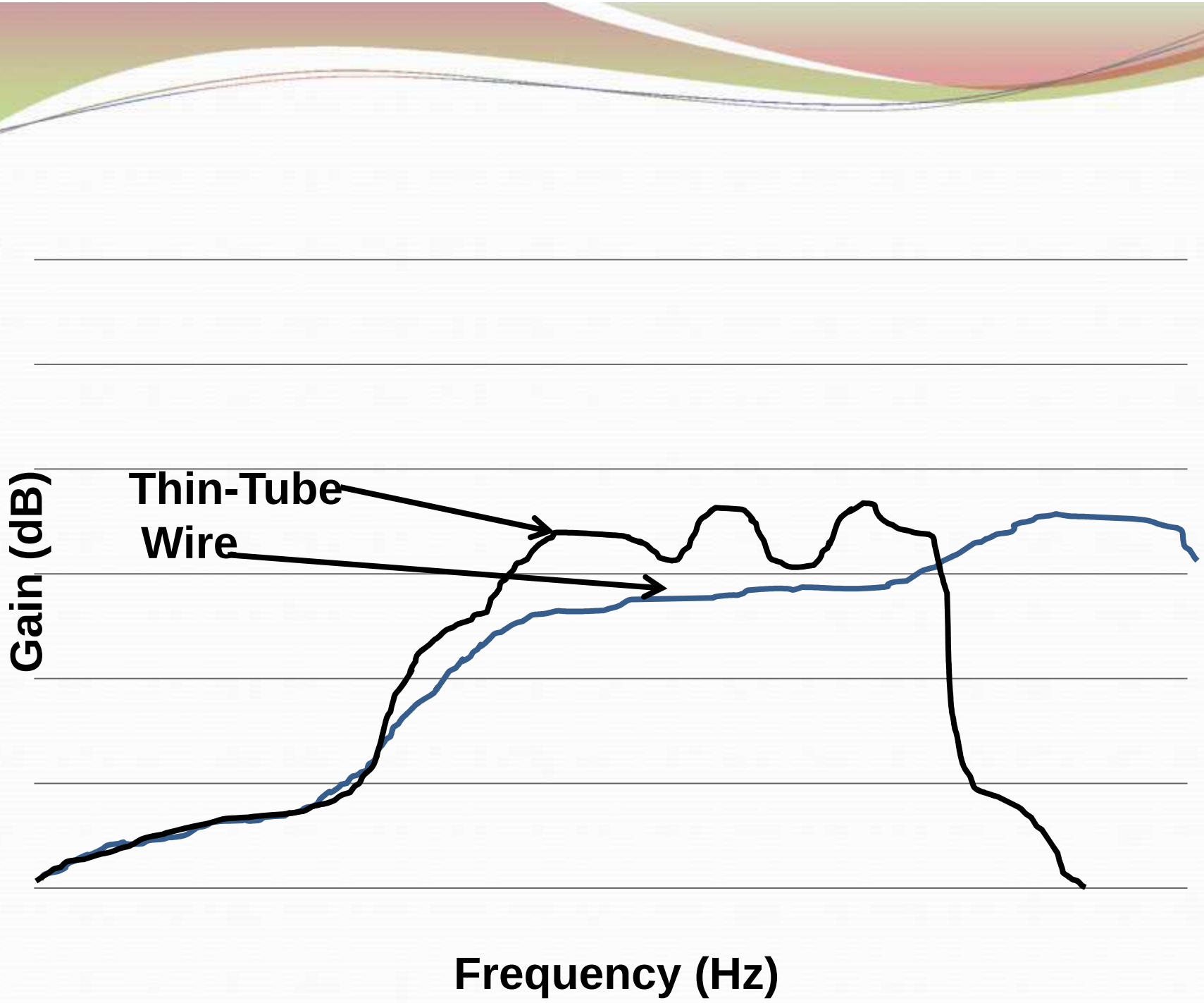
Also, counsel on…..

- **RITE (RIC) vs RITA:**
  - **Smooth vs irregular frequency response**
  - **Extended bandwidth**
  - **Impact of moisture less of an issue**
  - **Strong advocate of custom mold versus dome**
- **Strong advocate of VC**
- **Strong advocate of programmable t-coil**
- **Different Levels of Technology (Level 1 vs Level 5 vs Entry).**
- **4-6 week trial period**
- **If unsatisfied, can try different technology or return for full credit minus small professional fee**
- **Compensation of staff is not based on commission**
- **Access to most manufacturers**

Thin-Tube and Receiver in the Canal Coupling



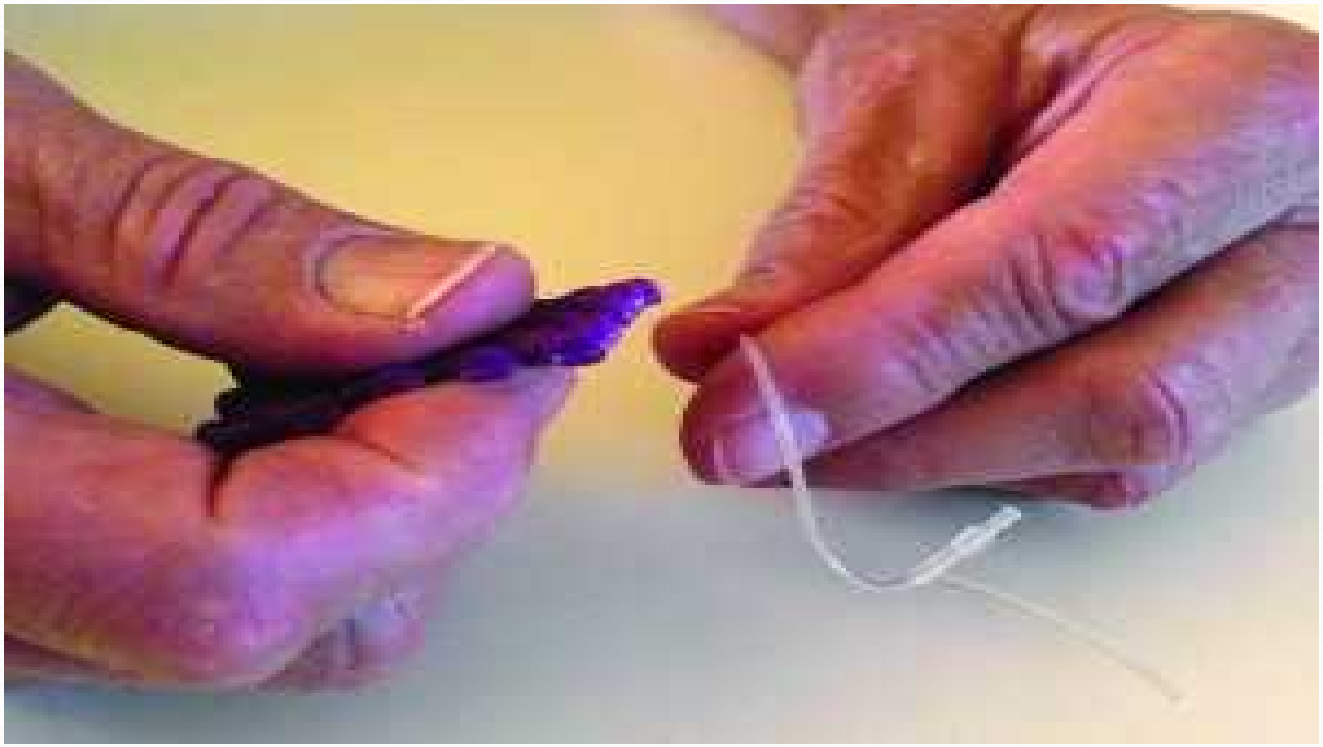



Thin-Tube
Wire
Gain (dB)
Frequency (Hz)

Widex

a. Receiver is warranted for same duration as warranty of aid (1-3 years)
b. Warranty as “stand alone” is 3 months
c. Smaller in design
d. Greater resistance to moisture and debris
e. No need to assemble wire and receiver

Vanish ($28)



Vanish

Battery Drain

Typical Current Drain (mA) per ANSI S3.22 (1976)	Size – 675	600 mAh	Size – 13	290 mAh	Size – 312	150 mAh	Size – 10	90 mAh	Size – 5	42 mAh
	Hours*	Days*	Hours*	Days*	Hours*	Days*	Hours*	Days*	Hours*	Days*
.2 mA	3000	188	1450	91	750	47	450	28	210	13
.3 mA	2000	125	967	60	500	31	300	19	140	9
.4 mA	1500	94	725	45	375	23	225	14	105	7
.5 mA	1200	75	580	36	300	19	180	11	84	5
.6 mA	1000	63	483	30	250	16	150	9	70	4
.7 mA	857	54	414	26	214	13	129	8	60	4
.8 mA	750	47	363	23	188	12	113	7	53	3
.9 mA	667	42	322	20	167	10	100	6	47	3
1.0 mA	600	38	290	18	150	9	90	6	42	3
1.2 mA	500	31	242	15	125	8	75	5	35	2
1.4 mA	429	27	207	13	107	7	64	4	30	2
1.6 mA	375	23	181	11	94	6	56	4	26	2
1.8 mA	333	21	161	10	83	5	50	3	23	1

Battery Size and drainage in mA				# Days	#/year	Monaural Cost/year ($) at cost per battery @ $0.50, $0.75, and $1.00			Bilateral		
675	13	312	10			0.5	0.75	1.00	0.5	0.75	1.00
			1.8	3	122	60.83	91.25	121.67	121.67	182.50	243.33
		1.8	1.2	5	73	36.50	54.75	73.00	73.00	109.50	146.00
		1.4	0.8	7	52	26.07	39.11	52.14	52.14	78.21	104.29
	1.8	1.0	0.6	9	41	20.28	30.42	40.56	40.56	60.83	81.11
	1.8	0.9	0.6	10	37	18.25	27.38	36.50	36.50	54.75	73.00
	1.4	0.8	0.5	12	30	15.21	22.81	30.42	30.42	45.63	60.83
	1.3	0.7	0.4	14	26	13.04	19.55	26.07	26.07	39.11	52.14
	1.2	0.6	0.4	16	23	11.41	17.11	22.81	22.81	34.22	45.63
	1	0.5	0.3	18	20	10.14	15.21	20.28	20.28	30.42	40.56
	0.9	0.5	0.3	20	18	9.13	13.69	18.25	18.25	27.38	36.50
1.8	0.9	0.5	0.3	21	17	8.69	13.04	17.38	17.38	26.07	34.76

Amazon.com: PowerOne hearing aid batteries size 313 - Windows Internet Explorer

File Edit View Favorites Tools Help

amazon

Favorites | Expedia Travel Vacations, C... | Adult Audiology Home | SAA Student Conference Bu... | Microsoft Outlook Web Access | Suggested Sites | Free Hotmail | Get more Add-ons | Microsoft Outlook Web Acce... | Microsoft Outlook Web Acce...

Amazon.com: PowerOne hearing aid batteries size 313

Page | Safety | Tools

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Your search "PowerOne hearing aid batteries size 313" did not match any products.

Showing results using some of your search terms

"PowerOne hearing aid batteries size 313" (See all 4,592 results)

See Size Options

Hearing Aid Battery Powerone size 312 made in Germany Genuine 60 Pack by Power One

~~$19.99~~ **$17.66**

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$15.45 new (22 offers)

#1 Best Seller in Hearing Aid Accessories

Rayovac Mercury Free Proline Advanced Size 312 Hearing Aid Batteries, Total of 48 Batteries by Rayovac

~~$39.95~~ **$26.30** Prime

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Eligible for FREE Super Saver Shipping.

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Hearing Aid Battery Powerone size 10 made in Germany Genuine 60 Pack by ORIGINAL Powerone

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In Stock.

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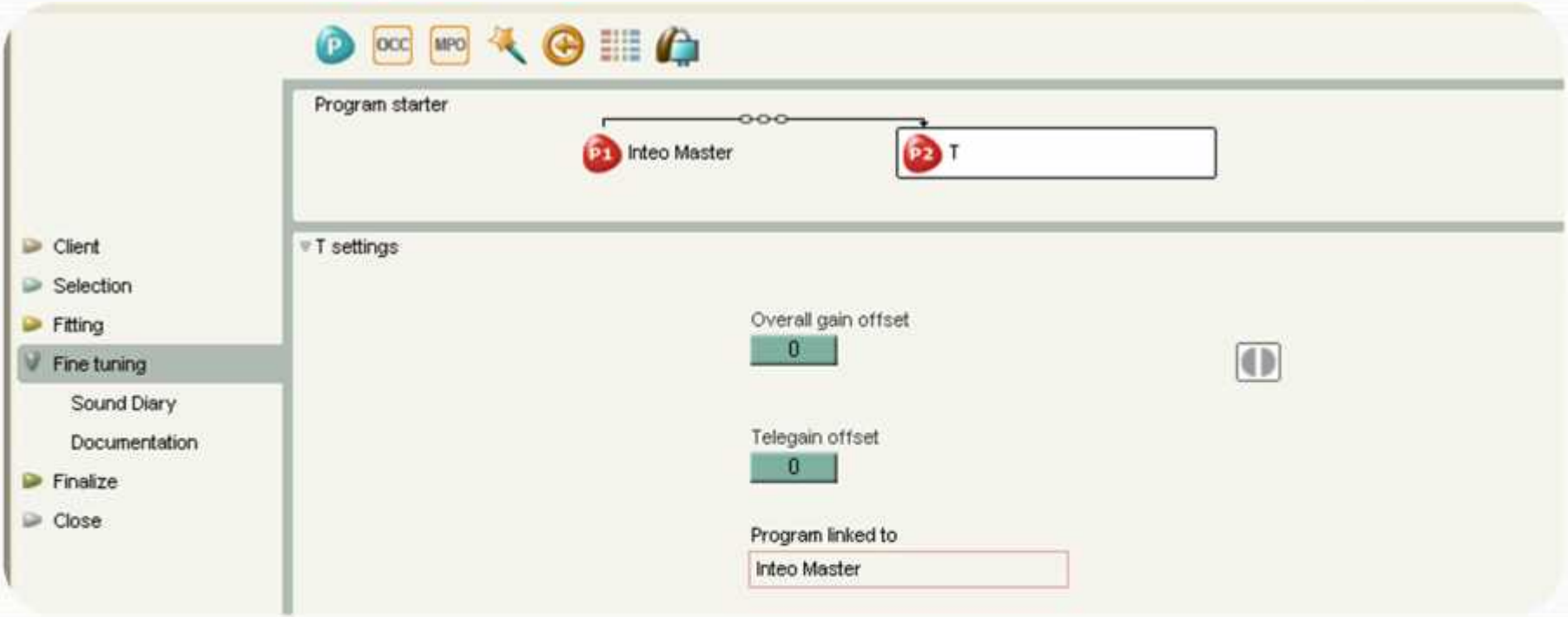
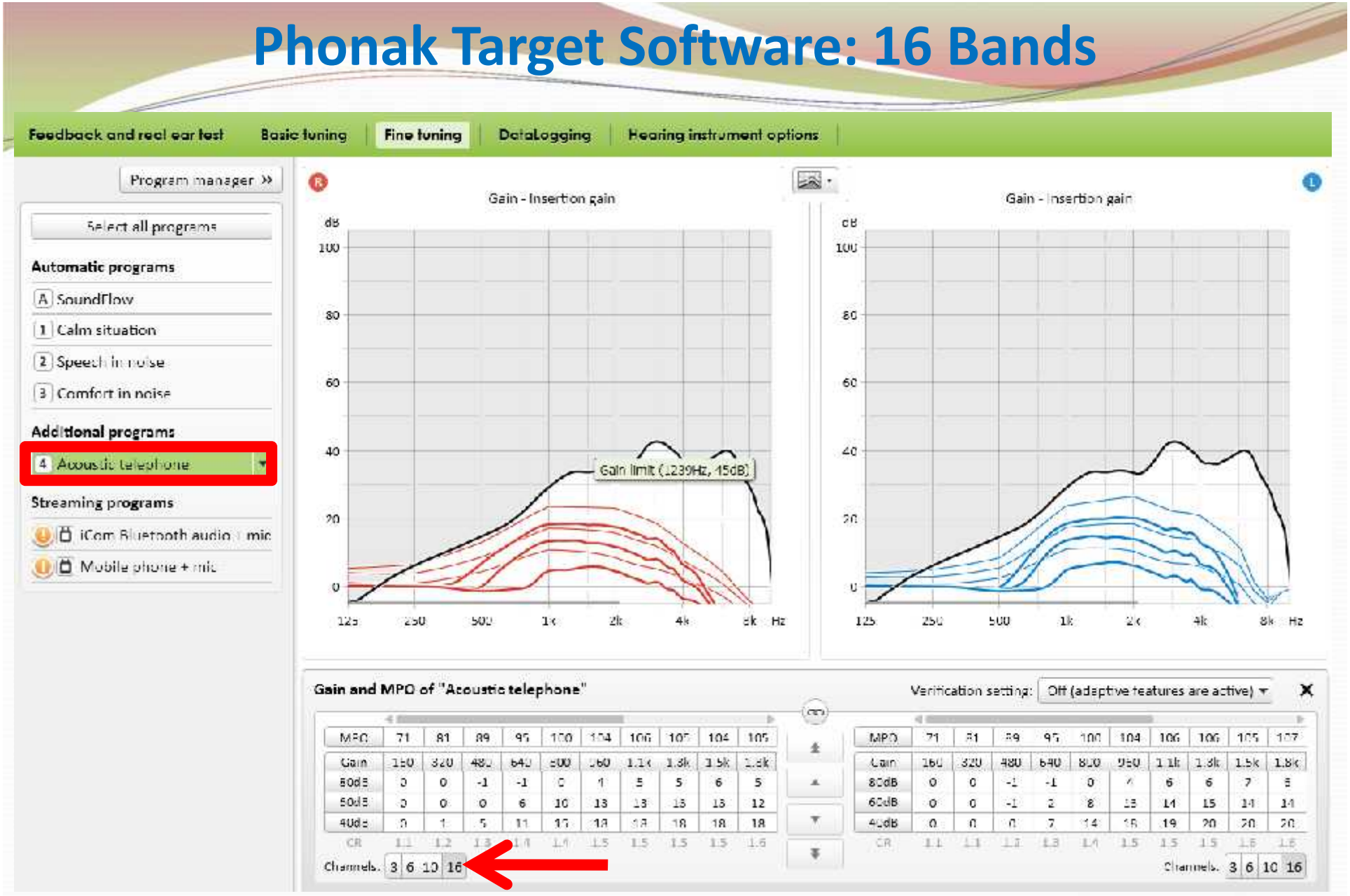
"PowerOne hearing aid batteries size 313" (See all 93 results)

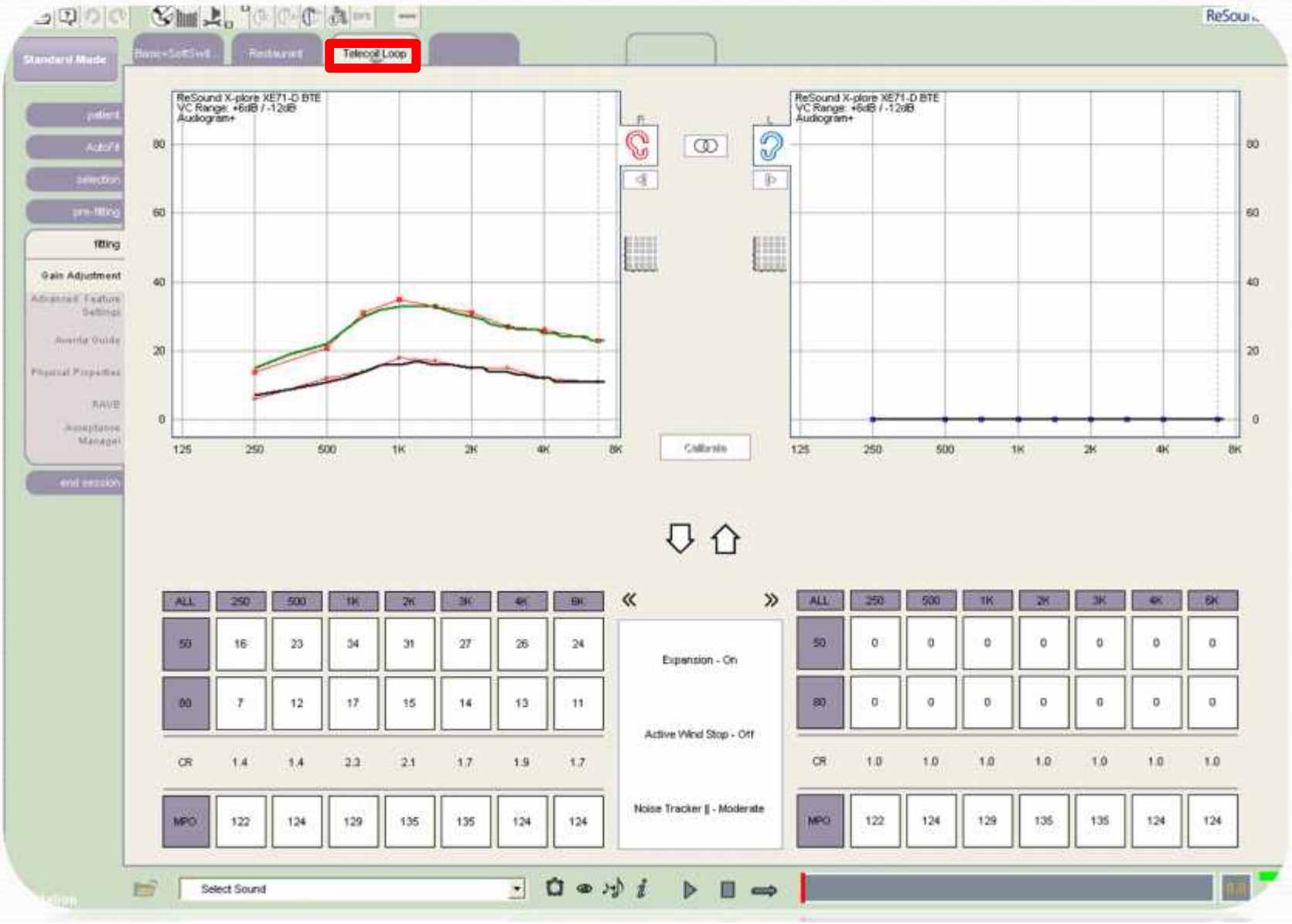
Widex: Can program overall gain

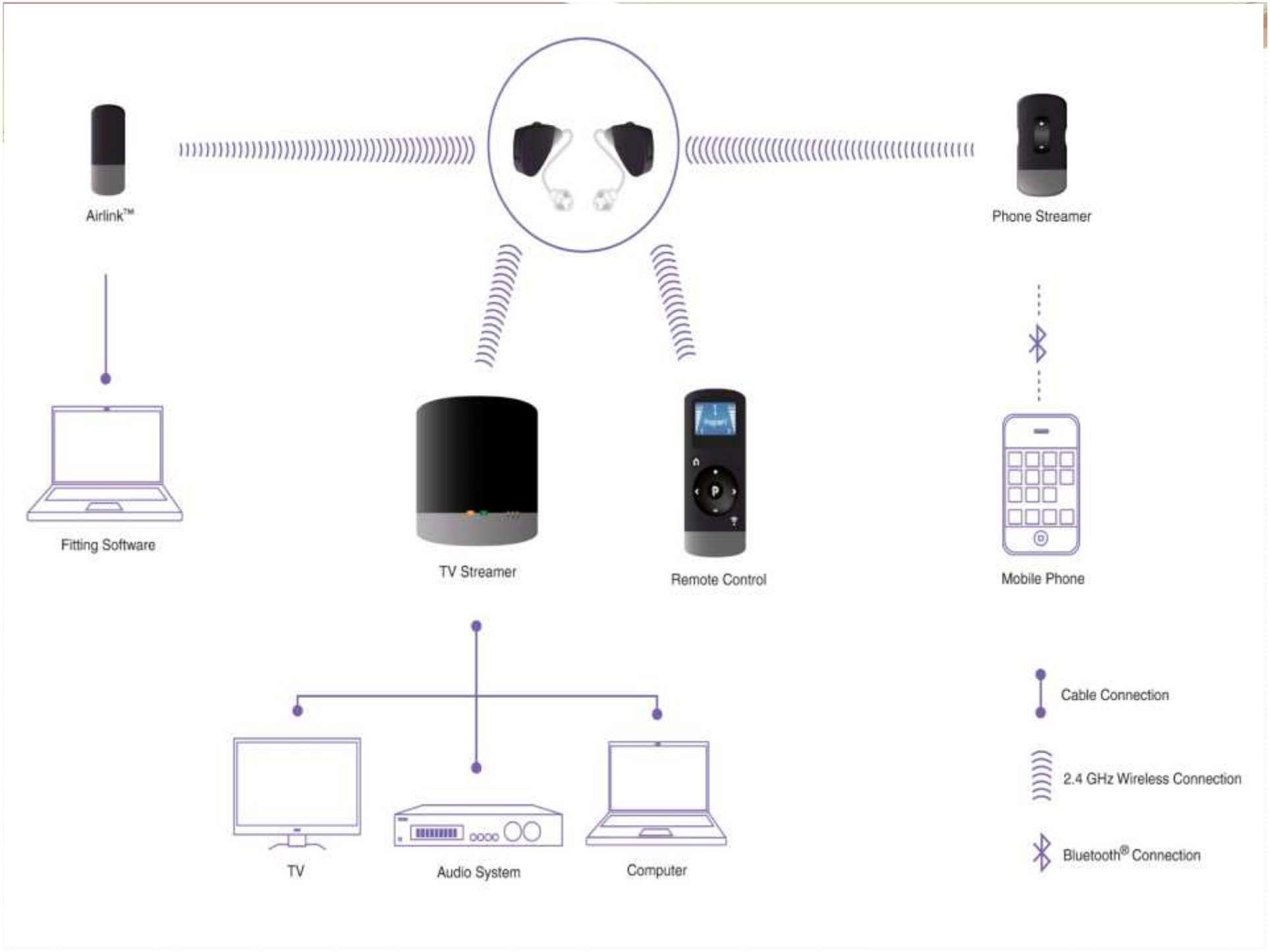


Phonak Target Software: 16 Bands



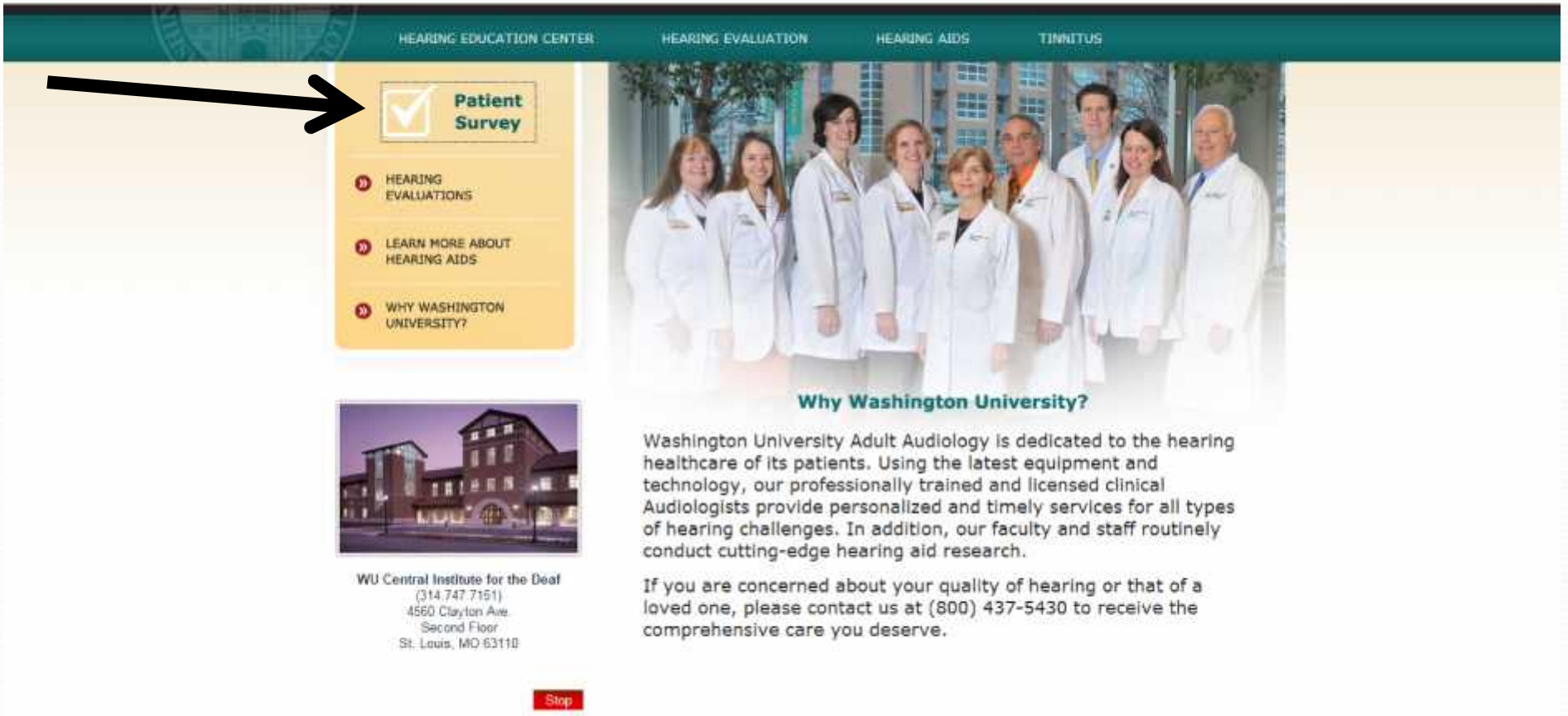
ReSound: Program T-Coil in 7 Bands




Airlink™
Phone Streamer
Fitting Software
TV Streamer
Remote Control
Mobile Phone
TV
Audio System
Computer
Cable Connection
2.4 GHz Wireless Connection
Bluetooth® Connection

Why Should I Get My Hearing Aids Here?

EarTrak
www.hearing.wustl.edu




Washington University Physicians
WUSTL.EDU
Adult Audiology
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HEARING EDUCATION CENTER
HEARING EVALUATION
HEARING AIDS
TINNITUS
Why Washington University
Hearing Education Center
Hearing Evaluation
Hearing Aids
PROVIDE FEEDBACK
If you have purchased hearing aids recently from one of our clinic locations, we would love your feedback. Your comments and insight are important to us and will help us improve and grow as clinicians and as a practice.
The link below will take you to a survey with questions regarding your satisfaction with your hearing aids, the services provided, and the staff who helped you. You will be asked to enter your Practice# and Client#, which can be found at the bottom of your hearing aid contract. If you cannot find these numbers, please call one of our patient service representatives at (314) 362-7489 and they will be pleased to provide you with the information. These numbers correspond to the clinic location where you were seen and the individual audiologist who you worked with. They are not linked to you or any of your identifying information.
Your feedback on this survey is completely confidential. Your assessment is analyzed by an outside company and your comments will not be linked to you. Thank you for helping us improve our clinical services.
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Locations
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Hearing Aids
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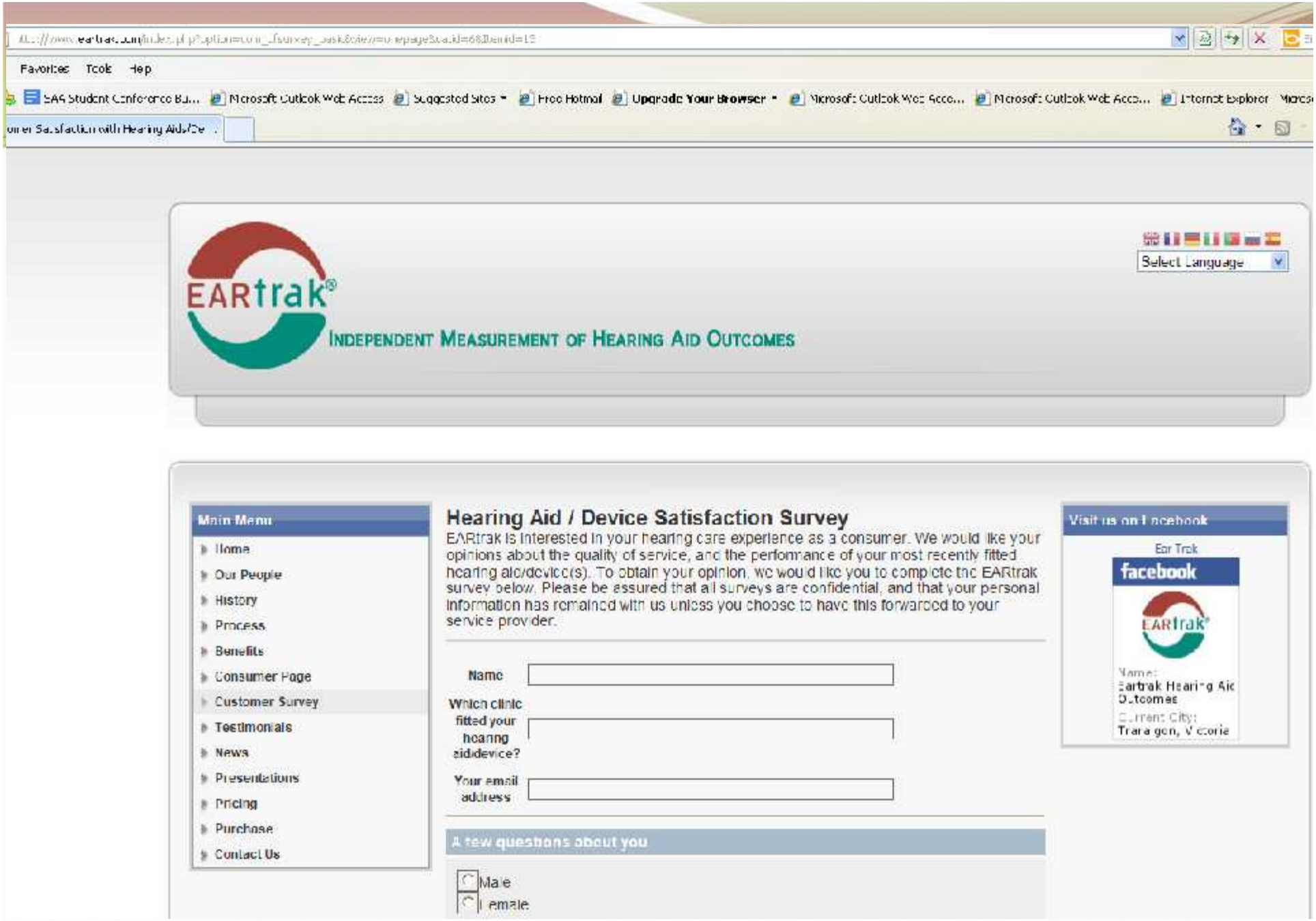
Favorites Tools Help
Microsoft Outlook Web Access
Suggested Sites
Free Hotmail
Upgrade Your Browser
Microsoft Outlook Web Acce...
Internet Explorer
EARtrak®
INDEPENDENT MEASUREMENT OF HEARING AID OUTCOMES
Select Language
Main Menu
Home
Our People
History
Process
Benefits
Consumer Page
Customer Survey
Testimonials
News
Presentations
Pricing
Purchase
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Hearing Aid / Device Satisfaction Survey
EARtrak is interested in your hearing care experience as a consumer. We would like your opinions about the quality of service, and the performance of your most recently fitted hearing aid/device(s). To obtain your opinion, we would like you to complete the EARtrak survey below. Please be assured that all surveys are confidential, and that your personal information has remained with us unless you choose to have this forwarded to your service provider.
Name
Which clinic fitted your hearing aid/device?
Your email address
A few questions about you
Male
Female
Visit us on Facebook
Ear Trak
facebook
EARtrak®
Name:
Eartrak Hearing Aid Outcomes
Current City:
Traralgon, Victoria

EarTrak

From Australia (Susan and Neil Clutterbuck) and have published or presented data on several thousand patients. If interested, go to www.eartrak.com.

Questions on survey:

- **About patient and hearing aids**
- **Unaided performance**
- **Aided performance**
- **Overall satisfaction with hearing aids**
- **Would patient recommend hearing aids, clinic, and/or clinician to friends/family?**
- **How patient learned of service provider**
- **Listening situations (11): very satisfied to very dissatisfied (5 point scale)**
- **Device features (12): same scale**
- **Clinic and staff (8): same scale**

Respondent comments for Practice: 1002, Client: 022-5

Report from EarTrak: 1002 is Wash U; 022-5 is one staff member

Your responses for Question 12 - Satisfaction with Listening Situations					
With one person	**In small groups**	**In large groups**	**Outdoors**	**At a concert or movie**	**At church or at a lecture**
Very satisfied	Satisfied	Neutral	Satisfied	Satisfied	Satisfied
Watching TV	**In a car**	**At work**	**On the phone**	**At a restaurant**	
Very satisfied	Neutral	Not relevant	Very satisfied	Satisfied	

Your responses for Question 13 - Satisfaction with Hearing Aid Features					
Overall fit/ comfort	**Ease of adjusting volume**	**Visibility**	**Cleaning frequency**	**Ongoing expense**	**Battery life**
Satisfied	Satisfied	Satisfied	Satisfied	Neutral	Satisfied
Reliability	**Clarity**	**Sound of own voice**	**Localisation**	**Loud sounds**	**Whistling**
Satisfied	Satisfied	Satisfied	Satisfied	Neutral	Very satisfied

Your responses for Question 14 - Satisfaction with Service Provider			
Professionalism of clinician	**Friendliness of staff**	**Patience of clinician**	**Explanations given**
Very satisfied	Very satisfied	Very satisfied	Very satisfied
Amount of time spent	**Cleanliness and appearance of office**	**Service after purchase**	
Very satisfied	Very satisfied	Very satisfied	

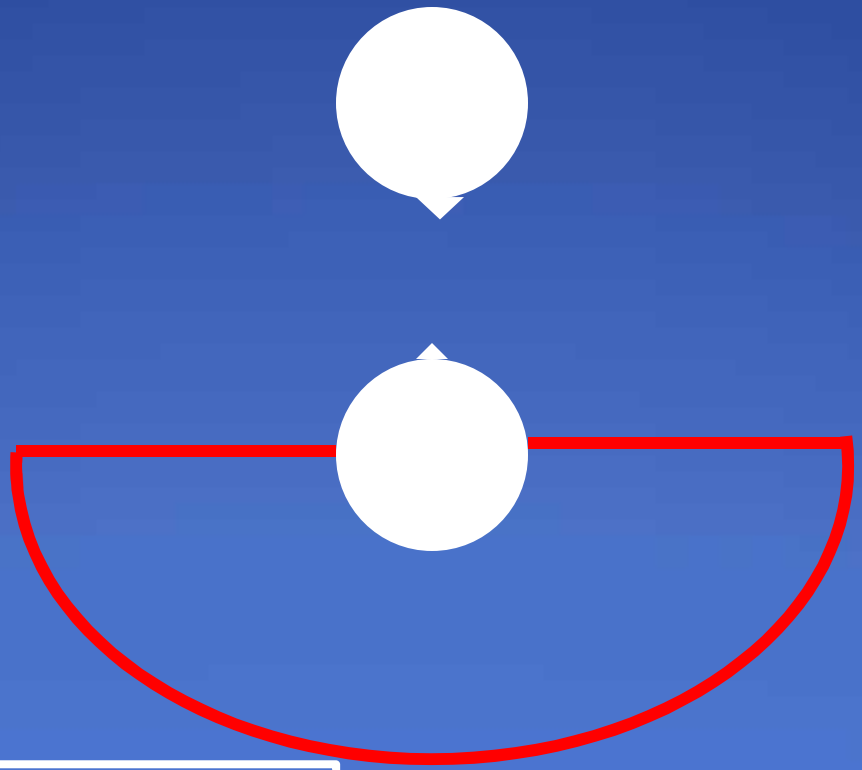
Listening situation		Satisfied		Dissatisfied	
		Your Clients	EARtrak Group	EARtrak Group	Your Clients
with one person	n	40			0
	%	93.0 %	87.4 %	2.4 %	0.0 %
	N	43			
in small groups	n	42			0
	%	95.5 %	68.0 %	11.5 %	0.0 %
	N	44			
in large groups	n	26			3
	%	59.1 %	31.8 %	31.7 %	6.8 %
	N	44			
outdoors	n	33			0
	%	78.6 %	66.9 %	8.4 %	0.0 %
	N	42			
concert/ movie	n	25			1
	%	69.4 %	66.9 %	10.6 %	2.8 %
	N	36			
place of worship/ lectures	n	27			0
	%	71.1 %	62.0%	13.3 %	0.0 %
	N	38			
watching TV	n	37			0
	%	90.2 %	77.3 %	8.4 %	0.0 %
	N	41			
in a car	n	38			0
	%	86.4 %	62.9 %	11.4 %	0.0 %
	N	44			
workplace	n	29			0
	%	93.5 %	63.0 %	6.2 %	0.0 %
	N	31			
telephone	n	32			3
	%	76.2 %	51.7 %	20.1 %	7.1 %
	N	42			
restaurant	n	28			5
	%	63.6 %	45.2 %	25.0 %	11.4 %
	N	44			
Number of clients surveyed		47			
Mean situations satisfied		79.7 %	62.1 %		
Individual practice range		55.3 % - 79.7 %			

Features		Satisfied		Dissatisfied	
		Your Clients	EARtrak Group	EARtrak Group	Your Clients
Fit/ comfort	n	38			3
	%	86.4 %	62.2 %	5.7 %	6.6 %
	N	44			
Volume adjustment	n	32			2
	%	82.1 %	68.5 %	11.9 %	5.1 %
	N	39			
Visibility of aid	n	32			0
	%	78.0 %	82.1 %	2.8 %	0.0 %
	N	41			
Cleaning frequency	n	33			1
	%	76.7 %	79.3 %	4.0 %	2.3 %
	N	43			
Ongoing expense	n	27			2
	%	65.9 %	77.4 %	6.1 %	4.9 %
	N	41			
Battery life	n	23			5
	%	53.5 %	66.4 %	16.1 %	11.6 %
	N	43			
Reliability	n	35			0
	%	92.1 %	65.4 %	2.5 %	0.0 %
	N	38			
Clarity	n	39			2
	%	88.6 %	71.6 %	9.4 %	4.5 %
	N	44			
Sound of voice	n	33			5
	%	78.6 %	72.0 %	4.8 %	11.9 %
	N	42			
Localization	n	31			3
	%	75.6 %	59.2 %	12.9 %	7.3 %
	N	41			
Loud sounds	n	20			8
	%	47.6 %	49.3 %	22.3 %	19.0 %
	N	42			
Whistling	n	27			6
	%	67.5 %	55.0 %	16.9 %	15.0 %
	N	40			
Number of clients surveyed		**47**			
Mean features satisfied		**74.4 %**	**70.7 %**		
Individual practice range		**55.5 % - 81.5 %**			

Features		Satisfied		Dissatisfied	
		Your Clients	EARtrak Group	EARtrak Group	Your Clients
Professionalism	n	43			0
	%	100 %	97.7 %	0.8 %	0.0 %
	N	43			
Friendliness	n	43			0
	%	100 %	98.5 %	0.7 %	0.0 %
	N	43			
Patience	n	43			0
	%	100 %	97.7 %	0.8 %	0.0 %
	N	43			
Explanations	n	43			0
	%	100 %	95.4 %	0.8 %	0.0 %
	N	43			
Time spent	n	43			0
	%	100 %	96.4 %	0.6 %	0.0 %
	N	43			
Office appearance	n	43			0
	%	100 %	97.0 %	0.7 %	0.0 %
	N	43			
Post-purchase service	n	43			0
	%	100 %	92.8 %	1.8 %	0.0 %
	N	43			
Understood my needs	n	43			0
	%	100 %	95.5 %	1.4 %	0.0 %
	N	43			
Number of clients surveyed		**47**			
Mean service score		**100 %**	**96.4 %**		
Individual practice range		**86.9 % - 100 %**			

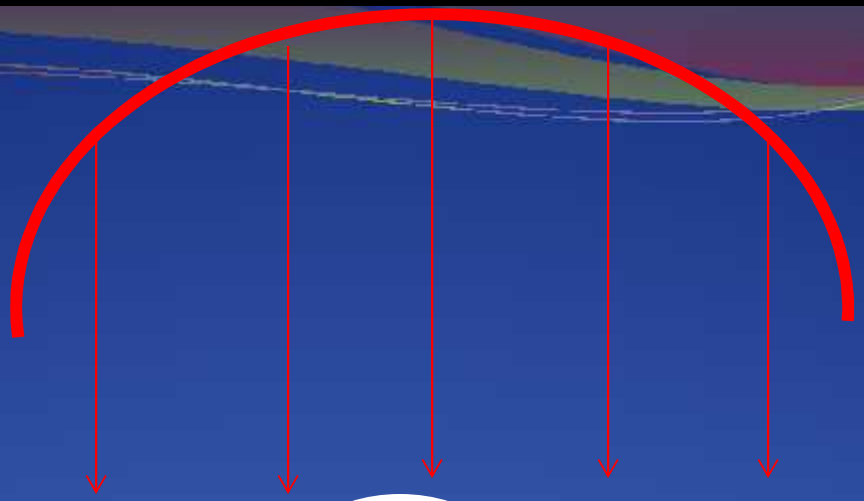
Omnidirectional

Directional



Noise louder than signal

Directional

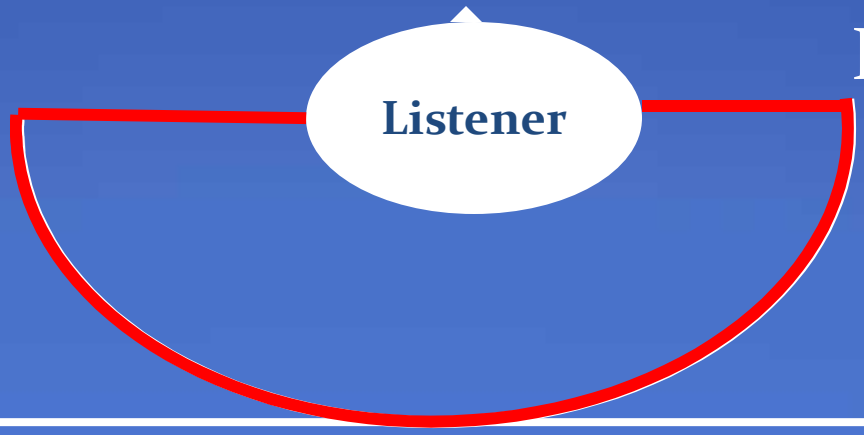


Noise from the front
Difficult

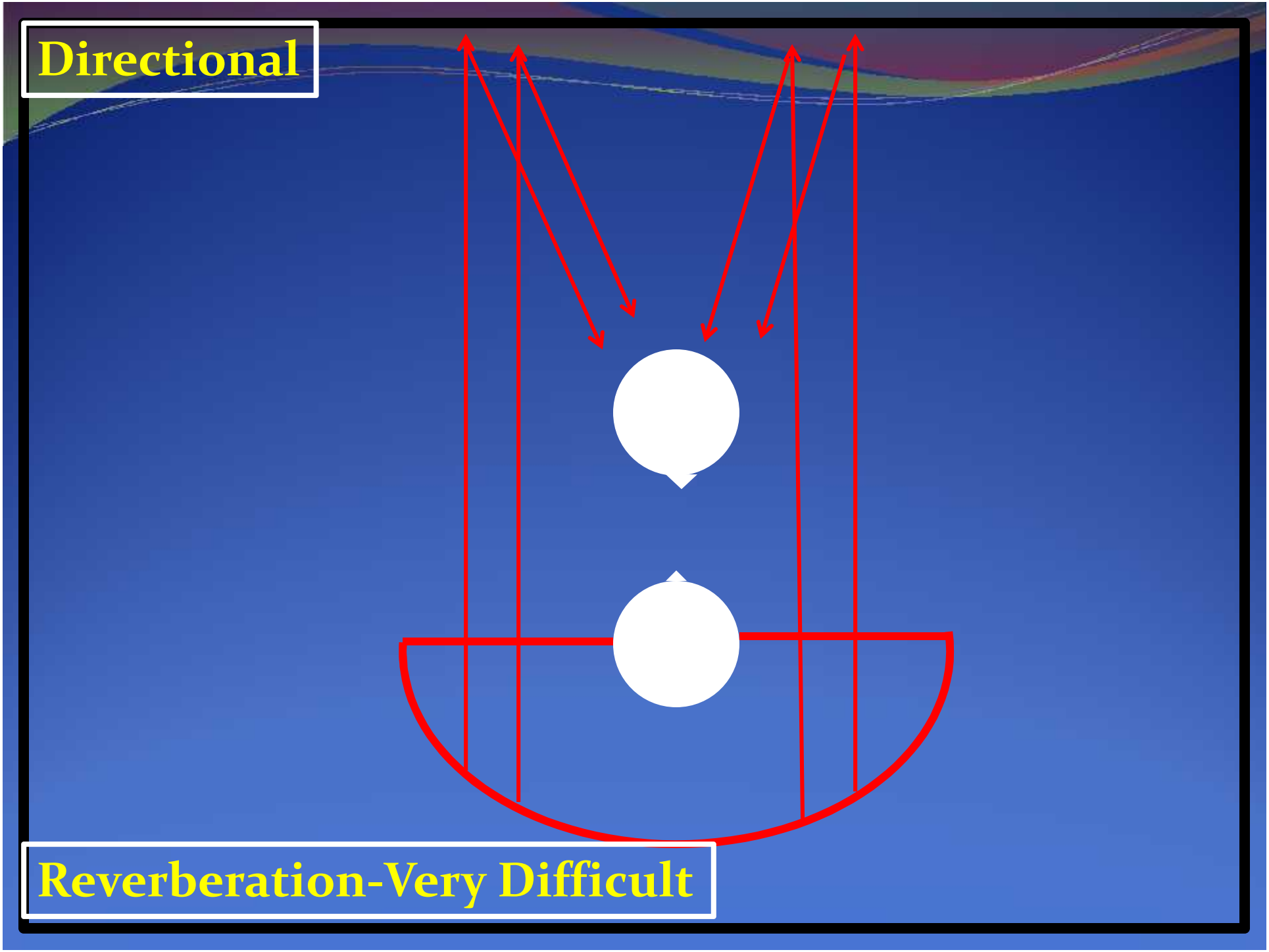
Talker

Noise from back
Easier

Listener



Noise from back and front- Very difficult


Directional
Reverberation-Very Difficult

Restaurant-Better

Talker

Table

Listener

Restaurant-Poorer

Talker

Table

Listener