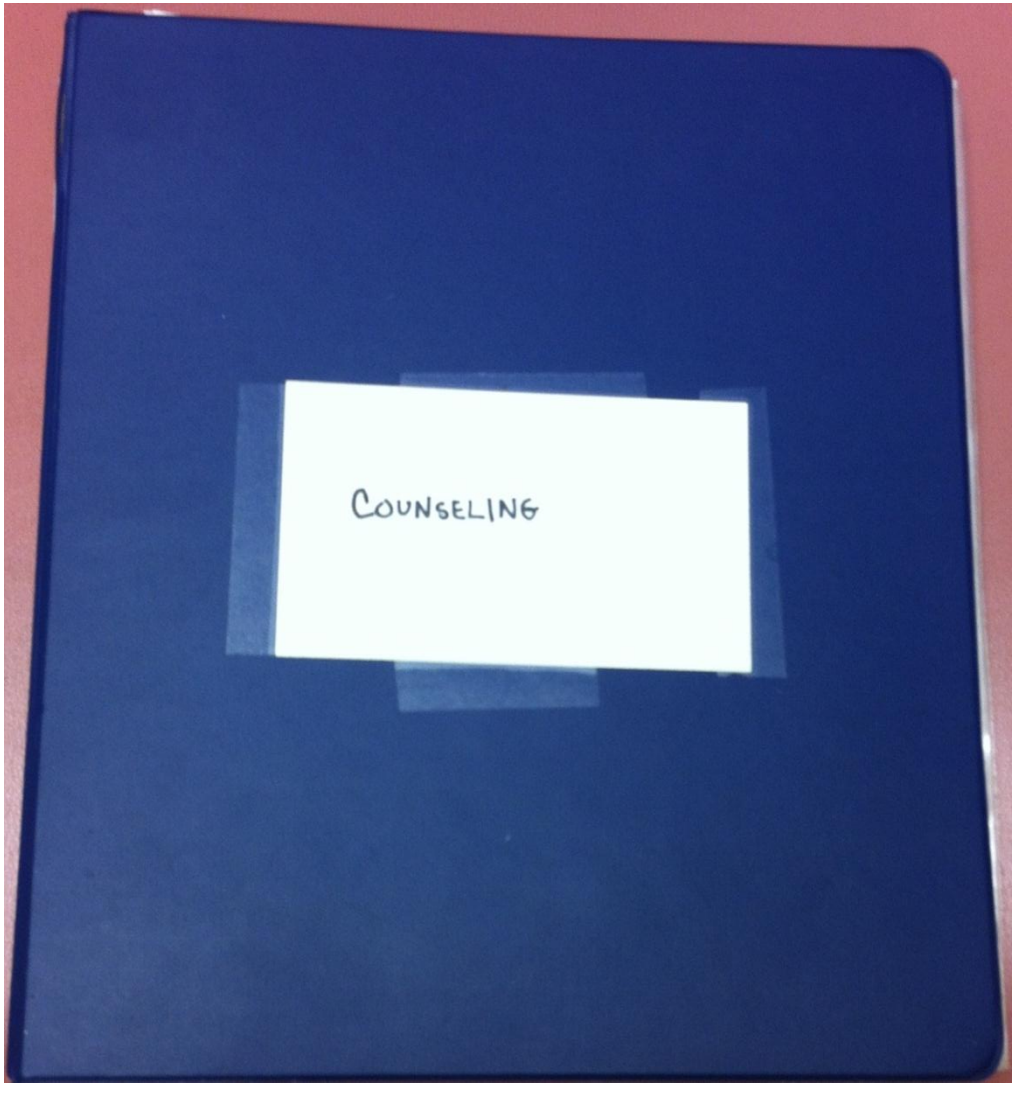
Tools to Help Patients Better Understand Hearing Aid Technology and Other Aspects of Amplification

Michael Valente
Siemens *e*Learning
July 24, 2014

My Hearing Aid Evaluation Counseling Binder

This presentation describes the contents of this binder that is constantly changing



Patient Visits for Amplification @ Washington University

- Audiometric examination
- Hearing aid evaluation
- Hearing aid fitting
- Hearing aid assessment

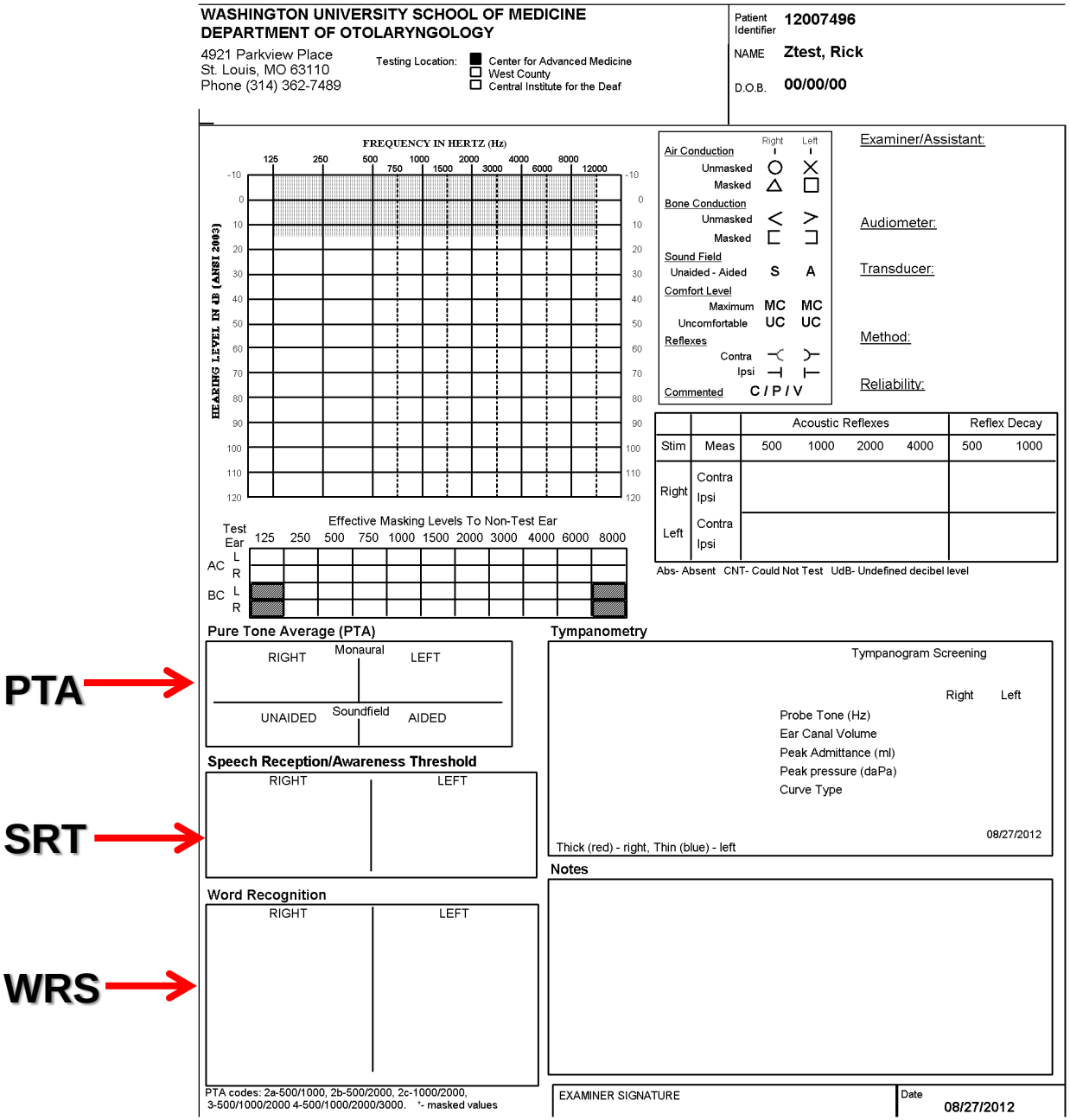
Typical HAE

- Review audiologic examination
- Review anatomy of ear
- Impact of patient's hearing loss on Speech Intelligibility Index (SII)
- Counsel on:
  - Differences in levels of technology
  - Realistic expectations
  - Realistic expectations for patients with poor word recognition
  - Recent advances in hearing aid technology
  - Batteries
  - T-Coil
- Additional counseling tools

1st Step

Review patient's audiogram

Computerized Audiogram Using AudBase Directly 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 12000
HEARING LEVEL IN dB (ANSI 2003)
-10 0 10 20 30 40 50 60 70 80 90 100 110 120

	Right	Left
Air Conduction		
Unmasked	○	×
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: AC L R, BC L R
125 250 500 750 1000 1500 2000 3000 4000 6000 8000

		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

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

Speech Reception/Awareness Threshold
RIGHT LEFT

Word Recognition
RIGHT LEFT

Notes

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

EXAMINER SIGNATURE
Date 08/27/2012

PTA →
SRT →
WRS →
← ART
← TYMP

AUDIOLOGICAL RECORD

TEST DATE 10-14-2013

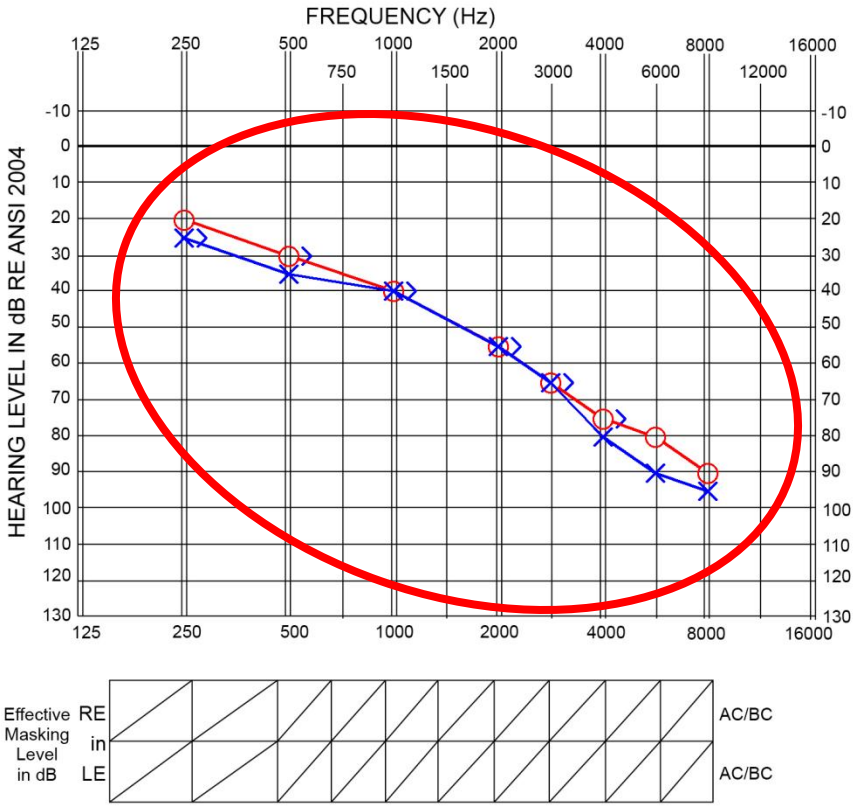
DOB 5-23-52 SEX Male

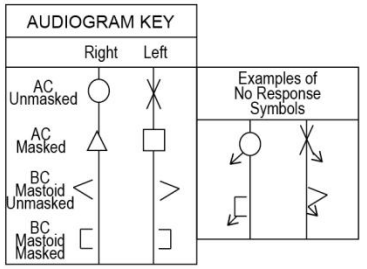
AUDIOLOGIST MV

AUDIOMETER GSI 61

EARPHONE Insert

NAME Chuck Wagon





SPEECH AUDIOMETRY

Speech tests via: (Circle) MLV Recorded

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 L 2A

NU-6 Female

RELIABILITY: Good

VALIDITY: Acceptable

ACOUSTIC REFLEX THRESHOLDS

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

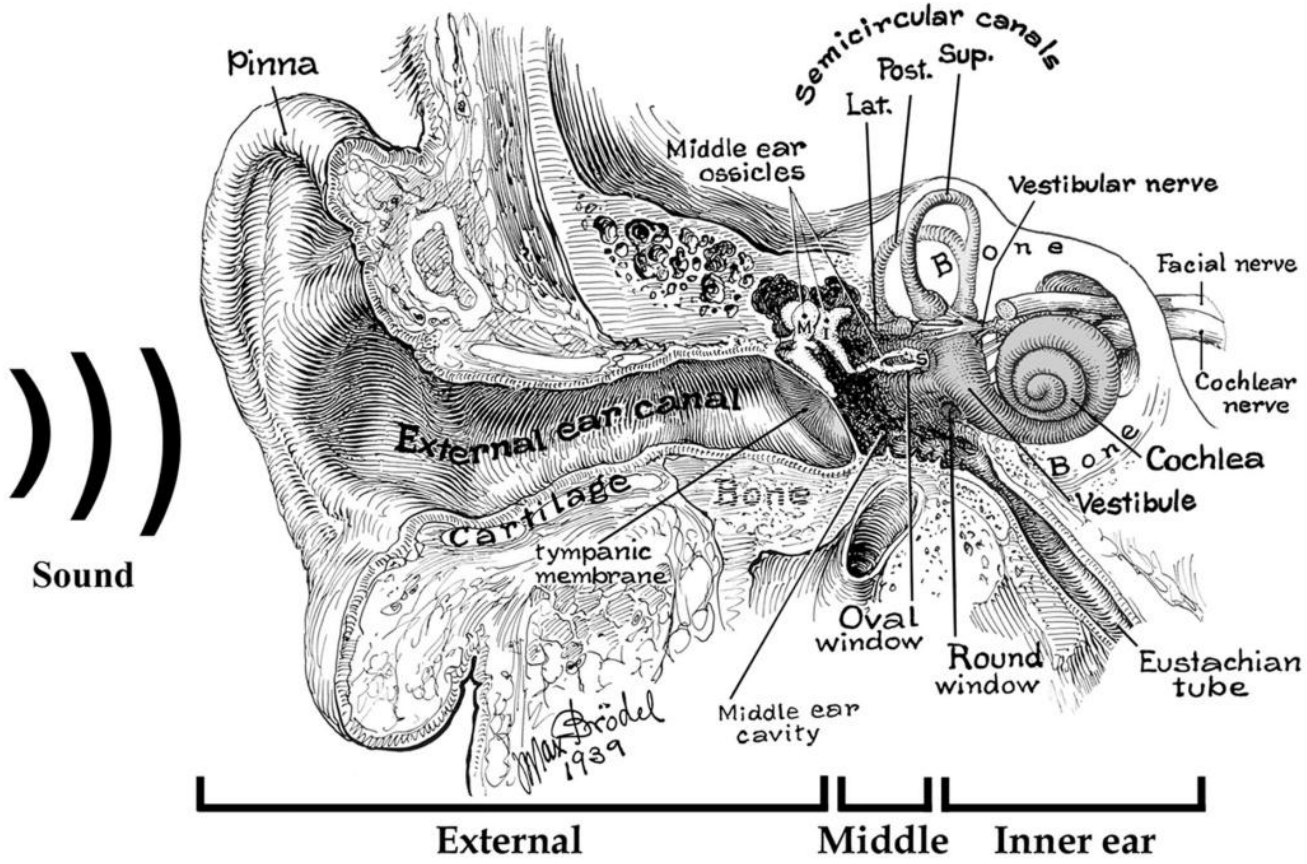
Peak Pressure (daPa): Rt 0 Lt 0

Type: Rt A Lt A

2nd Step

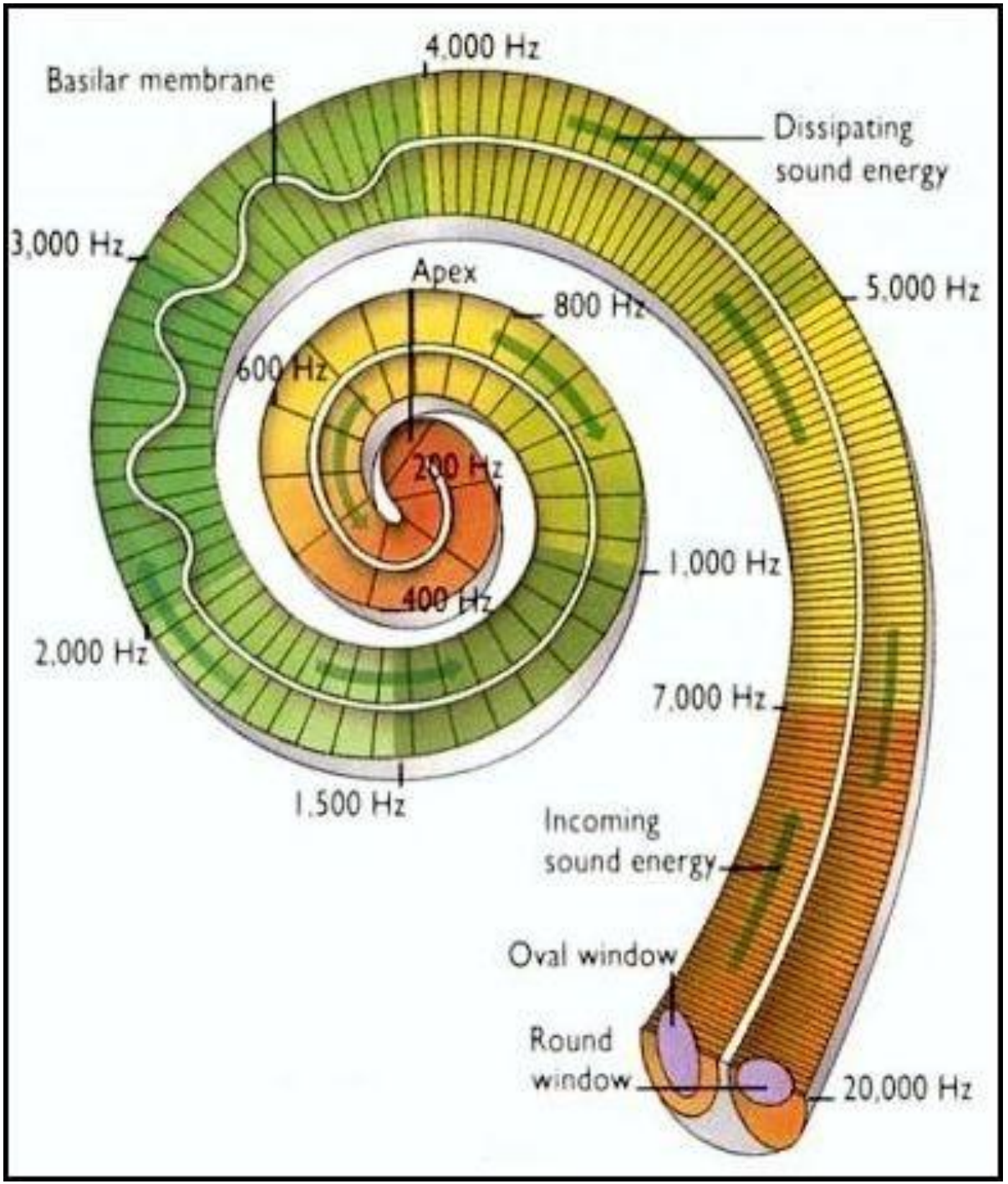
Review Anatomy

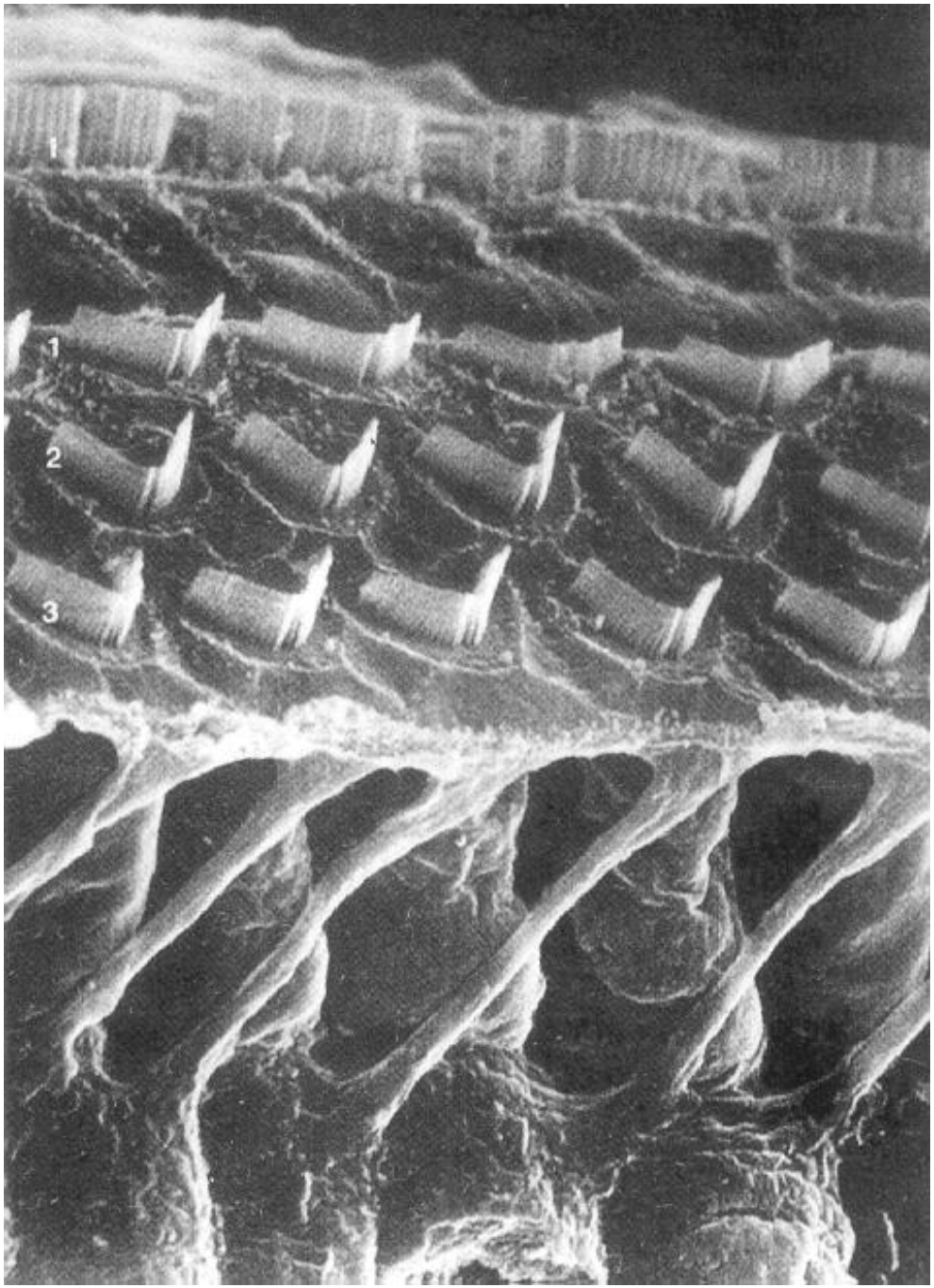
ART OF HEARING™



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

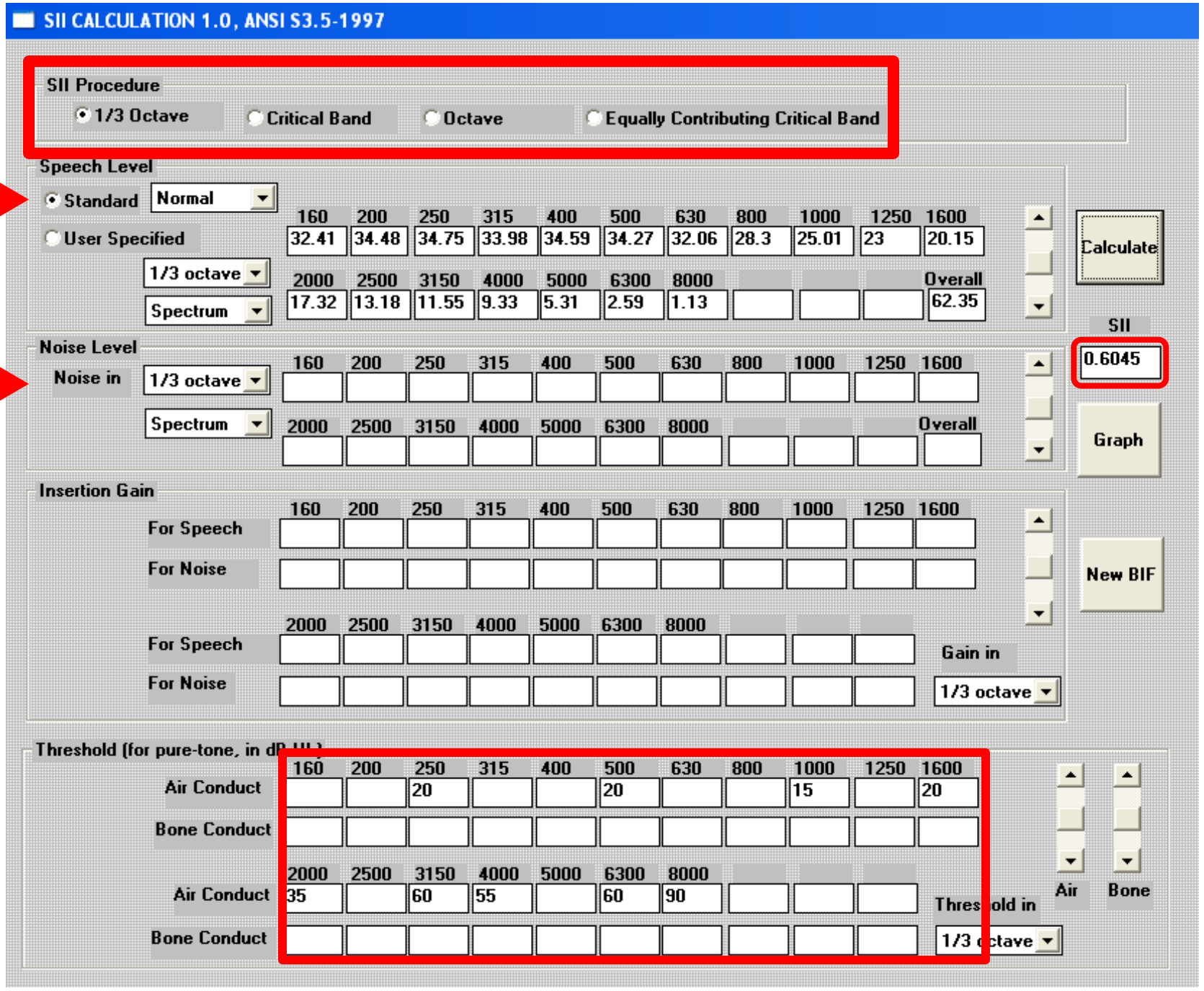

4,000 Hz
Basilar membrane
Dissipating
sound energy
3,000 Hz
Apex
800 Hz
5,000 Hz
600 Hz
200 Hz
1,000 Hz
400 Hz
2,000 Hz
7,000 Hz
1,500 Hz
Incoming
sound energy
Oval window
Round
window
20,000 Hz


1
1
2
3

a.
b.

3rd Step

Counsel on impact of HL on communication using SII


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
0.6045
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
20 20 15 20
Bone Conduct
2000 2500 3150 4000 5000 6300 8000
Air Conduct
35 60 55 60 90
Bone Conduct
Threshold in
1/3 octave
Air
Bone

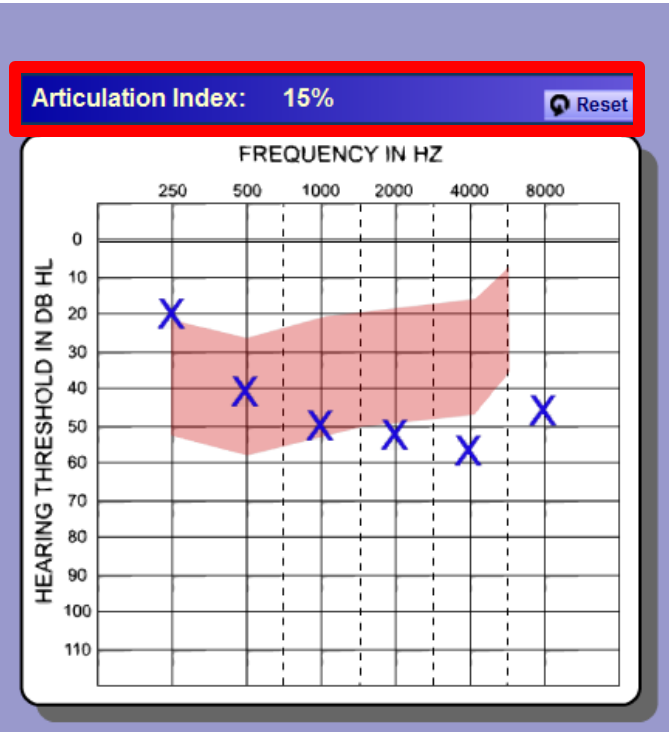
www.sii.to

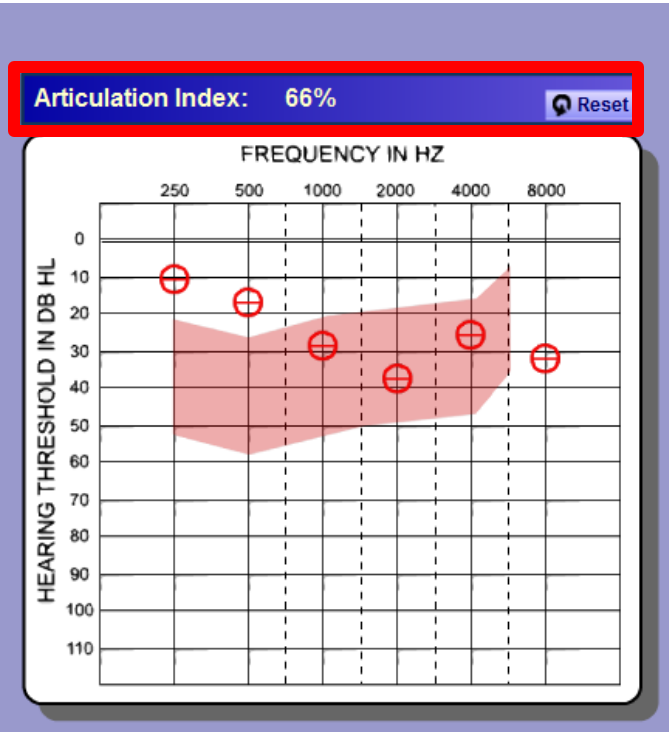
“Programs”

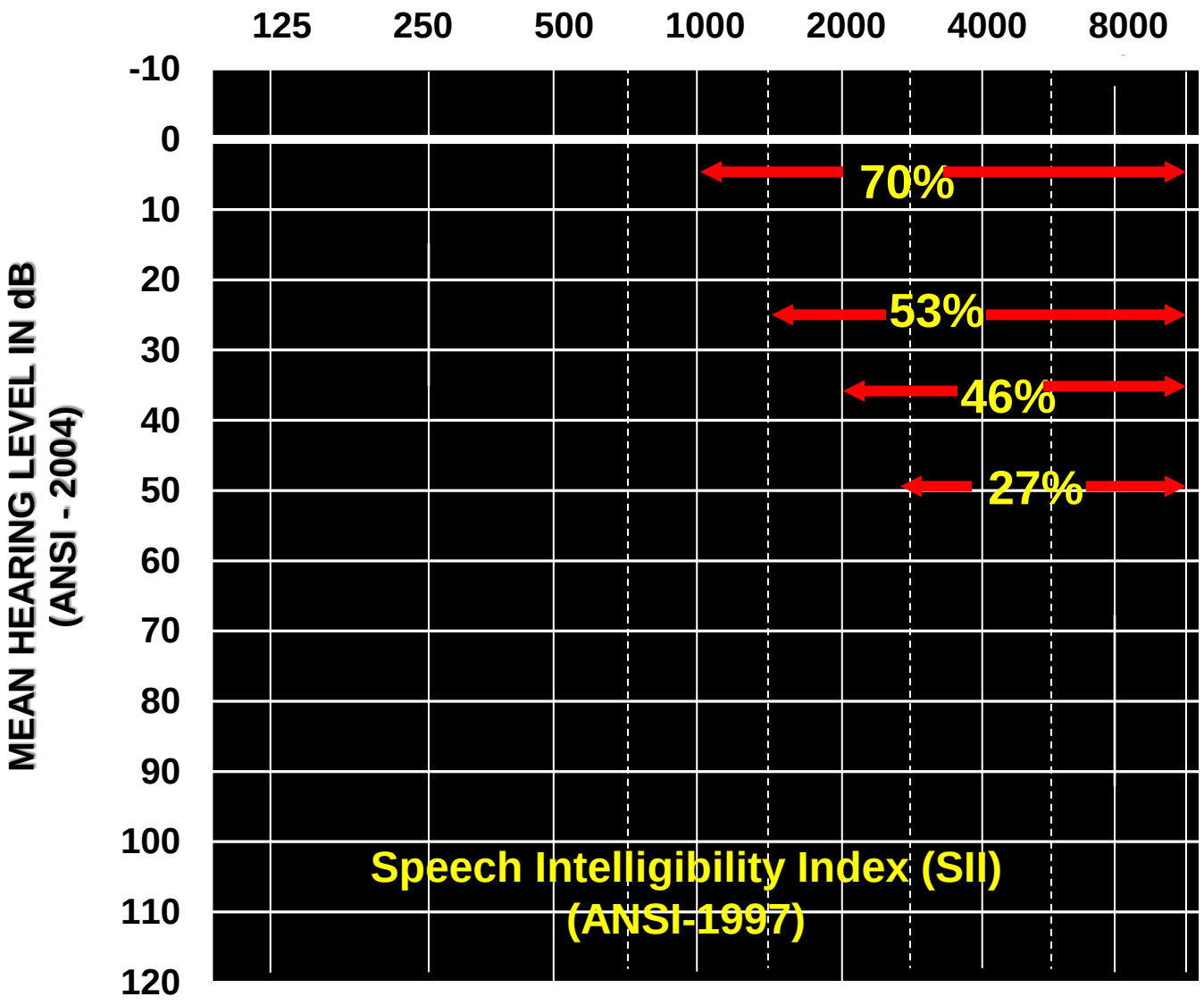
“Download”

“Windows Executable Program”

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






125
250
500
1000
2000
4000
8000
-10
0
10
20
30
40
50
60
70
80
90
100
110
120
MEAN HEARING LEVEL IN dB
(ANSI - 2004)
70%
53%
46%
27%
Speech Intelligibility Index (SII)
(ANSI-1997)

4th Step

Counsel on differences in levels of technology

Level 1: most expensive

Level 6: least expensive

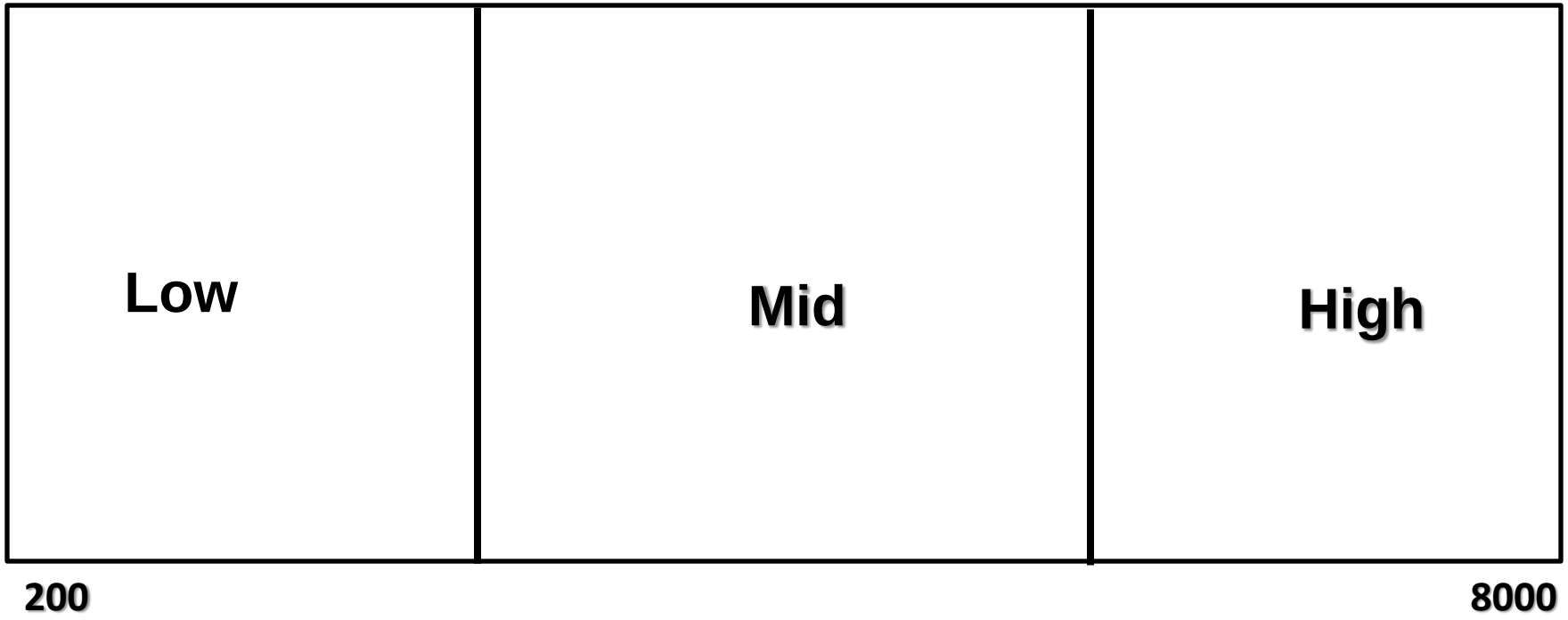
Counsel on differences in number of bands and Channels

a. Bands (3-20): Ability to adjust gain (REIG)/output (REAR) to meet NAL-NL1 or NL2 target

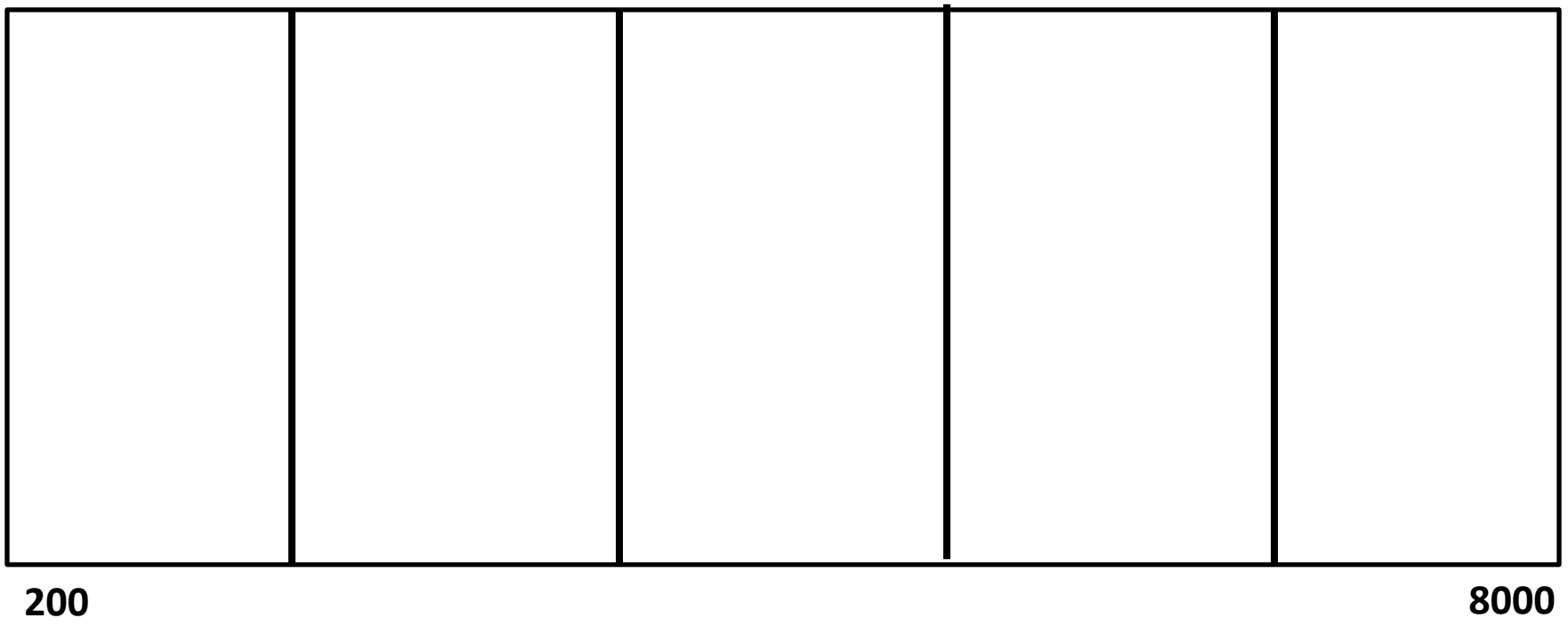
b. Channels (3-20): Signal processing in background

1. Manage feedback
2. Manage NR
3. Controlling the effectiveness of the directional microphone

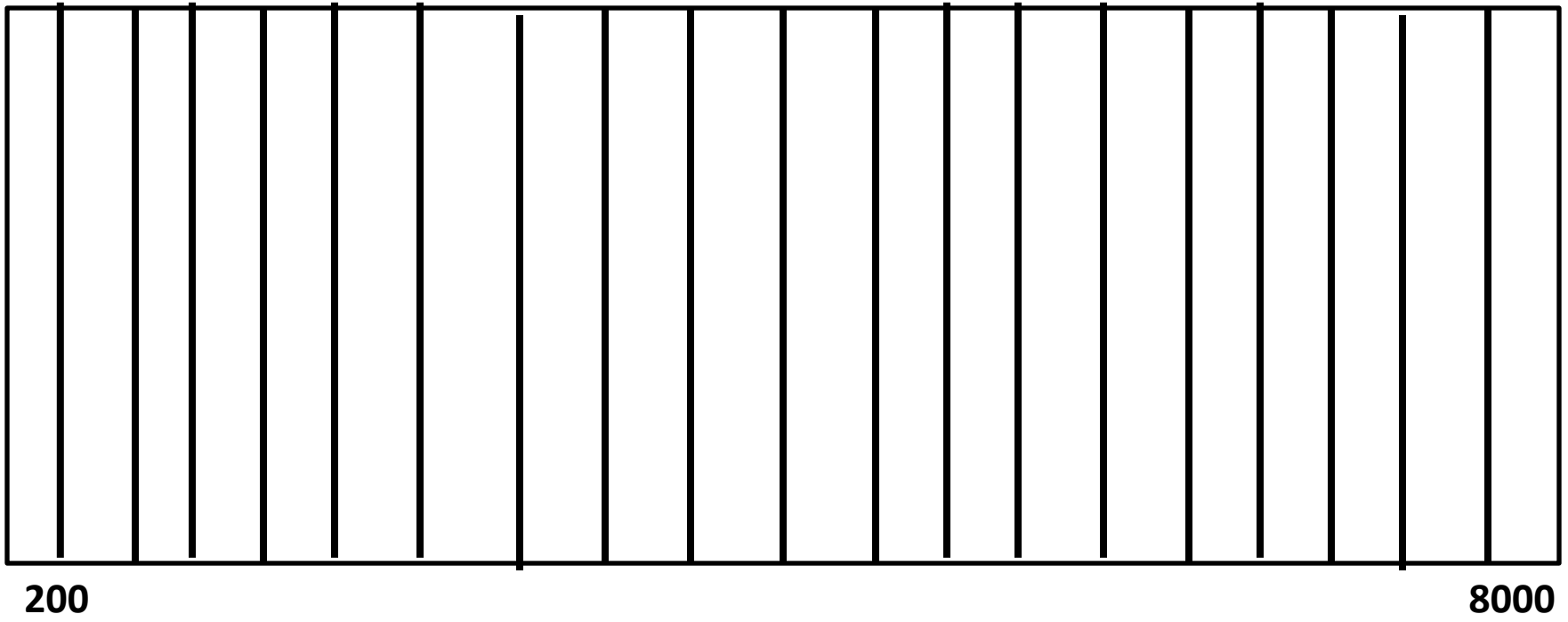
“Block of Cheese”
Three Channels



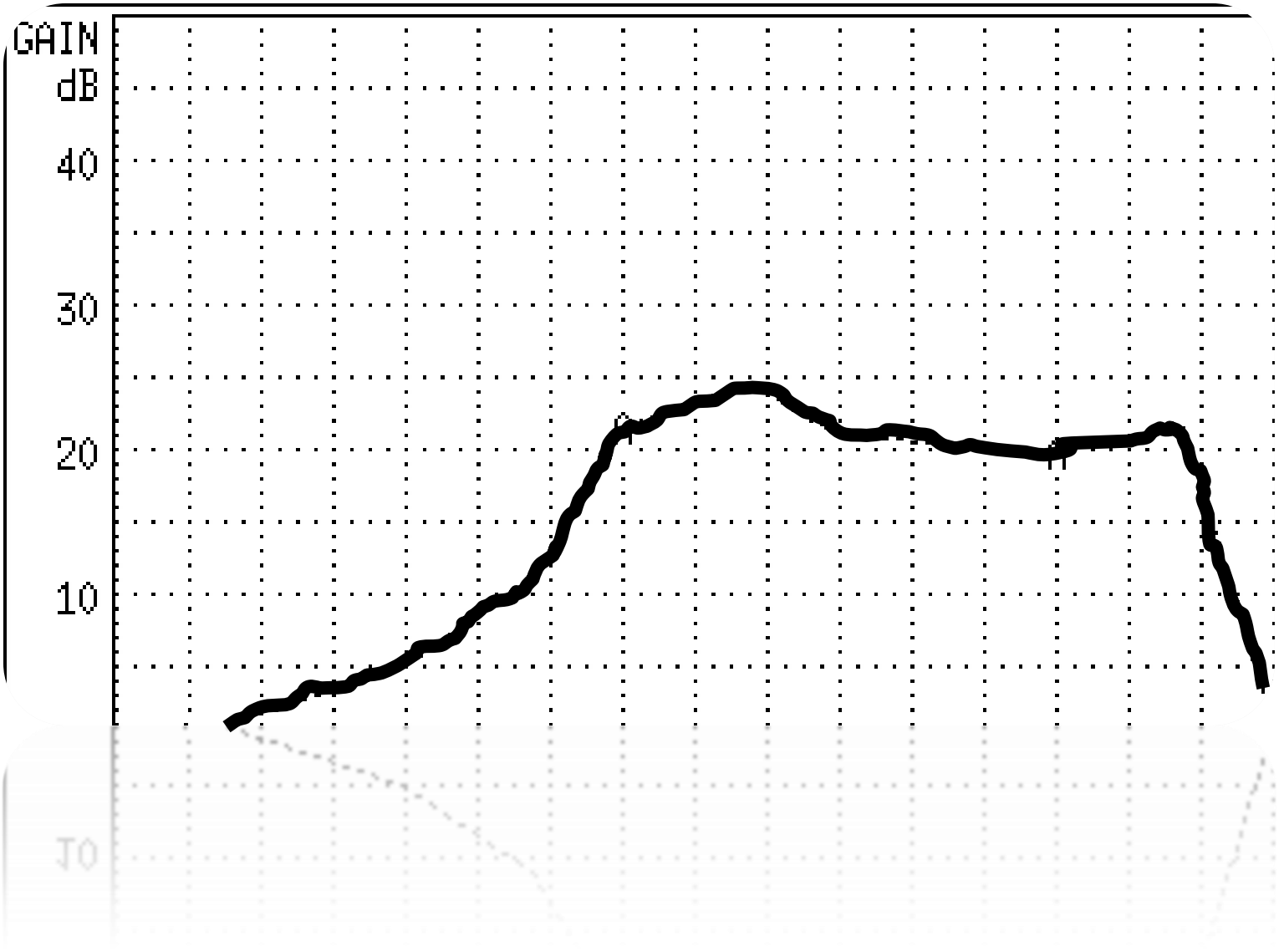
“Block of Cheese”
Five Channels



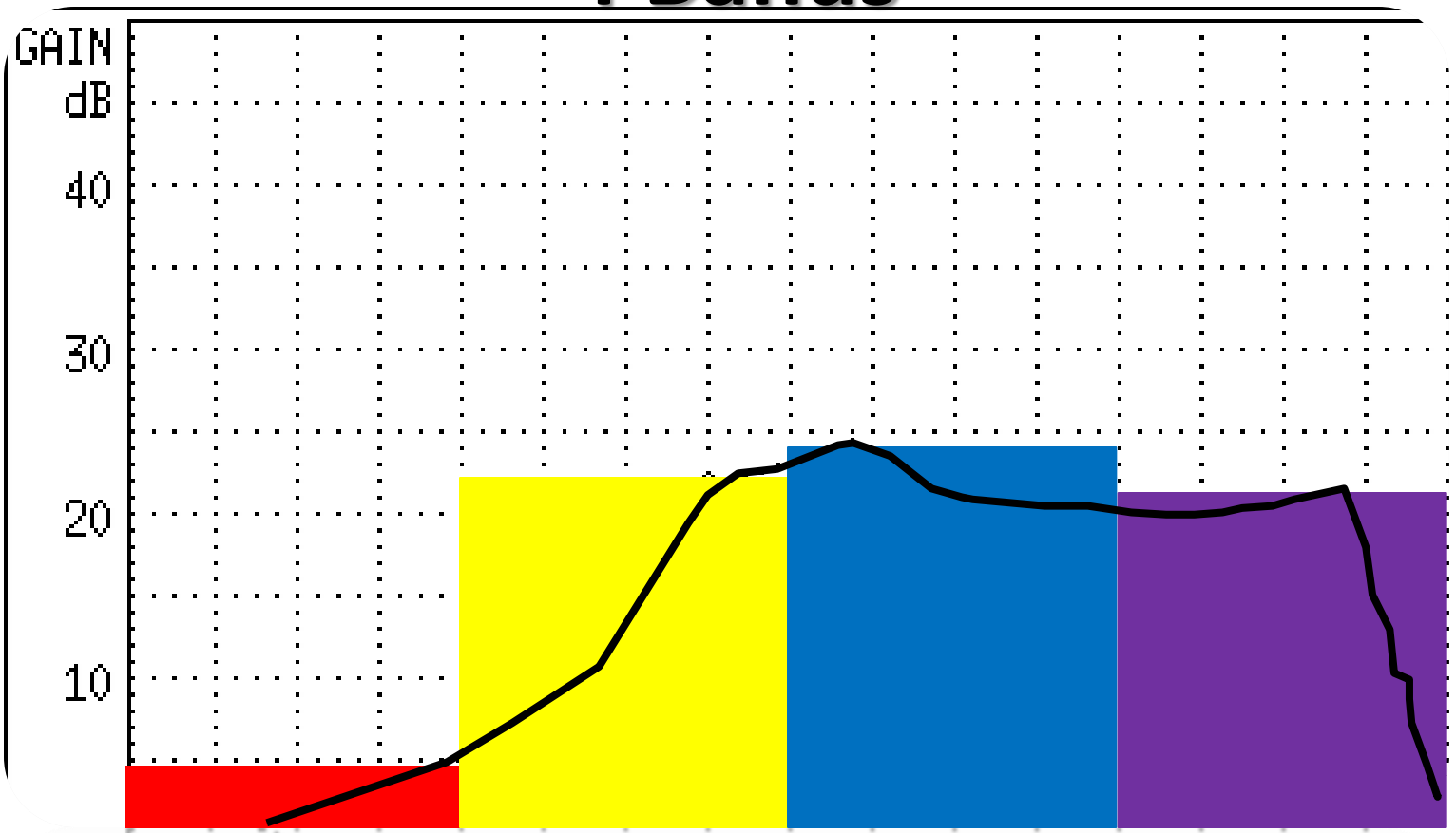
“Block of Cheese”
Twenty Channels



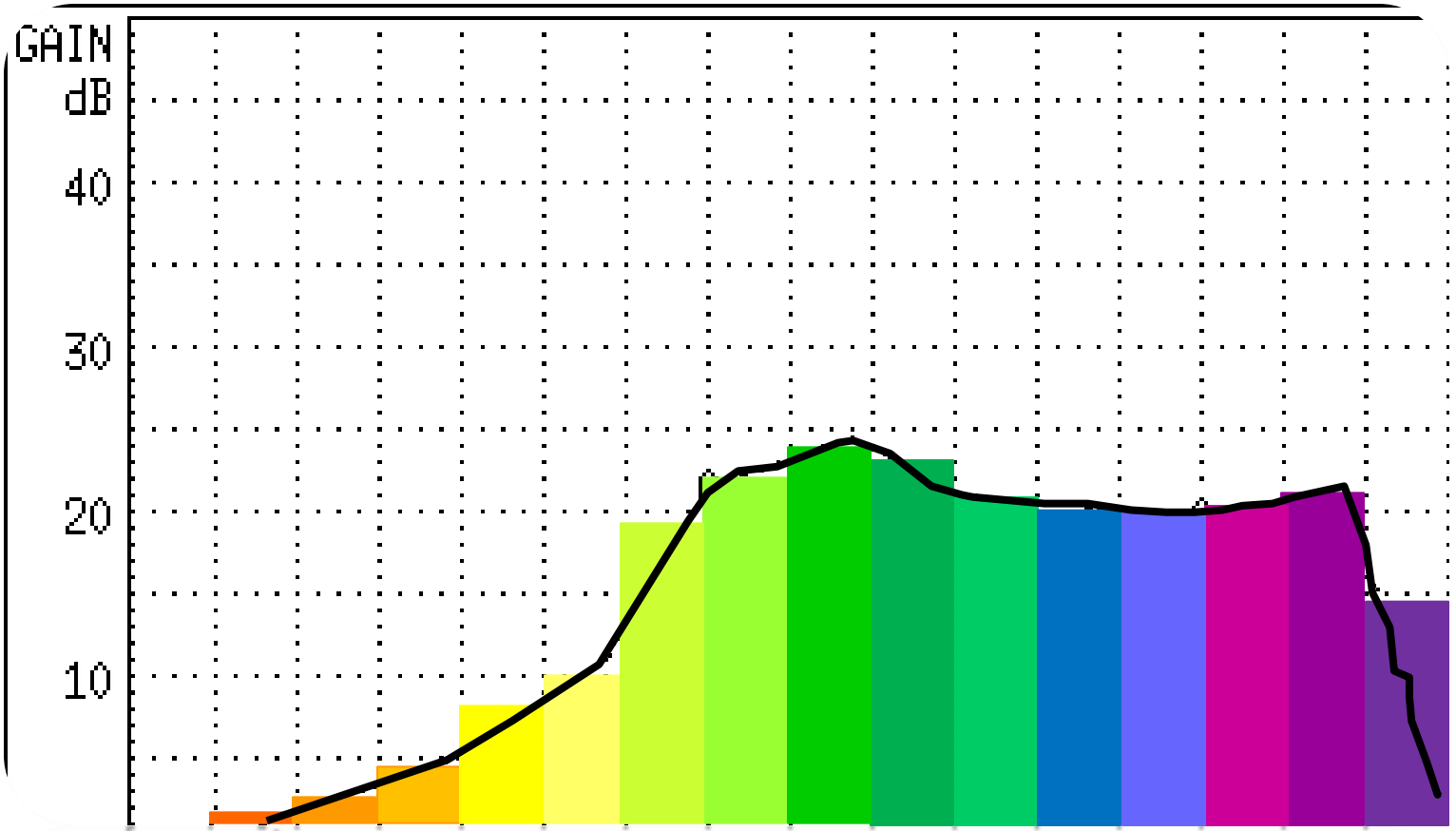
Real-Ear Measures

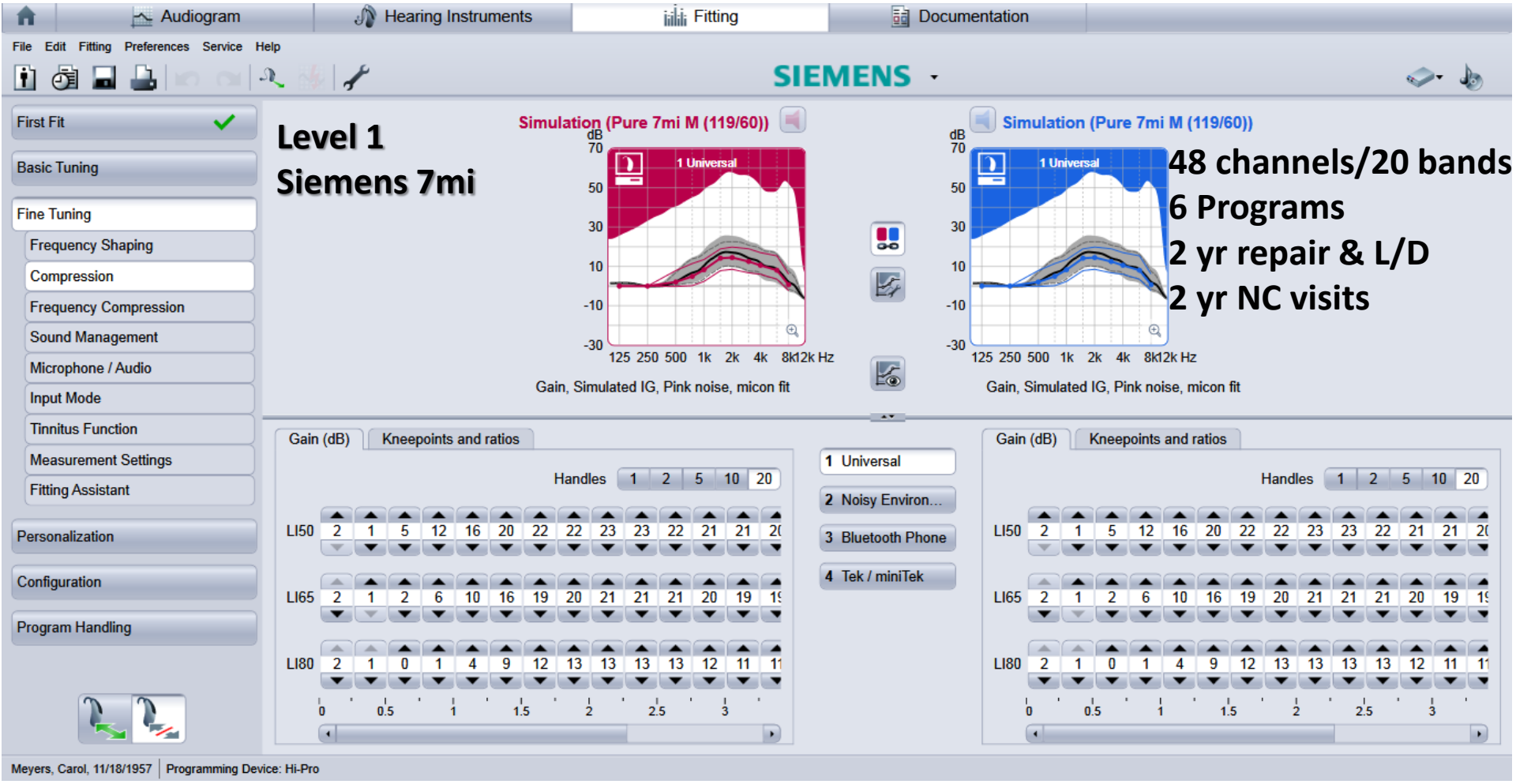


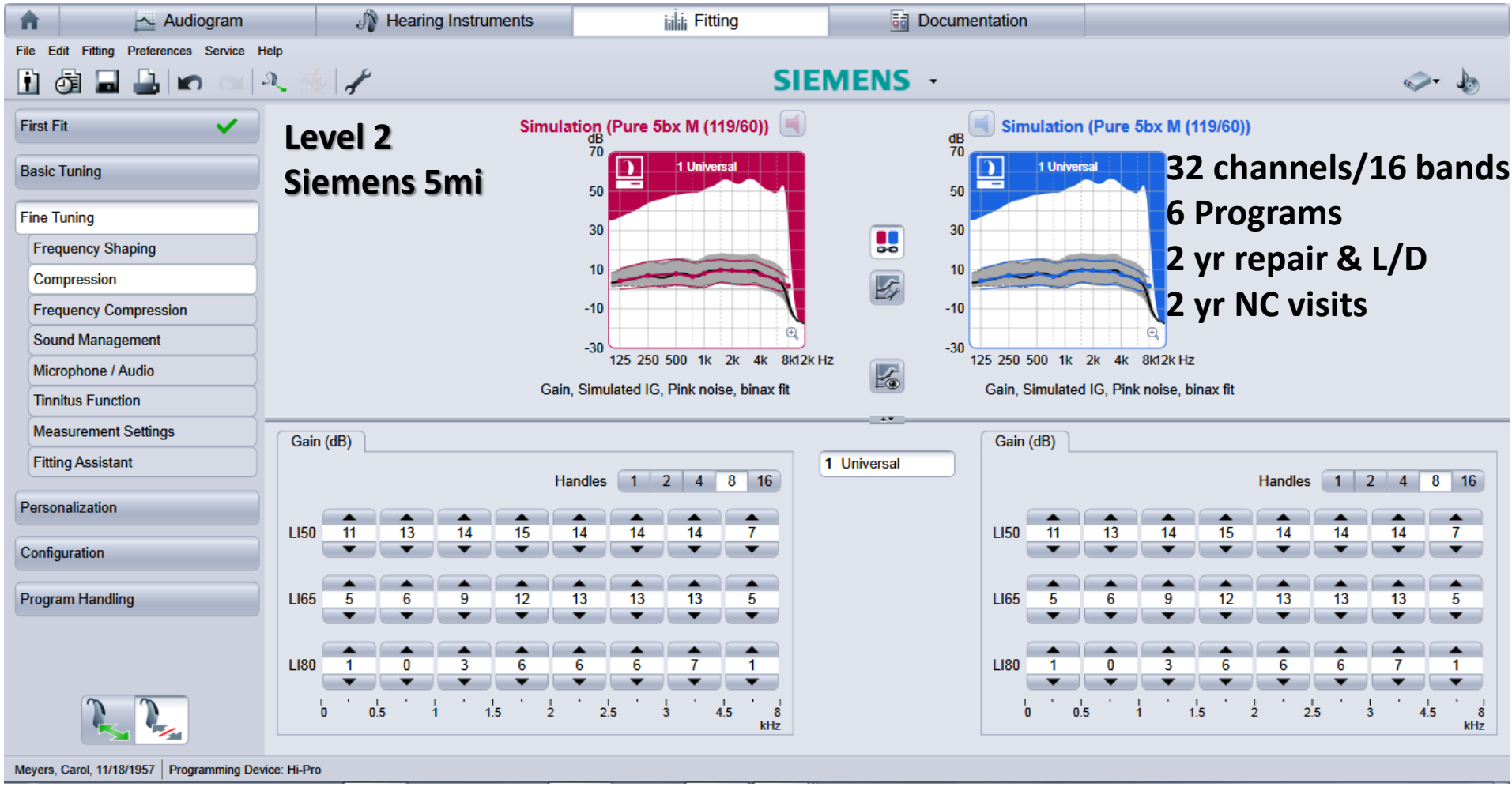
Real-Ear Measures
4 Bands

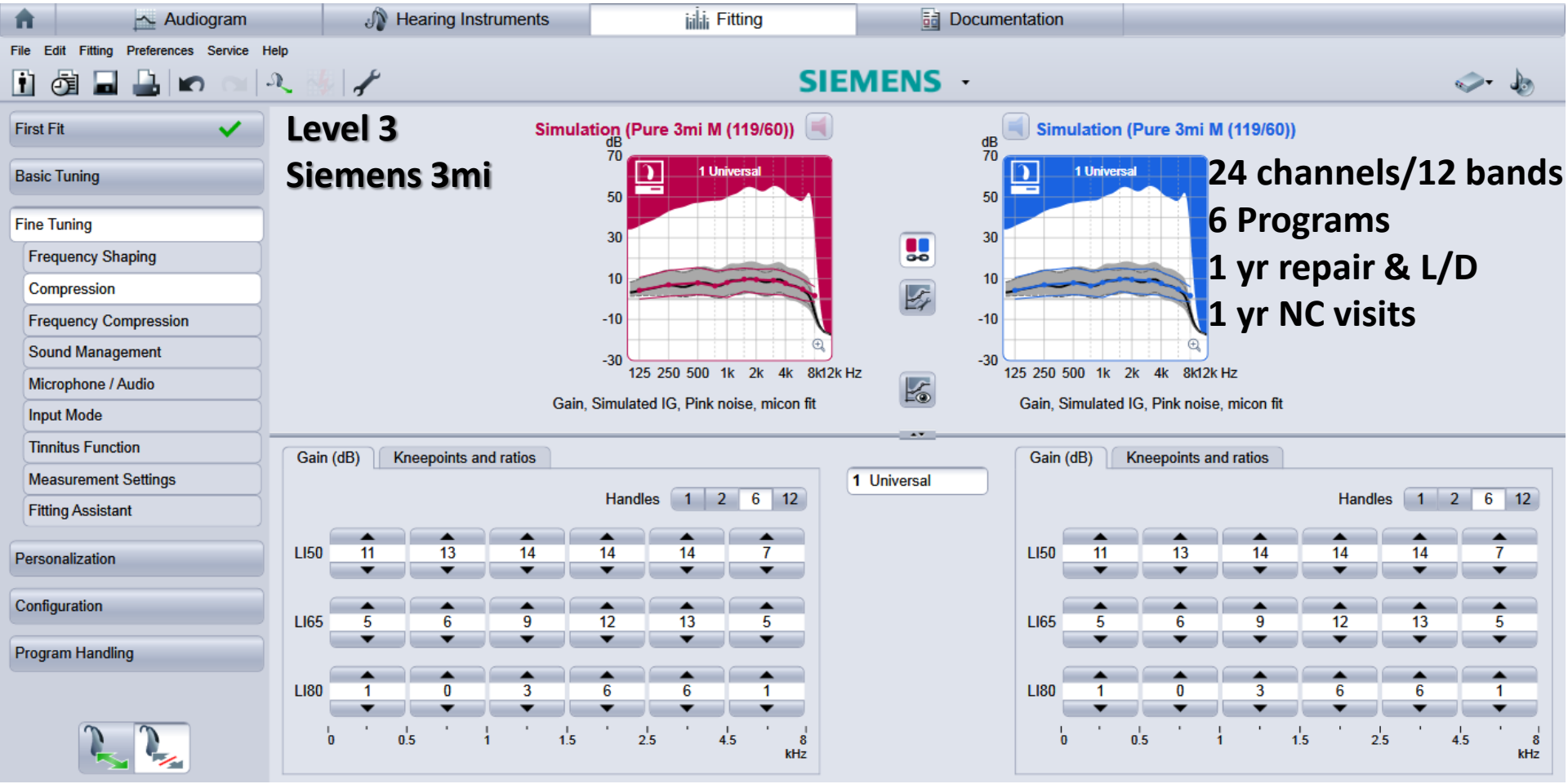


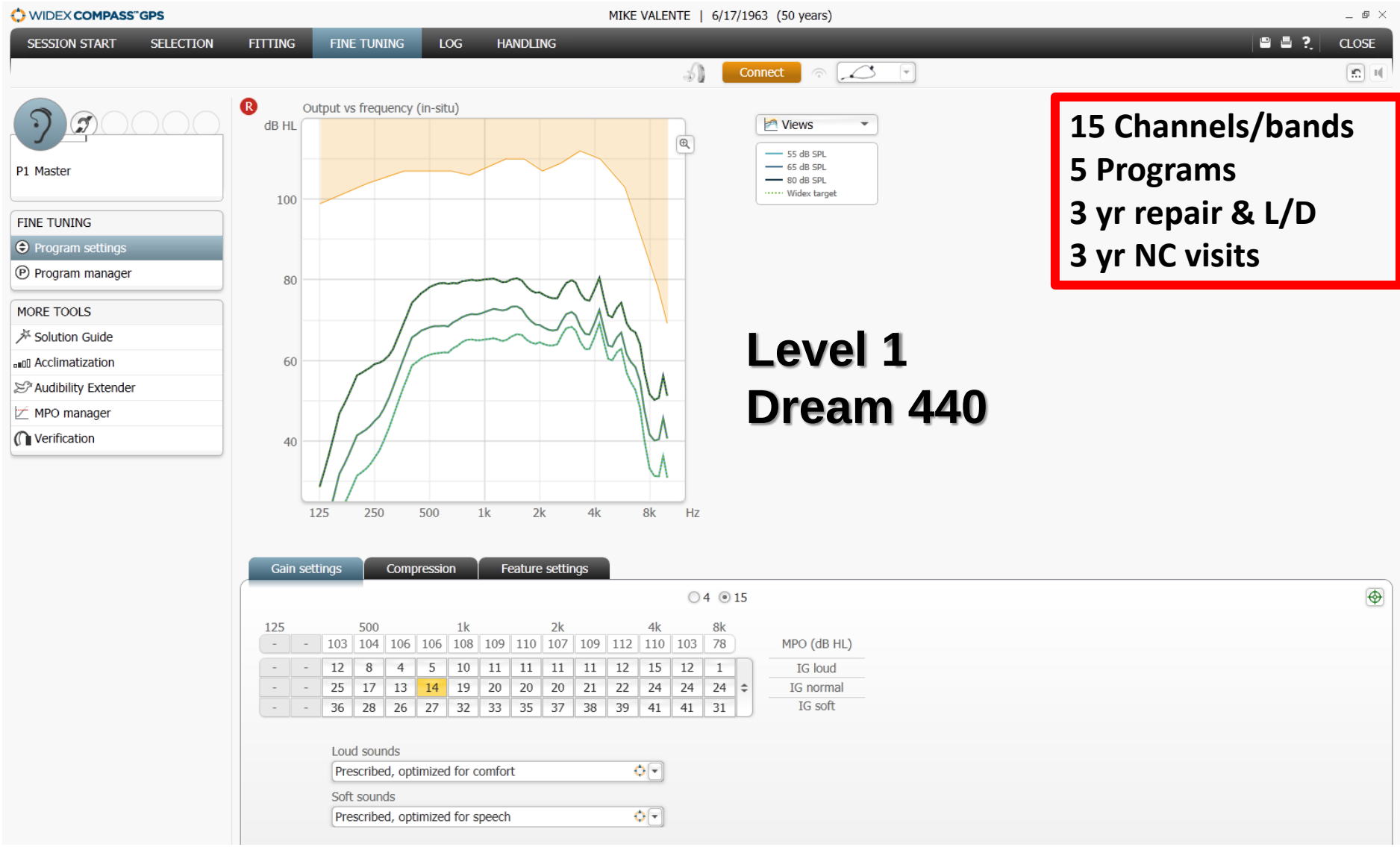
Real-Ear Measures
15 Bands

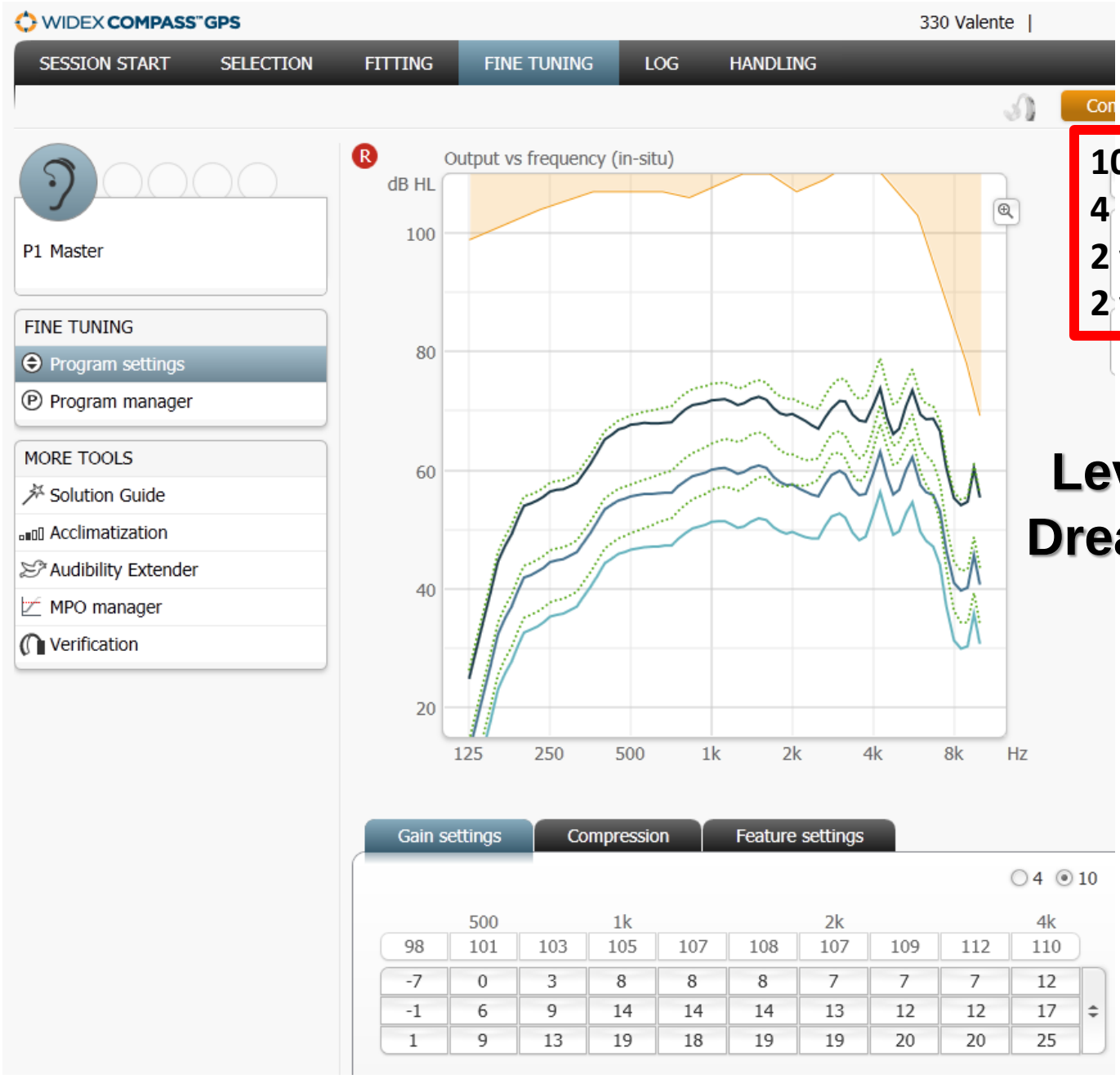



Audiogram
Hearing Instruments
Fitting
Documentation
File Edit Fitting Preferences Service Help
SIEMENS
First Fit
Basic Tuning
Fine Tuning
Frequency Shaping
Compression
Frequency Compression
Sound Management
Microphone / Audio
Input Mode
Tinnitus Function
Measurement Settings
Fitting Assistant
Personalization
Configuration
Program Handling
Level 1
Siemens 7mi
Simulation (Pure 7mi M (119/60))
1 Universal
dB
70
50
30
10
-10
-30
125 250 500 1k 2k 4k 8k12k Hz
Gain, Simulated IG, Pink noise, micon fit
Simulation (Pure 7mi M (119/60))
1 Universal
48 channels/20 bands
6 Programs
2 yr repair & L/D
2 yr NC visits
Gain, Simulated IG, Pink noise, micon fit
Gain (dB)
Kneepoints and ratios
Handles 1 2 5 10 20
LI50 2 1 5 12 16 20 22 22 23 23 22 21 21
LI65 2 1 2 6 10 16 19 20 21 21 21 20 19
LI80 2 1 0 1 4 9 12 13 13 13 13 12 11
0 0.5 1 1.5 2 2.5 3
1 Universal
2 Noisy Environ...
3 Bluetooth Phone
4 Tek / miniTek
Gain (dB)
Kneepoints and ratios
Handles 1 2 5 10 20
LI50 2 1 5 12 16 20 22 22 23 23 22 21 21
LI65 2 1 2 6 10 16 19 20 21 21 21 20 19
LI80 2 1 0 1 4 9 12 13 13 13 13 12 11
0 0.5 1 1.5 2 2.5 3
Meyers, Carol, 11/18/1957
Programming Device: Hi-Pro


Audiogram
Hearing Instruments
Fitting
Documentation
File Edit Fitting Preferences Service Help
SIEMENS
First Fit
Basic Tuning
Fine Tuning
Frequency Shaping
Compression
Frequency Compression
Sound Management
Microphone / Audio
Tinnitus Function
Measurement Settings
Fitting Assistant
Personalization
Configuration
Program Handling
Level 2
Siemens 5mi
Simulation (Pure 5bx M (119/60))
1 Universal
dB 70 50 30 10 -10 -30
125 250 500 1k 2k 4k 8k12k Hz
Gain, Simulated IG, Pink noise, binax fit
Simulation (Pure 5bx M (119/60))
1 Universal
dB 70 50 30 10 -10 -30
125 250 500 1k 2k 4k 8k12k Hz
Gain, Simulated IG, Pink noise, binax fit
32 channels/16 bands
6 Programs
2 yr repair & L/D
2 yr NC visits
Gain (dB)
Handles 1 2 4 8 16
LI50 11 13 14 15 14 14 14 7
LI65 5 6 9 12 13 13 13 5
LI80 1 0 3 6 6 6 7 1
0 0.5 1 1.5 2 2.5 3 4.5 8 kHz
1 Universal
Gain (dB)
Handles 1 2 4 8 16
LI50 11 13 14 15 14 14 14 7
LI65 5 6 9 12 13 13 13 5
LI80 1 0 3 6 6 6 7 1
0 0.5 1 1.5 2 2.5 3 4.5 8 kHz
Meyers, Carol, 11/18/1957
Programming Device: Hi-Pro

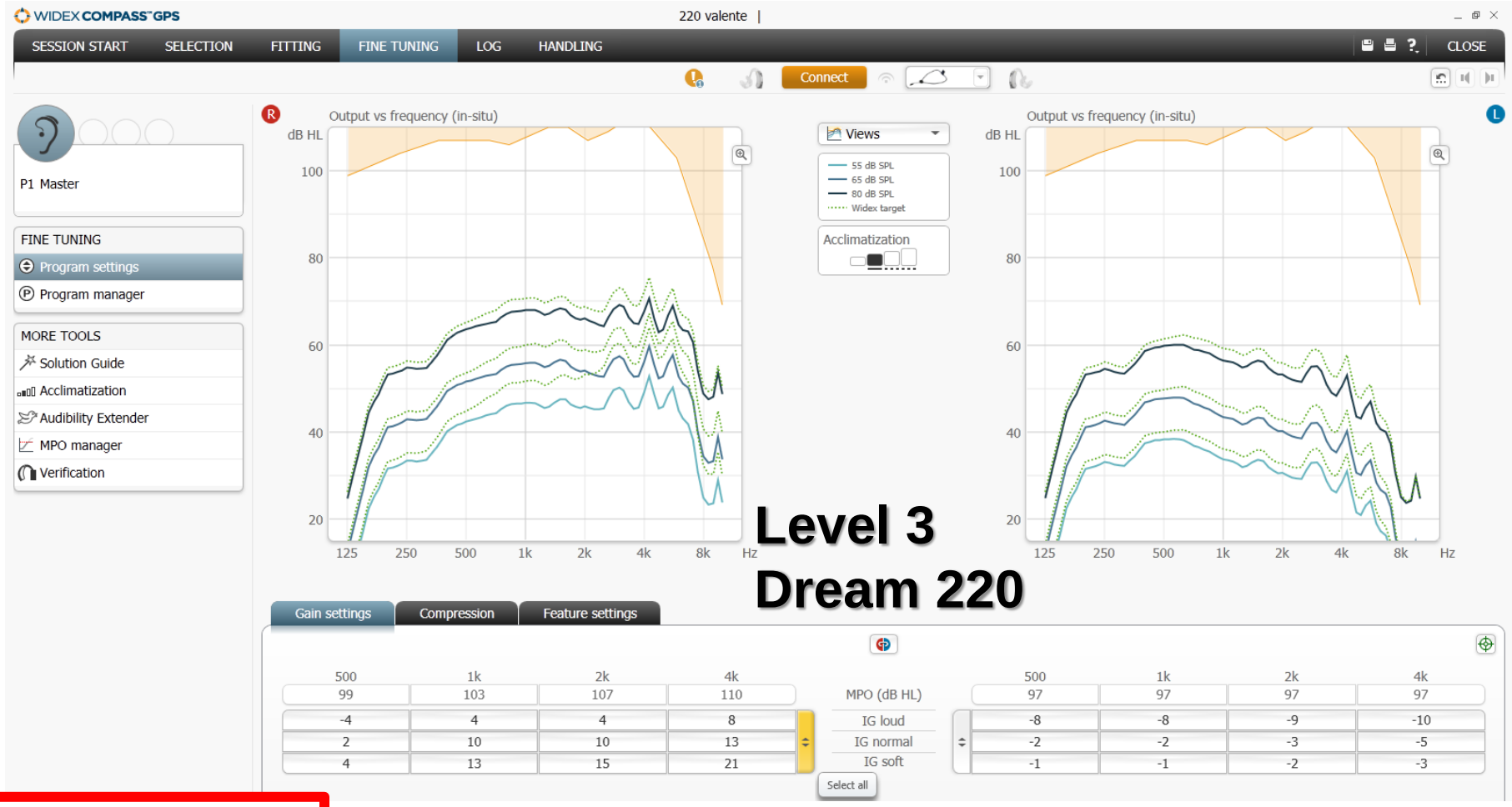

Audiogram
Hearing Instruments
Fitting
Documentation
File Edit Fitting Preferences Service Help
SIEMENS
First Fit
Basic Tuning
Fine Tuning
Frequency Shaping
Compression
Frequency Compression
Sound Management
Microphone / Audio
Input Mode
Tinnitus Function
Measurement Settings
Fitting Assistant
Personalization
Configuration
Program Handling
Level 3
Siemens 3mi
Simulation (Pure 3mi M (119/60))
1 Universal
dB
70
50
30
10
-10
-30
125 250 500 1k 2k 4k 8k12k Hz
Gain, Simulated IG, Pink noise, micon fit
Simulation (Pure 3mi M (119/60))
1 Universal
24 channels/12 bands
6 Programs
1 yr repair & L/D
1 yr NC visits
Gain, Simulated IG, Pink noise, micon fit
Gain (dB)
Kneepoints and ratios
Handles 1 2 6 12
1 Universal
LI50 11 13 14 14 14 7
LI65 5 6 9 12 13 5
LI80 1 0 3 6 6 1
0 0.5 1 1.5 2.5 4.5 8 kHz
Gain (dB)
Kneepoints and ratios
Handles 1 2 6 12
LI50 11 13 14 14 14 7
LI65 5 6 9 12 13 5
LI80 1 0 3 6 6 1
0 0.5 1 1.5 2.5 4.5 8 kHz


WIDEX COMPASS GPS
MIKE VALENTE | 6/17/1963 (50 years)
SESSION START
SELECTION
FITTING
FINE TUNING
LOG
HANDLING
CLOSE
Connect
P1 Master
FINE TUNING
Program settings
Program manager
MORE TOOLS
Solution Guide
Acclimatization
Audibility Extender
MPO manager
Verification
Output vs frequency (in-situ)
dB HL
100
80
60
40
125
250
500
1k
2k
4k
8k
Hz
Views
55 dB SPL
65 dB SPL
80 dB SPL
Widex target
15 Channels/bands
5 Programs
3 yr repair & L/D
3 yr NC visits
Level 1
Dream 440
Gain settings
Compression
Feature settings
4
15
125 500 1k 2k 4k 8k
- - 103 104 106 106 108 109 110 107 109 112 110 103 78
MPO (dB HL)
- - 12 8 4 5 10 11 11 11 11 12 15 12 1
IG loud
- - 25 17 13 14 19 20 20 20 21 22 24 24 24
IG normal
- - 36 28 26 27 32 33 35 37 38 39 41 41 31
IG soft
Loud sounds
Prescribed, optimized for comfort
Soft sounds
Prescribed, optimized for speech



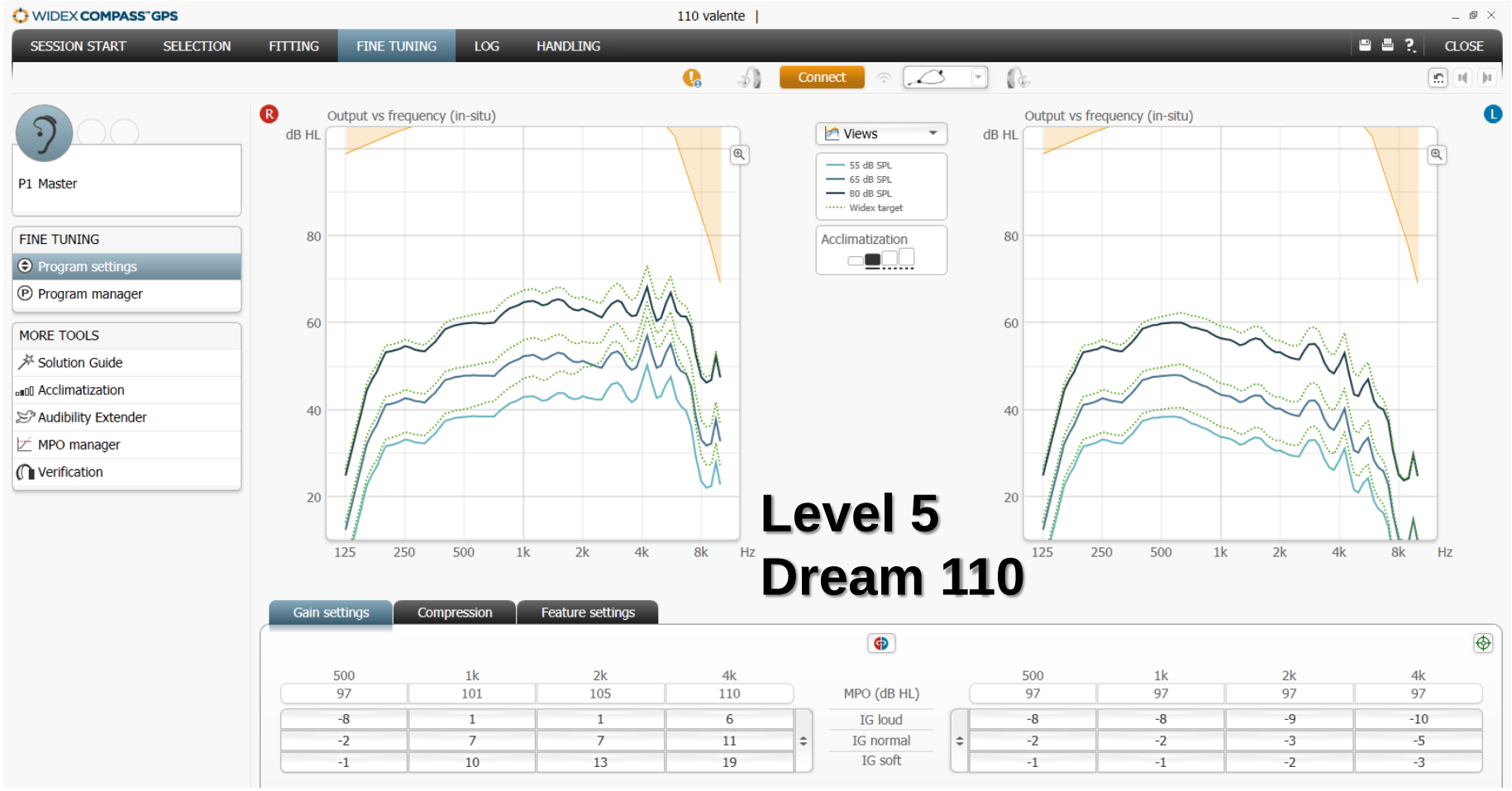
10 channels/bands
4 Programs
2 yr repair & L/D
2 yr NC visits

Level 2
Dream 330

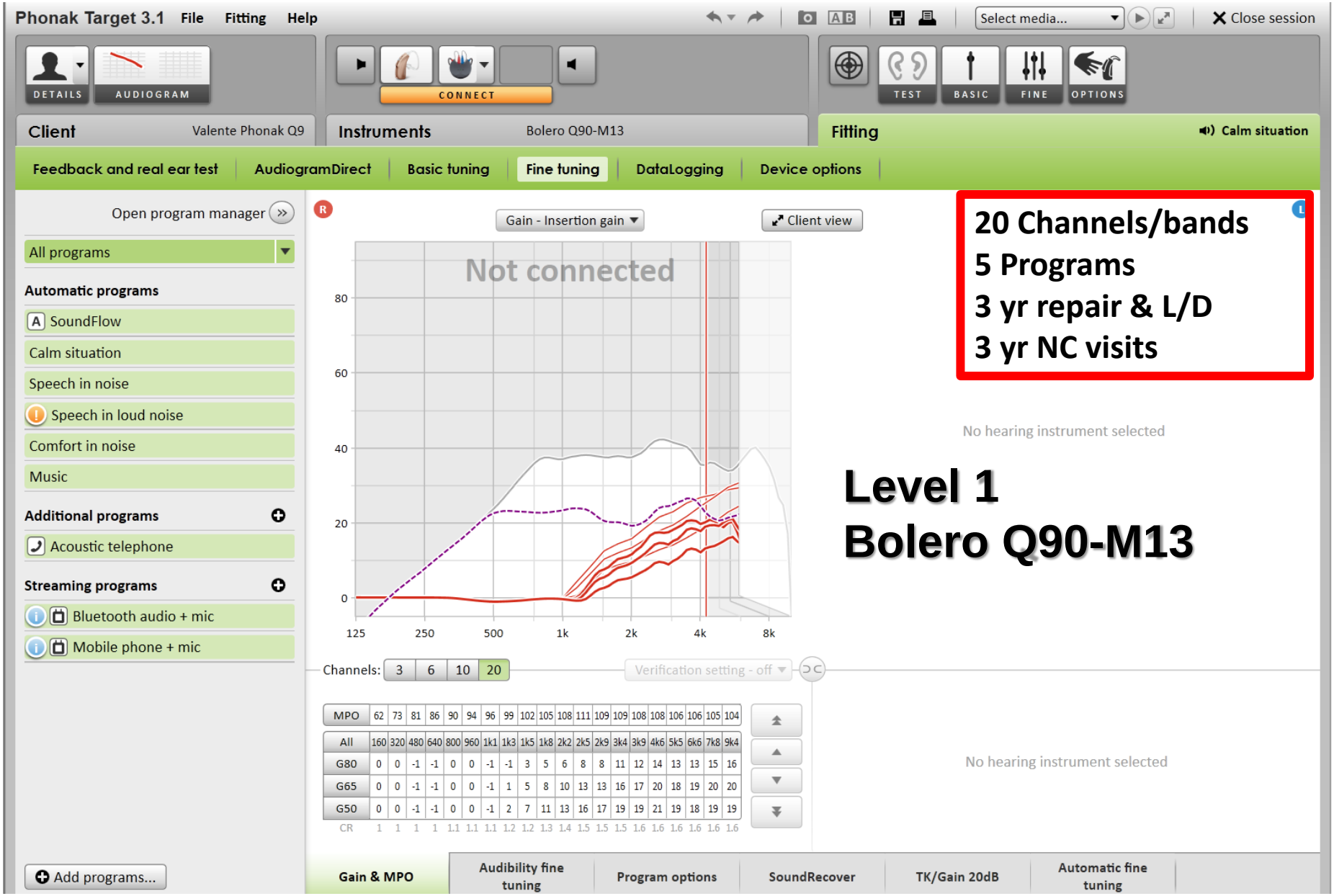


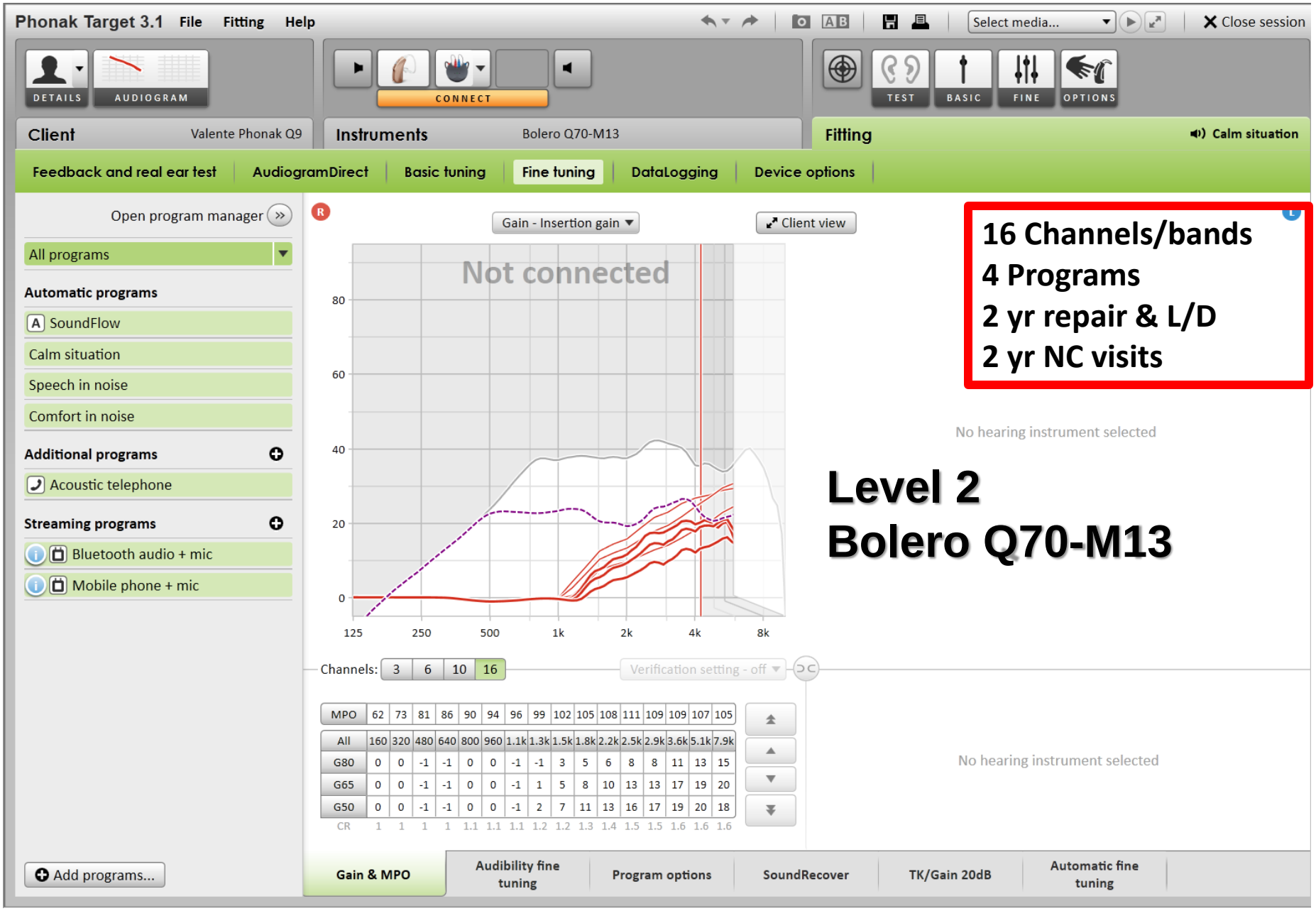
Level 3
Dream 220

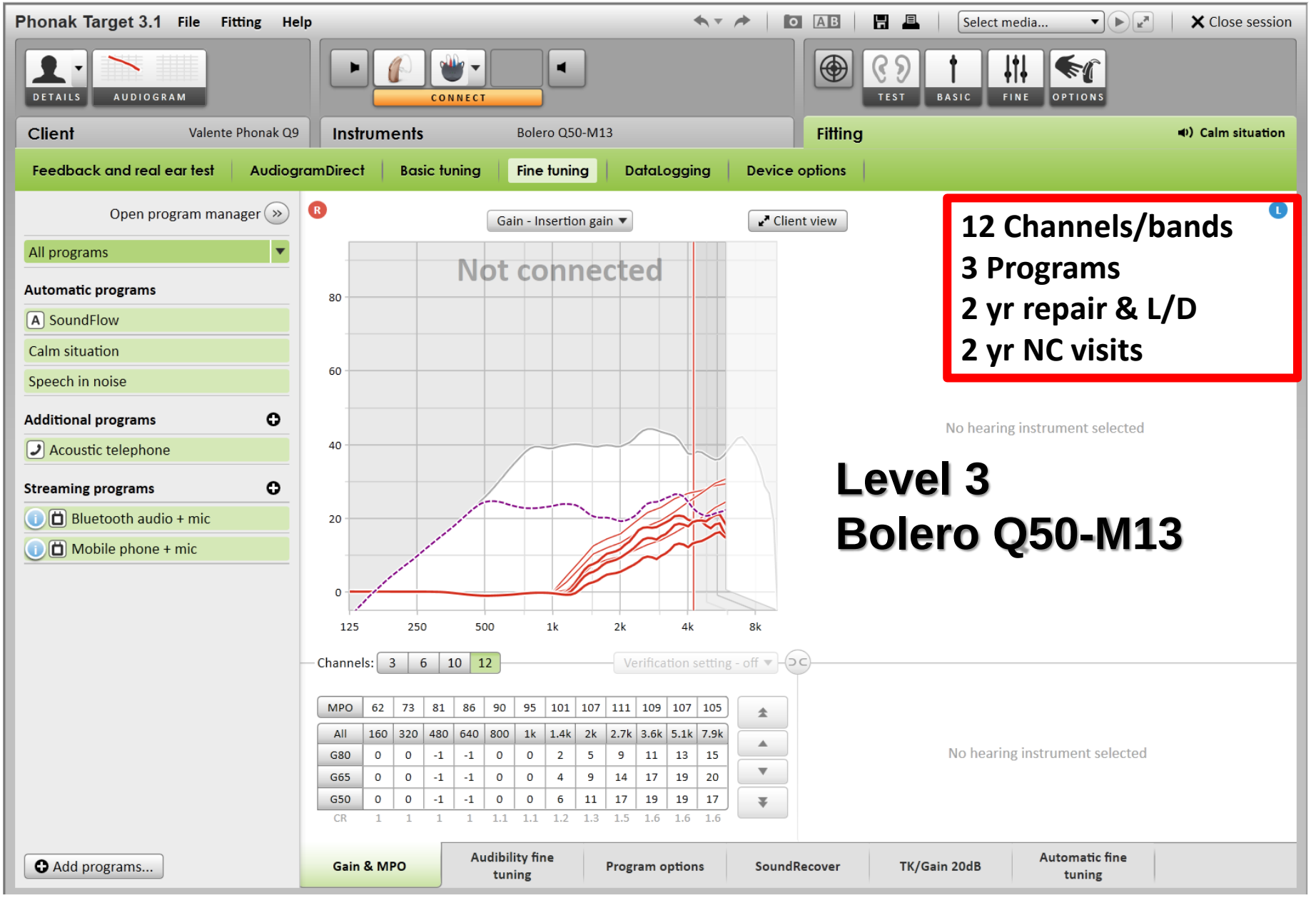
5 channels/bands
3 Programs
2 yr repair & L/D
2 yr NC visits



3 channels/bands
2 Programs
1 yr repair & L/D
1 yr NC visits

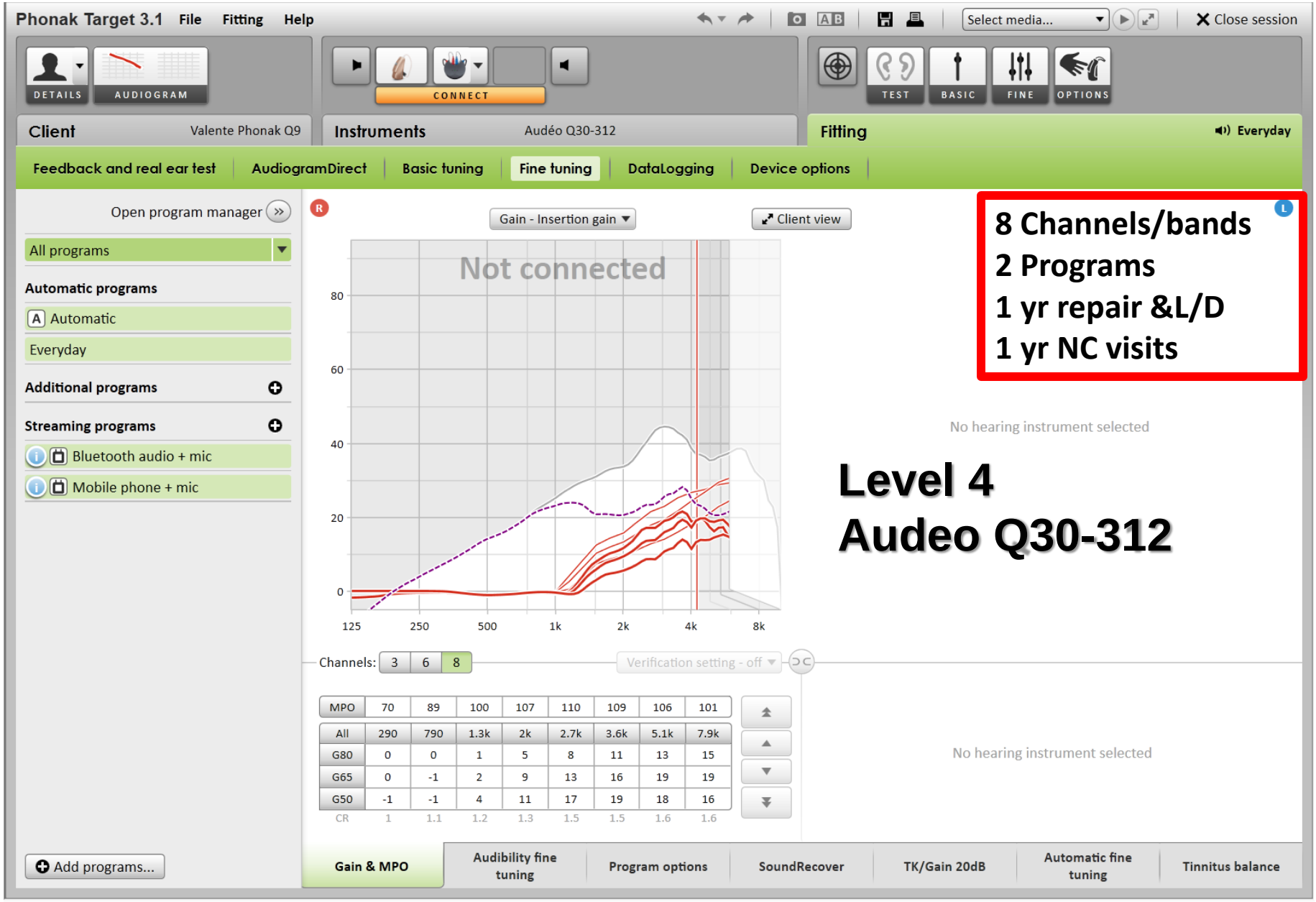

Phonak Target 3.1
File
Fitting
Help
Select media...
Close session
DETAILS
AUDIOGRAM
CONNECT
TEST
BASIC
FINE
OPTIONS
Client
Valente Phonak Q9
Instruments
Bolero Q90-M13
Fitting
Calm situation
Feedback and real ear test
AudiogramDirect
Basic tuning
Fine tuning
DataLogging
Device options
Open program manager
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
Verification setting - off
MPO 62 73 81 86 90 94 96 99 102 105 108 111 109 109 108 108 106 106 105 104
All 160 320 480 640 800 960 1k1 1k3 1k5 1k8 2k2 2k5 2k9 3k4 3k9 4k6 5k5 6k6 7k8 9k4
G80 0 0 -1 -1 0 0 -1 -1 3 5 6 8 8 11 12 14 13 13 15 16
G65 0 0 -1 -1 0 0 -1 1 5 8 10 13 13 16 17 20 18 19 20 20
G50 0 0 -1 -1 0 0 -1 2 7 11 13 16 17 19 19 21 19 18 19 19
CR 1 1 1 1 1.1 1.1 1.1 1.2 1.2 1.3 1.4 1.5 1.5 1.5 1.6 1.6 1.6 1.6 1.6 1.6
Gain & MPO
Audibility fine tuning
Program options
SoundRecover
TK/Gain 20dB
Automatic fine tuning
20 Channels/bands
5 Programs
3 yr repair & L/D
3 yr NC visits
No hearing instrument selected
Level 1
Bolero Q90-M13
No hearing instrument selected


Phonak Target 3.1
File
Fitting
Help
Select media...
Close session
DETAILS
AUDIOGRAM
CONNECT
TEST
BASIC
FINE
OPTIONS
Client
Valente Phonak Q9
Instruments
Bolero Q70-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
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
Verification setting - off
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
Gain & MPO
Audibility fine tuning
Program options
SoundRecover
TK/Gain 20dB
Automatic fine tuning
16 Channels/bands
4 Programs
2 yr repair & L/D
2 yr NC visits
No hearing instrument selected
Level 2
Bolero Q70-M13
No hearing instrument selected



12 Channels/bands
3 Programs
2 yr repair & L/D
2 yr NC visits

Level 3
Bolero Q50-M13


Phonak Target 3.1
File
Fitting
Help
Select media...
Close session
DETAILS
AUDIOGRAM
CONNECT
TEST
BASIC
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
Open program manager
All programs
Automatic programs
Automatic
Everyday
Additional programs
Streaming programs
Bluetooth audio + mic
Mobile phone + mic
Gain - Insertion gain
Client view
Not connected
80
60
40
20
0
125
250
500
1k
2k
4k
8k
8 Channels/bands
2 Programs
1 yr repair &L/D
1 yr NC visits
No hearing instrument selected
Level 4
Audeo Q30-312
Channels: 3 6 8
Verification setting - off
MPO 70 89 100 107 110 109 106 101
All 290 790 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
CR 1 1.1 1.2 1.3 1.5 1.5 1.6 1.6
No hearing instrument selected
Add programs...
Gain & MPO
Audibility fine tuning
Program options
SoundRecover
TK/Gain 20dB
Automatic fine tuning
Tinnitus balance

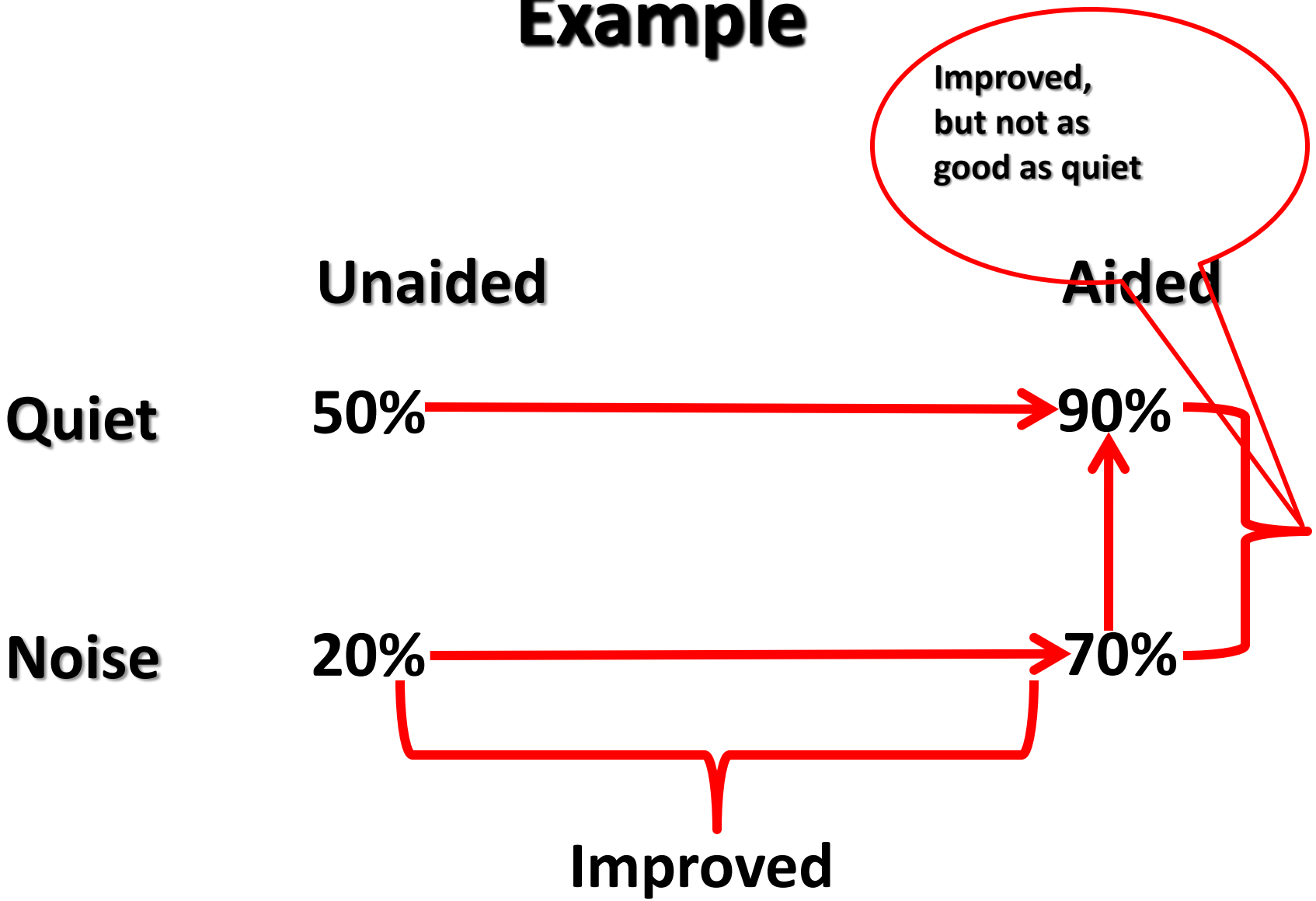
5th Step

Counsel on realistic expectations

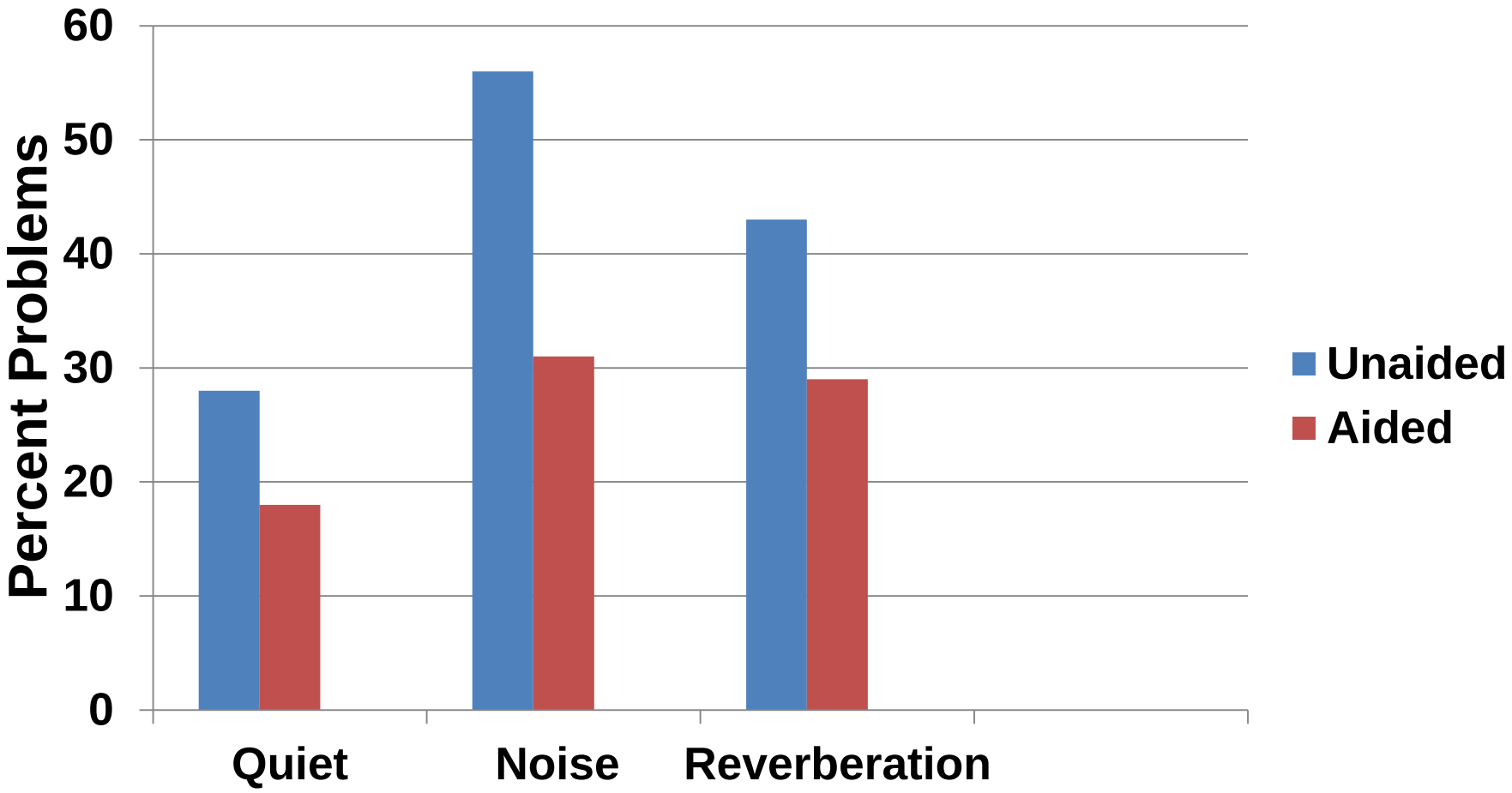
Expected Benefits

- ***In Quiet***: Aided performance will be better than unaided performance
- ***In Noise***: 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" (~ 60-65 dB SPL) sounds will be "comfortable," and "Loud" (≥ 80 dB SPL) sounds will be loud, but not be "uncomfortable"

Example

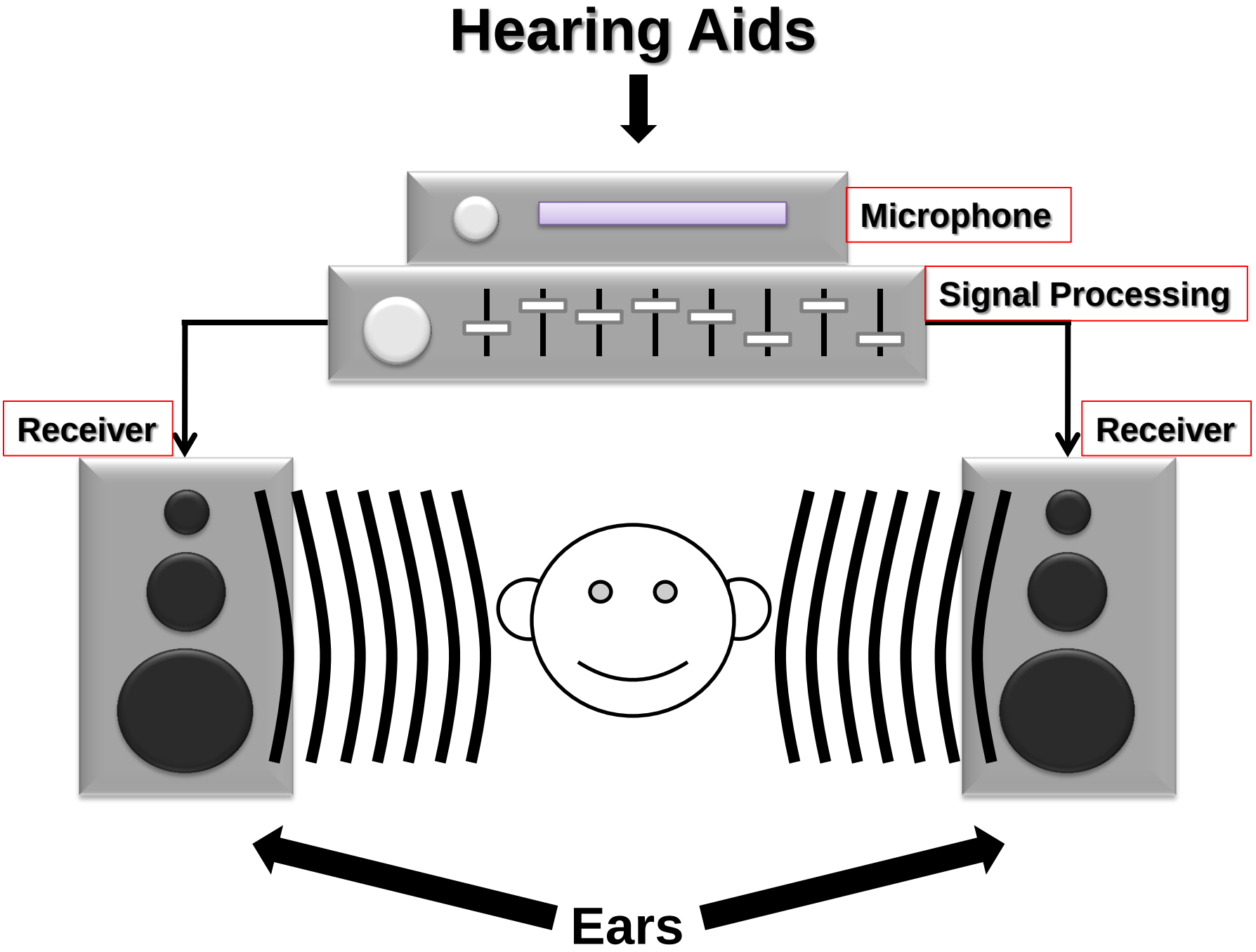

Improved,
but not as
good as quiet
Unaided
Aided
Quiet
50%
90%
Noise
20%
70%
Improved

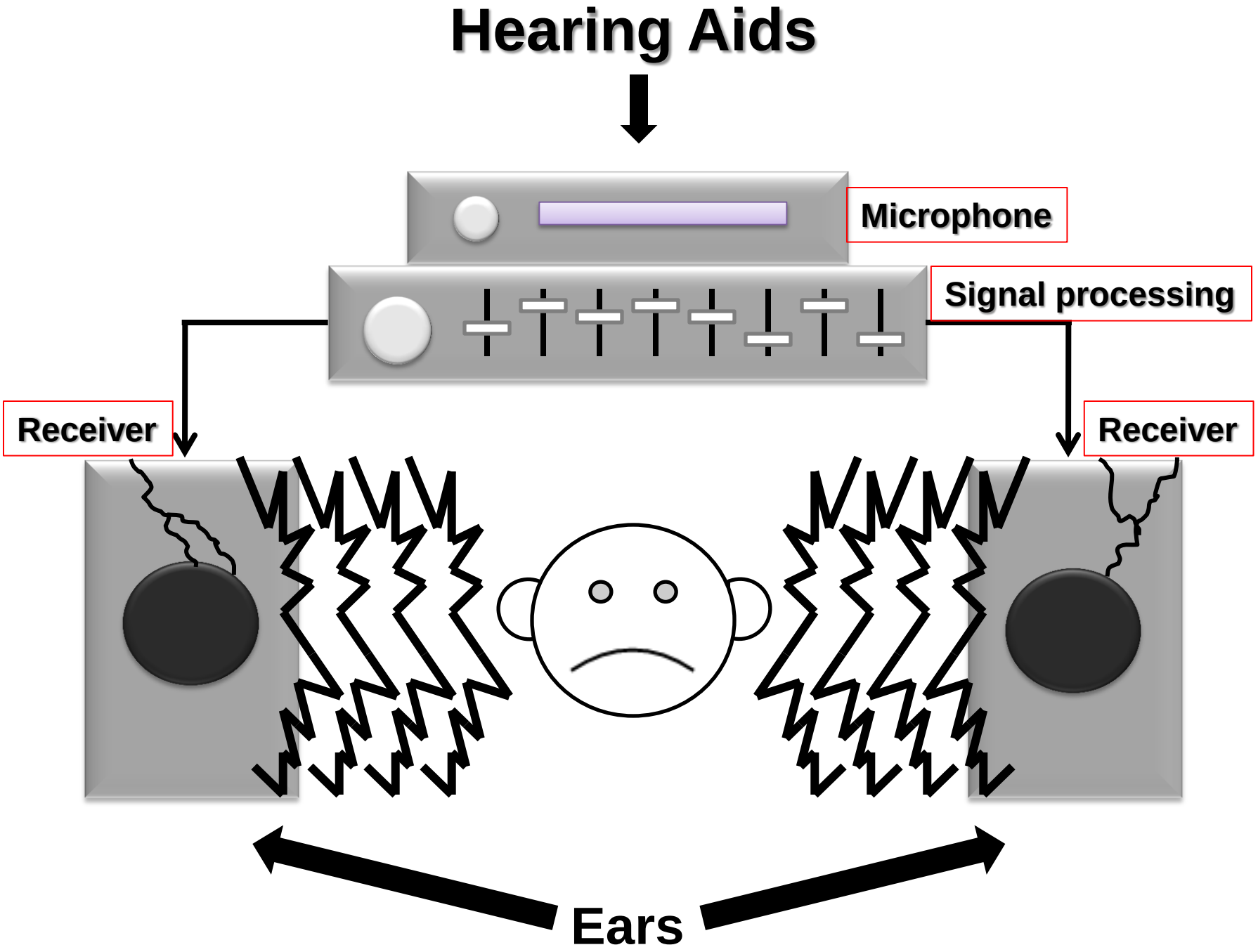
Realistic Benefits from Hearing Aids



6th Step

Counsel on expectations with very poor word recognition


Hearing Aids
Microphone
Signal Processing
Receiver
Receiver
Ears


Hearing Aids
Microphone
Signal processing
Receiver
Receiver
Ears

Reasonable Expectations
Rose Allen

Expect:)

a. others to notice your hearing loss before you do!

b. your audiologist to be knowledgeable, courteous, and accommodating.

c. differing opinions because there is no single best hearing aid and expect recommendation for two hearing aids.

d. your audiologist to assess your hearing difficulties in several environments and define individual goals for you.

e. to be offered a 30 day trial period and a non- refundable fee if returned.

f. a referral to a physician to rule out any medical condition that may contribute to your hearing loss.

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

h. your audiologist to evaluate the benefits provided by your hearing aids.

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

j. a period of adjustment (4-6 weeks)

k. your voice to sound different.

L. a good, comfortable fit.

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

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

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

P. To have difficulty hearing in noisy situations.

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

R. repairs.

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

T. to purchase new hearing aids every 5 years

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

7th Step

Counsel on recent advances in technology for new or current patients with “older” current technology

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

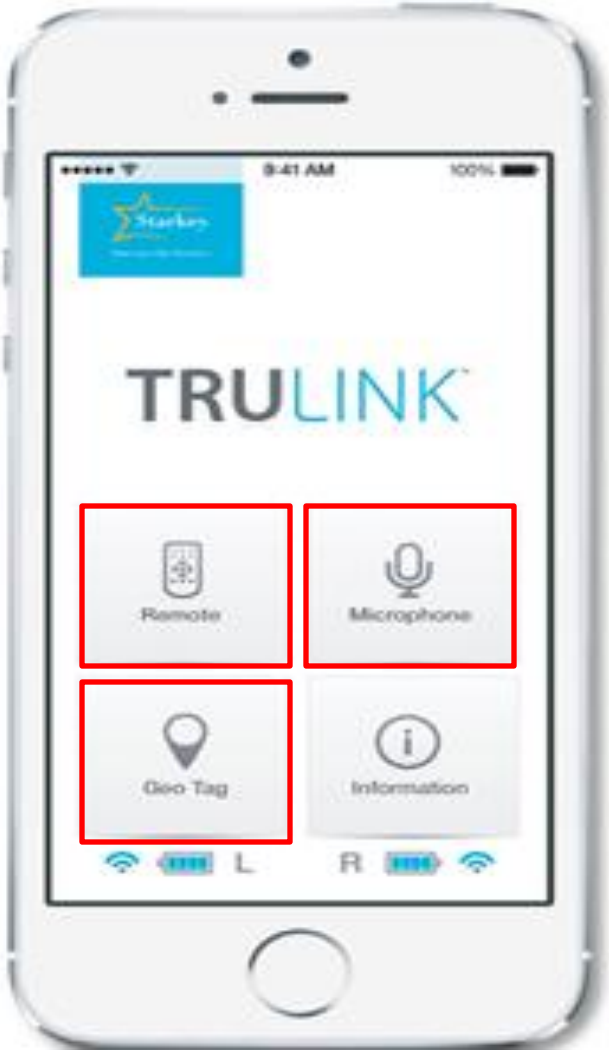
- **ReSound= iPhone 5**
- **Starkey = iPhone 4s and 5**
- **Free apps from the iTune Store®**
- **GeoTag up to 16-20 listening situations of environments**
- **Instructions about your hearing aids**
- **Remote microphone**
- **“Find aid” function**
- **Record an environment to play back**
- **Remote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

  Bass/Treble

Starkey TRULINK APP

Remote Control

Geo Tag



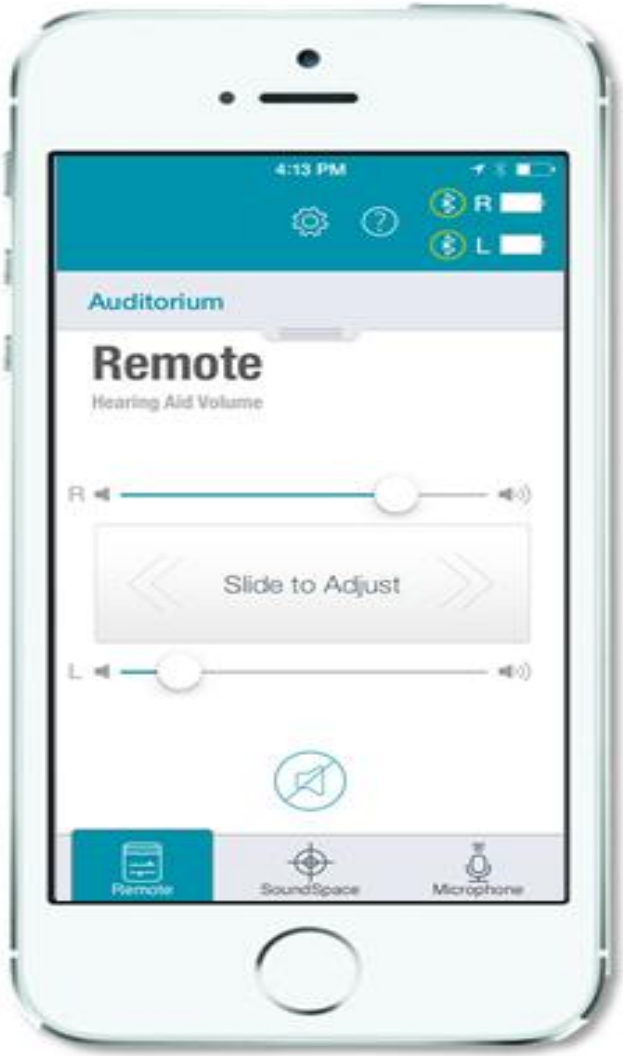
Remote Microphone

Remote Control

Change volume and switch memories

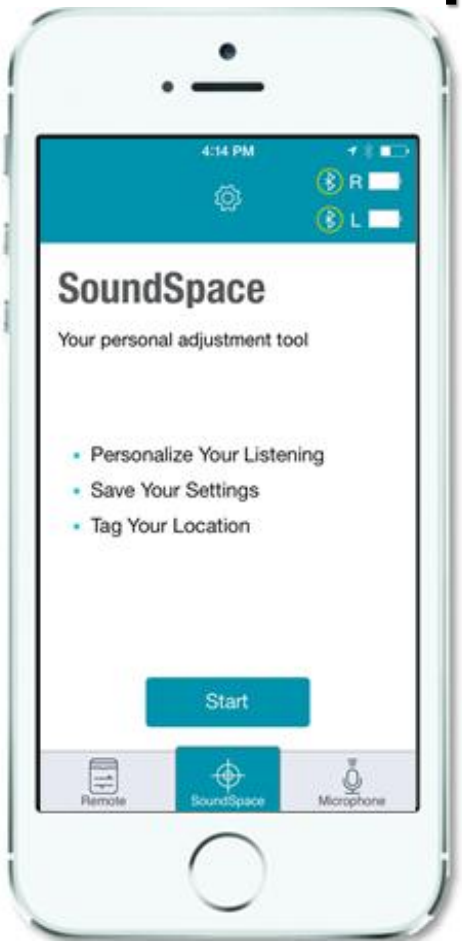
Right

Left



SoundSpace

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



Louder

Bass

Softer

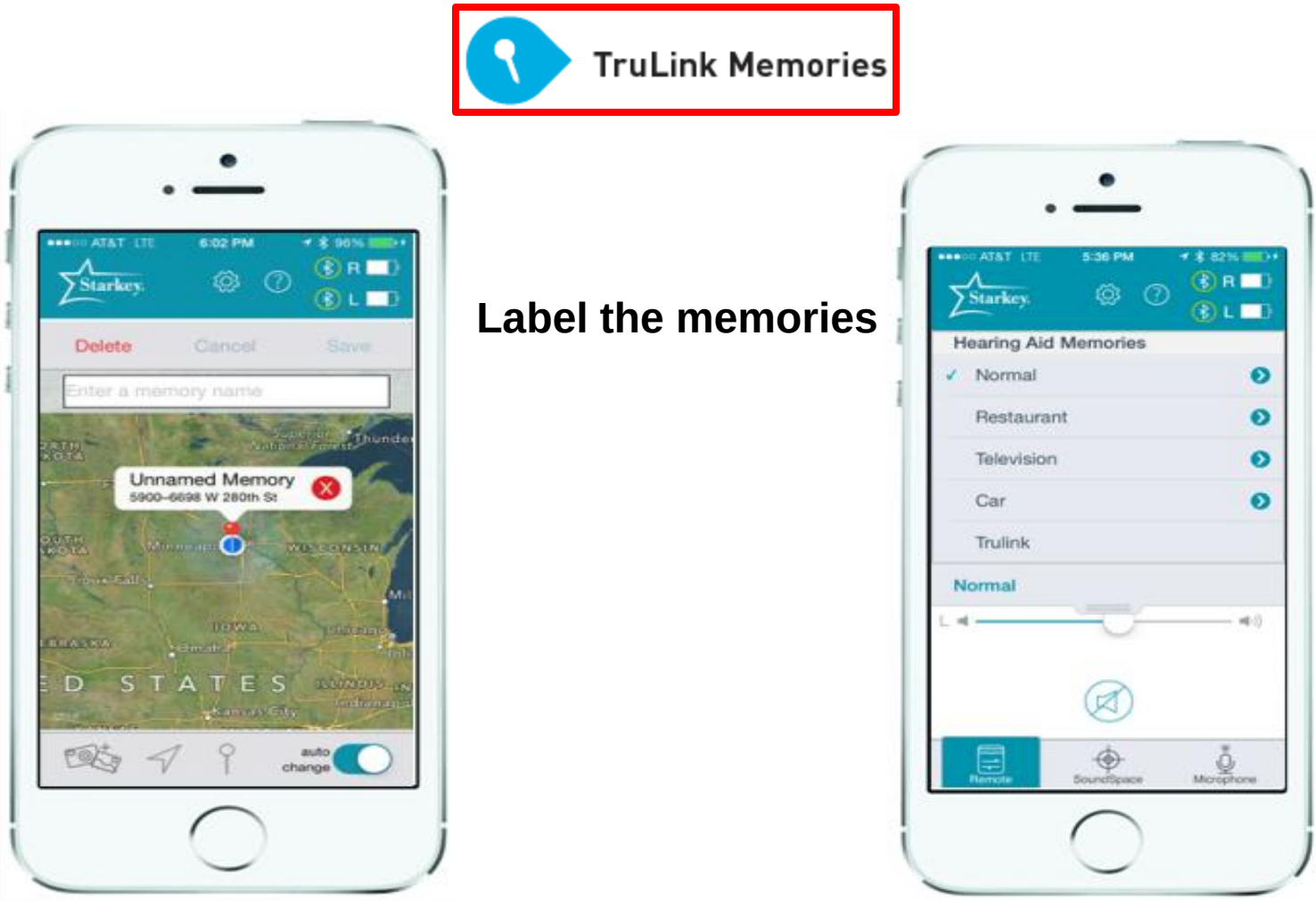
Treble

20 Memories:

a. 4 created by audiologist

b. GeoTag up to 16 TruLink Memories

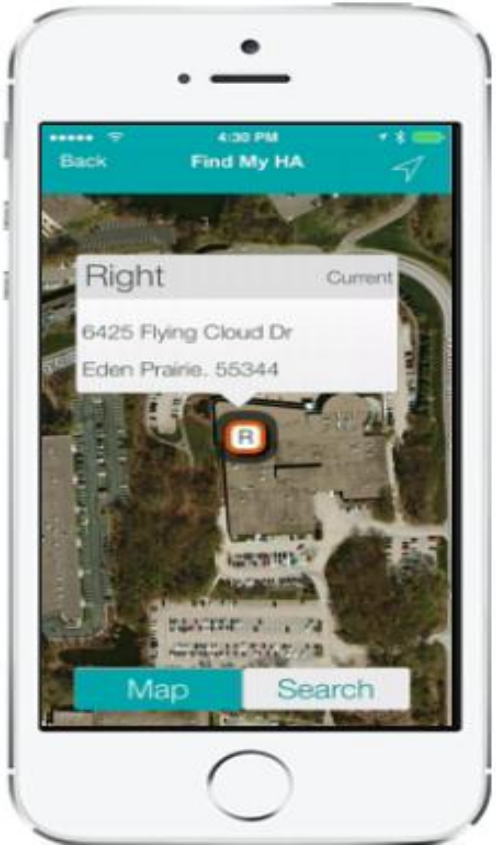
c. Use iPhone GPS to know the location and automatically change to that memory when the patient is at the tagged location.



Live Microphone

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

Find My Hearing Aids



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

Have other tools on Lyric and Roger, but time does not allow to review these

At this point…..

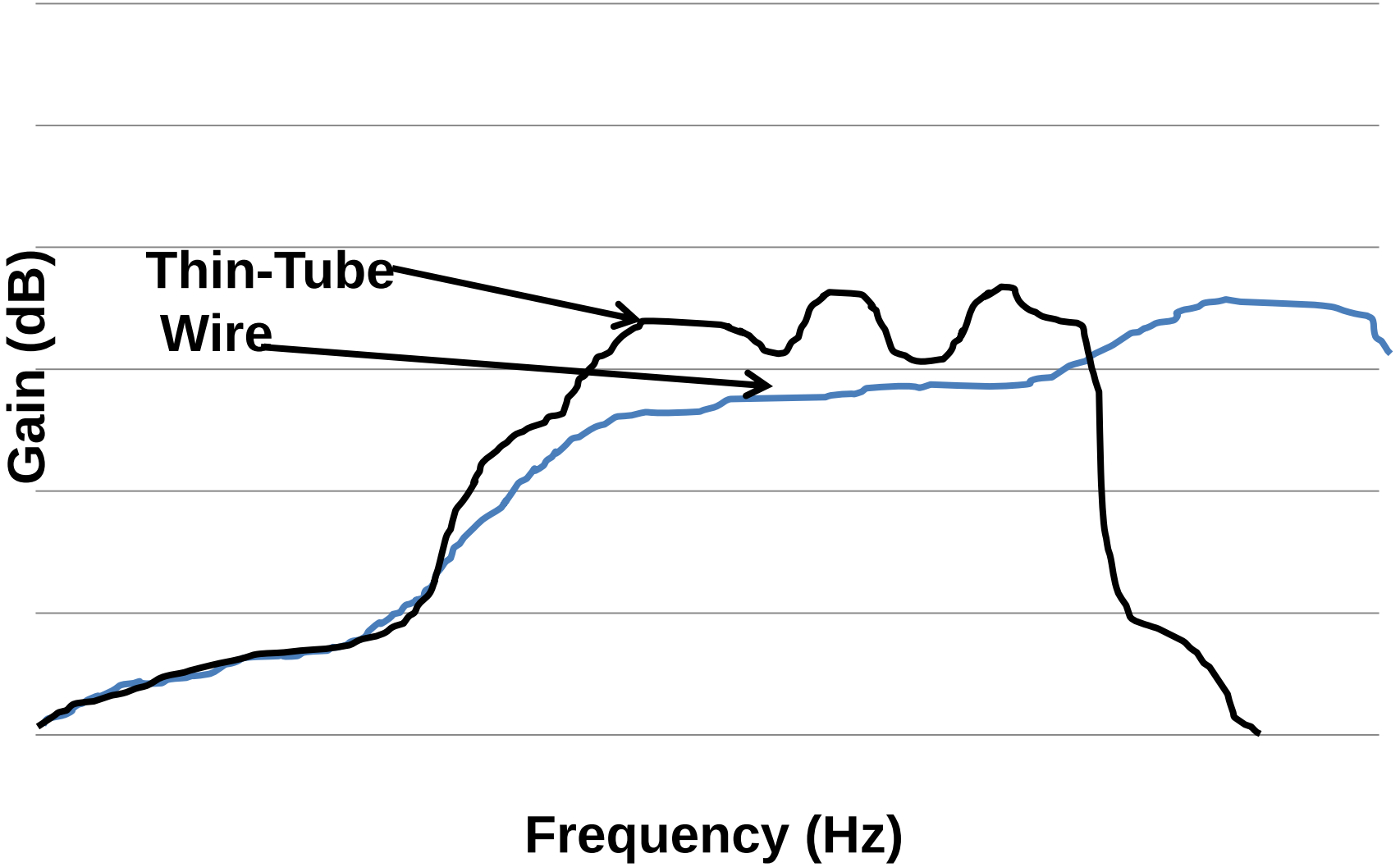
- Will program “demos” and fit patient. Have “demos” of virtually all our hearing aids, remotes, and major accessories. To be able to do this, we limit practice to three manufacturers.
- Provide brochures of the hearing aids, remote control(s), and accessories along with the charges.
- Emphasize staff does not receive “commission.”
- May order aids if patient feels this is what he/she would like to do.

Also at this point…..

- **If the patient decides to "think about it," or mention that he/she wants to "comparison shop," I emphasize the need to obtain hearing aids only at clinics where REM and measures of validation are completed. If not, turn around and walk away.**

Finally, also counsel on…..

- **RITE (RIC) vs RITA:**
  - **Smooth frequency response**
  - **Extended bandwidth**
  - **Moisture less of an issue**
  - **Strong advocate of custom mold versus dome (↑Comfort; ↓Feedback;↑Retention; ↑Gain)**
- **Strong advocate of VC (on aid, remote or phone)**
- **Strong advocate of programmable t-coil**
- **4-6 week trial period**
- **If unsatisfied, can try different technology or return for full credit minus professional fee**


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

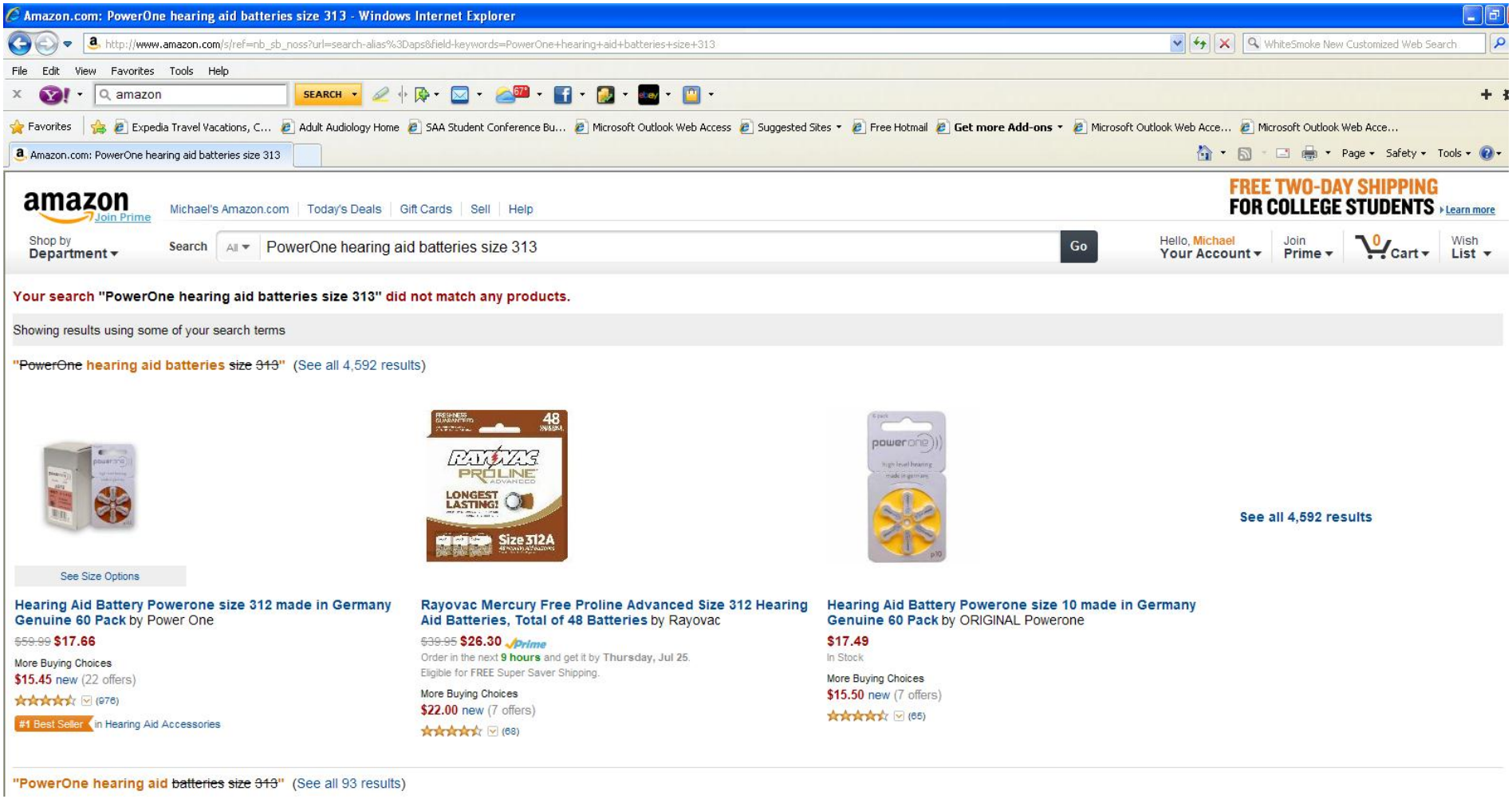
8th Step

Counsel on batteries because this has become a concern with newer streaming technology

Excel Spreadsheet

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

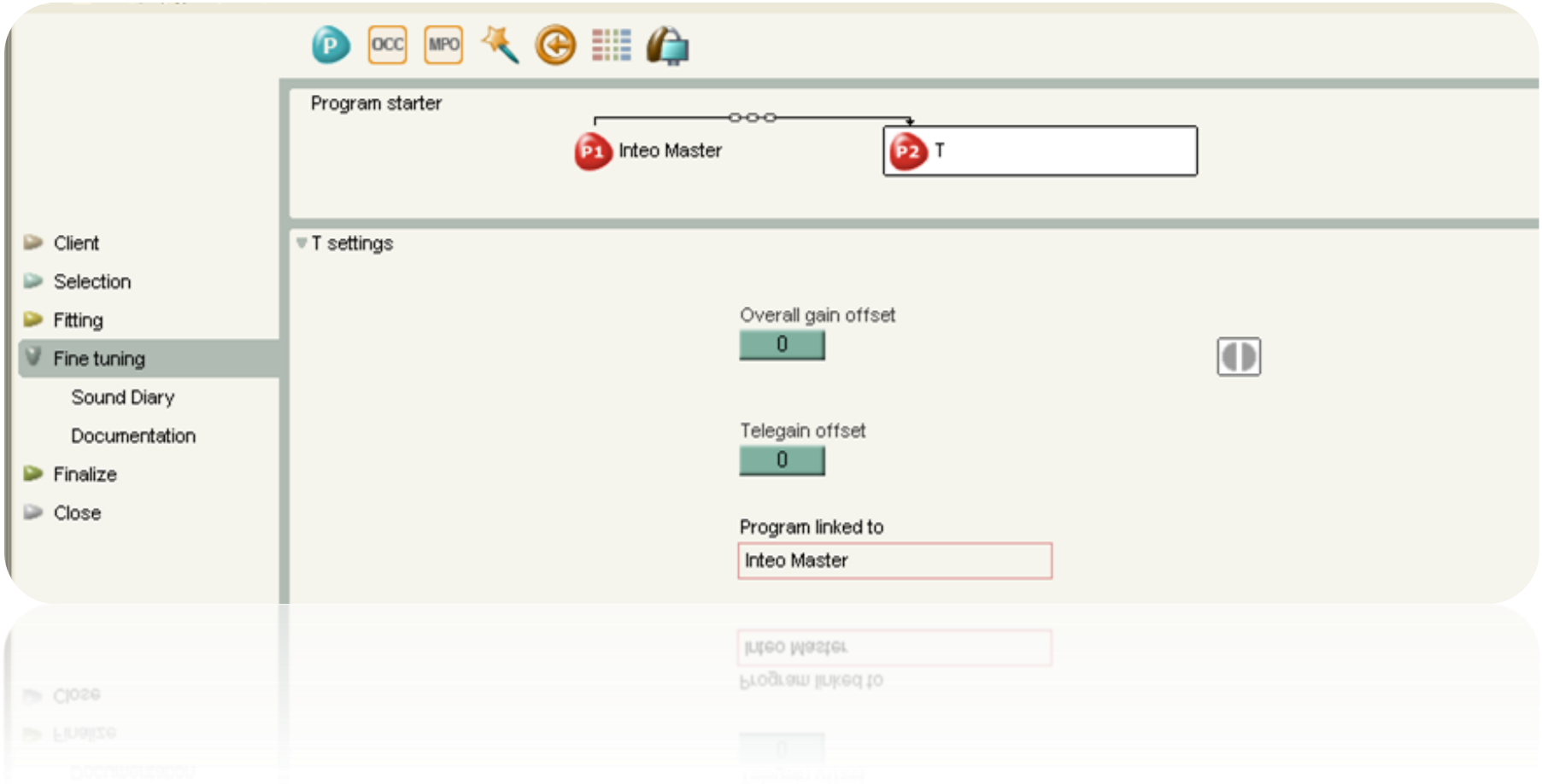


Don't Use Energizer Batteries

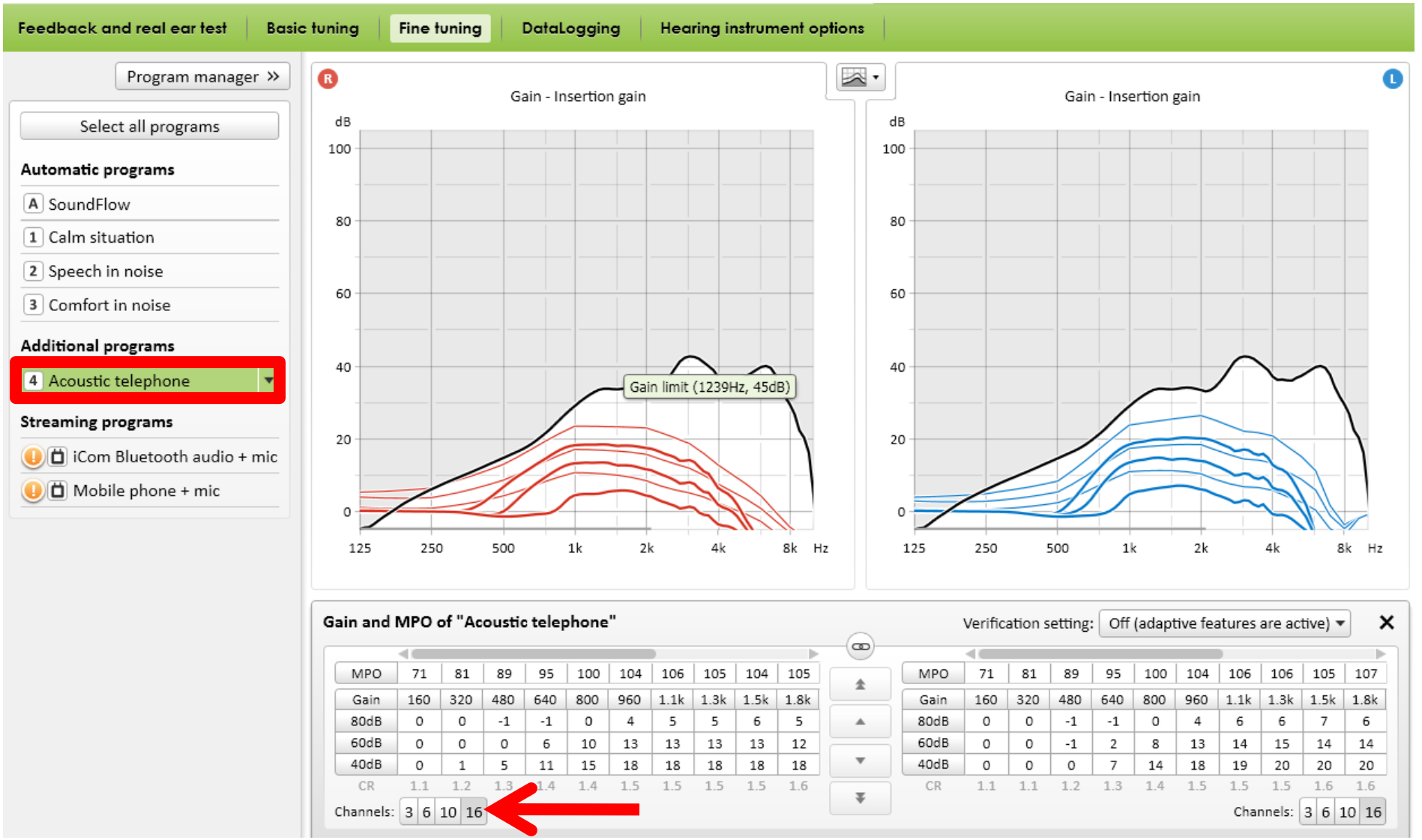
9th Step

T-Coil

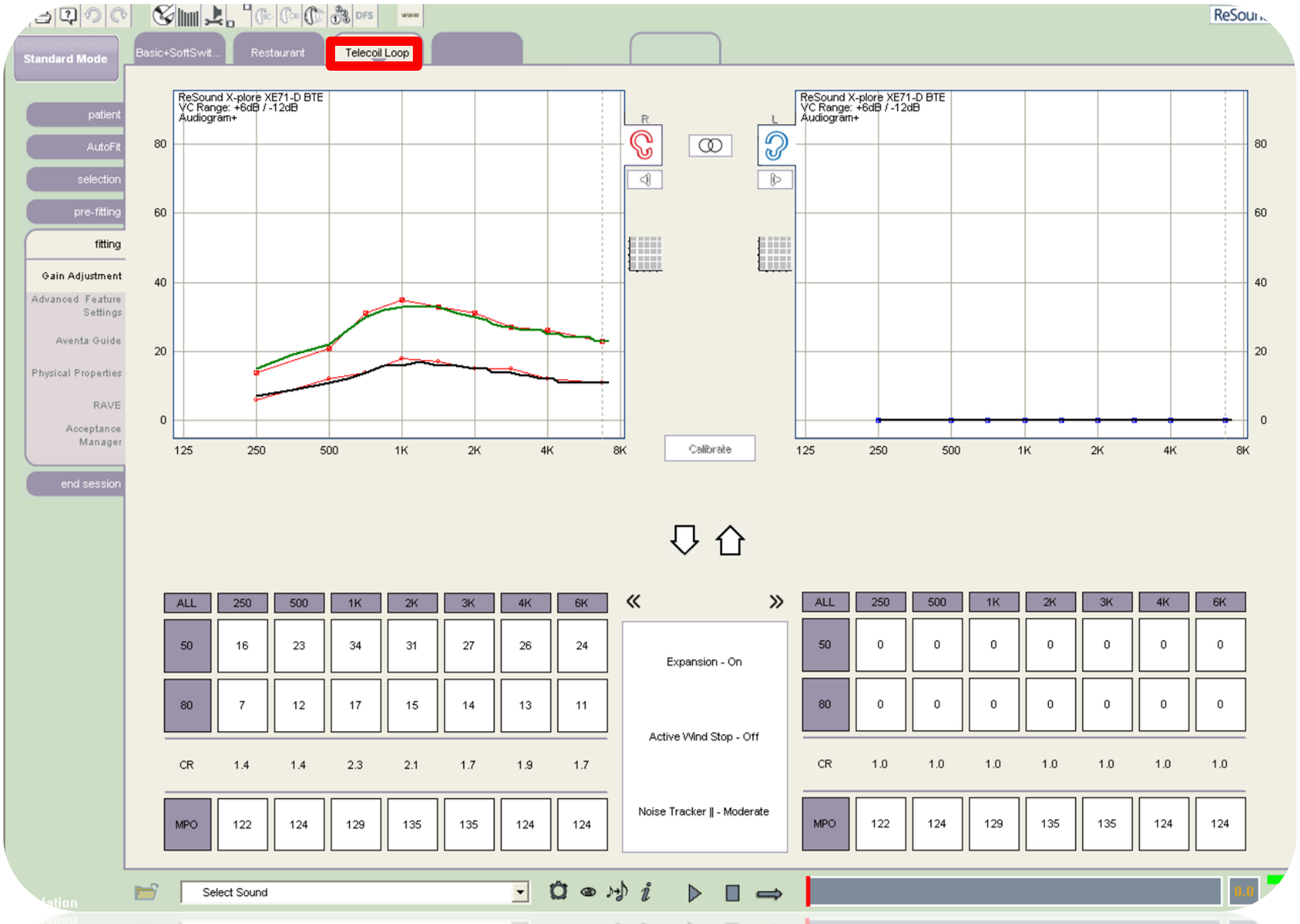
Widex: Can program overall gain



Phonak Target Software: 16 Bands



ReSound: Program T-Coil in 7 Bands

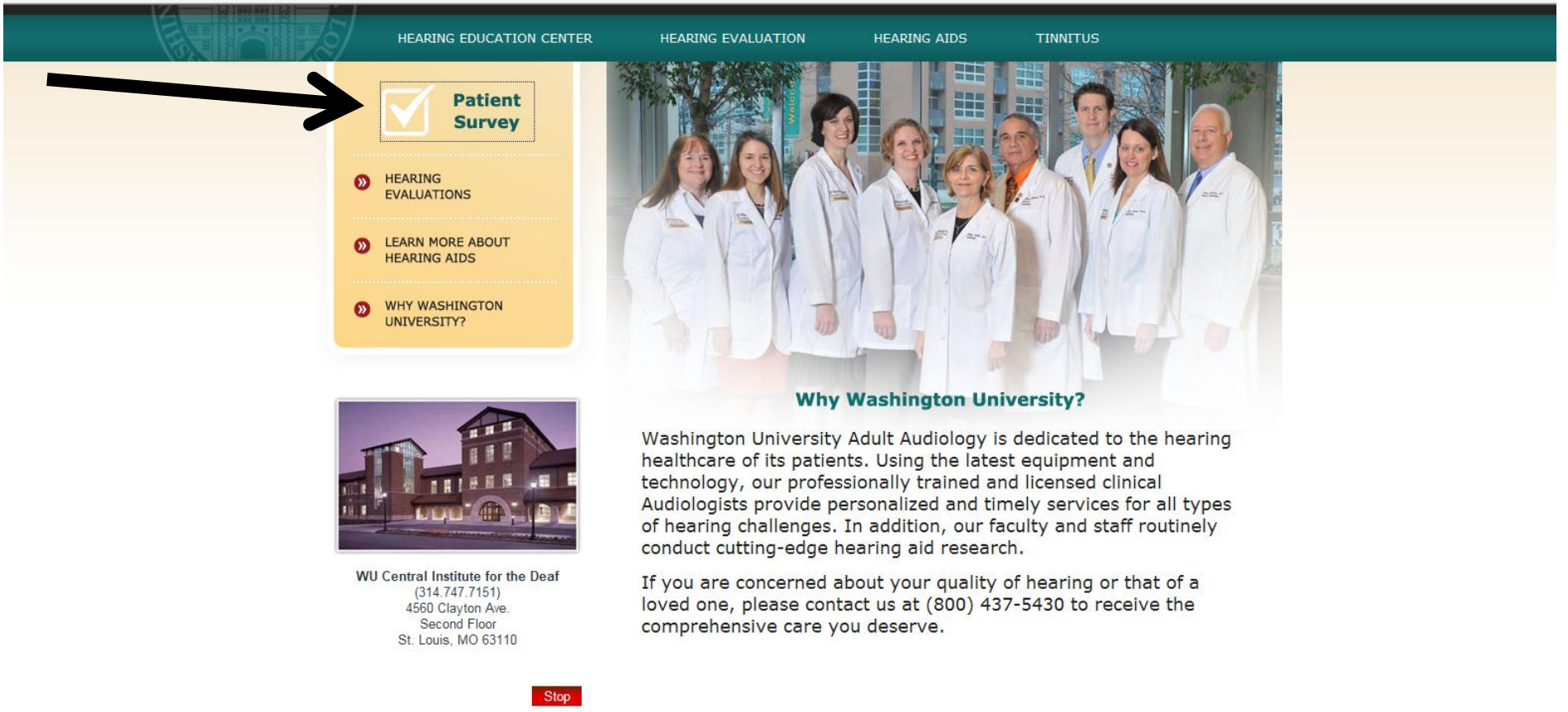


10th Step

Additional counseling tools

Why Should I Get My Hearing Aids Here?

EarTrak
www.hearing.wustl.edu




Washington University Physicians
WUSTL.EDU
Adult Audiology
HOME
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.
Click Here to take Survey
Return to: Patient Survey
Locations
The Center for
Advanced Medicine
314.362.7489
Services
Hearing Education
Hearing Evaluation
Hearing Aids
Custom Fit Earplugs
Contact Us
800.437.5430
audiology@ent.wustl.edu
Follow Us:
Internet
100%

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
- Contact Us

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 Aic 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

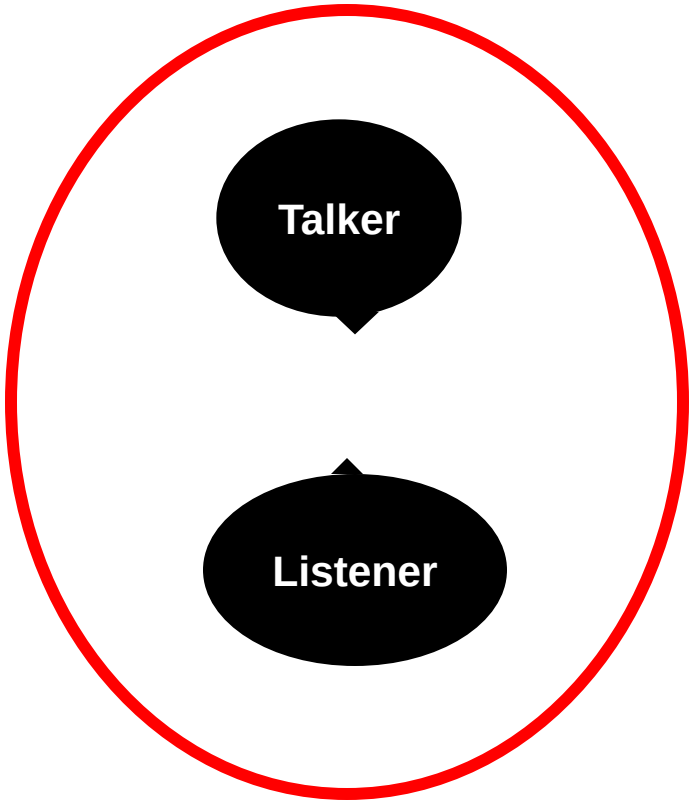
Your responses for Question 14 - Satisfaction with Service Provider			
Professionalism of clinician	**Friendliness of staff**	**Patience of clinician**	**Explanations given**
Very satisfied	Very satisfied	Very satisfied	Very satisfied
Amount of time spent	**Cleanliness and appearance of office**	**Service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

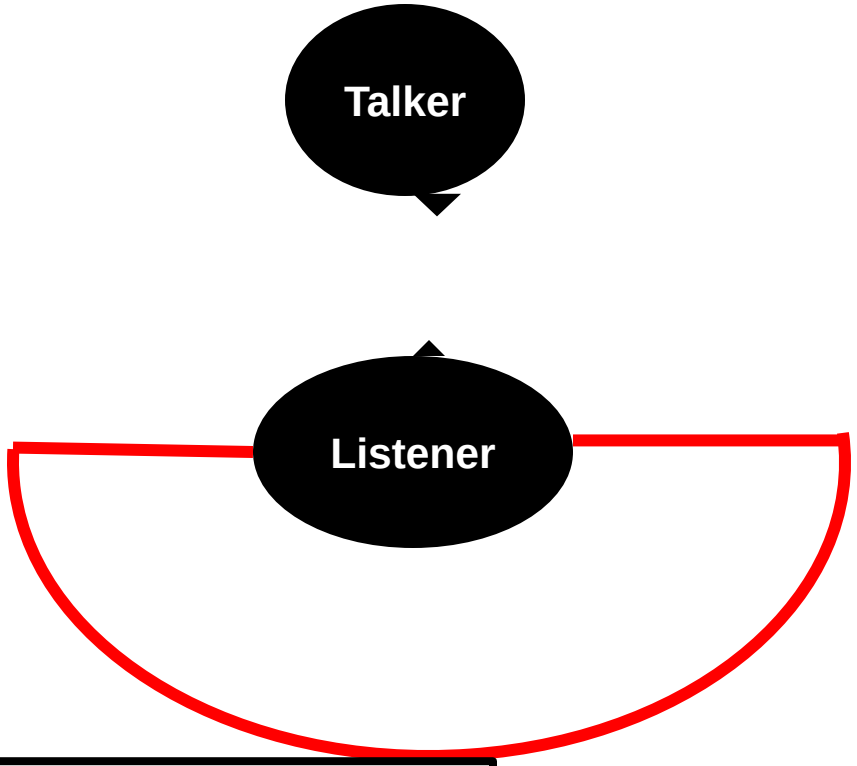
Features		Satisfied		Dissatisfied	
		Your Clients	EARtrak Group	EARtrak Group	Your Clients
Fit/ comfort	n	38			3
	%	86.4 %	82.2 %	5.7 %	6.8 %
	N	44			
Volume adjustment	n	32			2
	%	82.1 %	68.5 %	11.9 %	5.1 %
	N	39			
Visibility of aid	n	32			0
	%	78.0 %	82.1 %	2.8 %	0.0 %
	N	41			
Cleaning frequency	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 %	85.4 %	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

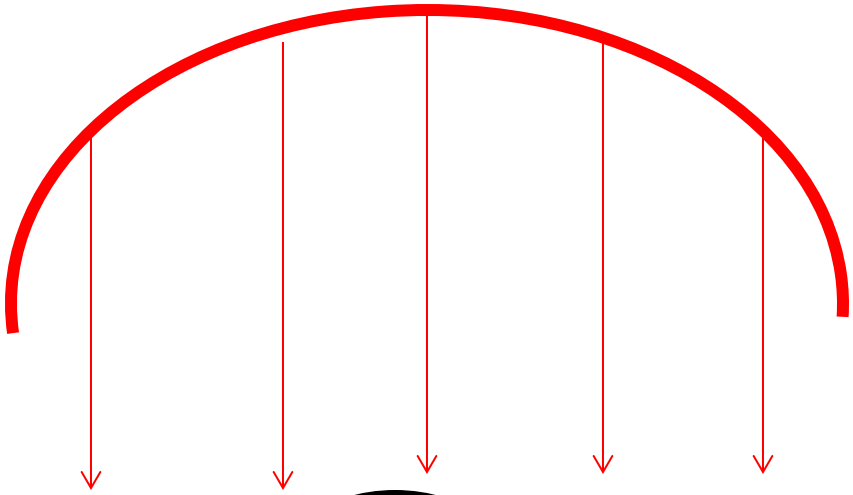


Directional



Noise louder than signal

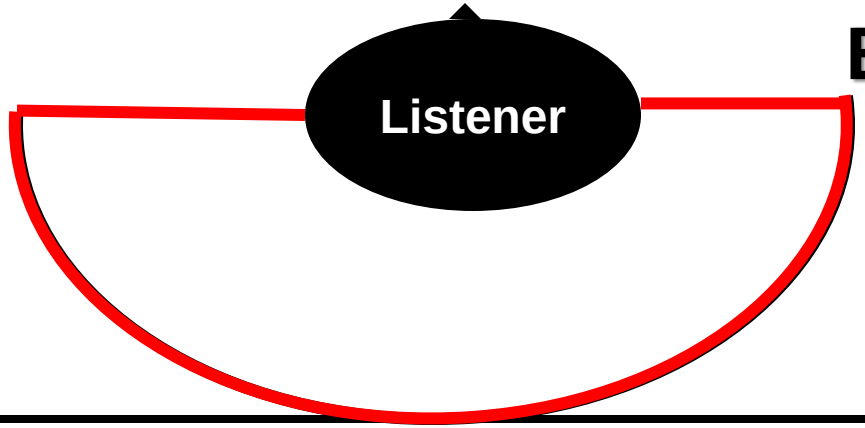
Directional



Noise from the front
Difficult

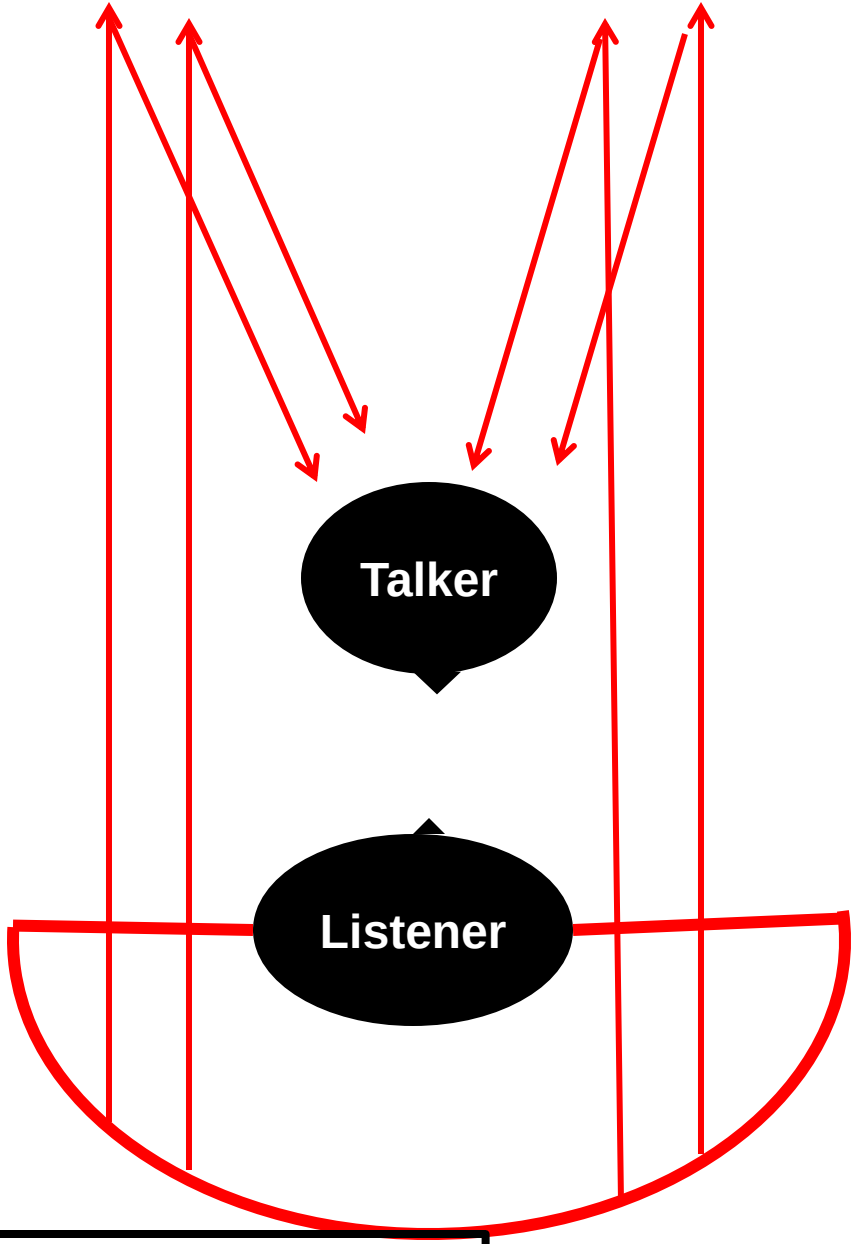
Talker

Noise from back
Easier



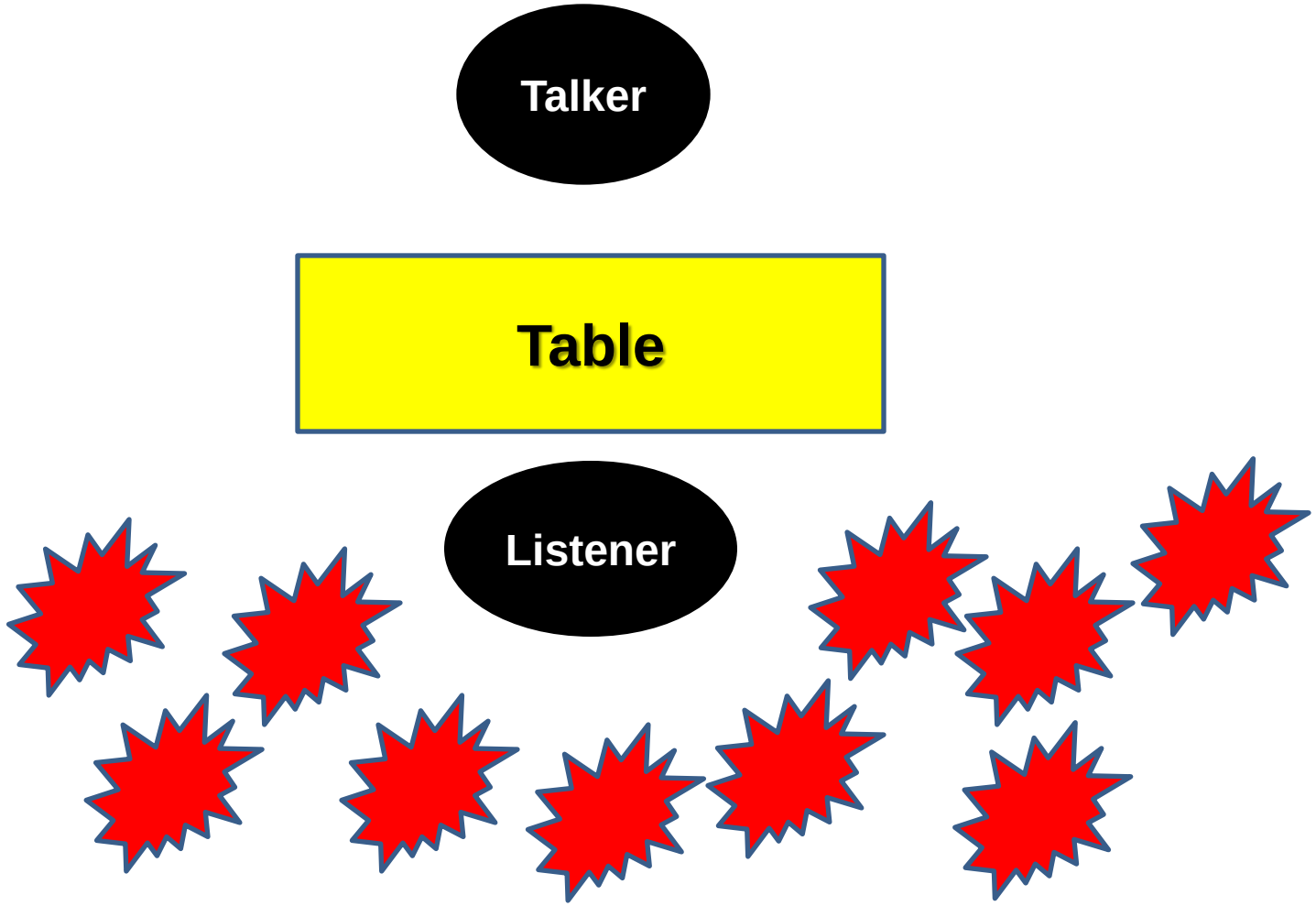
Noise from back and front- Very difficult

Directional

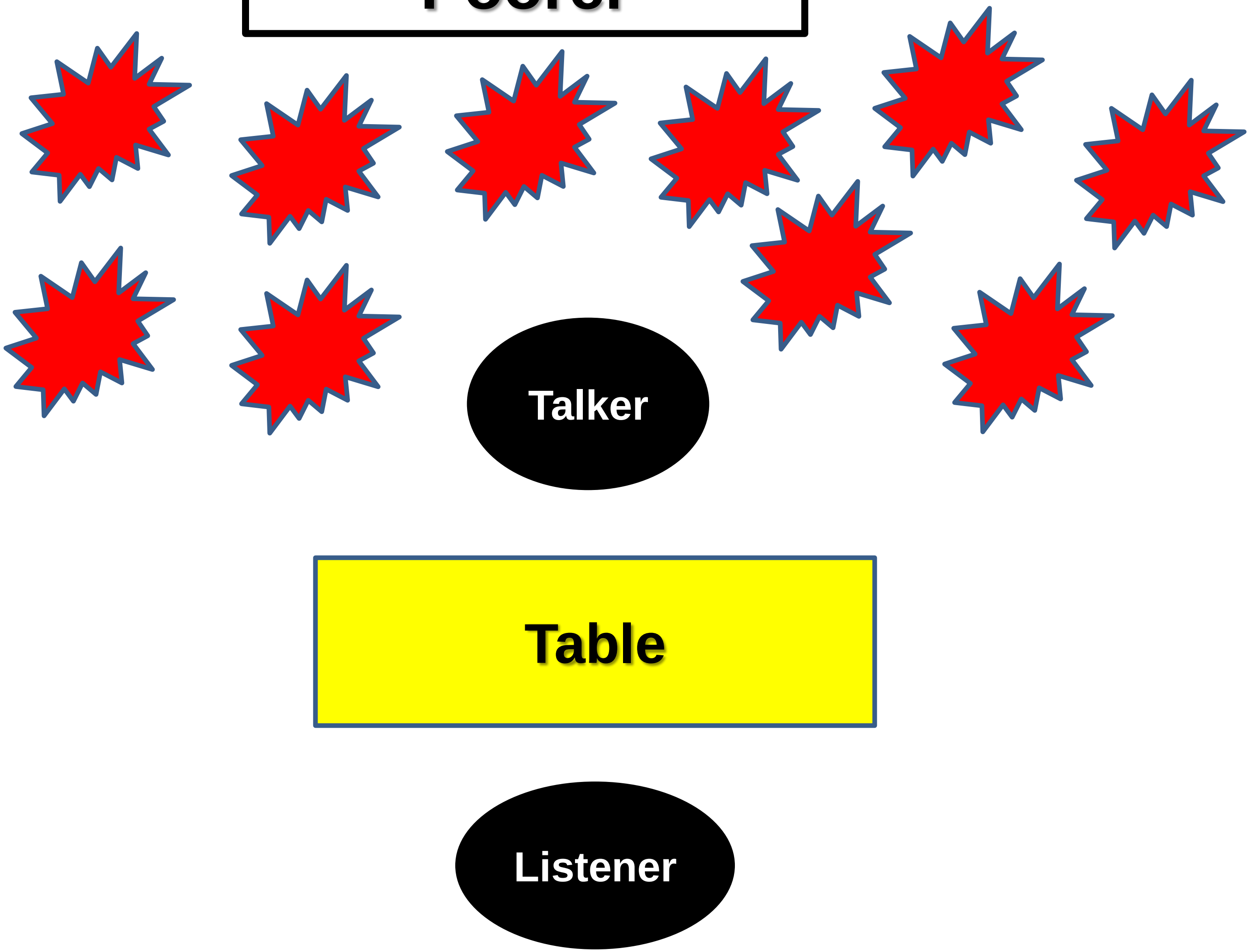


Reverberation-Very Difficult

Restaurant-Better



Restaurant-Poorer



Thank You!