Dear GoldenEar Fan,

You’re among our most important contacts. You may own GoldenEar products or, at the very least, you’ve expressed an interest in what we do to make GoldenEar unique among speaker brands. We appreciate that very much and want to ensure that you get as much enjoyment from your audio system as you can.

That’s the overarching goal of this newsletter and will remain so as we send out more issues, new product announcements and new product reviews. We’ll try to strike a good balance, technical articles will be included, but not too “geeky” to enjoy - informative and fun above all else. Happy listening and welcome aboard!

The GoldenEar Team

It’s About Time ...

Not to brag or anything, but the last year has been a great one for GoldenEar. What’s even more incredible is that we’ve been able create a successful speaker company from scratch during these difficult economic times (not to mention the morphing of the audio industry we grew up in into an iPod™/headphone business). We’d like to think it’s all due to our superior intelligence, fabulous marketing prowess and amazing good looks (OK. Semi-amazing good looks). But the truth is, it’s mostly due to Sandy’s vision and the engineering team’s developing spectacular products at prices that make them truly terrific values. And your discerning taste in buying lots of them. Thanks.

Over a year ago we invited GoldenEar owners to pony up and subscribe to our forthcoming newsletter. A goodly number of you did just that. Unfortunately, we got so busy building a dealer network and developing products and supporting our customers that the newsletter just slipped way back in priority and never got written. Until now.
It’s our intention to make this newsletter much more than a marketing exercise. We’re gonna fill it with articles designed to help you maximize the enjoyment you get from using GoldenEar products (and the rest of your audio and audio/video systems). We’re trying to cover a broad range of readers so some of you may find segments of these newsletters old hat. Others may find the very same verbiage pretty advanced. And at times we may get a little technical. Your feedback will hopefully help direct our efforts as we continue to send these out to you. We may even challenge some innate beliefs and misconceptions (“Hey, there’s something wrong with this surround system!! There were a couple of seconds when I couldn’t hear those rear channels. I better crank ‘em up a bit.”)

We’re asking you to be more than just a passive reader. We’d like to hear from you regarding topics you’d like us to cover, questions you have regarding pure stereo and home theater and any other relevant audio topics. If we don’t know the answer, we’ll try to get it for you. And if you can, send in some pictures of your system with a description and we’ll try to publish some in future issues (there’s also a spot on our website forum for you to show off your system). Note that any materials you send should be free of copyright encumbrances’ and open for us to publish in these e-mails. Be sure to include your e-mail address in case we have questions for you as well. Send ‘em to info@goldenear.com, subject line “Newsletter”.

Thanks, hope you enjoy the newsletter

What’s Your Home Theater Goal?

Ask most audio oriented Home Theater buffs that question and you’ll likely get a range of responses. Many will say “I’d like to duplicate the movie theater experience (sans the sticky floors).” Some will say “To reproduce the movie soundtrack as accurately as possible (you know, that ol’ Hi-Fidelity thingie).”

We’d agree with those goals too. But after a whole bunch of years in this business we’ve observed an interesting phenomenon; the reality is many Home Theater buffs would be more than satisfied if they had three fundamental audio “elements”:

1. The ability to play the system so loud that it prompts either of the two Official Home Theater Wife Responses, to wit; “Does it have to be that loud?” or “Turn that darn thing down!!”

2. So much bass output that when the Tyrannosaurus in Jurassic Park 1 shows up their pants legs flap mightily in the breeze (subwoofer levels set to at least “11 - MegaThud”).

3. So much surround channel output that you hear and are constantly aware of the surround speakers every moment the system is playing (“Hey, I think this thing’s broken! There was a second when I didn’t hear the surround speakers.”)
We understand and appreciate those guilty pleasures too. Bass that shakes the house and oodles of surround info are just plain fun. And if that’s what puts a smile on your face, who are we to question it? But there really is a generally accepted goal for Home Theater that often times gets lost in the excitement of all that impressive bottom end and surround field info. Simply stated; the ultimate goal of Home Theater is to draw you into the action taking place on the screen, be it a movie, TV show or concert. We want you to get lost in the experience, and transport you from your den or great room into Jurassic Park, onto the Titanic, into Nemo’s ocean, etc.

Most of us have had the experience of going to a movie theater and getting so caught up in a great flick that we forget where we are. Then suddenly someone coughs or sneezes near you and for a few seconds you’re not sure exactly where you are! Without question creating that kind of totally involving experience is exactly the goal of the movie’s director. And it’s our goal too. To help you recreate such a realistic and well balanced sound field that you forget where you are and you get lost in the experience.

If you think this might be a fun goal (it is, trust us), it would be good for you to understand the role each speaker plays in the system and why you’d want to place them properly and set them to the correct volume, even if it means you won’t move the house off the foundation with bass or you might not be aware of those surround speakers all the time (Sacrilege! Who would say such a thing? Off with his ears!!). Of course, as reality impinges on your plans you may have to make compromises in speaker placement, listening levels, and more in order to maintain Domestic Tranquility (not to mention having a bed rather than a couch to sleep on). But if you keep this goal in mind when you make those compromises you should end up with a more involving surround experience that can take you (and your significant other) on some exciting and emotional adventures.

The **Front L/R speakers** - These provide some of the special effects and help to expand the front sound field (so stuff that happens towards the left or right sides of the picture have corresponding sounds). They typically play the movie’s music soundtrack and may also provide some dialogue, but that’s usually pretty limited. Depending on the soundtrack, they can be very active, or not.

The **all important Center Channel** - Arguably the most important speaker in the system, the Center Channel delivers up to 80% of the dialogue and up to 65% of the special effects in films. That’s a lot of information to deliver. Sure, you can use a “phantom” Center Channel by splitting the center signal in mono to the front L/R speakers (you can do this by simply setting the electronics’ setup menu to “no center channel speaker”), but you need to have L/R speakers with excellent, smooth off-axis response. Not to be immodest, **GoldenEar** speakers excel in this regard. If you don’t have adequate speakers and you’re not precisely in the “sweet spot”, centered right between the L/Rs, the center “image” will be pulled to whatever side you’re closest to. And even excellent speakers like ours can benefit from the precise localization a dedicated Center Channel provides.

The **Surrounds** - Let’s break surrounds down into the Primary and Secondary Surrounds. Primary Surrounds would be placed directly to the sides or a little behind the main listening area, two feet or more above seated ear level, in a 5, 6 or 7.1 channel system. Of necessity, the Primary Surrounds can be placed directly behind the listening area but when placed this way their ability to draw you into the experience is lessened. The Secondary Surrounds are those located in the rear of the room in a 6 or 7.1 channel system. These get the “Rear Surround” information from the receiver/processor.
The vast majority of information contained in all the surround channels from movies or TV shows is environmental. It’s birds chirping, wind whistling through the trees, city street noises, office sounds, people eating in the restaurant sounds, etc. It’s almost all background sound, not primary sound. The fact is, you shouldn’t be consciously aware of the surround channels most of the time; they’re there to help set the mood and draw you into the scene’s location. Of course, occasionally the director WILL place primary sounds in the surround channels (like an airplane flying overhead from behind) but that usually happens only once or twice in a film.

Interestingly, in surround music tracks all bets are off as to what’s put in these channels. The engineer may try to locate you in the audience (our preference) or place the musicians around you, like you’re up on the stage (harder to get lost in the experience because you’re watching like you’re in the audience but the soundtrack is inconsistent with the visual). Sometimes they’ll put primary sounds in the surround channels that are completely inconsistent with what you’re seeing on the screen. Why do they do this? Your guess is as good as ours...

**The Subwoofer** - Thumpa - thumpa - thumpa. Yup, we all love to shake the walls. And it’s OK to have a little too much sub output in order to satisfy that need. But the sub should integrate well with the rest of the system and not be overbearing. Try to keep the desire to knock plaster from the ceiling in check. The overall effect will be much more believable and involving. A few good gut pounding bass impacts are always fun, but they shouldn’t be happening constantly, throughout the film, even if Arnold Schwarzenegger’s in it.

You might also note that bass levels that seem fine for music CDs and DVDs almost never deliver enough punch for movie special effects. You’ll find that raising the sub level a dB or two for movies and lowering it the same amount for music makes for a much more believable sonic balance.

Here’s a link to Dolby’s web site where you can find their speaker placement recommendations. 

*Dolby recommended speaker placement*

Please note that based upon your room, equipment, domestic situation and more, you may need or want to modify these recommendations. We would strongly urge you to set the system up as closely as possible to the standards we’ve described and use it for a while before you make any judgments. In many cases, after someone’s become acclimated to the sound of a properly balanced system, re-setting to the prior balance ends up sounding just plain bad.

**Next issue:** Speakers large or small? How do you set the channel levels correctly? And more...

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**Sandy Gross Awarded Small Business Executive of the Year by CEA**

The following is reprinted from TWICE Magazine on Oct 10, 2012.

Steve Smith, San Francisco - Sandy Gross of GoldenEar Technology was named Small Business Executive of the Year, an inaugural Consumer Electronics Association (CEA) Innovation Entrepreneur Award presented during a luncheon at its 2012 CEA Industry Forum.
Gross is co-founder of Polk Audio, Definitive Technology and his latest business, GoldenEar Technology.

At Polk he was in charge of marketing and product concepts. In 1988 Gross left Polk, then founded Definitive Technology in 1990. The company designed high-end stereo and surround-sound speakers. He retired as president in 2009 and started his third loudspeaker company, GoldenEar Technology, in 2010.

Gross is often called upon by other entrepreneurs, in the early stages of developing their companies, for advice. In his acceptance remarks he thanked audio pioneers like “Henry Kloss and Saul Marantz, who were mentors of mine,” as well as his wife Anne Conaway for her tremendous support and help over so many years. He added that he has been “very lucky to make a career in high-end audio, a business that provides pleasure and entertainment.”
Dear GoldenEar Fan,

Well, we warned you that there were more of these entertaining and fascinating newsletters on the way. See, we’re on a mission to try and ensure GoldenEar owners get the most enjoyment they can from their speakers. We’re trying to balance the risk of giving you too much technical information with the fact that we believe owning or considering GoldenEar speakers means you’re interested in getting top performance too.

If you have any questions regarding this content, or if you’d like to let us know how we’re doing, please send ‘em to us at info@goldenear.com and we’ll answer them in the next issue. Of course, if you have immediate set up questions regarding your GoldenEar system you can call our Tech support line at 410-998-9134, or email support@goldenear.com.

Happy setup and happy listening!

The GoldenEar Team

Setting Speakers to “Large” or “Small” in Your Receiver or Pre/Pro

We don’t mean to sound like the Large or Small Police, The Setup Sheriff or Bass Management Mavens in this newsletter, but the information below is based on our collective experience setting up and evaluating thousands of stereo and multi-channel audio systems. Many were set up according to the following guidelines and resulted in reproduction that was impressively natural, highly believable and very involving. Others were set to, oh, let’s call it different “standards”, and in most cases suffered greatly compared to systems configured as per these guidelines. We believe if you’ve spent significant amounts of hard earned cash to get quality components and put together a great system, dropping the ball during set up would be a shame.

Some caveats ...

1. Our recommendations here are based upon our experience, generally accepted engineering standards and input from industry experts (Believe it or not, we didn’t use Wikipedia!).
2. There really is an audio industry-wide, generally accepted way to set this stuff up and that’s the basis for our recommendations in these newsletters. However, based on your room circumstances, the need for Enhanced Domestic Tranquility (EDT?) or your preference for a particular sound characteristic you get by utilizing different settings, configure your system up as you see fit. By all means, do whatever makes you happy, but try not to select settings that could lead to system damage, like setting very small satellite speakers to “Large” or cranking the subwoofer beyond “11” to MegaWhumpThud.

3. **GoldenEar** separates our speakers into 3 groups; full range floor standers (Triton Series), full range compact models (Aon Series) and satellites (SuperSat Series and the SuperCinema 3D Array). We’ll detail specific recommendations concerning them below …

### Is it Large or is it Small? How much does size really matter?

Utilizing the Bass Management menu in your surround sound electronics to set an individual speaker to Large or Small determines whether or not that speaker gets sent the bass signals originally placed in that channel by the recording engineer. Essentially, if you set a speaker to Large you’re saying it can produce thunderous levels of very deep bass. (See the info in the next few paragraphs for a good example of thunderous levels of very deep bass.) Sandy and the engineering team worked hard to ensure that **GoldenEar** full range speakers deliver bass performance that belies their size and price (if you own’em you already know this). And there’s an outside chance other brands of speakers you may have mixed into your system might produce decent bass too. So why would you set any speaker that seems to make OK bass to “Small”?

Before we give you those reasons we’d like you to be aware of how much deep bass it can take to re-create that “you’re in the action” experience, particularly for cinema special effects. Perhaps the best example is the original THX™ home theater standard which calls for a woofer system capable of generating 105dB at 20Hz at the listening position, in a 3000 cubic foot space. As a frame of reference, a room 18’ by 21’ by 8’ is just over 3000 cubic feet.

That’s 20Hz!

At 105dB!!

How loud is 105dB? Sitting in the front row at a rock concert is in the 105dB range. The onset of actual pain at the human ear’s most sensitive frequency of 2750Hz is at that level too. Note that these 105dB peaks in soundtracks are not sustained and the vast majority of residential listeners may not be listening at levels that would allow 105dB peaks anyway. But when Arnold Schwarzenegger blows up half a city block in a film you can pretty much assume that it’s intended to reach a 105dB peak level in the theater.

Creating this kind of powerful sound picture in your room will undoubtedly make movie watching more enjoyable and involving. But trust us, generating 105dB in the deep bass in an average size room ain’t so easy. In fact, very few residential “full range” speaker systems on the market are
capable of producing anywhere near this level of deep bass output. For that matter, not that many powered subs can either... only the biggest, baddest powered subs are capable of this kind of output (like our ForceField 5, for example).

**Reasons for utilizing bass management**

As noted above, the requirements for movie soundtrack special effects bass can be far more demanding than those for music reproduction (rap/hip-hop excluded, perhaps), so this discussion is most pertinent to Home Theater systems. The 20Hz/105dB THX standard noted above was developed by Lucasfilm™ based upon their goal of bringing home the theater experience. Properly utilizing the bass management capabilities in your surround electronics will go a long way towards achieving that goal. Here are some of the benefits of using bass management:

1. Eliminating the need for your surround sound receiver/amplifier to produce the deep bass by letting the subwoofer amplifier handle it frees up LOTS of extra amplifier power to reproduce the mids and highs. So taking the bass burden away from your receiver/amplifier lets it perform like a much more powerful unit, by increasing its headroom (the reserve power available for demanding midrange/high frequency passages) and greatly improving perceived dynamics.

2. Taking the bass away from your surround sound receiver/amp also reduces certain forms of internal amplifier distortion (most notably IM, Inter-Modulation distortion, where the presence of one tone impacts the sound of other tones, i.e. they inter-modulate each other). At the very least this alone will result in enhanced midrange and high frequency playback fidelity.
3. The above benefits hold true for speakers as well. Removing the burden of generating lots of deep bass lets most speakers perform better in the mids and highs with reduced IM as a side benefit too. (Note that the Triton 2 and 3 with their powered low frequency sections will deliver superb mid and high frequency performance while rocking out lots of powerful, deep bass without these concerns.) Kind of like having their own “bass management”.

4. Speakers that are not designed to produce bass frequencies (like our SuperSat speakers) can be damaged if the bass is not directed away from these “Small” Speakers to the powered subwoofer or large Triton Towers. Directing the bass away from smaller speakers also allows them to play MUCH louder.

5. Woofer location in typical residential rooms is critical to good deep bass reproduction, especially if you’re concerned about bass performance in more than one seat. In many cases, ideal subwoofer locations turn out not to be the best places to put the mid-range/high frequency speakers or vice versa. By using one or more subwoofers you can place the subs for best in-room performance and the satellite speakers to optimize their sound and imaging. Properly configured bass management makes this possible.

**Stereo vs. multi-channel**

If you have a high performance stereo system you’ve probably set the system up for a small “sweet spot” to optimize listening. And in such a situation, you can most likely get decent bass combined with good midrange and high frequency sound and imaging by adjusting the speakers and listening position. But when you’re trying to get multiple good sonic locations in the room, especially for deep bass, while at the same time optimizing mid and high frequency imaging and performance, it’s often easier to do it with separate satellites and subwoofers. (We’ll discuss this in more detail when we talk about standing waves in a future newsletter.)

**The Low Frequency Effects Channel (LFE)**

Lots of folks have heard of this channel but many don’t really understand what it does. It’s the “.1” channel in a surround sound mix like 5.1 or 7.1. The sound recording engineer takes the low frequency special effects (big explosions, crashes, etc.) and puts them in their own dedicated channel. Typically this channel is sent to the system’s subwoofer(s). In a multi-channel home theater, if you set the L/R speakers to “Large” and tell the electronics there’s “No” subwoofer, it redirects the LFE channel to the L/Rs. This is the standard TritonCinema configuration.

When you set any speakers in the system to “Small”, the bass that would normally be reproduced by those speakers is redirected to the system’s subwoofer (or the L/R speakers, if you’ve set them to Large and have no separate sub) as well. So the bass sent out from your receiver/processor to the sub can consist of the LFE channel only or the LFE channel plus the re-directed bass from any channel that you’ve set the speakers to “Small”. This is what bass management is all about.
GoldenEar Recommendations

**Triton Two and Three** - The bass sections of these models are more than simple subwoofers. They crossover to the midrange drivers much higher than a typical subwoofer crossover and are therefore an integral component in ALL the low frequencies these speakers produce. Think of the Triton 2 or 3 as full range three-way speaker systems with self-powered bass sections. Since these powered bass sections are capable of reproducing in room response as low as 20Hz, you probably are wondering “Can they replace a separate subwoofer?”

The short answer is that in most systems in most rooms, the Tritons are capable of delivering all the bass impact you’d want, even for movie special effects. Each Triton Three bass section is pretty much equivalent to one ForceField 3 sub and each Triton Two is equivalent to a ForceField 4 sub. So a Triton based Cinema with two Triton 2 or 3 towers has the equivalent of a PAIR of ForceField subs! Still, if you wanted to get the most bass impact you can, you could send the LFE (Low Frequency Effects) channel to one or more separate subwoofers, carefully placed to minimize standing wave issues in the room. The benefits typically will include better bass impact and more good “bass seats” around the room. It would also raise the overall playing ceiling of the system as the burden of LFE reproduction would be removed from the Tritons. This is an especially good approach for very large rooms.

**Aon 2 and 3** - these two models are essentially full range. They both deliver significant bass impact in most rooms, fully satisfying for typical music playback situations, however they don’t go as deep or play as loud as the Tritons towers. The quality of GoldenEar bass is similar throughout the line, it’s just the quantity that’s available that varies. In smaller rooms these models will deliver full range sound for both stereo and home theater applications. We do recommend that for maximum output and best bass impact in Home Theater applications, and/or in larger rooms, the addition of one or more powered subwoofer(s).

**SuperSat Series and the 3D Array soundbar** - these models have been designed to be used with bass augmentation. They should be combined with a subwoofer and bass management must be applied (set to “Small”) as per their owner’s manuals. They are not designed to be used without a sub in any application.

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Special Effects?
Turn it Up to Eleven Please! (How Loud is That?)

The link below will take you to The Ultimate SPL Chart, an interesting and fun loudness comparison document, so you can assign a number for just how loud that is! When you read it please remember the dB scale is logarithmic, not linear so, for example, 10dB is 100 times the power of 1 dB.

We think the linked document’s fun because:

A. We’re silly audio geeks and

B. It’s full of interesting facts like these:

-80dB - Underwater nuclear submarine microphones listening to shrimp chewing on food at 100 meters distance.

15dB - A pin drop from a height of 1 CM at a distance of 1 meter.

117 - 123dB - Home stereo system, very loud and powerful 200 - 20,000 watts (real watts, not “marketing watts”).

135dB - Humans begin to notice a slight “cooling effect” from air expansion.

150dB - Rock concert, “The Who” - two 10 story speaker stacks consisting of 144 double refrigerator sized speakers. Actual peak measured level reached 120dB at a distance of 32 meters for this normalized reading of 150dB. Continuous level reached 114 - 118dB (P) at 32 meters.

215dB - Battleship New Jersey firing all 9 of its sixteen inch guns.

310dB - Krakatau volcano eruption, 1883 AD. Cracked 12 inch thick concrete at 300 miles, eruption heard 3,100 miles away. Sound pressure caused barometers to fluctuate wildly at 100 miles distance indicating levels of at least 170 - 190dB. At 100 miles even shouting in someone’s ear could not be heard. Caused fog to appear and disappear instantly at hundreds of miles distance. Rocks were thrown to a height of 34 miles. Dust and debris fell continuously for 10 days after the eruption. Produced very colorful sunsets for 1 year. Ejected approximately 4 cubic miles of earth. Created an anti-node of negative pressure at the exact opposite side of the earth. Sound waves covered 1/10 of the earth’s surface. Shock (sound) waves echoed around the earth 36 times and lasted for 1 month.

We suggest you file the document under “Fun facts for the audio nerd”.

Ultimate SPL Chart

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Dear GoldenEar Fan,

We’re back at it again. In this issue we’re talking about surround sound system setup, how many subwoofers you might want to consider to make your life complete, and a new regular feature by Sandy, with this issue’s article on some exciting new products.

The system setup info in this edition addresses the things you’ll need to do before you perform the actual channel level setting. Next issue we’ll go through that procedure step by step. And if you can’t find your old Buck Rogers SPL meter we’ll provide some supplemental information about affordable SPL meters and apps that you can use for the setup procedure. We will continue to give you lots of tools and help like this to try and ensure you get the most from your GoldenEar system. Stay tuned …

If you have any questions or comments regarding this content, please send ‘em to us at info@goldenear.com and we’ll address them in the next issue. Of course, if you have immediate set up questions regarding your system you can call our Tech support line at 410-998-9134, or email support@goldenear.com.

Happy setup and happy listening!

The GoldenEar Team
Setting Your System Speaker Levels
Using a Sound Pressure Level Meter or App

Properly checking and setting the volume levels for all its channels is one of the most misunderstood yet simplest things you can do to your surround sound system to improve or, at the very least, verify its performance. We say improve because (as we’ve drummed into you in past issues) humans have a natural tendency to enjoy exaggeration in much of what we experience. Whether it’s the larger-than-life color intensity of Kodachrome slides, over-the-top, retina frying TV’s set to “Vivid”, or asphalt cracking car stereo Mega-Bass, we just tend to like everything larger than life. And that’s OK, as long as you understand that there’s an alternative too. An alternative that reduces the exaggeration and sets the performance levels based upon the goals of the movie director or music producer.

The benefits? More accurate reproduction of recorded sound throughout your listening room, deeper involvement in the experience, more sense of “being there” with easier “suspenion of disbelief”.

What follows are the preliminary things you’ll need to do before you can perform a manual system setup using an SPL meter or app. Next edition we’ll give you step by step “how to do it” instructions that will take you to surround sound nirvana, bring joy to all your friends and family and maybe even cure seasonal allergies. (This statement has not been evaluated by the Food and Drug Administration or Lucasfilm. Proper system setup is not designed to cure any known medical conditions but has been known to generate a syndrome called “excess smiling” among viewers and listeners.)

There’s a lot of information in here. Please take the time to carefully read each instruction. You’ll be rewarded with excellent system performance if you do.

Read the Full Article …

One Sub, Two Sub, Three Subs more …

The question of how many subwoofers to use and where to place them in the room comes up frequently so we thought we’d address it superficially here and give you lots more detail in a future issue.

Scientific research has shown that multiple subwoofers, strategically placed within a room, can deliver smoother bass response to more seats than one giant, honkin’ subwoofer randomly located in the same room. Triton Twos and Threes, with their built-in powered subs, are the perfect way to get these multiple-sub benefits without extra boxes in the room!
Now this isn’t to say that if you place an 18-inch driver, 14 jigawatt sub in just about any typical residential room you won’t be able to inflict pain on all but the most dedicated bass junkie. But if you agree that sheer quantity of bass isn’t the primary goal but quality of the bass combined with several people being able to enjoy it is a lofty goal than we’d ask you to consider multiple subs. Again, making a pair of Triton towers with built-in subs the perfect answer to better in-room bass performance.

Your initial reaction might be, “Sure, these guys are saying this because they wanna sell me more subs.” Well, we DO want to sell more subs, but that’s truly beside the point here. Incorporating multiple carefully located subwoofers in a room gives you a much better chance of getting spectacular bass performance over a wide seating area. Since locating the typical “Big Box” sub is almost always an issue when it comes to domestic tranquility, the built-in subs in the Triton speakers eliminates the need for those extra boxes. And if you have a SuperCinema or AonCinema system, we’ve specifically designed GoldenEar ForceField subs to deliver excellent bass performance from unusually compact enclosures.

Right now all we’ll say is in a rectangular room, one or two subs located at the center of the front (a pair of Tritons gives you those front center subs) and one or two subs located at the center rear (another pair of Tritons in the rear would be the ultimate solution) will do you proud. Add just for fun, add a couple ForceField subs located at each side wall center and you will have bass nirvana for everyone in the room! We’ll explain the details in future editions, so hang in there.

Sandy’s Place

As you’ve read above, we’re working hard to ensure you get the most pleasure possible from your GoldenEar speakers. I personally hope you enjoy listening to them as much as I and my team enjoy designing them for you.

I thought you might also enjoy being one of the first to read about all of our latest exciting new GoldenEar product introductions in these newsletters. And I’d really love to share some of our unique designs and technology implementations (like folded ribbon tweeters and our world-beating passive radiator designs) with you. So that’s my purpose in writing this column - stay tuned!

For this newsletter I’d like to tell you about three exciting new products that are just now arriving at our dealers showrooms.
**ForceField 5**

The extraordinary **ForceField 5** incorporates all the advanced technology and innovative concepts introduced in the ForceField 3 and 4 but in a larger and even more powerful low-frequency beast. The ForceField 5 combines a long-throw 12” driver (which incorporates a huge high gauss magnet structure) driven by a GoldenEar-designed DSP-controlled 1500-Watt digital amplifier and pressure coupled to a large, downward-firing quadratic planar infrasonic radiator.

I’m personally very excited about this sub as I believe it’s one of the best I’ve ever created. It’s capable of delivering clean, articulate, musical bass and floor shaking special effects without strain or boom. Actually, I believe incorporating the ForceField 5 in your system will easily bring major smiles to your face. Find out more about the ForceField 5 here. **Mark Fleischman**, in his Home Theater Magazine, May 2013 review said:

“I was dumbfounded by how much bass output the sub could muster.”

“This sub will likely serve a large room with headroom to spare.”

“The ForceField 5 sub handled low-frequency barrages with floor-shaking confidence...”

We couldn’t agree more!

**Invisa HTR-7000 and Invisa MPX**

The **Invisa HTR-7000** and **Invisa MPX** were designed and engineered to deliver an amazing stealth home theater system that both disappears as well as delivers sound quality which rivals our free standing speakers. The HTR-7000 is a flush mount front main left, right or center channel in-ceiling speaker which incorporates basically the same cast-basket 7” driver and High Velocity Folded Ribbon drivers used in the Aon 3. They are combined with our FocusField™ Technology utilizing a unique Non-Periodic Waveform (NPW) Diffraction Control and Wave-Launch construction in a 30 degree angled configuration which focuses the sound field optimally for seated listeners in a typical living room. And, of course, they can also be used as rear or side surrounds too. They retail for $499 each. Optional Square Grilles are also available.
The Invisa MPX is a MultiPolar In-Wall/In-Ceiling speaker which combines 2 cast-basket 5.25” bass/midrange drivers (the same basic drivers coming in the new Triton Seven) which are angled left and right for wider dispersion and enhanced spaciousness and configured in a D’Appolito Array around one of our signature High Velocity Folded Ribbon Tweeters. They are perfect as rear or side wall or ceiling mounted surrounds and will find a happy home in a complete Invisa stealth system, or combined with any of our free standing speakers. They also make great sounding in-wall front main speakers for 2 channel or home theater applications. The Invisa MPX also retails for $499 each.

Please [click here](#) for more information on these new Invisa models.

Onward and Upward,

Sandy Gross

President and Founder
GoldenEar Technology

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Dear GoldenEar Fan,

This issue is a continuation of the last edition (click here to view), where we went over the preliminary steps you’ll need to take in order to manually set speaker levels in your system. So, now’s the time to actually perform them! With this edition in hand and your SPL meter or app running on your Apple/Android device, you’re ready to begin. There’s a supplement located here with lots of information about affordable SPL meters and SPL Meter (and other) apps that you can use for the setup procedure.

We hope you’re finding this kind of information informative and worthwhile. But the only way we’ll know if you are (or what else you’d like to read about) is if you give us some feedback regarding these newsletters. We’d like to pick a topic of broad general interest to cover from the ones sent in. So what are you waiting for? Send your comments and suggestions (and if you have any questions regarding this content) to info@goldenear.com right away and we’ll address them in the next issue. Of course, if you have immediate set-up questions regarding your system you can call our Tech support line at 410-998-9134, or email support@goldenear.com.

Happy setup and happy listening!

The GoldenEar Team
Setting Your System Speaker Levels
Using a Sound Pressure Level Meter or App - Part 2

Begin here only if you’ve just read (or re-read) Issue 3 of this series and performed the preliminary steps described therein. What follows are the steps you’ll take to do a manual system setup using an SPL meter or app. See the Supplement (linked above) if you don’t have such a device.

We know there’s a lot of information in what follows. Please take the time to carefully read each instruction before you perform the action. You’ll be rewarded with excellent system performance if you do.

Read the Full Article...

Sandy’s Place - My Favorite Demo Music - Part 1

Many people have visited me, with my various companies, at dealer events or trade shows over the years, and most have commented on my selection of demo material. So I thought I’d share with you those tracks that are my all-time favorites - I play them again and again because they’re so good. I should point out that I have always selected material that allows me to “suspend disbelief” when listening. What I mean is, I want to sit down to listen and in moments forget I’m listening to a stereo system and be transported to the performance or control room of the studio. Here are some of my favorites (pt 1) ...

The Great Gate of Kiev, from “Pictures at an Exhibition” as conducted and performed by Eiji Oue and the Minnesota Orchestra. Reference Recordings catalog #RR-79. This HDCD recording is crystal clear and preserves all the dynamics as though you were sitting only a few rows back in the hall while it was performed.
The Peacocks, by the Bill Holman Band from the “A View from the Side” XRCD. Perhaps one of the most respected yet unrecognized master arrangers and players of the Big Band era, Bill Holman paints a beautiful picture with this song. As it begins you can just see in your mind peacocks slowly opening their plumes and revealing the intricacies and lush, bright colors. This song is much the same and reveals its dense but sublime beauty as you listen. Wait ‘til you hear it on a great system with a pair of Tritons!

Pie Jesu, from “Requiem and Five Anthems” by John Rutter and performed by the Turtle Creek Chorale. Reference Recordings catalog #RR-57. This HDCD recording perfectly captures both large and small scale choral performances along with subtle pipe organ playing some very low notes! The way it’s recorded I feel like I’m in the front row of the balcony and the soloist is singing her aria as though I am the only one in the audience. This disc was selected as a Super Disc by The Absolute Sound editors. It’s really, really, really good!

Summer Days by Ana Caram, from her album “Rio After Dark”. Chesky catalog #JD028. This is what I would call a typical Chesky recording: very simple and it captures all the nuances in the performances by each of the musicians. Latin jazz relies on the subtle interplay of musicians and should wrap itself around you like a warm breeze if the system is up to the task.

Once in Love with Amy by Mel Tormé, from the album “Mel Tormé Swings Shubert Alley”. Verve catalog #821 581-2. The Velvet Fog himself with the Marty Paich Orchestra, released in 1960. Mel’s voice sings right to me on this cut and the whole thing sounds incredibly natural. This shows that, no matter how old the recording, the system really has the power to pull me into the performance. Now also available from HDtracks in both 24/96 and 24/192 resolutions!

Those are just the first few, look for part II in a future issue. Now, if I can find my old record by Terry Riley called “A Rainbow in Curved Air” …