

Convergent Audio SL1 Ultimate Preamp: The Ultimate Solution?

Perhaps you're bothered a bit, as I am, by the ascendancy of line-stage preamps. They don't really do much. Certainly they don't amplify much. If they did, people with CD players (or separates) with decent volume pots couldn't go directly to their amplifiers, eliminating the line-stage preamp.

Line-stage preamps really serve as routing boxes, allowing us to switch between sources, and volume controls (they reduce the volume, not increase it; balance controls, are, one way or another, pretty much just separate volume attenuators for each channel). And whatever they're doing with the source signal, that signal is already high in level – not some puny thing easily lost, masked, or distorted. They might come with a remote control, but controls often cause sonic degradation, or a phase switch, which I confess I find helpful, provided that there isn't a trade-off in sound quality. But that's about all we get from line-stage preamps. Not really a helluvalot of work; not much complexity.

Why, then, do so many cost so much? These days, top-of-the-line High End line stages run \$5,000, \$8,000, \$10,000, even \$14,000 and more. If you're still playing records, you still must have a phono stage at anywhere from \$500 to roughly \$5,000. Since that is outboard, you'll need another set of interconnects. And if you're into that sort of thing, you'll need another after-market power cord, too. And you'll have to devote another shelf to hardware instead of the really useful stuff – records and CDs!

Full-function preamps of high pedigree are still available. Among them are components from Audible Illusions, Spectral, Jadis, and others. But my favorite, indeed my favorite among all the preamps I've heard, is the Convergent Audio Technology SL1 Ultimate. It presents an interesting combination of virtues old and new. And it delivers outstanding performance.

Though the sound of the CAT is modern, the approach of the company (and its owner/designer, Ken Stevens) is rather old-fashioned, making the Ultimate easy to overlook. The company does a bit of marketing, and little else to call attention to itself. Unlike some of its competition, changes and additions to its product offerings are infrequent. And they're never superficial.

Indeed, CAT probably deprives itself of marketing opportunities because it makes its improvements too easy to neglect. Cosmetically, the Ultimate preamp, which has undergone substantial improvement through the years, could easily be mistaken for the preamp that came from the company nearly 20 years ago. Its appearance is unchanged – conservative, functional, unprepossessing. As always, it has two nicely machined rotary knobs, one for volume and the other for balance, near the center of the faceplate; flanking them are toggle switches to choose between phono and line, the two line inputs, mute or operate,



tape or source, etc. And there's a single red LED that comes on when the unit is ready to go. On the separate but non-detachable (the umbilical cord is hard wired at both ends), little (but dense and heavy as a dark star) black power supply, there's a rectangular on/off switch that glows red when the unit is on. That's all.

Similarly, the functional features of the CAT offer no clue to the changes inside or the modernity of the sound. Inputs and outputs remain single-ended RCAs. Stevens has never been convinced that balanced connections are better, so the CAT doesn't provide any. There is no remote control; Stevens has not found one that does not, in his view, compromise sound quality. There's no phase switch, again because, in Stevens' view, the extra switch results in a sonic compromise. Cartridge loading at anything other than the 47,000 Ohms "default" position is still accomplished by inserting plugs provided by CAT into an input adjacent to the phono input.

But the Ultimate has evolved considerably through the years. The first tip-off comes when you carry the thing. As a result of efforts to provide better shielding, increased resistance to air and structure-borne vibration, and a beefier, stiffer power supply, the main chassis and the power supply, taken together, feel more like a good sized amp than a preamp, weighing in at a whopping 60 pounds unboxed. Gradual modifications to the circuit have resulted in changes to the tube complement, as well. Today's Ultimate uses six 6922s, which CAT gets from Sovtek, and four 12AX7s, from EI in Yugoslavia. (Note that US 6DJ8s may not be substituted for the 6922s; they're unsuitable to the CAT's plate voltages. Note too that 5751s may not be used in place of the 12AX7s, and that, like the SL1 Signature Mk III, but unlike previous iterations of the preamp, 12 AU7s cannot be used in the Ultimate.) Other changes to the circuitry and passive parts have been made through the years, too. The most recent: the number and placement of capacitors (which are custom made

for CAT), decoupled cascaded regulation (whatever that is) using Mosfets, new proprietary internal wire, a new circuitboard (meaning older CAT SL1s cannot be upgraded to the Ultimate), and more.

I've been so happy with the Ultimate that I've done no tube rolling. Experiments with cones and other outboard feet have yielded little repeatable change, and that generally a detrimental hardening of the sound – testimony I think to the quality of the beefy mechanical engineering. A repeatable, solid (but by no means huge) improvement came from use of an ESP power cord. As only my Rockport turntable and the CAT share a dedicated 30-amp circuit, there probably wasn't need for more radical improvement.

So, what has the gradual improvement of the CAT preamp wrought? For one thing, a sound I would describe as modern, one that bespeaks the convergence of tubed and solid-state high-end components on increasingly realistic music reproduction.

What do I mean by "modern sound?" Well, first, a *lack* of sound: quietness. Though the deep blackness between notes of digital recordings and gear may not be natural, neither is hum, buzz, shush (circuit rush and tube noise), or any other electronic noise. The digital age has made us require silence from our components. The Ultimate preamp delivers it. By any standard, digital or analog, tube or solid-state, the CAT is a nearly noise-free component. When used with the Wavelength Triton Signature single-ended triode amps and the extremely sensitive Avantgarde Horn Trio loudspeakers, with the system at idle but unmuted, you just can't tell it's on. The same is true if the unit is used with CAT's own amps or the Lamm ML2s and either Avalon Eidolon or Shun Mook Bella Voce speakers. Only when I use the high input sensitivity (and, in this application, high powered) Lamm amps with the extremely sensitive (105dB/watt/meter) Avant-gardes do I hear a bit of tube rush from the CAT and when music is playing, it's undetectable.

Another aspect common to a lot of modern components is nice, robust gain. They don't strain easily. Certainly, that too is true of the CAT, especially where it matters most, in the phono stage. the Clearaudio Insider Reference, with its output of about 0.6mV, mated beautifully with the CAT. I assumed that the Koetsu Onyx Platinum, whose output is merely +/- 0.2mV, would be more of problem. My assumption was wrong. The system was still essentially noise free. And there's almost no noise that rides along with the gain or the music. The CAT is robust, and hence versatile, and stands out of its, and the system's, way.

Given a low noise floor and high gain, you'd expect a modern-sounding component to have good dynamic capabilities. The CAT meets that expectation. Throughout the frequency spectrum, it reaches well down into the softest passages, neither masking nor distorting tonality and detail in the most delicate pianissimos; when called for, it recreates a natural, unstrained, easy softness. And dynamic peaks can be huge and scary; if you go for those late Romantic orchestral climaxes, the CAT's your animal.

There is also an extremely natural continuousness to the CAT's presentation of music's dynamics – no stair-step ratcheting of loudness, but instead the smooth scaling of amplitudes that reveals which musicians and, especially, vocalists have the greatest control over nuances of dynamic expression. In addition to wide dynamic range and exemplary continuousness, the CAT has an ability to place dynamic activity with and on the specific image of the instrument creating it, an ability that I first heard and attempted to describe in the Clearaudio Insider Reference phono cartridge (review, Issue 116). When I wrote about the Clearaudio's ability to attach music's liveliness, energy, and motive force – its action – to the locales and physical bodies of the instruments creating them, to sort out which sound generators were more active and which were less, I was listening to it through the CAT. If the CAT had not been capable of transmitting such information, I couldn't have heard it from the Clearaudio.

Modern-sounding components have also achieved a high level of tonal neutrality over the most of the audible frequency range. The best tube units no longer have only a luscious (romanticized) midrange coupled to rolled highs and tubby bass. The best solid-state units no longer have dry, gritty midranges, highs that are about as nice as the sound of chalk screeching across a blackboard, and bass that falls short only of a thunderstorm in the mountains.

Again, the SL1 Ultimate meets the new standard. The depth and power of its bass reproduction equals (and usually exceeds) anything I've heard before, tube or solid-state. This thing produces bass notes and the shuddering blast of air that supports them with power, tonal specificity, detail, and subtlety.

In the highs, the CAT's deliver all the overtones I'm capable of hearing, and perhaps more tellingly, all my sons, with their much younger ears, are capable of hearing. I should add here, though, that the CAT does not give me the sense of completely unlimited extension that I've heard from some Audio Research and Spectral gear. Nor does it equal the unlimited, "big sky over Montana" expansiveness that I get from Burmester gear. No music-related information is missing, but there's a feeling that the CAT doesn't quite keep reaching forever upward.

Yet throughout that frequency range, the CAT is tonally neutral. I've never heard any component that does less to color tonal information with a sound of its own. Proof of that came not only in comparison of the (non)sound of the CAT to my recollection of the characteristic sounds of oft-heard instruments and voices but also from comparison of CDs driven directly into the system by a CD player (the Mark Levinson No. 39) with an excellent, all-analog volume control to those CDs driven by the same CD player, with volume controls completely bypassed, into the CAT. To my surprise, I couldn't repeatedly find evidence of the CAT imposing much of its own sound anywhere in the frequency spectrum. Near as I can tell from careful listening to LPs, the phono stage is like the line stage: It's neutral.

In addition to deep quiet, gobs of gain, dynamics both wide and subtle, broad frequency response, and tonal neutrality, modern High End gear is characterized, perhaps most of all, by transparency to the source. That sort of transparency is not the same thing as transparency to the rear of the soundstage. Some modern-sounding components, including the CAT, have that; some do not. Here, though, I'm talking about a component's ability to be transparent in the sense that it is invisible within a system, neither failing to reveal the performance nuances of other components (and ultimately, recordings) through an inability to preserve and resolve subtle information, nor masking them by reason of imposition of colorations, noises, and distortions. I've already commented on what I could hear from the Clearaudio Insider Reference phono cartridge when using the CAT. When I switched to the Koetsu Onyx Platinum, I could instantly hear that cartridge's greater liquidity and naturalness, equally superb detailing, and very slightly diminished bass power and dynamics in comparison to the Clearaudio. Similarly, the differences between the great Wavelength Triton Signature SET amps, with their single-output-tube immediacy and directness and 300B-derived tonal glory, and unbelievably great Lamm ML2s, with their stunning, life-size images and wall-melting, Texas-sized soundstage, were instantly revealed. And all the tweaks we get into – adjustment of azimuth and VTA, cable dressing, speaker positioning, dialing-in of subwoofer phase and amplitude and crossover point, etc. – which too often involve guesswork, are, through the CAT, as easy to hear as a change in speakers. For that matter, if you like digging into the differences between original and reissue LPs, gold and silver CDs, phono cables, even record-cleaning fluids, use the CAT and all will be revealed. I've yet to find the limits of the CAT's transparency, even invisibility, to the rest of the system and to sonic and musical information.

By now you've guessed that all of this could be put another way. If you like to think in terms of a component's ability to resolve information, to reproduce all the detail previously hidden away in grooves and pits, if you've been impressed by how much more subtle "data" our modern audio systems now recover, you'll find the CAT SL1 Ultimate belongs at the head of the class of new components.

More importantly, the CAT does one thing extremely well that I haven't always heard from its competition, even those that are otherwise exemplars of modern-sounding components of the second Golden Age of audio. The CAT's way with tonal color is outstanding. Long ago, I noted that tonal colors in music, like various hues in a painting, consist of more than just an audible or visible wavelength (frequency). A color – say, a medium blue – could come from chalk, crayon, or pencil, from watercolor, oil, or acrylic. While the color would be the same, its depth and density, its reflectivity, its intensity, would differ. In music, the same note (frequency) could come from a piano or a cello or a French horn, but the tonal detail behind that note

could differ greatly. Even the same note played on a single instrument could be "made" very differently by a musician's choices in attack, articulation, duration, shading. Many components fall short of revealing those nuances, even though, in a more basic sense, they "get" the note. The CAT does not fall short; it retrieves and recreates the nuances of tonal color that too often are washed away in our stereo systems. I've heard no gear that beats the CAT in conveying tonal truth and very few that equal it, none at a lower price. It is superb.

On the other hand, I have heard preamps that give us a bit more of a sense of the atmosphere of the venue in which a recording was made. Some reveal more details regarding the air in the hall – its relative humidity, barometric pressure, and the like. I'm not sure whether this represents a shortfall in the CAT's performance or a trade off. For one thing, a good bit of this kind of information *is* revealed by the CAT, just not as much as I've heard from the Jadis JP80MC and a few others. For another, I've never heard that sense of the atmosphere coupled to as much resolution of tonal color as the CAT delivers; it seems to come at a cost in diminution of tonal information. If forced to choose, I'll opt for the CAT's way with tonal color. But in an ideal universe, I'd like that and a more complete sense of atmosphere.

If no trade-offs were required I'd like a remote control and phase switching, as well. I suppose some applications could benefit from balanced connection options, too. Besides, there's always room for improvement.

Although I'm a dyed-in-the-wool audio crazy, as inclined to fiddle about with my system as the next geek, I'm so pleased with the CAT's performance, and so convinced that I've not found its limits as it continues to keep step with other improvements in my system, that I suspect I'll be changing just about everything else before I get a different preamp. The CAT SL1 Ultimate is my first choice in preamps. ☺

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Source: Manufacturer loan
Price: \$5,950 with phono stage; \$5,350 without

ASSOCIATED EQUIPMENT

Avant Garde Horn Trio Loudspeakers with two pairs of Avant Garde's Pro 17 (sub)woofers; Nordost SPM speaker cables; Lamm ML2 and Wavelength Triton Signature monoblock amps; Nordost Quattrofil interconnects; CAT SL1 Ultimate and MK III preamps; Mark Levinson No.39, Metronome CD players; Rockport Sirius II integrated turntable, tonearm, and stand; Koetsu Onyx Platinum, Clearaudio Insider Reference, van den Hul Grasshopper Gold IV cartridges; Transparent Reference XL MC phono interconnect; PolyCrystal equipment racks and shelves; ESP and Siltech power cords; ASC TubeTraps; cones, feet, stones, bricks, cable floaters, dedicated circuits, separate grounding, and other indicia of audiophile tweakiness.