

This unedited transcript of a continued webinar is provided in order to facilitate communication accessibility for the viewer and may not be a totally verbatim record of the proceedings. This transcript may contain errors. Copying or distributing this transcript without the express written consent of continued is strictly prohibited. For any questions, please contact customerservice@continued.com

Grand Rounds by ReSound: Gain Adjusting Options in ReSound Smart Fit Software

Presenter: Valerie Kedem, AuD

Okay, well, welcome everybody. Thank you so much for joining us today for another grand rounds by Resound, which is going to be all about adjusting gain. Our title here today is Gain Adjusting Options in Resound Smart Fit Software. My name is Valerie Kedem and I am a field training audiologist with GN Resound. So we do have a few housekeeping items to attend to.

First, it's going to be the inherent risk and benefits. So anytime we do an educational program, there are always inherent risk and benefits associated with this. This is what we audiology online here. We also have three learning outcomes that we would like for you to hopefully get at the end of our 30 minutes here today. And so we just want you to be able to compare and contrast the differences between GAIN adjustments, gain percentage and experience levels.

We want you to be able to understand and utilize Environmental Optimizer too. And then based on your patient complaints, we hope that you can kind of make decisions about which option is going to be the most appropriate based on that patient feedback. We are pretty deep as far as customer care is concerned. So if you have any questions regarding this to make sure that you and your patients are successful with these fittings and the overall sound quality and volume of the hearing aids, please don't hesitate to reach out to anybody here on this list.

So let's go ahead and get started with our seminar all about gain. So I just want you to take a moment to ponder and think about how many ways can we change GAIN in the Smart Fit software? And so it seems like kind of a basic question and a basic topic like, yeah, okay, hearing aids equals volume. However, there are multiple ways, specifically four different ways that you can adjust for gain in the software. And sometimes you'll use them together, sometimes you might use one versus the other based on what the patient is coming in and telling you.

So because this is a software course, we are now going to hop into our software here and then we'll come back into the PowerPoint at the end and do some case studies to hopefully just solidify

everything.

So here is our software. And what I like about the software is we're kind of compartmentalizing or chunking the information together. So with adjustment screen is also the screen that you get pulled into whenever you're coming into the software. And I know that everything underneath all my options, underneath fine tuning, environmental optimizer 2, auto ram acceptance manager, all of these are involving making these hearing aids louder or softer. So once we're done with our time here today, when you go back into your clinics and you start utilizing this new information, you can feel confident that even if you don't remember exactly what is what you know, that you are doing something with the gain because it's under my gain adjustment screen.

So the first way that you can change gain, and this would be for the complaint of everything is too loud or everything is too soft is going to be what I like to call old schooling it and coming here and clicking all where my pointer is. And you're going to see that the frequencies and the 50, 65 and 80 gain inputs have now become highlighted with this light gray. And so if the patient comes back and they say, hey, you know, overall, all day, every day, no matter what, my hearing aids seem too loud, you can do this all. And you can come here in the middle. We have 1, 2 and 3 DB options.

And maybe you can go up or down depending on what that patient complaint is. So if it's too soft you could go up. If it's too loud, you can calm down. Now, if your patient has a gain issue and it's more like everything's too sharp, harsh and tinny, or everything is too boomy, or I have like an echo, then you would come in here to the gain adjustment screen and you would choose those frequencies based on that complaint. And then at that point you can make those fine tuning adjustments to the gain dependent on what the patient is saying.

So that's option number one as far as manipulating or making the hearing louder or softer. The second option is going to be up at the top of this screen, right in the middle here, where it says gain percentage.

So we will always start out at 100% of gain percentage unless you have gone into the preferences of the software and changed it to a different percentage point. But for the most part, you'll always see gain percentage at 100% out the gate. And if I click on this dropdown, you'll see that we have several options.

So if you like to go up and down and gain by 10% increments, this might be more for you. All roads lead to Rome. You're going to get the same results whether you go down here and go up and down in 1, 2 and 3 DB adjustments, or if you prefer to do these 10% increments.

So those are the first two ways that you can change the overall volume of these hearing aids. The third way is going to be under my patient screen over here. And so we do have these experience levels. We have four options. We have first time user onboarding, first time user experience, nonlinear and experience Linear.

If you are hanging out here on your gain adjustment screen and your patient has come back several times and they're like everything is always too loud and you've cranked it down, you've cranked it down, you've gone to your percentages, you've made it less and they're still saying no, it's just, it's just, it's still, still just too loud. So if you have that type of issue or the reversed is, hey, you know, at first fit several months ago it was just wow, kazawi, I really liked how it sounded and over time I just feel like I just can't get that same wow factor. And you have gone into your software and you've made the gain percentages more and you've brought your gain up a little bit here or a lot and they're just like, no. The patients are like, no, it's just not. Just hasn't had that sparkle that it did before.

So if you have one of those two complaints, it's always too loud or always too soft and this gain adjustment screen isn't quite getting us to the right place, then you can come over here to patient and you would probably even change your experience levels. Now the software defaults to first time user, but you can change it to any of these four options that you see here. When we're thinking about

experience levels, we're not just taking in consideration the gain, we're also taking in consideration how much emphasis that we're applying in the high frequencies and how much compression we're applying to this fit. So if you're a first time user onboarding or first time user, this means that you're going to have less overall gain applied to the fit, less emphasis in the high frequencies and more compression. If you're experienced nonlinear or experienced linear, then that means that you're going to have more gain out the gate, more emphasis in the highs and less compression.

So if you're a patient, we're going to start off at first time user because again, this is the default and they're telling you that it is always too loud no matter what. They might be a first time user onboarding patient. And so I'm going to go ahead and go back to first time user and see my gain level percentage right here is at 100%. When I go in here to first time user onboarding, look what happens to my gain level percentage, it drops down to 70%. So if you have somebody who's very sensitive to audibility, the sounds, or you're Trying to chase them down to put the hearing aids in their ear or I like to sometimes refer to them as the folks that like to put their toes in the pool.

That's me to test out the water. First time user onboarding is a very appropriate way to start out knowing that over time we do want to get them out of that and maybe into first time user and then eventually into your experience nonlinear. Also what's going on in the background with first time user onboarding is that the advanced features I'm going to apply these changes really quickly that are made for your comfort and noise, they become more aggressive. So I can see here that my impulse noise reduction is at moderate and my noise tracker 2 per environment also becomes more aggressive. And we're just saying, hey, this auditory system is a little bit sensitive right now and we really can't pump in a whole bunch of volume.

And we also know that the system probably would appreciate not having as much background noise information coming in. So that's first time user onboarding. Now if your patient is telling you, hey, you

know, I don't have that sparkle, that wowie kazawi anymore, then they're no longer a first time user at this point. You can now take them out a first time user and put them into experience. Typically it's going to be experienced non linear.

We would love for everybody to hang out and experience nonlinear at 100%. We know that this isn't always the case, but that's kind of like the end goal if we had it in goal. So if your patient's like I just need more and, and whatever gain adjustments you're making isn't getting you to that place and that is your clue or your cue to change your experience level and to go up into experience nonlinear. I personally like this type of response because it means that the patient's wearing their hearing aids and that their auditory system is adapting to this information and we can give them even more. So it's, in my opinion it's a, it's a good transition, it's a good change.

They're all good. But this one just shows that we're moving forward. Now the last experience level that we have here is linear. And so I'm going to go ahead, I change it to experience linear and I'm going to go into my gain adjustment screen. So you can see that it's really not a true linear fit, but it's just going to be a little bit tighter between this 50 and the 65 and the 80.

This is a really good Experience level for your folks who they really would like to be an analog hearing aid, but they're not, they're hard to find. And maybe for oscillators is a good option for your patients who have a medical ear. So somebody with maybe conductive hearing loss or mixed hearing loss, they tend to do better with this experience linear option. So those are going to be your four experience level options, and that's going to be what you're utilizing when making these gain changes here on this screen or this gain percentage aren't working. Just of note, the gain percentage here on your gain adjustments fine tuning screen and the gain adjustments that you see here, the gain, the gain level percentage, they are the same.

So if I change it to 90 here on my patient profile screen, it will also be 90 on my gain adjustment screen as well.

So those are three out of the four ways that we can modify gain in the software. We can old school here, right? With our gain adjustments, we can do our gain percentages and then we also have these experience levels that we can try out as well. But what about for the patient who comes in? And we're going to go back to our gain adjustment screen and they tell you that overall, in most environments, the gain is perfectly fine.

The volume is great, except for this one time. So if you get that everything sounds good, but scenario, then you're going to use environmental optimizer. Now, for environmental optimizer, I like to call this an automatic volume control wheel, because that is what environmental optimizer is. It is automatically making the hearing aids louder or softer, depending on what type of environment they happen to be standing in. So I'm going to pull this up a little bit so we can see all the environments at the same time.

And we have seven of them. We have quiet speech, soft speech, loud speech and noise, moderate speech and noise loud, noise moderate, and noise loud as well. And so we're just describing what type of environment the patient's standing in while wearing these hearing aids. When we fit hearing aids, we tend to try to make this a little bit more complex than it is, but it's not. We're just saying we're going to take up the entire volume of the hearing aid by a certain decibel level that we see here, or we're going to reduce the entire volume of the hearing aid by a certain decibel level over here.

So 2, 2, 2, 1, 0, negative 2, negative 3. These are decibels. So automatically for every single patient out the gate, for every single hearing aid, and every single Hearing loss. These are the default settings that we have for gain going up or down in a quiet environment, we're going to go up by 2 decibels. And a noise loud environment, we're going to go down by 3 decibels.

So that kind of makes sense. If I'm standing in a noise environment that's loud, I probably don't want as much volume coming into my hearing aids. So I would be cranking my volume down on my hearing aids. And oftentimes for those soft speech environments or these quiet environments, we just want a little bit more. So then I would be cranking my hearing aids up or making that gain or that volume louder in my hearing aids.

The way that we got these default settings is that we put a lot of people in hearing aids. A big chunk of folk like 900, give or take, and we let them wear their hearing aids for about a week. And they ran their data logging and we said, okay, on average, when patients are in a quiet environment versus a speech and noise environment versus a noise environment, what are they doing with their volume control wheels? And then we took the averages of that and that's how we got this decibel setup. So how do we use environmental optimizer?

It's excellent for that. Everything sounds good, but scenario if your patient comes in and they tell you that everything sounds good, but you they're at home during the day and they just want it to their hearings to be a little bit louder. But when their family cuts back, the volume is perfectly fine. It's just they work from home and they just want to have a little bit more awareness of their environment. Now you can come into your fine tuning and you can make the hearing aids louder.

That's not wrong at all. But you might find that your patient is coming back and saying, okay, hey, when I'm at home during the day by myself, working volume's fantastic. However, as soon as my family comes home, wow, it's just too loud. So you've created a fixed a problem, but you've created another problem. That is the beauty of environmental Optimizer too, because they can come in, they can have that same complaint.

Hey, I would really like to, you know, have a little bit more volume whenever nobody's home. Then you can come into quiet and you can pull to the right. Pulling the slider to the right is raising the volume of

the entire hearing aid from 250 hertz to 8,000 hertz. And I'm going to pull this over again and I want you to take a Look right here where my pointer is. And you're going to see like a flash.

And so what that's trying to show us is that this is a temporary gain change, a temporary volume change.

So that would be maybe how you use quiet, soft speech. That is going to be for the complaint of, or the issue of everything sounds good, but I can't, I can't hear my granddaughter. And I watch her several times a week, but she's got such a little baby voice. I just really struggle to hear her. But everybody else is fine, not a problem.

So if you're not using Environmental optimizer, then probably what you're going to do is go into fine tuning, you know, bring up your mids and your high a little bit to try and pull more speech information out. And that's again perfectly fine. There's nothing wrong with that. But on the flip side of that, the patient might be back in a week saying, hey, you know, I hear my grandbaby really well now. However, every time I open up a newspaper or cut my fork on my plate or my dog walks across the tile, wow, that's, that's a lot.

It's a little too much. So again, back to that same scenario. You fix one problem but created another. So again, Environmental Optimizer 2, instead of making gain changes globally, you can just make them for a moment in time and then you can pull it over to the right. Speech loud.

I like to use this one for the issue when the patient comes back and says, hey, everything sounds good, but you promised me a month ago my own voice was going to sound better and it is just banging around in my head. Can you help me with this? Yeah, no problem. But it's the only volume issue that they're having. So maybe every time that your patient talks, they don't need an additional 2dB of information coming in.

So you can pull this to the left, you can even just click where you want it to go. And so when they talk, the volume of the hearing aids will remain the same. It will not go up or down. It's just going to be at zero. Speech and noise.

Moderate. Speech and noise loud. If you can make this word. And it's just telling us that I have both speech and noise in the environment that I'm standing in with my hearing aids. They're both present same for speech or to say I'm in a speech only environment.

Same for quiet. It's saying I'm in a environment that doesn't have anything going on in it. And so the speech and noise. This is going to be good for when patients come in and say, hey, everything sounds good. But I go out to this restaurant once a month with my friends and we start off pretty early and we meet up after work on Fridays and, and I just find like, I just don't feel like I'm hearing well.

And I just, it's, it's a volume issue. It's not necessarily the background noise. It's more just. I wish they were just a little bit louder. So you can come in here and you can pull these to the right.

I like to do both of my speech and noises together, kind of in tandem, if you will. Because if the patient is in a speech and noise environment and it's quieter in that more moderate setting, but they stay a little bit longer when it really gets rocky and rolling, they're still in that same environment and they're probably still going to need that boost up in the gain of the hearing aid. So I just kind of pull these over together just to make sure that I have them set up. And then the last two are noise. When we fit hearing aids, we like to try to make this background noise.

I've seen, at least in my experience, this is not talking about background noise. We have a different feature for that called noise tracker that takes care of background noise concerns. This is just stating that your patient's standing in a noise only environment. So sometimes you might hear everything

sounds good. But I like this cafe across the street for my job.

And I work in a quiet building. And when I step out from that quietness onto the busy sidewalk, I feel like my hearing aids are very, very loud. Okay, cool. So I might just come in here and reduce noise.

Moderate noise, loud.

Now the last thing I'm going to say about Environmental Optimizer is that it takes one second per decibel change here.

And in order for the patients not to hear the transitions between the environments, we recommend that you keep everything within 2 to 3 decibels. So from quiet to soft speech, we have 2dB difference from speech loud to speech soft, maybe a 3dB difference. Speech and noise moderate, you're within the 2dB and so forth and so on. The reason that we do recommend that 2-3 DB gap, or no more than that 2-3 DB gap is that we don't want the patients coming back and saying, my hearing aids are turning off, my hearing aids are making weird sounds, my hearing aids are doing something goofy. When I walk from room to room to room.

Offentimes if I hear that? I'm coming right to Environmental optimizer and making sure that I don't have something like this going on, which is going to be a 12 second delay or 12 second transition from quiet to speech soft. So we just want to make sure that the transitions are really smooth and the patient isn't aware of them.

So now what I'd like to do is go back into our PowerPoint presentation and run through a few case studies that we have to just kind of solidify everything in these last few minutes that we have together.

So case study one, patient returns stating that he's struggling to hear speech at his favorite restaurant.

So for that I would go into my gain adjustment screen, I would go to Environmental Optimizer 2 and

then I would make speech and noise moderate and speech and noise loud a little bit louder. And so I'm going to pull my slider to the right. Case study number two. And by the way, all of these case studies are part of your materials.

So there is a handout that has this information. It has screenshots of everything that we talked about. It also has a case studies too, if you'd like to use that for reference, for future references. Case study number two, patient states that everything is too soft all day, every day. So for that I would go to my gain adjustment screen, fine tuning and decrease the volume or the gain of that hearing aid by 1, 2 or 3 dB.

Case study number three, patient has returned a few times stating that the hearing aids are just too loud. Gain adjustments have been made, each time with no success. The patient experience level is first time user. So for this guy or this little lady, I should say going to go to that patient screen and I'm going to go to my experience levels. So we're saying, okay, we've done a few adjustments here, we're not getting to a better place.

Maybe you need more or less. And this, in this example we're going to change from first time user and we're going to go down to first time user onboarding with that 70% of gain and that more aggressive noise reduction in the background.

Number four, patient returns saying her own voice is too loud. So that's going to be your environmental optimizer two, speech loud and pull it to zero. We don't need more gain when we talk.

Number five, patient return stating that everything is too loud all day, every day.

So for this one we're going to go to the gain adjustment screen and maybe change the gain percentage to 90% or maybe 80%. Just kind of bring down the overall gain.

Number six, patient returns stating that the wow factor is no longer there and he's been wearing his hearing aids for about six months. Two increases to his hearing aid volume have been made in that time and he's of first time user data logging shows that he's really wearing these hearing aids. He's really utilizing them. So this is a good thing, right? That means that we've adapted and we can take more information in.

So we're going to go to that experience level and we're going to change from first time user to experienced non linear.

Number seven patient returns stating that her hearing aids are too soft when she's at home alone during the day. But when everybody's at home she's good. It's just when she's working by herself. So that's going to be that environmental optimizer, right? That everything sounds good but complaint or issue.

And we're going to go to quiet and then we're going to pull the slider to the right.

You have two more here. Patient returns stating that he can hear his pants when walking. So this is another way to use the quiet option under environmental optimizer too. And in this case actually pull the slider to the left and we would decrease the decibel level in the quiet environment.

Nine patient returns stating that he can hear everything and everyone great except for his soft spoken wife. That's no good. So we are going to again go into that Environmental Optimizer 2 speech soft and we're going to pull the slider to the right. And the very last one that we have here, case study number 10 patient returns stating that when he walks to his favorite cafe for lunch after being in a quiet and office building, his hearing aids are too loud. So this is something that we just talked about that's going to be Environmental Optimizer 2 and those are going to be your noise environments, right?

There's not really speech coming at him, it's just he's in a noise only environment and we're going to decrease the the decibel level. We're going to pull that slider to the left.

So I just want to say thank you so much. I hope that you feel more confident in utilizing the four different ways for adjusting gain in the software. So again that's that gain, percentage overall gain adjustments the experience levels and then for those fine tuning moments for volume issues or concerns, the environmental optimizer will would be your friend in that particular instance. So please don't hesitate to reach out if you have any questions or concerns. Please don't forget to take your five question quiz so you can get your ceu.

And I hope everybody has a great day and a wonderful week. Thank you.