

## Equipment Report

# REL S/5 Subwoofer

## You Complete Me

Neil Gader

If REL Acoustics, the highly regarded subwoofer manufacturer, pulled out of the high-end marketplace tomorrow, never again to manufacture another unit, its place in the audio pantheon would forever be assured. REL has offered superb build-quality and high standards of bass reproduction since the company was founded in 1990. Thankfully for bass fans everywhere, nothing has changed in its latest venture, the S/5, which may be the best-performing midpriced sub REL has offered in its vaunted history. The S/5 goes about its tasks so matter-of-factly, effortlessly, and invisibly that it seems to become another attractive fixture in the room—until you pull it from the system. Then you understand what authentic low bass brings to the party. You also begin to understand the meaning of...addiction.

The REL S/5 is the kingpin of the freshly minted S Series, a line second only to the big Gibraltar subs in the REL lineup. Tipping the scale at seventy pounds, the S/5 is not small, but it isn't a real-estate hog, either. The S Series enclosures are visually lavish and lavishly inert. Sporting 1 1/8"-thick cabinet walls, my gloss-black sample was superb in fit and finish. The solid T-304 stainless steel grab handles are first cast, then micro-machined, and finally polished in a six-stage process. The polished aluminum trim pieces—such as the footers—elegantly accent its dark good looks.

Inside the S/5 is a new forward-firing 12" alloy-cone woofer. According to John Hunter, REL's Woofer-in-Chief, this driver's excursion has been increased to a full two inches, an improvement of a 1/4". He also points out that the cone's moving mass has been reduced almost 60 percent by his reckoning, and that it is "self-quieting," which is to say, it is so non-resonant that it stops as quickly as it starts. Additionally, there's a downward-firing 12" passive driver with a unique carbon diaphragm that is similarly stiff and lightweight. REL says that the S/5 uses a simple filter-type that's quite fast—with about eight milliseconds in group delay—to eliminate the passage of unwanted higher frequencies to the REL driver. Power is also superior to that of its predecessor, the discontinued R-528. The S/5 now uses a NextGen2 550W switching amplifier that can generate up to 873W on hard transients.

Per tradition, REL subs do not use high-pass filters—the main speakers run full-range, full-time. REL's view is that high-passing the sub/sat looks good on paper, as it allows the main speakers to perform with less stress and more dynamism. But REL also believes that high-pass filtration creates more problems than it solves. Why? Because the main speakers are designed and voiced to operate within a specific range of frequencies, and by cleaving away a portion of that output via a high-pass crossover you are essentially refashioning the speaker into a different, even unpredictable unit never contemplated by its designer. That's why—at least under their breath—many designers don't actively embrace third-party subs, high-pass or not. Subwoofers from the same



brand are another story. They have purposefully designed drivers and low- and high-pass crossovers to pair with designated models (Revel, among others, comes immediately to mind as a specialist in these matters). In any case, no high-pass filtering for the S/5.

The back panel houses a phase toggle and rotary settings for the low-frequency effects (LFE) level and for volume, plus the tiniest 39-step increments for adjusting the crossover over the range of 30–120Hz. There are dual low-level RCA inputs, plus an LFE input, but the high-level input is and has always been REL's preferred means of installation. A lengthy Neutrik connector is provided for this purpose. It carries within its jacket four wires for connection to an amplifier's speaker taps.

REL suggests starting with corner placement, usually on a room diagonal. This not only maximizes room gain but also allows "for the most linear true low bass wavelaunch." The set-up manual REL provides is quite comprehensive (without being intimidating) about

optimizing placement. In my experience, dialing in an REL is a matter of a few easygoing minutes rather than hours of hand-wringing. My advice: Bring a friend for fine adjustments. (Because of the added expense, I hesitate to mention that if you have a "problem" room, setup is easier with two subs, as they work together to smooth and flatten overall room response, and thereby become less of a sonic presence. This was an experience that I enjoyed first-hand with a pair of S/5s, but that's a story for another time.)

### Mood Elevator

There are two sets of criteria that I use to evaluate subwoofers. There's overall bass quality (extension and musicality), and then there's integration (the subwoofer's ability to blend with the main stereo speakers). Net: Does it remain true to the character and voice of the satellites?

In the tight confines of my listening room, the S/5 wasn't even breathing hard as it extended response into the middle twenty-cycle range. It did so without calling at-

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## Specs & Pricing

**Type:** Front-firing subwoofer, with downward-firing passive radiator

**Drivers:** 12" woofer, 12" passive

**Frequency response:** 21Hz -6dB

**Power:** 550W

**Dimensions:** 17.5" x 18" x 20"

**Weight:** 70 lbs.

**Price:** \$2,500

### REL ACOUSTICS NORTH AMERICA

800 Addison St.  
Berkeley, CA 94710  
(510) 990-6005  
rel.net

attention to itself—no overhang, perceived box coloration or, to use the sonic slang, “slowness” in its response. In all honesty the S/5 will go even lower, but my room struggled to support 25Hz without the doors rattling and the space over-pressurizing. The S/5 makes short work of large-scale orchestral pieces laden with timpani and bass drum. Every decaying flutter off the skin of these instruments is presented concisely and cleanly, and often in overwhelming detail. Small-scale, low-level cues don’t escape the S/5, either. Towards the end of Jackson Browne’s “Colors of the Sun” from *For Everyman*, there’s a repeated piano and drum motif that resolves into a deepening bass note that seems to ripple, sustain, and expand as if suspended in space. Each repetition of the motif is heavier and more resonant than the last, until the track begins a long fade. The bass notes hardly exist at all without the help of the S/5. Similarly, during Yes’ “It Can Happen” from *90125*, there’s a recurring bass line where the bassist slides his finger down the string, the pitch plunging as if tossed off a cliff. Most speakers by themselves can’t reproduce the full weight of these descending notes convincingly. The S/5 can.

What makes its performance special, however, is not its obvious power, extension, and dynamic headroom. These exist to degrees that can overpower most medium-sized rooms. It’s its clarity and focus that really impress. Credit is owed to the sub/sat transition, which is so seamless that it becomes anyone’s guess where the REL leaves off and the sats takeover. For me, this is where the believability factor kicks in. For example, when drummer Russ Kunkel plays some tom-tom fills during Carole King’s “Home Again” on *Tapestry*, the drum-skin detail and tuning, and the resonant decay, reveal themselves in full bloom, images locked into position without a hint of the S/5 in the sonic picture. This was also true of the kick-drum positioned centerstage during Holly Cole’s “Take Me Home.” The weight of the impact didn’t pull towards the corner position where the S/5 was sitting—it remained focused dead center within the soundscape. And this wasn’t just the case with the REL augmenting my compact ATC SCM20s, either. Even a speaker like the gorgeous Kharma Elegance S7 Signature floorstander, certainly no sluggard in midbass response and speed, benefitted richly from the ministrations of the S/5.

Less obviously, the S/5 enhances the mood of a performance in the way it conveys sweeping and subtle landscapes of tonal

color and timbre, gradients of shadow and light. The S/5 establishes the musical context for what is to come. For example, without the opening 30Hz organ pedal point that introduces Strauss’ *Thus Sprach Zarathustra*, or the deeply ominous synth note that kicks off Dire Straits’ epic “Telegraph Road,” listening to these pieces would be like listening to a Shakespearean sonnet with the opening quatrain lopped off. On the tight, crisp bass intro to Holly Cole’s cover of “I Can See Clearly” from *Temptation*, the REL captures the optimistic bounce and jauntiness of the instrument—character that’s pivotal to the upbeat emotion of the song. Similarly, from the opening bar onward, the forward placement of Ray Brown’s standup bass immediately signals listeners that the album *Soular Energy* is about the bass player as frontman, not backing musician.

Of equal importance is the ambient information that the REL reproduces. This baby can move a lot of air. Take a familiar piece like “Lux Aeterna” from the *Rutter Requiem*. The hall sound becomes a more active player in the performance when the S/5 is in the system. You can hear the air filling with sound around the musicians and chorus, and then hear this ambience even more clearly when the organist hits the lowest pedal points. And when the organist abruptly stops and the instrument goes silent, there is a sense of air rapidly escaping from the venue, like a balloon suddenly deflating.

A couple of tips to keep in mind: Subs do not operate in isolation. Only well-engineered main speakers with fairly neutral low-end response will excel with subwoofers. Sats with

a sucked-out lower midrange and upper bass will sound a little bass-light and dynamically lean. And attempting to mask such a tonal deficit by raising the output and crossover point of the S/5 will only smear midrange detail and create a noxious midbass bump that further decreases the sense of sub/sat integration that, after all, is the desired effect. Also, with smaller compact monitors, care should be exercised in gain-matching the more dynamically limited satellite with the much higher dynamic limits of the sub.

What about value? Put it this way, if you consider that you can easily spend a \$2500 on a couple of power cords, then the real value of the S/5 comes into crystalline focus.

From time to time I meet audiophiles who continue to insist that subwoofers are the bane of their audio existence. I don’t know what sort of deep-rooted, sub-bass trauma they were exposed to in their earliest high-end years, but I’m here to tell you that the only drama I experienced during my time with the REL S/5 was the emotion that its evenly weighted balance and full-range musicality brought to the fore. (Plus the separation anxiety I’m anticipating when REL calls for its return.)

In both subtle and not so subtle ways the REL S/5 completed every speaker system it partnered with. Ultimately, it’s up to every audiophile to ask himself whether he wants the whole musical picture—the entirety of the soundscape. If your answer to that question is an unqualified yes, then consider yourself warned: Don’t even think of plugging in the S/5 if you ever expect to use that outlet again. An exceptional performer in any class.