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Equipment Reviews

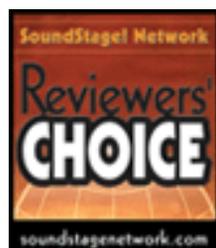
Constellation Audio Inspiration Stereo 1.0

Amplifier

Details

Written by Aron Garrecht

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Immediately before putting fingers to keypad for this review, I spent a considerable amount of time reviewing Constellation Audio's [Inspiration Preamp 1.0](/index.php/equipment-menu/648-constellation-audio-inspiration-preamp-1-0-preamplifier) (</index.php/equipment-menu/648-constellation-audio-inspiration-preamp-1-0-preamplifier>). (\$9900 USD). I began that review by touching on the company's lineage,

highlighting a few of the minds responsible for its products, and describing its three product tiers. The Inspiration series comprises Constellation's least-expensive models, succeeded by the Performance series, and finally their flagship line, the Reference series. But while the Inspiration models are Constellation's introductory products, they're by no means budget, stripped-down, bare-bones offerings. In fact, if I had to pick one word to define the Inspirations -- and in particular the subject of this review, the Inspiration Stereo 1.0 amplifier -- it would be *value*.



Beauty is *not* just skin deep

At \$11,000, the Inspiration Stereo 1.0 is the least expensive amplifier Constellation Audio currently offers. It weighs a healthy 80 pounds, stands 8.5"H, and has a dominating footprint of 17"W x 19"D. Its output is specified as a stout 200 or 400Wpc into 8 or 4 ohms, while its signal/noise ratio is >95dB (A-weighted), and its total harmonic distortion plus noise is <0.05% (1kHz at up to 90% of rated power). The Stereo 1.0 also offers two different gain levels. Paired with a non-Constellation preamplifier, its claimed gain is a respectable 26dB through its balanced (XLR) or unbalanced (RCA) inputs. But paired with any of Constellation's own preamps, the Stereo 1.0 offers a connection option the company calls Direct, a balanced-only option that, as I explained in my review of the Inspiration Preamp 1.0, "bypasses one of the proprietary J-FET line stage gain modules in the Constellation amplifier, and uses the Preamp 1.0's high-voltage output to directly drive the power amp's gain stage." Direct connection significantly reduces the overall gain level, to just 14dB -- but the voltage load on the amplifier is also reduced, making possible lower levels of noise and distortion.

The Stereo 1.0's chassis looks very similar to that of its far more costly brethren, the Performance Centaur II (\$40,000) and the Reference Hercules II (\$90,000). Alex Rasmussen, president of the Neal Feay Company, an industrial design and manufacturing firm, and lead industrial designer of all Constellation products, has convincingly carried forward into the Stereo 1.0 the immediately recognizable aesthetic of Constellation's amplifiers. In an effort to reduce manufacturing costs, the top, front, bottom, and rear panels of the Stereo 1.0 are made of thin sheets of aluminum, rather than the expensive solid billets from which the Performance and Reference chassis are milled. The side panels are a much thinner version of the more expensive lines' dual-layer, honeycomb-like pattern of vents, and remain the most eye-catching and identifiable aspect of this model.

The Stereo 1.0's nearly flat front panel is creased by two ridges reminiscent of a jet stream. These grow more pronounced until they reach the top of the faceplate, at which point they continue along the top plate, diminishing until they vanish halfway toward the rear. The ridges begin at either end of a solid horizontal bar that anchors the bottom third of the front panel while also serving as a power button and mute switch. Consecutive pressings of this bar put the Stereo 1.0 successively into its five operating modes, each indicated by a different display from the single LED at the bar's center: Standby (solid red), Cool Down (flashing red), Warm Up (flashing green), On (solid blue), and Mute (flashing blue).



On the rear panel are balanced (XLR), unbalanced (RCA), and Constellation's Direct (XLR) inputs. Above those, to the left, are toggle switches for Mute On/Off and Direct Balanced/RCA. Between the two banks of inputs are the speaker terminals, each capable of accepting spades or straight-only banana plugs. If your speaker cables terminate in angled bananas (as do the WBT-0610 Ag plugs terminating my Kimber Kable KS-6063 cables), you'll need to use a straight-banana extension -- the depth of the collars surrounding the Stereo 1.0's terminals are too deep to accept anything else. Between the speaker terminals are a trigger input, a USB Type-B connector for service updates, and a 15A IEC AC socket with main power rocker.

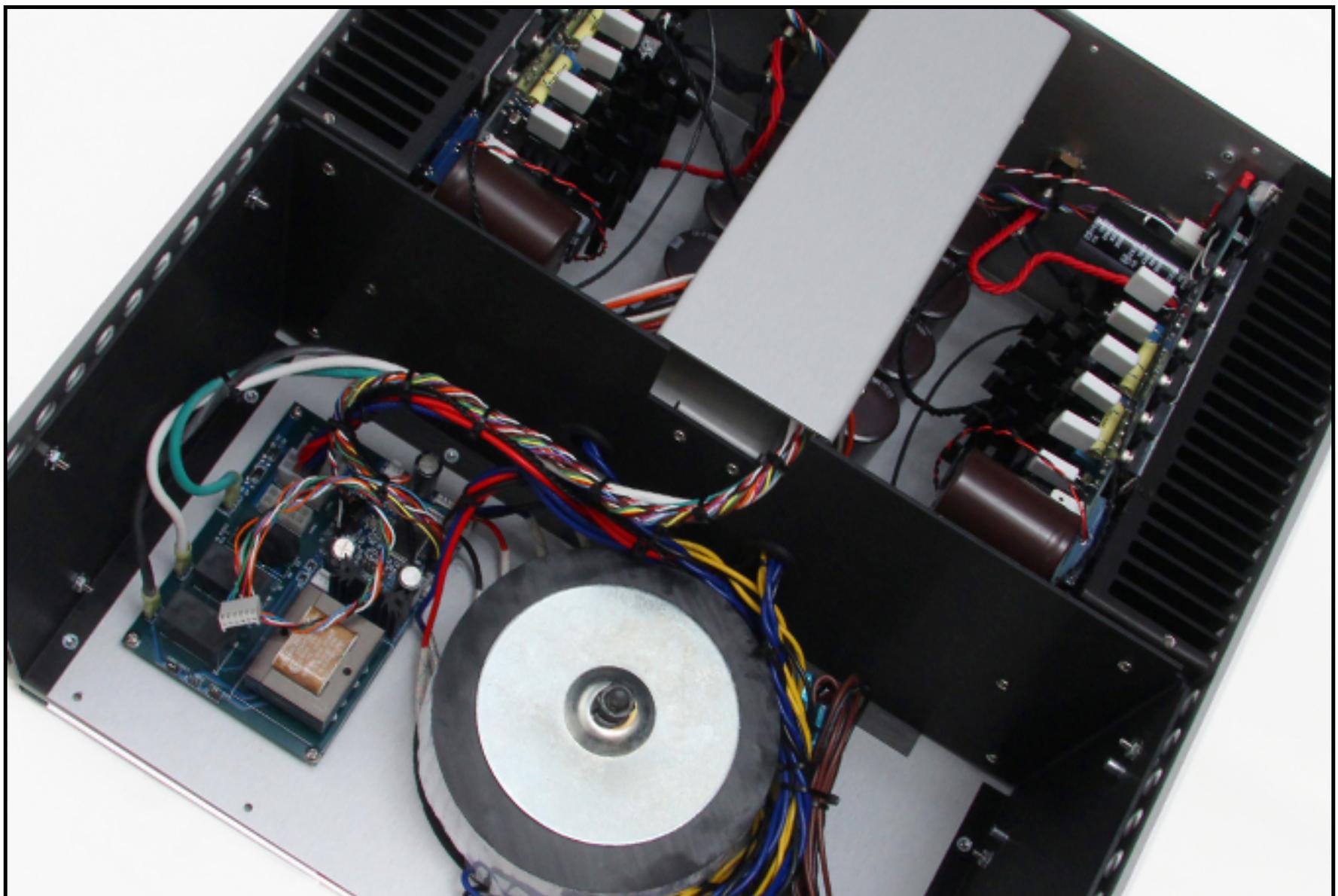
As I read the manuals for the Inspiration Preamp 1.0 and Stereo 1.0, I began to appreciate how much Constellation's philosophy of reducing costs in areas that minimally affect the overall sound quality is embodied not only in these models but throughout the entire Inspiration line. Consider, for a moment, just how much is shared between the Reference Hercules II, the Performance Centaur II, and the Inspiration Stereo 1.0: the line-stage gain module, the mechanically isolated circuit boards,

the Direct interface, and the balanced, bridged, fully discrete circuit topology are all identical. Where the Stereo 1.0 differs is in the implementation of its input and gain stages. Unlike the Centaur II and Hercules II, whose input and gain stages occupy independent circuit boards, the Stereo 1.0's input and gain stages are on a single board, reducing both complexity and parts count. While these stages are still fed voltage and power independently, the simplified circuit layout and location makes possible a much simpler power supply and internal architecture.

The Stereo 1.0's power supply also uses a custom-wound toroidal transformer that supplies power to 24 capacitors, each capable of storing 10,000 μ F. I asked Irv Gross, Constellation's VP of Sales, to tell me what makes Constellation's balanced bridged topology unique:

The balanced bridged topology uses only N-type output transistors. This enables the two halves of the audio signal to remain perfectly balanced. In most fully balanced amplifiers, the schematics for the positive and negative halves of the amplifier circuit are mirrored, but one half is built using N-type transistors and the other half using P-type transistors. While this approach will get you close, there will always be discrepancies because the transistor types themselves are different. As such, they will never quite allow you to truly achieve a perfectly balanced output, whereas using all N-type transistors will.

He also told me that this design has made output filters a thing of the past for Constellation amplifiers.



I peeked under the Stereo 1.0's cover. It's clearly divided into two sections: power supply and audio circuitry. The power supply occupies the entire front half of the amplifier, the audio circuitry the rear. The transformer, though covered in a tangle of wiring, is fully shielded from the audio circuitry with a thick aluminum plate, which further compartmentalizes and rigidifies the case. Leading off this plate and bisecting the rear half of the chassis is another fully shielded aluminum channel, which encases the supply leads from the IEC outlet on the rear. The audio circuitry and output stages are beneath and to either side of this channel, each output stage directly mounted on a beefy heatsink directly behind a honeycombed side panel. This topology, I was told, permits exceedingly short signal paths and more efficient cooling.

Acoustic love affair

When I'd first fired up the Inspiration Preamp 1.0, a few things rubbed me the wrong way: It took a long time to turn on, its ergonomics were a bit strange, and when paired with anything other than a Direct-connected Constellation amplifier, it was a bit noisier than I'd expected. Firing up the Stereo 1.0 for the first time was a more pleasant experience. While it took even longer than the Preamp 1.0 to power up or down, that seemed a small price to pay to ensure solid power delivery from an amplifier of this caliber. Once the Stereo 1.0 was up and running, I first drove it with my Simaudio Moon Evolution P-8 preamp, and immediately got the impression that, as the Ford Motor Company underrated the 1970 Boss 429 Mustang at 375hp, Constellation has underrated the Stereo 1.0 at 200Wpc. For those who aren't car buffs, Boss 429s were later dyno tested by several reputable sources as producing well over 500hp, and I have no doubt that if someone were to bench-test a Stereo 1.0, they'd find a similar if not greater difference between specified and actual performance.

I came to this conclusion immediately after listening to "Tin Pan Alley," from *The Essential Stevie Ray Vaughan and Double Trouble* (16-bit/44.1kHz FLAC, Epic/Legacy). The dynamic range afforded by the Stereo 1.0 was beguiling: Vaughan's electric guitar sounded resolute and unencumbered by headroom limitations, and at no time did notes from his strings sound hard, glaring, or unnatural. The anchoring rumble of Chris Layton's drums behind Vaughan at times spanned the width of my room in a manner truly arresting. I could feel each kick-drum beat in my chest, and reveled in the control, definition, and overall sense of ease with which the Stereo 1.0 delineated the skins against Tommy Shannon's wonderfully textured bass. Nor was it all about brute force -- taps of the brass had shimmer, good tonal color, and convincing decays, while twin cymbals struck together exhibited sharp transient control and appreciable vague coherence. I also enjoyed listening to the cracks of the wood blocks -- the initial impacts of their sound popped into thin air just right of center, followed by natural decays that seemed to float into a velvet-"black" background. Over and over, no matter how hard I pushed the Stereo 1.0, it never even approached sounding compressed, etched, strained, or aggressive. This, to me, personifies a well-designed amplifier.



Off to a terrific start, and impressed by the apparent synergy of the Constellation and my Simaudio P-8, I could have happily left things alone and done the rest of my listening for this review using only this dynamic duo. But I wanted to hear what differences, if any, might be made by inserting the Inspiration Preamp 1.0 in the loop by way of its Direct connection -- I'm a pretty firm believer in brand synergy.

Once the Constellations were connected to each other, I immediately noticed two things: gain levels dropped substantially, and, to my surprise, the noise floor grew a shade darker. With "Tin Pan Alley" as a baseline and using a sound-level meter and pink noise, I adjusted the volume level on the Preamp 1.0 to where I'd had it with my P-8, then played the track a few more times, listening for other differences. While there were more similarities than dissimilarities, there was a slight dimming of the overall sound, though not necessarily in a bad way. With the Direct-connected Constellations, the wood blocks sounded comparable in their attacks and a hint farther back on stage, but their decays seemed to diminish marginally sooner. I heard no differences in the texture, depth, or alacrity of Shannon's bass, and no dynamic compression in Layton's drums -- but I did hear a slight darkening of the brass, analogous to a shift in shade from butterscotch to caramel. The positions of Layton's drums also seemed ever so slightly farther back on the stage, as did Vaughan, which added to the soundstage measures of apparent depth and width.

From these observations I concluded two things: First, the synergies of the Stereo 1.0 and the two preamps were neither better nor worse than each other, just different. Second, it was inevitably a matter of preference, not performance, that divided these pairings. My inclination was toward the Constellation duo, and so I left things alone for the remainder of this review. Not long after starting to rifle through my music collection, I was stopped in my tracks by Omar Hakim's drums in the first 30 seconds of "Sensation," from Bryan Ferry's *Boys and Girls* (24/96 FLAC, E.G.). I've heard this track a number of times through my reference Simaudio gear, and what caught my ear here was just how similar the Constellations' sound was, despite my expecting otherwise. Hakim's drums had real kick, complemented by obvious transient control and focus. David Gilmour's electric guitar was equally well defined, with a sense of space around it that reminded me, once again, of just how good the Inspiration Preamp 1.0 and Stereo 1.0 were at conveying a sense of space without inflating the size of the instrument.



Later on that album, "Slave to Love" proved equally alluring. The track opens with wood blocks and various other percussion cleanly reproduced at center stage. I could easily hear Neil Hubbard's electric guitar move into the fold toward the left. As the track continues, Ferry's voice is locked at center stage, but what caught my ear was how the backing singers sounded and where their voices were positioned. I could easily make out individual voices, and every one of them was pushed toward the extremities of the soundstage, emanating from far beyond my speakers. I also reveled in Keith Scott's electric guitar during his solo in the middle-10-bar instrumental -- it filled my room with no hint of strain, and sounded more organic than I'm accustomed to hearing it through my

reference Simaudio gear. This, in combination with how Scott manipulated the strings to create the trademark Roxy Music sound -- or, more important, how cleanly and transparently the Stereo 1.0 communicated this characteristic -- really brought me back to the mid-1980s.

Moving out of the '80s and into the '90s, I cued up "B Minor," from Leahy's self-titled debut album (16/44.1 FLAC, Virgin). I paid particular attention to Donnell Leahy's fiddle, listening for signs of grain, etch, or aggressiveness, but came up short. The overall sound maintained great senses of pace, rhythm, and timing, but, to a small degree, lacked the liveliness I'm accustomed to hearing through my slightly cooler-sounding reference system. Donnell's fiddle was still anchored at center stage, sounding tonally correct, fast, dynamic, and full of textural detail -- but, surprisingly, it wasn't the focus of my attention. Instead, I was drawn to Frank Leahy's drums, which came across with even more addictive punch than usual, filling the space between my speakers with almost magically holographic solidity. Also compelling was the positioning of the light taps of the brass, which now solidly emanated from about a foot directly *behind* my speakers. Hearing this kind of pinpoint imaging, suspended in what seemed a vast space, all complemented by what was clearly becoming the Stereo 1.0's forte -- rock-solid bass -- was eerily realistic. The drums sounded almost indistinguishable from how they're presented through the Simaudio gear -- if it weren't for the one or two extra foot-candles of light with which Sims imbue the sound, it would have been a real struggle to tell them and the Constellations apart.

Switching back to the Constellation combo and quickly listening to Leahy's "The Call to Dance" again shone a spotlight on the Stereo 1.0's two strongest areas: transparency and bottom-end definition. The pitch definition and invigorating *thump thump thump* of the drums captivatingly pounding away behind Donnell's fiddle caught my attention every time. Oddly, "The Call to Dance" sounded livelier than "B Minor" in pitch and pace; it could be a slight change in how the track was recorded, or perhaps a change in microphone positions; but the fact that I was able to pick up on such a minute detail, such an almost imperceptible tonal change, exemplified just how transparent the Stereo 1.0 was, particularly when paired with the Preamp 1.0.



I dug my way out of the '90s and straight into 2004. “Don’t Miss You at All,” from Norah Jones’s *Feels Like Home* (24/88.2 FLAC, Blue Note), gave me a glimpse of how adept the Stereo 1.0 could be with a woman’s voice and an acoustic piano -- two of the hardest things for audio gear to get right. Jones’s piano notes didn’t float around my room; instead, they remained precisely where they’d originated from, just as they would had she been playing in my room. Each note had rich, dense tonal color, yet effortlessly transitioned from vibrancy to delicacy. Note decays consistently dissipated against the velvet-black backdrop I’d come to expect and appreciate from the Constellations, but did linger a wisp longer through my Simaudios. Also different was how the Simaudio duo painted Jones: I could more easily hear the breath in her voice, the fluctuations in texture and microdynamics, and the distance between her and the microphone. On the other hand, the Constellations presented Jones with a better sense of scale, a hint more warmth, and a smidgen more fluidity. I can’t say that either of these sounds was better or worse than the other; both were satisfyingly welcoming in decidedly different ways.

In the end

Spending time with Constellation Audio’s Inspiration Stereo 1.0 amplifier has been a rewarding and educational experience: rewarding because it’s one of the better two-channel amplifiers I’ve heard; educational because I grew to understand and appreciate Constellation’s approach in trickling down technology to its more affordable models. Priced at \$11,000, the Stereo 1.0 shares most of its circuitry and parts with Constellation models costing four to nine times as much. This undeniably

makes it Constellation's best value in a power amp. But in the high end, it's not always just about value -- it's also about absolute performance, and the Stereo 1.0 has nailed that too. It achieves levels of transparency, power, control, tonal color, and dimensionality well beyond those implied by its price and specifications. I believe that Constellation Audio has created something special in the Inspiration Stereo 1.0. I'll be sad to see it go. Highly recommended.

... *Aron Garrecht*

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Associated Equipment

- **Speakers** -- Rockport Technologies Atria
- **Subwoofers** -- JL Audio Fathom f112 (2)
- **Amplifiers** -- Rotel RMB-1585, Simaudio Moon Evolution W-7M (monoblocks)
- **Preamplifiers** -- Marantz AV8801, Simaudio Moon Evolution P-8
- **Sources** -- Oppo Digital BDP-103 universal BD player, Dell E7440 Ultrabook laptop computer running Windows, JRiver Media Center 20
- **Digital-to-analog converters** -- Simaudio Moon Evolution 780D, Wadia di322
- **Cables** -- Clarus Crimson S/PDIF and USB, Analysis Plus Silver Oval-In interconnects; Kimber Kable Select KS-6063 speaker cables; Cardas Clear Blue Beyond power cords
- **Power conditioner** -- Torus Power AVR2 20A

Constellation Audio Inspiration Stereo 1.0 Amplifier

Price: \$11,000 USD.

Warranty: Three years parts and labor.

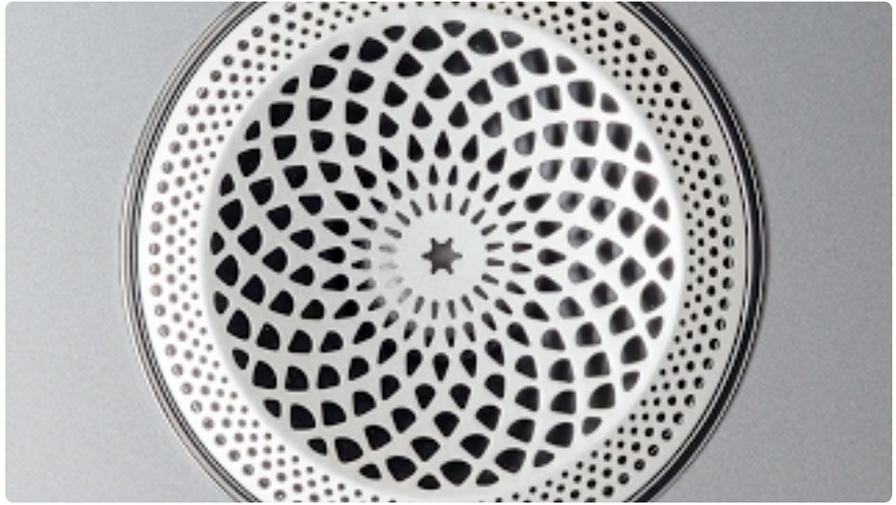
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