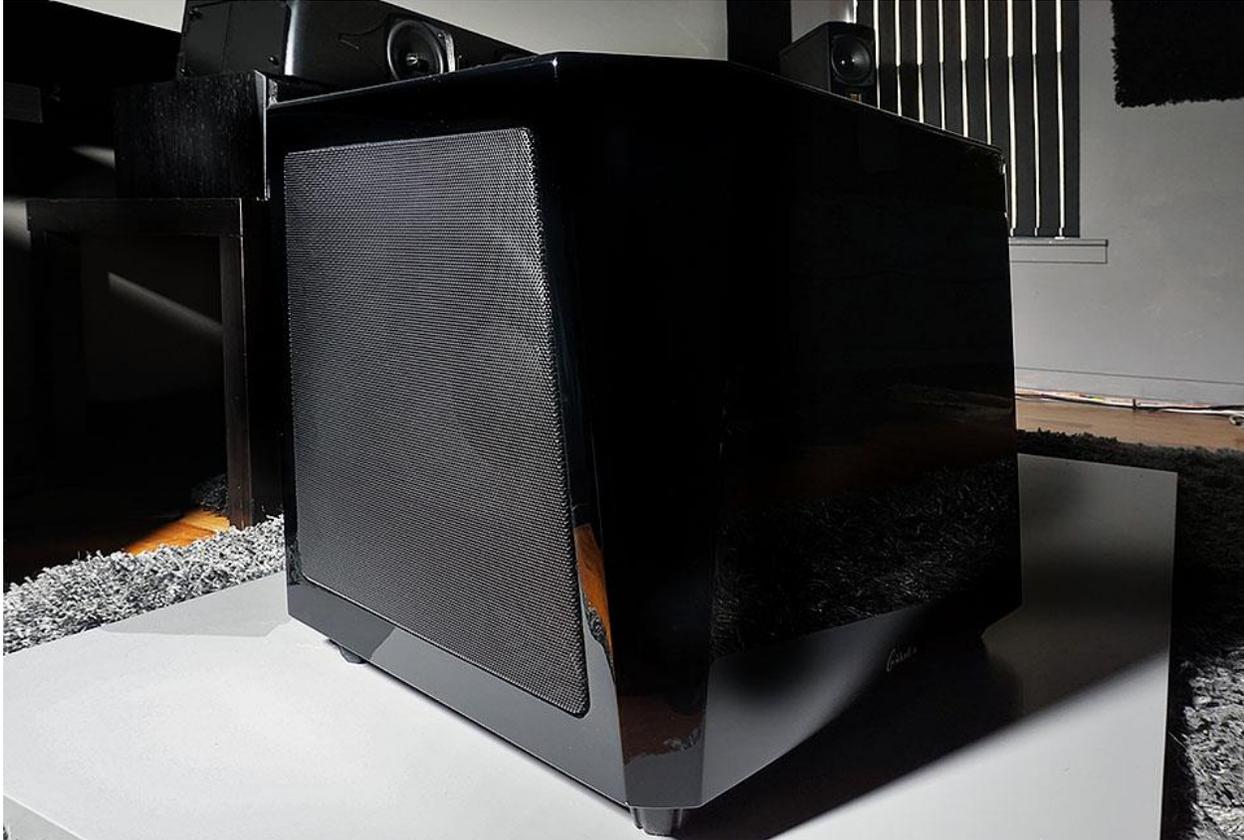




# GoldenEar SuperSub XXL Subwoofer Review

by Mark Heninger on July 20, 2016



Nothing adds gravitas to music or AV sound quite like the bass produced by a great subwoofer and it's no secret that AVS Forum is home to some of the most dedicated deep-bass aficionados on the Internet. Between the DIY crowd that builds subwoofers NASA could use to simulate rocket launches and the dedicated home theaters packed with monster subs from the likes of JTR and Seaton Sound, I've heard systems that are almost limitless in their ability to plumb the depths of ultra-low frequencies.

I'm an admitted bassaholic, as are many members of AVS Forum. While bassheads are united in our love for visceral audio experiences—we want to feel the sound—how we get there varies depending on budget, space constraints, and skills. Not everybody has the room or the need for 120 dB bass that's flat to 6 Hz, and this review is not about how

commercial subs compare to the hardcore DIY or Internet Direct approach to obtaining more (and better) bass.

Most people seeking a sub or two for their system want lots of output, low extension, and good sound quality in a package that fits in a living room or TV room. However, that desire often conflicts with a sub's capability—the smaller the sub, the harder it is to get ultra-low frequencies out of it. There's a sub out there for everyone, and this review will try to help you decide if GoldenEar's SuperSub XXL (\$2000) is a good option for you.

## **Features and Specifications**

GoldenEar's take on how to maximize output and sound quality in a comparatively compact sub manifests as the SuperSub series. Currently there are two models: SuperSub X and SuperSub XXL. While the X is a true compact wonder—it's barely larger than one cubic foot—this review is about the big brother, the XXL. (A review of the SuperSub X is forthcoming.) For a sub, it's still fairly compact at 19.75" (W) x 17.625" (H) x 15.875" (D), but its 82-pound weight hints at the firepower contained within.

The SuperSub XXL's guts include two 12-inch, long-throw, high-output active drivers and two 13x15-inch "quadratic planar infrasonic radiators" (i.e. rectangular passive radiators). The active and passive drivers operate in a force-cancelling dual-opposed configuration—the 12" active drivers fire out the sides of the sub, while the passive radiators are located on the top and bottom. The result is a lot of vibrating surface area powered by a 1600-watt class-D amp to move all that air.

The stereo line-level RCA inputs include a lowpass filter that's defeatable if the sub is used with an AVR's built-in bass management and subwoofer output. Notably, it does not offer speaker-level inputs, which is a feature found on GoldenEar's ForceField subs.

You'll want to use some sort of EQ to get the best bass possible out of the SuperSub XXL. For AVR and AV pre/pro users, room EQ is probably all you need. Whether you use an AVR's built-in room correction or a separate DSP processor such as a miniDSP 2X4 is up to you, but either way, I strongly recommend using EQ with any and all subwoofers to reduce the inevitable peaks at certain frequencies in any room. Even better is finding the best location for the sub that minimizes peaks and dips in the in-room frequency response, but that's the subject of another article.



*This is the back of the SuperSub XXL. My cat appreciates the mirror-like piano gloss finish.*

## Performance

When it comes to measuring subs, my capabilities are limited because I live in a city. There's no backyard option, which leaves me with little choice but to take rough nearfield measurements to ascertain approximate frequency response. Accurately charting maximum output at various frequencies is beyond my capabilities.

As with other GoldenEar subs I've measured, the specified low-frequency extension of the SuperSub XXL (10 Hz!) turned out to be a bit optimistic. In practice, the sub does not offer meaningful output at that frequency, and you don't need a microphone to see there is almost no cone movement. It may be the lowest frequency that triggers any sort of response, but it's totally inaudible.

Marketing specs notwithstanding, the SuperSub XXL manages to perform at a top-tier level when compared to other commercial subs of a similar size and price. For example, the XXL is more than competitive with the similar-sized but pricier (\$2100 each) JL Audio e112 (which I reviewed last year).

The SuperSub XXL's real-world bass extension gets down to about 16 Hz, which is the approximate -10 dB point according to an average of several nearfield measurements. With room gain and EQ factored in, I was able to obtain fairly flat response to 16 Hz, as measured from my listening position in my 2000-cubic-foot studio. For most people (including me), that's more than enough extension into the infrasonic zone to get full satisfaction out of their system.

In defense of mega-subs that can reproduce single-digit Hz, I've experienced the "Irene" scene from *Black Hawk Down* on a system that nails the 8 Hz helicopter thump in that movie at ridiculous levels. As impressive as that was, it's just a few seconds out of a two-hour-plus movie. If your sub goes down to 20 Hz, you've got 99.5% of content—be it movies or music—fully covered in the bass department.

The SuperSub XXL offers the tantalizing possibility of getting two ported 12" subwoofers worth of output from a single box that's the size of a typical 12" sealed sub. Thanks to its dual active and dual passive drivers, the SuperSub XXL can compete with high-performance 13" and 15" ported subs while taking up less space and remaining free of vibration, even at very high output levels.

## **Listening**

I did most of my listening using dual SuperSub XXLs in a 7.2.4 surround system featuring Dolby Atmos and DTS:X content. A Marantz SR7010 served as the brains of the system, with its built-in Audyssey MultEQ XT32 providing room correction and EQ. GoldenEar Triton Five speakers handled front L/R duties, and a SuperCenter XL was the center. Surround was taken care of by a pair of Triton Seven speakers on the sides and twin SuperSat 3s in the rear. Meanwhile, four Invisa HTR 7000 speakers provided the height effects for the system.

When performing critical (albeit subjective) listening, one sign of a great sub is when the lowest tones (30 Hz and below) sound clean and free of audible distortion, even when cranking the volume. Other hints of greatness include the ability to render subtle textures and energize an entire room, even at modest output levels. I found the SuperSub XXL delivered on all those counts.

With music, the SuperSub XXL effortlessly rendered highly detailed bass that brought out the character of instruments and synthesizers. Dubstep tracks from Datsik and Bassnectar were bracing at higher volume levels, and yet the bass itself was a pleasure to experience and not at all overwhelming. Daft Punk's "Disc Wars" from the *Tron: Legacy* soundtrack

was successfully reproduced by the XXLs, including the ultra-deep underlying rumble that many lesser subwoofers mangle or miss entirely.

Another track that truly puts subs to the test is “Requiem: Pie Jesu” from Rutter: Requiem, Five Anthems (Turtle Creek Chorale). It’s not my style of music, but it possesses extremely wide dynamic range and features an organ that hits 20 Hz four times and 16 Hz once. Few systems can properly handle those notes, which should be felt rather than heard. The SuperSub XXLs reproduced the track with great verisimilitude, creating precisely the sense of grandeur that the composition calls for.

Movies fare extremely well with the SuperSub XXLs handling bass. The primary issue I have is that I can’t take full advantage of them at night—such is the intensity of their output. From subliminal infrasonic drones to explosions and crashes that trigger goose bumps, the SuperSub XXLs ability to play deep, clean, and precise resulted in a more believable and immersive movie experience.

## **Summary**

Choosing a subwoofer can be fun—or it can be infuriating given all the available choices. Finding a sub that offers the right combination of price, performance, and aesthetics is a personal experience. If your per-sub budget is in the \$2000 range, there are many tremendously capable options available.

If your goal is strictly maximum dB per dollar, you should probably look at other options. The SuperSub XXL provides a great balance of reasonable size, high fidelity, and sheer power. When your needs tilt toward a subwoofer that’s comparatively compact while possessing bass response that does justice to home cinema as well as hi-fi audio, the GoldenEar SuperSub XXL is well worth auditioning.

## **TEST SYSTEM**

### **Sources**

Samsung UBD-K8500 Ultra HD Blu-ray player  
DIY HTPC running Windows 10  
Roku 4

### **Processors and Amplification**

Marantz SR7010 AVR  
Crestron Procise ProAmp 7x250

### **Speakers**

GoldenEar Triton Five  
GoldenEar Triton Seven  
GoldenEar SuperCenter XL  
GoldenEar SuperSat 3  
GoldenEar Invisa HTR 7000

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