

REL Stadium III Subwoofer

Readers of my subwoofer survey in Issues 117 and 118 will recall that I had high praise for the REL Storm II, which I found worked especially well with Quad ESL-63 electrostatics and other British speakers designed more or less along the lines of the BBC-monitor sound, including Spondor SP1/2s and S3/5s. REL's designer, Richard E. Lord, firmly believes that subwoofers work best in augmentation mode, which means that the main speakers continue to operate full range. Unlike other augmented designs, RELs employ a novel arrangement in which a Neutrik connector takes the signal from the amplifier's speaker outputs, the advantage being that the entire signal, phase intact, is carried forward to the subwoofer. Though I cannot verify these advantages with measurements, I can report that REL subwoofers tend to be much easier to integrate than most. To some extent, this is true of all augmented designs, as opposed to divided ones, that is, those employing active crossovers to divert the bass frequencies to the subwoofer and the rest of the range to main speakers. But this gets me slightly ahead of the story.

Priced at \$2,995, the Stadium III rests in the middle of the REL's "St" line, filling the gap between the \$1,800 Storm III (the replacement for the II) and the \$4,000 Stentor II, but well below the flagship \$8,000 Studio II. It uses a 10-inch volt-driver in a ported cabinet with a 200-watt high-current DC-coupled amplifier. In addition to the Neutrik connection, for which a special cable is provided, there are dual RCA stereo low-level inputs and a balanced input for mono and differential amps. Separate level adjustments are provided for the low- and high-level inputs, and phase and roll-off frequency are switch selectable. The attractive and sturdy cabinet – one of the few pieces of audio gear that ever drew an approving comment from my wife – measures 23.25 x 21.5 x 14.5 inches, weighs 88 pounds, and is made from high-density particle-board with veneers in cherry, rosewood, walnut, and black ash; floor spikes are supplied.

There are a few options for hook-up. For two-channel playback, the high-level Neutrik connection is recommended.¹ When this option is used, the listener has full use of REL's ABC circuit (Active Bass Control), which permits selection of 24 bass-turnover frequencies, that is, the frequency at the upper knee of the response, above which the signal starts rolling off. These frequencies span a range of 22 to 96 Hz. REL's literature does not specify the kind of crossover or the degree of roll-off, but my ears tell me that, unlike that of the Storm II, it is very steep.

The ABC circuit consists of two controls. The first, called "coarse," has four settings, marked A, B, C, and D, which change the roll-off frequency by approximately half an octave per division, beginning at 22 Hz and going as high as 69.

Then a second control, labeled "fine," is used to trim the response further. This control, with settings of 1 through 6, offers a resolution of approximately one semitone per division, extending all the way to 96 Hz in the D position. So let's say you start with A, or 22 Hz, on the coarse control; the fine control in its first position lets you stay at 22 Hz, or choose among 23, 25, 27, 28, and 30 Hz in the remaining five settings. If these options still leave a hole in the response, then advance the coarse control to B, whereupon you may choose 32, 34, 36, 38, 41, or 43 on the fine control.

This may sound daunting, but in use it proves remarkably easy. A few suggestions to make the job easier: First, enlist a helper, someone to work the controls while you do the listening. Second, the *Stereophile Test CD* [STPH-002-2], with its low-frequency warble tones, is a valuable tool. Third, find out where your speaker's low-end -3dB point falls and start with the coarse adjustment at half that frequency. For example, the -3dB point of the speaker I used for most of my evaluations, the Quad 989, is around 35-40 Hz, so we – the importer, Sterling Trayle, did the set-up – began at A-1 (22 Hz) and wound up at A-5 (28 Hz). Don't take this as gospel, even if you own 989s; these settings worked for my room; settings may differ for yours.

As for placing the subwoofer, I'll not rehash the arguments about why I prefer corner placement except to say that it typically results in the smoothest overall response and allows subwoofers to



¹ The REL is an ideal subwoofer for systems that must do double-duty for home-theater and music because you can use the Neutrik connection for music yet connect the low-frequency-effects output of your receiver or processor to the low-level phono inputs. In addition to its separate level control, the latter can bypass the internal crossover settings. Thus, when you're playing music only, as from a CD or turntable, this input will remain inactive; when you play a home-theater source, the woofer will continue to augment the bass of your front channels and will also reproduce the .1 low-frequency channel of home-theater sources.

operate most efficiently. However, the flexibility of the Stadium III's ABC circuit is such that you can achieve satisfactory results from placement elsewhere and are surely encouraged to try.

In a position paper published on REL's website, Richard Lord argues for augmented designs because no additional electronics, with their associated colorations, insertion losses, phase anomalies, and so forth, are placed in the signal path of the main system. He also recommends small satellites with subwoofers over large speakers without subwoofers (and, presumably, with them as well) because "with a large speaker there must be more boxy radiations" and because a large speaker will "augment the output at some frequencies and cancel it at others," thus causing more "room boom."


I am aware that a designer will always argue the theory that casts the best possible light upon his products. Given Lord's design aims, his arguments are valid as far as they go. But I disagree with his statements about small versus large speakers – granted that, all else equal, a large speaker will usually sound boxier than a small one and a large one requires more care in placement and balancing than a small one. However, in my experience, even high-quality small monitors do not project the sense of dynamic ease and authority of larger speakers, and often fail to provide a satisfying impression of fullness in the middle and upper bass, essential for the natural reproduction of symphonic music. One of the main reasons for adding a subwoofer is precisely to address the dynamic limitations of small speakers and the midrange and high-end stresses and distortions that arise because the main speaker-amplifier combination has to reproduce very low frequencies. And not just small speakers – as regards low distortion and increased dynamic range, even the majority of so-called full-range speakers benefit from not having to reproduce very low frequencies.

I am emphasizing these points for two reasons. First, despite the considerable benefits of phase linearity and coherence, ease of balancing, and overall seamlessness of integration that the RELs offer, they do not get you the wholesale free ride that Lord's position paper seems to promise. Second, owing to my great enthusiasm for the Storm II, many readers of my survey concluded that I regarded it as the best subwoofer of the group. Not true. What I said was, and what I repeat here, is that the Storm works superlatively with Quads and other speakers in the British-monitor mold. If we extrapolate from this, my recommendation is that if you are basically happy with the dynamic range of your system, RELs could be the subwoofer for you. But if you are not, or if your present speakers are unusually distressed by having to reproduce deep bass or loud levels, then you need a divided arrangement.

These caveats out of the way, I have nothing but praise for how the REL Stadium III performed in my system. I checked it out with all the source material I discussed at length in the subwoofer survey, from the jazz trio, with its double bass, on Diana Krall's *Love Scenes* [Impulse IMD-233] to full orchestra with organ in Vaughan Williams' *Sinfonia antartica* [Naxos 8.550737] to the heart

beat that opens *Dark Side of the Moon* [Mobile Fidelity UDCD 6517]. Although my listening room has changed and so has some of the associated equipment, my notes indicate the Stadium handled all this material as well as any of the woofers in the survey and better than most. Its great flexibility in balancing with the main speakers made it one of the two least obtrusive subwoofers I've used, the other being the Hsu Research TN1220HO; once it was dialed in, I was never aware of the deep bass as emanating from a wholly different driver. Its integration with the Quad 989s was as seamless as the Storm's with ESL-63s. I was especially impressed with recordings of piano music, on which the REL let me hear the recording venue and the pedal action, while the entire low end of the instrument was reproduced with greater clarity, definition, body, and power.

One problem with the Storm II was that, even in the lowest settings of its controls, output was clearly audible way up above 150 Hz. This is not true of the Stadium III; the response falls quite steeply above the roll-off. Does this mean that the Stadium III is a thousand dollars "better" than the Storm? I would say yes, *if* you need the additional flexibility of the adjustments. With speakers such as the Quad ESL-63 and the Spendor SP1/2 and S3/5, the Storm worked so well that I would find it difficult to justify the additional cost for the Stadium. On the other hand, while my colleague Robert Greene achieved one of the flattest overall response curves he ever measured in his room with the Spendor 1/2-Storm combination, he could not get a good balance with his Harbeth 40 monitors, as the Storm slope was not steep enough in any setting. My experience suggests that this problem would be nonexistent with the Stadium III, owing to its far greater range of adjustments combined with its steep drop-off above the turnover frequency. But REG and I will investigate this and report in a forthcoming issue.

In the meantime, if you have a full-range speaker that is adequate or better in the warmth region but from which you would like more extension in the very deep bass, the Stadium III could be the answer. It is beautifully made and excellently engineered, and its performance is altogether outstanding. But before you commit yourself, make sure you are satisfied with your present system's dynamic capabilities. 

PAUL SEYDOR

IMPORTER INFORMATION

SUMIKO

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Phone: (510) 843-4500; fax: (510) 843-7120

Source: Importer loan

Price: \$2,995

For Paul Seydor's Associated Equipment, see his SME review.

SPECS

Frequency response: 18-120 Hz

Power output: 200 watts rms, 400 peak

Warranty: 3 years parts and labor