ReSound Smart Fit 2.2: POWER Packed Advanced Features

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Okay, well, let's go ahead and get started. It is right at the top of the hour here. Welcome. My name is Valerie Kedem. I'm one of the field training audiologists with GN Resound.

And today we are going to spend the next hour talking about our newest version of Smart Fit, which is resound Smart Fit 2.2. And for this course we are going to talk about our advanced features. So the course title Resound Smart Fit 2.2 Power Packed Advanced Features. It's just going to be more of an intermediate course to talk about what you get when you're hanging out in our Advanced features pages. We have a lot of features to talk about today and we'll also not only talk about what you get with the Vivia product, but we'll also go and look at a live Enzo Fitting, Enzo IA Fitting, which is our newest super power product that came out earlier this month.

So let's take a look here at the risk and benefits. So there's always inherited inherent risk and benefits associated with any courses and these are them for audiology online.

And we also have three learning outcomes. So we would like for you to be able to after this course be able to explain how to solve more of these challenging patient fittings that you see something that's beyond maybe your usual so maybe venting or counseling or increasing or decreasing gain whenever your patients have come back multiple times with the same type of problem or they just have a really challenging type of hearing loss. We have all these advanced features that you can kind of keep in your back pocket for those instances. So we want you to be able to feel more comfortable using these advanced features when that occurs. We also like for you to be able to discuss how to address basic common patient complaints as well using Resound Smart Fit 2.2 and then also be able to differentiate the features within the technology level.

So when we we launched the Resound Vivia, which launched In February of 2025 this year, we took the Level 4 out of more budget level and we popped it up into the more advanced level. So with Vivia you get a 4, a 5, 7, 9. And the same holds true with that brand new Superpower product that released a

couple weeks ago. And that is your Enzo ia. So I just want you to have a little bit of awareness about what you're gain between a four, a five, a seven and a nine.

We do have a really robust group of folks at Resound, so anybody that you see here on this page, you can reach out to to get additional information or Ask any questions that you may have. You're always welcome to reach out directly to me as well. But we definitely want to make sure that you know who you can talk to to get any information that you need.

So this is a software course. So for the remainder of our time together we will be in our software.

So usually for this course, because we're talking advanced features, we're talking about follow up programming. I already have these hearing aids connected, but I wanted to show you with the Smart Fit 2.2. I know it's 2.2 because if I look at the top left of my screen, it's telling me that when I hit connect, you're going to notice that this screen here is a little bit different than what we had in previous generations of this software before. The right side would show up here on the left and then the scanning for instance area would be in the middle and then the left side would be in its current placement. So when we're seeing here that we're scanning, this is a little bit different.

It used to be called search, but it's now called scan, doing the same exact function. And we can see now here on my right side that I have my resound Vivian 9s. These are my 960s. So this is my rechargeable option with a number two low power receiver for both the right and the left ear. And I'm going to hit the word continue.

Anything that you see is blue. Like my continue button. Mean it's an actionable item. So this means that it does something. Let's hit continue and then we'll start this connection process.

The updated software isn't much different than what we are used to looking at. It's meant to be user friendly, it's meant to just flow how it makes sense. Kind of intuitive if you will. I want everybody, whether you're used to resound software brand new to the industry or brand new to Resound, to be able to get through a first fit and now after today, feel more comfortable utilizing these advanced features no matter where you are in your journey with Resound. So right here is our calibration screen.

We run the calibration again because we're saying this is a follow up fitting and this is just whenever you run your calibration, you're activating your feedback system. So we want to see that this calibration has been ran and it has. And so we're going to go into the software. So when you're coming back into the software for follow up, this is the screen that we end up on this is called our gain adjustment screen. And what I like about the software is that we are trying to clump or group together what's what.

So anything that I see under Gain adjustments, whether it's your fine tuning, your environmental optimizer, two Auto REM acceptance manager, this is all about making these hearing aids louder or softer in some way. So when I'm taking a look here at gain adjustments fine tuning, if I need to adjust the total volume of the hearing aid up or down, this is where I'm going to be able to do that. And so I'd like to take a little bit of time to talk about how you can adjust volume within the software. And I know that seems like a really basic conversation and it is to some degree, but we do have four different ways that you can adjust for volume within the software. All roads lead to roam.

There's really no wrong way to do this. I think sometimes it comes down to personal preference as you as a provider. But if you have that complaint or volume issue that the hearing aids are too loud or too soft all day, every day under my Gain Adjustment screen fine tuning, one way that you could handle that, hey, it's always too loud or always too soft is to come down here to your gain adjustments. Where my pointer is, I'm going to click on all. And you can see everything is gray now, which means it's active.

And then you can come in here in the middle where it says 1, 2 and 3. That's indicative of decibels. And you can go up or down by 1, 2 or 3 dB. So maybe the complaint is everything's too soft all day long. So now I've upped the volume or the gain by 2 decibels.

Another way that you can handle this complaint is going to be if I pull my pointer a little bit higher so I'm still in the middle of the screen where it says gain percentage. This allows you to increase or decrease the gain of the hearing aids by 10%. So if your brain likes 10% increments better, that's fine too. Here, maybe it's too loud now so you can go to 90%. So those are two ways that you can change for the complaint of everything is too loud or everything is too soft all day, every day, no matter what.

Now sometimes what will happen is that the patient comes in and you keep getting, they keep telling you, hey, you know what, it's just not loud enough. And you up 2 decibels. And they're like, it's still not loud enough. And you go up another two decibels and then they're like, yeah, it just doesn't have that wow factor that I'm looking for. And you go up another DB and you've checked their ears, there's no wax.

You've cleaned their hearing aids, you've done a listening check. You know the hearing aids are functioning correctly. So if you get this complaint that everything is too loud or too soft and no matter what you do here on your gain adjustment screen, it's not making it better. Something to remember is that we also have our experience levels. Now experience levels is going to be two screens over.

So over here on patient and it's going to be under patient profile, under experience level. Now, the software always defaults to first time user unless you've changed it. Either you've changed it in your presets to maybe be an experience nonlinear or you've changed during the fitting to one of the other three options that we have here. And what experience levels do is that they're a little bit more sophisticated than just taking the gain or the volume of the hearing aid up or down by decibels. When you're taking a look at these experience levels, they're actually taking into consideration three separate

parameters.

They're taking into consideration the total gain that's being applied to this fit. It's taking into consideration how much high frequency emphasis is being applied. And then we're also taking into consideration how much compression is being applied out the gate. So if you have somebody and you're a first time user and you're in your gain adjustment screen and they keep telling you that it's just, it's too loud, it's too loud, it's too loud. So the opposite complaint of what we did here and you bring it down, and you bring it down some more, and you bring it down some more and you're like, I don't understand why it's not doing what you want it to do.

That is your clue or your cue or at least it's mine to come into my patient screen and maybe I need to change my experience level from first time user to first time user onboarding. Now before I do that, I'm going to take my gain level percentage, I'm going to put it back to 100. And this is the same function here is, you see here I'm going to switch back to my gain adjustment screen. This right here where it says gain percentage in the middle where my pointer is. And on my patient screen where it says Gain level percentage, circling it right here.

Those are the same exact function, just you can find them on two different screens. So if the patient's telling you that it is still too loud and you want to go to first time user onboarding, what will happen, and we'll see this in a minute, is that this gain level percentage will drop to 70% out the gate. So you're already 30% less volume that you were a first time user. And then also the advanced features for noise reduction become more aggressive. So first time user onboarding, I like to think of this as the people who kind of like myself.

I like to put my toe in the pool instead of jumping right in. Or if you just can't get the volume rate, it always seems to be too much too loud. You might try starting back here at first time user onboarding. And then over time you can bring up to first time user. Now the opposite of that for changing your

experience level could be something well that's completely different.

And that could be that you keep making it louder and your patient's like, it's just not, it's just not loud enough. It's not loud enough, it's not loud enough. Or maybe they've been wearing their hearing aids and they're six months out and you had them at first time user and it was great. And then now it's not. Your patients like just don't have that wow factor.

I just don't have the effect that I did when I first started wearing their hearing aids. In my mind, that's a good thing. That means they're wearing their hearing aids and that their auditory system can now take more information. So at that point I might come back over here to my experience level and change them to experienced nonlinear. We also have one more experience level and this is called experienced linear.

That's not a true one to one compression. But when I come back into my gain adjustment screen, you can see that my compression is a little bit tighter than maybe what it would be with experience nonlinear. So this is a really good experience level for your patients that have medical ears. They have mixed hearing losses, conductive hearing losses, or they really are that analog patient. They've worn hearing aids for a really long time.

If they could get their hands on analog hearing aid, they absolutely would. That experience level of experience linear tends to work out really well for them. So all roads lead to roam. There's nothing wrong with starting off with first time user. Again, that's the default.

If you've got an experienced resound user. I would Say, go ahead and start off at Experience Nonlinear. This is what they're going to be used to if this is where they've been in the past. But you can use these interchangeably to get that gain or that volume that your patient's looking for.

So I've been saying the complaint is everything is too loud or too soft in all the environments all the time. And the reason I'm saying it that way is because we have our fourth gain change option, and that is within this feature called Environmental Optimizer 2. So Environmental Optimizer 2, again, it's under my Gain Adjustments tab, because this is all about making my hearing aids louder and softer. However, Environmental Optimizer 2 is making the hearing aids louder or softer in seven independent environments. So I'm going to pull this up here so you can see all the environments.

So we have quiet, a speech soft, a speech loud, a speech in noise moderate, a speech in noise loud, noise moderate and noise loud. We have our numbers here. 2, 2, 21 0, negative 2, negative 3. These are decibels. So what's going on is Environmental Optimizer is saying, within these seven different environments, our patients usually have different volume needs.

So let's make this Automatic Environmental Optimizer 2. In my head, I call it Automatic Volume Control Wheel because it is changing the gain or the volume of these hearing needs automatically by whatever decibel number that you see here, depending on which environment they happen to be in. Quiet is just us hanging out. There's nothing in the environment. There's no speech, there's no background noise.

It's just quiet speech. Whether it's speech soft or speech loud is telling us that there is only speech in the environment. So, like this environment right now, there's only speech in the environment, there's no background noise. And from time to time, there might be some quiet speech in noise, moderate speech in noise loud, if you can make this word. And then we're describing an environment I'm standing in an environment that has both speech and noise.

They're together. So think a restaurant, a party, meetings, etc. Speech and noise loud. Same idea, just a little bit louder. Environment noise.

Our hearing aid brains want to make noise about background noise. It is not. This is again about volume. We're making these hearing aids louder or softer, depending on which environment they happen to be in. We have a separate noise reduction feature, Environmental Optimizer, which we'll talk about here in a few minutes.

But noise moderate and noise loud is just describing where you're standing while you're wearing your hearing aids. So these are these seven different environments that we work with then. Okay, that's great. So how do we use Environmental Optimizer 2? It's my favorite feature within the software because what it does is that when your patient comes in and they say, hey, everything sounds good, but.

And it's a volume issue, you can come directly to Environmental Optimizer 2 and make that change without creating other issues on the other side. So what I mean by that is if your patient comes in and they say, hey, everything sounds good, but I'm at home during the day, I work from home, my family's at home, it's fine. The volume of the hearing aids are fine. But then the garage door closes and everybody goes off to work at school and I just wish that my hearings were a little bit louder and I wish it would just kind of happen automatically. Okay, that's great.

So if you had that complaint, everything sounds good, but when I'm home by myself, I want more volume. If you don't have Environmental Optimizer, AKA that automatic volume control wheel, you probably will come in and just maybe make the hearing aids louder. That's fine. There's nothing wrong with that. But on the flip side of this, you've made all day everyday listening louder.

And so the patient might come back in and say, oh, okay, well, I'm home during the day, the volume's great, but as soon as people start coming home, wow, those hearing aids are way too loud. So what we've done is we fixed one problem, but we've created another. If you can remember, Environmental Optimizer, that same complaint. Hi, everything sounds good, but it's too quiet in my house during the

day when my family's at home. Volume's great.

With these hearing aids, you could come into quiet and you can boost the volume of the hearing aid by certain decibels. So it's already defaulted to 2 decibels getting a little bit louder, but maybe that's better at three, or perhaps even four.

Speech. The way I like to use the speech, soft could be something like, hey, everything sounds good, but my husband talks really softly. Parlors that he got these hearing aids was so I could hear him and we could talk again. And I can hear everybody else. Everything else sounds great except for him.

Is there anything that you can do for me? So again, it's that same complaint, everything sounds good. But now if you don't use Environmental Optimizer, then probably what we're going to be doing is maybe coming in and boosting the mids and the highs to some degree. And again, that's perfectly reasonable, makes perfect sense. There's nothing wrong with that.

On the flip side, when you make these global changes to all day everyday gain or volume, what could happen is that you've kind of increased those hearing aids, you've increased the highs and the patient might come back in a week or so and say, okay, so I can hear my husband much better now, but everything's too loud minus my husband's speech. Everything's too hard sharp to anyway, my dog walks across the tile, I hear the little nails. So now everything else is too loud except for my husband's voice. So again, we've created one problem while fixing another. So instead of doing the gain changes here for all day every day, I could go to environmental optimizer speech soft then give it a little boost.

So whenever I'm in this soft speech environment that is my husband's talking, my hearing aids will get louder and then they'll recover back to the gain that they are naturally set at. The way I like to use speech loud is for that complaint of own voice. Hey, everything sounds good. But I remember about six weeks ago you told me my own voice was going to settle down and it's just really loud. It's booming

around in my head.

So environmental optimizer speech loud, maybe the patient doesn't need their voice to get 2 decibels louder every time they talk. So you could make this gain change here to zero so that doesn't go up or down. When I start talking, my own voice maintains itself. It doesn't get any louder or any softer. Speech in noise moderate and speech in noise loud, remembering that we're exchanging the word in for and so I'm just hanging out in an environment that's got both of these.

And so maybe the complaint could be hey, everything sounds good. But I about once a month I go out with my girlfriends and we go to this one restaurant and it's the same place every time. But I really, I'm having problems hearing them. It doesn't seem like it's background noise so much, it just seems like it's the volume in this particular restaurant. Could you help me out?

Sure, no problem. So you could come in here and give a little boost. Now I like to use these in tandem. I like to use this feature noise moderate and loud together. Because what about if you get to the restaurant and it's kind of the beginning of the rush hour, so Maybe it's like 4:30 or 5 or even 5, 30 or 6, depending on the day and where you live.

And it's quieter. But you say maybe you stay, it's a three hour lunch or three hour dinner because you're seeing your girlfriends and you're happy to hang out with them. And over time, as it gets noisier, then that volume of that environment is going to get louder. I like to change these together just to make sure that accommodates for the different environments the patient might find themselves in. It could be the same environment, just the overall volume of that environment is a little bit different.

Then last but not least, we're back to our noise environment again. We're not talking background noise, we're just talking about, I'm in a noise only environment. So my example for men, you might change this is, hey, everything sounds good, but I work in a quiet office building. There's this banging cafe across

the street, I love it. But the difference from super quiet office building to busy street at lunchtime the volume is so loud on my hearing aids.

Is there any way that you could help me out with this? So of course you could go in and you could reduce overall gain if you wanted to, or whatever types of fine tuning that you like to do. Or you can come into your environmental optimizer and you can reduce the gain in these noise moderate and noise loud environments. So when we think about environmental optimizer, again, it's that automatic volume control wheel. It's wonderful for everything, sounds good, but complaints and allows you to really tweak that gain that volume for these independent situations.

Last couple things I'm going to say about environmental optimizer, try it, use it, use it, it's your friend. But also know that it takes a second per DV change for these changes to occur. So with that in mind, in order for the patient to not hear your transitions from environment to environment, we like to keep from line to line. So what I mean by that is soft speech, speech loud, speech and noise moderate. We want to try and keep this within two to three decibels of each other.

From speech soft to speech loud, that's a three decibel difference. Speech and noise moderate to speech loud, that's a two decibel difference. And that'll just help ensure that the patient doesn't hear the transition of the gain or the volume when they're going from one environment to the other. So if you get a complaint that's like, hey man, I, when I walk around, I feel like my hearing aids are just going up and down and up and down or they're quiet. I just hear them doing weird things, or they're turning off and turning back on whatever type of complaint that sounds like that.

First, what I'm going to do is come into my Environmental optimizer and make sure that I don't have something wonky like this. If this is how it's set, this means that you have a 12 second transition. So that takes 12 seconds for this change to occur. Your patients are absolutely going to hear that and they're going to be back in your office and they're going to think something's wrong with the hearing

aids. Nothing's wrong, they're doing their job.

It's just that there's a 12 second delay, which is, as we all know in clinic, when we're trying to hook up our hearing aids to our software, any type of pause in the process seems to feel like forever and ever, even if it's only 10 or 20 seconds.

Last thing about Environmental Optimizer, these are your default settings for every hearing loss, for every hearing aid, for every patient. We got these. We put a bunch of people in hearing aids and we let them wear them for a week. And after that, seven days. We read their data logging and we said, okay.

On average, when people cruise through these different environments, what are they doing with their volume control wheels? So for speech soft, most people want to go up by 2 decibels. If I'm standing on a very busy corner road at rush hour, then most patients are going down by 3 decibels and everything here in between.

So I hope you feel a little more comfortable with Environmental Optimizer. And again, back to the original conversation. On gain, there's these four different ways you can handle gain for the everything is too loud or soft. You can do your gain adjustments, fine tuning. Same thing.

You can use gain percentage. You can go up and down in 10% increments. If this is not working for whatever reason, if you go back to your patient profile, you can change your experience level. And then if you have a volume complaint that sounds something like everything sounds good. But use Environmental Optimizer, it'll be your friend.

So let's go on to our advanced features here.

So on our advanced features page. And again, this is going to be for your follow up fittings and hopefully this is going to be for your follow up fittings that you're just what you normally do today is just not handling your patient's issues like we're just not in the right place that we need to be. When we cruise through These advanced features, yes, there are a lot of them, but we don't want you to feel that you have to use them or you have to do a lot of fine tuning for a first fit or that you're always having to tinker with the advanced features for all of your follow up fits. That's not the case at all. It's just if you need something more, this is what we have for you.

Also within our advanced features page, we include our tennis sound generator and we've broken up our features for what their purpose is, if it's a speech feature or if it's a comfort feature. So comfort is all about making these hearing aids more comfortable, right? DFS stands for Digital Feedback System. This is our feedback control, Noise Tracker two. This is our noise reduction system.

Wind guard, wind impulse noise reduction, Loud sudden sounds expansion. These low level environmental sounds that we need to try and eliminate or reduce for our patients. This is all about comfort of the hearing aid. Then if we tab over here to our speech, again, this is all about making the hearing aids either sound better overall for sound quality and also to enhance speech. If we start off here with directionality, and we could talk about directionality for an hour, easy, not a problem.

We've got all sorts of different options for directionality. They change as you go from tech level to tech level. But at the end of the day, directionality is just talking about what is my microphone doing at any given time. And you'll see that if I'm in program number one, which is our default program, all around, our most automated program, these are the options that we have. We have omni, we have soft switching, we have 360 all around, we have spatial sense.

If I go to hear a noise, which is our default number two program, and I click on my directionality dropdown, you're going to see that we have different options. We still have omni, but we now have fixed

directionality, soft switching, autoscope, adaptive directionality, spatial sense, intelligent focus. So depending on what the purpose of a program is, oftentimes we'll determine what directionality options that you get or what microphone pattern options that you get hearing noises. Our second program, think of it as a more sophisticated restaurant program. That is what's going on behind the scenes.

And this is going to be for your more noisy, challenging environments. So let's talk about directionality a little bit deeper here and I'll just go through and kind of talk to you what each of these is doing. So omnidirectional, that's omni Omni. Right. It's fixed omnidirectional microphone.

Nothing is changing at all. If I have spatial sense here, which is the last option in this drop down spatial sense is also hanging out in omni Omni, but it's going to be using average pena cues. So if you've got somebody who really prefers their hearing aids to not have a lot of changes, usually our more power fittings tend to not like a whole lot of advanced features to be turned on or a lot of automatic changes to be turned on. But they feel like they need some direction functionality, then spatial sense might be their better option versus just straight traditional omni. So both operating the omni condition.

This just has some average penna cues to help for better localization.

Soft switching is going through two different microphone patterns. It automatically goes between omni omni so right and left ear on omnidirectional microphone pattern or directional Directional. And this is going to change based on speech and noise in the environment. Our option here, that's actually our default setting and our recommendation. I know this because that's how we start off.

It's also bolded when I go to the dropdown. This is our most sophisticated option for directionality. And I'm going to go up here under help to feature demonstrations. And underneath here, this is where you can have a nice little cheat sheet and the software and it gives you videos and written blurbs on what the feature is doing. And it's specific to whatever hearing aids that you have either hooked up or that

you're in simulation with.

So this is great, the words, but sometimes watching a video can be a little bit better. Sometimes that just helps kind of solidify that information. And so when you see 360 all around or in a level 7 all access directionality or binaural directionality. Three, this is what's going on in a nutshell. The hearing aids are going through four automated microphone patterns.

So what we were looking at earlier was omni Omni the two circles. This is an asymmetrical pattern. One hearing aids in omni one hearing aids in directional. And then we'll go into automatically behind the scenes, both hearing aids being in a directional beam form. So both right and left.

So no matter which ones you have, whether it's a level nine, a level seven, level five and now level four in your program number one. That is the basic thing that's going on. Omni Omni one of two asymmetrical patterns and then this directional beam form that's all happening in the Background.

Again, everything that you are looking at here for this hearing aid, they all have videos and written blurbs.

So that is directionality in program number one all around in your level nine. Now, if I go down to directional mix, you're going to see directional mix more than you ever have in the software because it is going to be in more levels of technology than we've ever seen. I believe it goes down to the four. So usually this has been a level nine product or level nine feature, but with the launch of the Vivia, the Vivia has a second chip in it that does deep neural network noise reduction functionality. We had to kind of up the ante and make sure that we don't.

All the levels of technology are going to be really beneficial for our patients because not everybody's going to be in a level 9 rep and not everybody's going to be in a rechargeable rip. So how do we make

sure that patients are getting all the benefit that it possibly can? One of those is to add some more features. So with that in mind, directional mix is something that you will start to see more and more, even if you're in a level seven or a level five and so on and so forth. So directional mix is essentially the crossover frequency.

And I'm going to go to my little blurb here and you can see that it's telling me that it allows for adjustment of the frequencies. But if I click on my eye, I get back to my videos. And so essentially this is what's going on with your directional mix. Okay, so it's how much are we processing the sound in omni versus directional? So the software is going to pick the initial setting based on the severity and configuration of the hearing loss.

But sometimes it does need to be changed. Times that you might change directional mix are as follows. One could be that, and I hear this patient comes in and they say, hey, I've come in a couple times for this, but it just don't seem to think that it's working any better. But I can hear everybody around me when I go out to dinner at a restaurant or I'm at a meeting, but the people that are sitting right in front of me, I'm still struggling to hear. So if you hear that and you've done your usual fine tuning, you could come into advanced features under speech.

And you are going to increase the amount of directional mix. So maybe from low to medium or medium to high. And when we take a look here and we see this red line, what we're saying is that everything on the left side is going to be processed in a more omnidirectional pattern. Everything on the right side is going to be processed in a more directional pattern. So if that's a complaint, I can't hear people right in front of me, but everybody else around me.

Maybe we're processing too much lower for this patient.

The opposite of that would be maybe your patient is saying, man, in a quiet environment, it's still too noisy. And you've gone in and you've done noise rejection, you've cut your lows, you've turned expansion on, and they're just like, no, it's just too. It's too noisy, it's too noisy. Then maybe we're processing too much information in the directional beam form. So at that point, we're going to pull it to the left and we're going to lower that directional mix.

The third example of when you might change directional mix is what I like to call my Hail Mary. And man, you just can't get the sound quality right no matter what. You've done everything. You've called tech support, you've had the patient in multiple times, and they're like, yeah, I've got to let the sound quality of the hearing aids, then at that point, I don't think it matters which way that you go. But you could try changing the directional mix and see if their auditory system just likes something different than what the recommendation is within the software.

The next option here under advanced features speech are time constants. So I would say that if I go back to my gain adjustment screen and I'm staring at environmental optimizer, this is one of the number one features that are utilized daily in the software. Number two or three, depending on who you're talking to, what your patient base is, it's going to be time constants. Now, time constants are your attack and release time. So how quickly these hearing aids are going into and coming out of compression, we start syllabic.

So we do really fast attack and release times. We feel like it's a more dynamic solution. It works well for most people. It gives you the most bang for your buck. It's just giving you access to more parts of the speech.

However, we also know that really fast attack and release times can do a couple things. One is going to be a sharper sound quality. That's okay because we're trying to enhance speech. But some auditory systems maybe are used to more rounded sound quality. Perhaps they're coming from other

manufacturers that do slower attack and release Times out the gate, that's fine.

Everybody has their philosophies of what they do, why they do it. And so then you have a constant chronic problem of everything is too loud or harsh or sharp or tinny. Harsh, sharp, tinny. Harsh, sharp, tinny. So it would look something like this.

If I go to gain adjustments, I go to fine tuning. And your patient's saying, hey, heart, sharp, tinny. Her sharp, tinny. And you have pulled it down, and you pull it down, you pulled it down and you're like, there's no way that this is harsh, sharp, tinny. And then you've pulled it up, your gains.

And you pray nobody ever comes behind you and looks at this fitting. You're like, oh, my gosh, please, please, please don't let anybody come and look at this spinning. Because what am I supposed to say about it? If this is something that you see and it's like, still harsh, sharp, tinny, how can that possibly be? I'm in my negatives here, my highs and my mids.

That is your cue to try time constants. So you can go to program options here. And I would do recalculate. I'm going to recalculate Magaine NPO only assuming that that's what I've been tinkering with. Boom.

Takes us back to first fit. And then I'm going to go right back into advanced features. I'm going to go into my time constants and I'm going to bring them down to moderate. And what this is doing, it's going to slow down how quickly the hearing aids are going into and coming out of compression. And what that does is it changes the sound quality of the hearing aid.

You're not losing any gain or losing anything at all. It's just changing the sound quality to be a little bit more round versus so sharp. So if that's your complaint, try this. And you will sometimes even visibly see the patient kind of relax. Because now the sound quality is what they like it to be.

Their auditory system likes it. And you kind of get a two for one because we're giving the patient the gain. Right. That they need to understand speech. And that previous fit that we have with the negatives is absolutely not going to do that for a patient.

And we are also giving the sound quality that their auditory system prefers. Now, you get this in a 9 and a level 7 as well.

The other thing that you can do time constants, is that if you have a patient who has a cognitive issue and that can look like dementia, that can look like they're a stroke victim. They were fine six months ago. They've now since had a stroke since you first fit them. And they're saying that they don't hear as well, they're not doing as well with their hearing aids, but audiologically they're exactly the same. As far as speech understanding and threshold responses, that might be your cue or your clue to try and slow down those time constants.

Some people will say, go to slow, it's perfectly fine. Some people prefer moderate. I think as long as the patient is seeing a difference and you can see a difference and that the patient is doing better, it doesn't really matter which one you go to. So you also might slow down your time constants beyond the cognitive issues. For folks who have very severe hearing losses, severe to profound hearing losses tend to do better with slower time constants.

And also folks with poor word recognition scores. So you can also slow those down as well. And so between the harsh, sharp, tinny and that cognitive decline or bigger hearing losses, poor word to scrim time constants can really help you out and be your friend. And those level nines and those level sevens. Now our next one underneath speech, you also get this in all of your levels of technology.

It's called Sound Shaper. And I also like to show the video for Sound Shaper because this is what we have going on with Sound Shaper. This is our frequency lowering feature. So we're not doing transposition, we're not taking from your highs and putting it over in the lows. What we're actually doing is just lowering information from the area of inaudibility to the area of audibility.

To use a really scientific word. We smush it down into the area that the patient can actually hear it. This is done in a linear fashion because at the end of the day, it's compression. We know compression can distort and so we want to cause the least distortion possible. So we feel like doing it in a, a linear manner helps with that idea.

Also, Sound Shaper is always going to be in the off position unless you as the clinician go in and turn it on. So we can see here based on this here, this hearing loss for the right ear that the softer is like, well, they could try moderate. I see that because it's bolded here, but it's still in the off position. So for my right ear, the recommendation for Sound Shaper is moderate. Again, I know that's because it's bolded and the recommendation for the left ear is off and I know that because it's two bolded.

But no matter what Sound Shaper will always be in the off position. It will never turn itself on automatically. We want the patient to try and get by with soundchiefer being turned off if possible. If it's not working out or they're used to some sort of frequency lowering, go ahead and you can try turning it on and see where they are. In my experience, it's been a very hard yes or a very hard no.

I've never had a patient that's kind of in between having Sound shaper turned on.

So I'm going to go into my hearing noise program under my comfort, I mean, my speech features and just wanted to show you what it looks like a little bit different. So under directionality we have these options, but we default to intelligent focus. Now, when you see the word focus. So let's just take the word intelligent out for a minute and you look at this word focus, that's telling you that you're in your

hearing noise program and it's also telling you that you have a really sophisticated beam form happening. So the word focus is cluing us in no matter what.

If it's ultra focus or front focus or clear focus or intelligent focus, that we're in our second program and that the hearing aid microphones are now in this very narrow beam form and you're also getting a little boost in your mids to help really pull out the speech. So that's what the word focus is telling us. When we see the word intelligent, that is our cue or a clue that we have at this point in the stage of the game. The Resound Vivian 9 rechargeable. Rick, I know that's a huge mouthful, but the newest product, highest level of technology, rechargeable rec.

When you see the word intelligent, beyond what it's telling you, as far as the product that you have is that this is saying, oh, my deep neural network chip is turned on. So you'll see the word intelligent under hearing noise level nine, under directionality. And you're also going to see it when I tap over here to my comfort section for advanced features. It says intelligent here as well. And this is referring to the noise tracker.

So again, anytime you see the word intelligent, wherever intelligent may be, this is letting us know that these hearing aids have their second chip, their deep neural network chip for noise reduction. And it's on or it's active at this point and you can see that our time constants immediately go to slow for this hearing noise program. Our sound shaper remains off.

So I'm going to go into comfort and I'm going to go back to all around here for a minute and just talk to you what these different features are doing. Once we get done with this, I will pair a multi mic plus to the hearing aids and talk about some new auto streaming functionality and how you can change that. And we'll also pull up an Enzo Fit, an Enzo IA fitting so you can see what that looks like and a few features that you get only with a power fitting. So with our DFS Ultra 3, that's again, that stands for Digital Feedback System. When you see DFS Ultra 3, this is telling us that we've run our calibration,

we've activated our feedback system for this patient's fit.

And anytime that you run calibration and turn this feature on, it defaults to mild. Now, for some reason, you have breakthrough feedback. I would go ahead and do the physical part, make sure that they don't have any earwax, make sure the hearing aids are working well, make sure they're clean, check all the stuff that you normally would do. But if you're having breakthrough feedback for whatever reason, you can come into advanced features under comfort and you can change the feedback control. So we have these four options.

Well, we have five. If you include all mild, moderate, strong and music.

When you're going from mild to moderate and moderate to strong, what you're doing is you are making the feedback system more sensitive. And what I mean by that is that you're telling the hearing aid, you're telling that feedback system in the hearing aid to start classifying more sounds in the environment as potential feedback. So if you had that break feedback, maybe you need it to be more sensitive. So you could go maybe to moderate. You could also try strong if you needed to.

If you are at music, music is the least sensitive. Out of these options. Music probably should be in between off and mild, but it's not. It's here at the back. This is also something that you get the full spectrum of your DFS Ultra 3.

You get this in all levels of technology as well. Well, four through nine for sure. And what music is doing is it's the least sensitive of our feedback system options. Because we don't want the hearing aid to be classifying every musical note, song, pick up the guitar, et cetera, et cetera as potential feedback. Because what happens is that with the DFS Ultra 3 system, we're doing something called phase cancellation.

Phase cancellation is literally sending an equal but opposite Signal out to zap, cancel, zero, phase out the feedback that's occurring. So that's why we want you to run the calibration. We want you to turn on the feedback control. Because instead of notching out gain where feedback occurs, which is usually around 3.3k, what we're doing is that we're leaving gain alone, but we're phasing out or we're canceling out where feedback might occur. So if you have peaks of feedback at 3K, 3200, 3200, 3300, the hearing aid will know that, and it'll send out equal the opposite signal.

It'll say, negative 3,000 hertz, negative 3,100, negative 3,200, negative 3,300. And that'll zero it out or phase it out.

So you always want to have this turn on if possible. And the way this is explained to me, to kind of explain it to you, is mild's like, oh, hey, hey, I look like feedback. I sound like feedback. Cool. I'm gonna do my thing.

Moderate's a little faster. Modern's like, oh, hi. Hey, you look like feedback. You sound like feedback. Cool.

I'm gonna do my thing. Strong's had 18 Red Bulls. It's 8am Strong's like, hey, hey, you look at feedback. He's on feedback. Cool, cool, cool, cool.

I'm gonna do my thing. Really loves this job. Really wants to do what it needs to do. Music's on vacation. Music has its beach towel with its beach clips onto the beach chair.

Music doesn't want to really have to do anything because he's on vacation. He's like, hey, man, you look like feedback. You sound like feedback. All right, fine, I'll do my thing. If you have it on strong, and the patient comes back and says, when I sing, my hearing aid sings.

You need to either change it to moderate or to music.

It's not broke. It's just that the feature is sending out a signal that's equal to opposite. So if they're saying that every time they use their com, their pad on their security system, or their microwave, and they go beep, beep, beep, and here, need this beep, beep, beep. Because it's classifying that as feedback. So we need to either back it off a little bit or really chill it out.

Nice tracker two. So with the launch of the Vivia product, again, we have that deep neural network chip in the rechargeable Vivia 9.

We have two different types of noise reduction occurring in the level nines. The first is noise tracker 2. Noise tracker 2 is doing spectral subtraction. This is what the music industry uses, this is what the movie industry uses to reduce background noise from their soundtracks. And essentially whether you're using Noise Tracker 2 and I'm going to change it to my Hearing noise program so you can see intelligent noise focus.

Whether using Intelligent Noise Tracker or Noise Tracker 2, essentially, at the end of the day, they're both got the same idea behind them. They're both looking at the environment, they're identifying speech, they're leaving speech at the volume that it comes in at and then they're reducing the background noise by some decibel. If you're a noise tracker 2, if you're doing a mild reduction, that's negative 3. So noise reduction is reduced by 3 dB. If you're doing a moderate noise reduction, that is 6.

So background noise is reduced by 6 DB. If you're considerable, that's a reduction of background noise by 8. And if you're at strong, that's noise reduction at 10.

If you're in the hearing Noise program and you see Intelligent Noise Tracker again, we're doing Leaving speech at its volume. The second chip is now in play and it is doing noise reduction, but it is doing a

combination of noise reduction decibel between lows and then mids and highs. So it's a little bit more complex. But at the end of the day, we're still just trying to keep speech at the volume it's coming in at and reduce that background noise. So patients are able to be in these noisier environments and be really comfortable there.

If you have a level nine and you're in program number one or anything that's not hearing noise, you have this thing called per environment. And so this is an automatic noise reduction. And again, these look very similar to what you have with Environmental Optimizer. Same exact environment, but this is about background noise. So if the patient's saying background noise is a problem, you want noise tracker 2.

If you have a 9, then the noise reduction will happen automatically depending on which type of environment you happen to be in. And if you think about this, do I need as much background noise in a quiet environment, background noise reduction in a quiet environment as I do in a noise loud environment, the answer is no. No, I don't. So this makes sense if we think about it like that. A little bit of background noise in a quiet or speech only environment, a whole lot of noise reduction.

When I get into those noise only environments, as you Go down on the technology levels. If you're in a seven, you get strong down to mild. Five, you get considerable down to mild. Four, you get moderate and mild and so forth and so on. Wind guard.

Wingard is wind guard. When it activates or detects wind in the environment. It does this by a couple different parameters. First, you have to have a dual mic system. So you have to have a hearing aid that has two microphones.

CICs aren't going to cut it. So if you've got a CIC and you don't see windguard, that's how it's supposed to be. Because we have to have a certain frequency occurring, we have to have it within a certain

decibel level. We have to have a turbulence or an asymmetry over the front and back microphones. If all those three things happen, once the hearing aid says that's wind and wind guard will activate itself, it's kind of in sleep mode until those three things happen.

Impulse noise reduction. This is loud, sudden sounds. Busboy's going to town at that restaurant. Patient's like it's really uncomfortable. Maybe they need a little bit more of note.

If you get into strong and they're telling you the sound quality is squishy, pull it back to moderate. And then last here is expansion. And so expansion is for. It was originally developed for circuit noise of the hearing aids but. But hearing it have gotten much quieter over time.

And this is usually something that's turned on for your patients that have good low frequencies and bad highs and they might come back with this complaint of your issue that they can hear certain noises in their room, but they're really soft noises. So expansion takes care of these low level environmental sounds. That noise tracker, whether It's Noise Tracker 2 or Intelligent Noise tracker, isn't going to be able to handle because noise tracker kicks in around 40 decibels. These are going to be for sound softer than that. So if they complain that the refrigerator is humming or they can hear their fan or their room has a weird noise or whatever that may be, that's just like this low level environmental sound.

You can turn on to mild or moderate or strong again as you go through levels of technology, you'll go from strong to moderate to mild.

Also if you just have weird sounds in the hearing aids for whatever reason, sometimes turning this on but will help. That's not something that we hear very often. Again, these are kind of one offs that happen from time to time. But there's something wrong with terrain expansion on and seeing if it Helps.

So let's go ahead and go into device controls and let me pair my Multi Mic Plus. So this is my new Multi mic to my hearing aids in the software. I'm going to go to device controls accessories and I'm going to choose new generation accessory. I'm going to push the little pair button on the back of the accessory. You're going to see the flashy light turn blue.

Excuse me. But don't forget, with the new accessories, they have to be within 2 inches of the hearing aids in order for the pairing to happen. And our previous generation of accessories, it could be across the room. So this is the thing I always forget to do. I'm like, why aren't these pairing?

Why aren't these pairing? Oh, I've got it in my hand and my hearing aids are on the table. So we're just going to wait for this to pair.

Sometimes it does take a little bit of time.

Try that one more time. It worked a little earlier today.

I love it when things work exactly how they're supposed to. Here. There we go. Beautiful. And so we can see that it says paired.

And then once we've done this pairing in the software with the new accessories, the TV streamer plus and the Multi Mic plus, we do have auto streaming now. So that means that you can make the accessories with their turnaround turn on. And they have auto streaming as a default to be on. They as soon as the patient either turns on the multi mic or gets into the TV room within range of that TV streamer, they'll start streaming. Now, just for clarity here, the Multi Mic plus, the default for auto streaming is on the TV streamer plus the default to streaming is off.

If you need to change that or remove the accessory from the pair, you can do it here in a live fitting with these little dot, dot, dot and you can turn the auto streaming on or off or even remove the multi mic.

So that is the auto streaming. And then last but not least, we're going to click out of here real fast and pop over into the Enos in our last few minutes here.

I just wanted to show you what the directionality looks like in hearing noise for the Enzo IA Level 9. Also, this is the same directionality that you get in a Vivian 9 non rechargeable. It's a focus, but we'll see here which focus it is. And whenever you do a power fitting, whether it's with a Enzo IA or even an Enzo Q or high power hearing aid or a Ric with a super ultra power receiver, you do have two different features that you don't have access to if it's not this power type of fitting. One is that you get a low frequency boost and the other is that you can change the compression between WDRC semi linear and linear compression.

So we don't really talk about that very often because we don't do a huge volume of super power power power fits. But those are features that just automatically pop up in the software. You don't have to find them or look for them or do anything to the software to make that happen just to help with these patients. So first I'm going to go to advanced features. Then I'm going to go to hearing noise.

And so hearing noise, the directionality in the Enzo IA Level 9 is clear focus. Clear focus is what you get in the level nine. But we don't have a second chip here. So this is why it's called clear focus versus intelligent focus.

And the other two features here that you can get is going to be the compression. You could do linear or semilinear or wdrc. It always defaults to wdrc. And then the last feature that you get for these more power fits is going to be under advanced features comfort. And this is your low frequency boost.

And again, how many options that you get for this is going to depend on your level of technology.

Okay, so we are almost right at time here. I just want to say thank you everybody for coming today. I hope that you feel better about the advanced features in the software. Let me just make sure there's not a question in here. Nope, no questions.

So don't forget to take your five question quiz to get your ceu. Thank you so much for joining us today and I hope everybody has a wonderful rest of their day. Thank you and have a good one.