

Sound-Lab A-3 loudspeaker

By J. Gordon Holt • September, 1986

The Sound-Lab electrostatic loudspeakers are legendary. Many serious audiophiles have heard of them, and rumors of their existence abound in audio circles. But, like gnomes, UFOs, and poltergeists, Sound-Lab loudspeakers are sufficiently hard to find that it is sometimes difficult to prove to skeptics that they exist at all. Well, I can now report that they *do*. As proof of this contention, I can point to the two which are actually occupying solid, tangible space in my listening room at this very moment. I have even taken a photo of them, which will be published along with this report if they leave any sort of an image on the film emulsion. (Many such apparitions do not!)



I have even met, face-to-face, and conversed with, a flesh-and-blood person who lays claim to being the designer of, and the president of the company which manufactures, the Sound-Lab loudspeakers. His name is Roger West, and he too is real.

Seriously, though, for a company which has been making loudspeaker systems for almost eight years, Sound-Lab maintains an extraordinarily low profile. It has never advertised anywhere, almost never submitted products for review to magazines (footnote 1), nor has it exhibited at CES for quite some time now (though their speakers were being used by both Rowland Research and Klyne Audio Arts at the 1986 Summer CES in Chicago). As a result, probably only a few thousand people have even heard of the company, let alone heard its loudspeakers. (After this issue of *Stereophile* is published, 35,000 people will have heard of Sound-Lab.)

Why such diffidence? Because Sound-Lab sees itself as a small company, staffed by people who believe in the product and take pride in their workmanship, and the Wests would prefer that it stay that way. Actually, I don't blame them; that kind of business, today, is a rare throwback to the dark ages, when running a business was supposed more to be fun than to be profitable.

But Sound-Lab's attitude toward the promotion of their products is so laid-back, it's a wonder they sell any loudspeakers at all. How come they're still in business, after eight years of virtual obscurity? Roger attributes this to the incredible quality of his products, whose owners are allegedly so pleased that they voluntarily promote Sound-Lab speakers among their friends. It's the old build-a-better-mousetrap idea, which seems to make great logical sense, but which has brought failure to almost every manufacturing concern that adopted it as a way of doing business. In my opinion, it is *not* the quality product that usually succeeds today, but the most flamboyantly hyped product. Roger West does not believe in hype, and as proof of his opposite view, he cites Sound-Lab's eight years of longevity and continued, if sluggish, growth. After having lived with a pair of his A-3 speakers for several weeks now, and scanning my notes for the review I am about to write, I think he should be making some contingency plans to cope with a sudden increase in orders: this review is going to be a rave.

First, though, a brief description of the A-3. It is a full-range push-pull electrostatic with a curved (semi-cylindrical) diaphragm. Unlike another curved-panel electrostatic, the similarly-sized (and \$900-lower-priced) MartinLogan Monolith, whose low end crosses over to a 12"

cone woofer at 100Hz, the Sound-Lab A-3 is a true full-range electrostatic, spanning the entire audio band down to a claimed 32Hz without the use of a dynamic woofer. Also unlike the Monolith, the A-3's diaphragm is not freely suspended between its four edges to produce a continuous curved surface. Instead, it consists of a number of small, vertically rectangular flat panels, arranged in a 90-degree arc. Each panel measures about 4" wide, and they vary in height from 2.5" to 7". The varying vertical dimension, and varying tensions on the Mylar film diaphragm, cause each radiating panel to resonate at a different frequency; careful choice of those resonant frequencies produces a controlled rise in overall response at low frequencies, which precisely (in theory, at least) compensates for the LF rolloff that normally occurs in a dipole system of this size. (This front/back cancellation effect has been described often enough in these pages that I won't go into it again here.)

The A-3 is large enough to impress, but, with its nicely patina'd walnut trim (with mirror-imaged grain patterns for the skirt strip at the bottom front of each speaker) and curved, horizontally ribbed black grille cloth, too attractive to offend or intimidate. Each speaker weighs 145 lbs, but (thank Heaven!) is equipped with 5 castors, so the speakers are a snap to move around in order to tweak locations and orientation. (Just warn the cleaning lady not to roll them out of the way for vacuuming. Tell her you *want* to accumulate dust under your loudspeakers.)

The Sound-Lab A-3 is rated at 88dB sensitivity (1W at 400Hz input, 1m from the speaker), but my sample pair didn't even come close to that figure. Assuming the manufacturer's 6-ohm impedance figure to be correct for midrange frequencies, 2.45 volts of input would be equivalent to 1 watt of power. I fed one speaker with a 400Hz 1/3-octave warble tone at that level, and measured the output at 1m from the grille with a General Radio 1565-A SPL meter (tripod-mounted, 70 degrees incident angle, 40" height, C-weighted, Fast). The reading was 76dB, 12dB below the rated efficiency figure! Thus, the 100W minimum recommended power is by no means an overstatement.

Unfortunately, the speakers would not, on low frequency test tones, handle even that much power without strain. With a warbled sinewave centered around 45Hz, both of my samples sounded as if they were starting to bottom out at a mere 94dB—with a measured input power of only 12 watts. On musical material, fortunately, rather than bass tones, there were no signs of audible stress until playback levels reached about 100dB (150W input power). This is just about the minimum volume needed to reproduce symphonic and operatic music at realistic levels, but it was barely adequate for clean reproduction of such very-wide-dynamic range recordings as the JVC Rozhdestvensky Shostakovitch Symphony 15. In other words, the large (+ Series) Acoustat speakers are still the only ones I have found that can handle large amounts of mid-bass energy, let alone the below-40Hz stuff.

But what does the A-3 sound like when it isn't being stressed? I would liken it to a superb tubed power amplifier. Though not altogether uncolored—no loudspeaker is—its colorations have a strong personal appeal. The sound is rather warm and rich through the low end, rather rotund and gutsy through the lower middle range, and soft and sweet through the high end. Through its entire range it has the incredible transparency and delicacy that I have only, to date, heard from wide-range electrostatics. It is, in short, my kind of loudspeaker.

Because of these predispositions, it does not do well with tubed power amps, including the best I've tried: the [Audio Research D-250 II Servo](#). With that amp, the A-3's low end is overly warm and loose, lacking in extreme bottom, and rather flabby through the midbass. And its highs, although gorgeously smooth, are a bit *too* sweet.

Of the power amps I have on hand—Conrad Johnson Premier Fives, the Electron Kinetics Eagle 2a, a Perreux 5150B, an Audio Research D-250 II Servo, and a pair of Threshold SA-1s—the A-3s sound best with the Thresholds. The result is a bit short on infra-LF range and midbass impact, but is otherwise almost impossible to fault—at least on recordings of acoustical instruments. Highs with the SA-1 amplifiers are simply gorgeous: open and detailed, yet amazingly sweet, smooth and delicate—very much like what I hear at those live performances where some audiophiles bitch about lack of high end.

As longtime readers know, my priorities for judging reproduced sound are not exactly those of your average audio perfectionist. (Read [JA's editorial in Vol.9 No.5](#) for a second opinion from another perfectionist.) I value middle-range accuracy above all else, tonal balance second, freedom from distortion third, frequency range fourth, and imaging and soundstaging last. This is why I so frequently disagree with some of my associates' equipment reports, and must remind myself periodically that, among audiophiles, I am viewed as somewhat of a heretic. The Sound-Lab A-3s, however, are the first speakers I have heard in which all such considerations seem somehow irrelevant. They seem, to me anyway, to do *everything* right—if not perfectly right, then at least so right that I almost feel foolish trying to find *anything* wrong.

How do I love these? Let me count the ways. First off, they do midrange the way Andersen does windows! Cellos have bite and a marvelously luminous glow, piano bass strings sound just like what they are—high-strung steel wires—and the large brass instruments have an authority and awesome power that I rarely hear outside of the concert hall. For this reason, the A-3 gives an illusion of dynamic range like few speakers systems I have heard. (And those few did not do other things nearly as well as the A-3s.) No instruments are favored over others: all sound very convincingly real. Massed violins are particularly good, having that exceedingly rare mix of sweetness and resinous bite that is the earmark of a truly great upper midrange and high end.

Bass range is deeper than that of most available program material, being subjectively flat to around 35Hz in my listening room, but is a little shy of delineation impact when compared with the best I have heard. The only low end I have had in my house that was clearly superior in extension, impact and detail, was that from the Infinity RS-1B's bass towers, whose overall performance above the LF range is, I feel, far less detailed, transparent, and convincingly real than that of the A-3.

But what about imaging and soundstaging, one area where the RS-1B has remained unsurpassed to date? I've heard more breadth and depth in my listening room from some other systems—the RS-1Bs, for instance—than I get from the A-3s, but I have proven to my own satisfaction, via tapes that I mastered myself, that the Infinities in their previous out-in-the-room location (footnote 2) were *exaggerating* both spaciousness and depth to some extent. (Since the RS-1Bs were moved closer to the rear wall, both qualities are markedly diminished but are more literally accurate. But who gives a hoot about accuracy, when inaccuracy *sounds* better!) The A-3s, also positioned near the rear wall, produce about the same breadth and depth as the RS-1Bs, but with much greater transparency.

Imaging from the A-3s is spectacular! With a mono source, the "image" remains tightly bunched between the speakers, with no perceptible wander either with changes of pitch or lateral changes of listening position, and this translates into almost incredible image specificity and stability from stereo sources. This is, in fact, the first electrostatic system I have heard which allows me to move from end to end of my listening sofa to the other (a distance of about two meters) without the "stage" position shifting almost entirely to one speaker and

becoming, essentially, monophonic. As you might surmise, there is virtually no vertical venetian-blind effect from the Sound-Lab speakers.

The A-3s are the most perfect embodiment to date of my ideal loudspeaker system. Never in my life have I lived with a speaker that has brought, and continues to bring, as much pleasure, excitement, and satisfaction. In short, I am madly, passionately in love with their sound, and I hereby give notice to Roger West that he is going to have a hell of a hard time prying them loose from me.

Now that I've expressed my feelings about the A-3s, I must add that they are not going to appeal equally to everyone. They do not do well on rock material, lacking both the requisite tartness and aggressiveness to do justice to rock music, and can't produce the kind of sound pressure levels demanded by most rock listeners. And, as I mentioned previously, their soundstaging breadth and depth are not as spectacular, however accurate I feel they may be, as those of some other systems. But give these a clean, honestly miked recording of acoustical instruments, and the A-3s seem to vanish, providing as transparent a window on the music as any I have ever heard, with greater naturalness and tonal accuracy than any other.

Quite unlike the sound—a bit lean and (generally) a bit slow—of such state-of-the-art planar systems as Magnepans and Apogeos, the A-3s' sound is rich and extremely agile. (I have not heard the \$6600 Apogee system, but I assume that it now embodies the same improvements that have been incorporated into the *Duetta*, *Scintilla*, and the new *Caliper*. Nor have I yet heard the latest incarnation of the MartinLogan Monolith, which was received a couple of weeks ago.)

Mind you, I don't want to give the impression that the A-3s are worth buying. Of course, *I* believe they are well worth the money, shortcomings notwithstanding—and more, if you consider the fact that you can pay more for less quality than these have to offer. I shouldn't say that in print, however, because if I do, the demand for Sound-Lab A-3s may mushroom, Sound-Lab will have to expand in order to meet the demand, and it will no longer be the cozy little family-and-friends company that it has been ever since its inception.

I view that prospect with very mixed feelings. On the one hand, I sympathize with Mr. West in his desire to avoid the chaos that would result from a drastically increased demand for his speakers—the angry phone calls from frustrated would-be customers, dealer cancellations because of an impossible back-order situation, the disruptive move to larger quarters, the frantic search for additional capital that could not be paid back until all dealers had paid up, and so on. And what if *Stereophile* were to do what *TAS* has been known to do: follow a rave review with a complete *volte face* put-down in the next issue? Sound-Lab could go the way other companies have gone as a result of such a shift in the wind: down the tube.

Then there is the fact that much of the A-3's success as a sound reproducer is due to the careful hand-tuning of its diaphragm resonances—a procedure that, to date, Mrs. West has done herself because she has been unable to train anyone else to do it right. *Could* Sound-Lab step up production of the A-3s without significant sacrifices in reliability and sample-to-sample consistency? (The fact that other manufacturers of dipole speakers have been able to develop instrumentation to replace individual judgment when tensioning diaphragms does not necessarily mean the same could be done with equal success for Sound-Lab speakers. But I do wonder how hard the Wests have tried—if at all—to devise such instrumentation.)

On the other hand, I am compelled to tell *Stereophile* readers whose sonic tastes parallel my own that a pair of A-3s may just be the last loudspeaker system they will ever feel the need to buy. I have only heard one other system that did a better job than the A-3 of reproducing the illusion of real, live, unamplified music, and that was the Wilson Audio Specialties WAMM, which sells for roughly eight times the A-3's \$5750.

It's my feeling that a pair of A-3s belong in the system of anyone who enjoys the sound of a real live orchestra (or chorus or string quartet or opera or what have you) and can afford the purchase price. But in order to help Sound-Lab remain the kind of company they are now and have expressed the hope of remaining, I shall conclude by saying that the A-3 is one of the worst speakers I have heard, that it's an unconscionable ripoff at the price, and that the Wests aren't going to get the review samples back without a fight.—**J. Gordon Holt**