



Zanden Audio Systems 8120F Stereo Amplifier | REVIEW

August 18, 2024

By Garrett Hongo

For the past seven years, listening to the gamut of jazz, rock, opera, and symphonic music, I have had the pleasure of great and rewarding sessions with my Zanden 8120, a stereo amplifier in its Modern line, matching it up not only with other Zanden [electronics](#), but also with a parade of analog, digital, and preamplification gear from over a score of other manufacturers all over Europe, the U.S.A., and Japan. I'd listen far into the night, loving the 8120's rich and natural sound, refinement (particularly with voices and orchestral strings), and its terrific extension, so impressive for a tube amp. So when Eric Pheils, Zanden Audio Systems North American importer, contacted me about reviewing the new Zanden Audio 8120F amplifier, you could say I was "amped" to hear what it had to offer that might be new. But I truly wondered how much

better Zanden could make its basic sound. Would the 8120F just be different, albeit in interesting ways? And if so, could I easily hear it?

From what I understood about Zanden Audio, under the guidance of its President and Chief Engineer Kazutoshi Yamada, the company just doesn't trot out new iterations of gear for any incremental upgrade. As was the case with the Zanden [1200 Signature](#) phono stage I reviewed in April, it often waits years until its research accumulates enough improvements to warrant a new version. In this case, for the 8120F amp, the changes essentially had to do with new Finemet core output transformers (made by a division of Hitachi) that replaced the high-quality transformers made by Tamura, another noted Japanese company. Custom Finemet transformers had already been used in Zanden's 9600mk2 amplifiers, its flagship Classic line monoblocks that each employ a pair of KR Audio 845 triode output power tubes. In addition, there were changes in wiring and absorption material that went into the new 8120F—all improvements claimed to result in a faster, more transparent, and more highly resolving sound with better imaging, more power, and greater authority in the fundamental bass region. I was promised a sound that would have pretty much the same fundamental character as my 8120 but that it would demonstrate better frequency response, a denser sonic quality, and be much quieter. Hmmmmm, I thought. We shall see.



Kazutoshi Yamada

Zanden Audio 8120F: Design and Development

As explained to me in an email from Yamada-san, the Finemet transformers that Zanden Audio now places in the 8120F (\$30,500 MSRP) are superior to that used in the output transformers in the original 8120 (\$20,990 MSRP when last available). They are characterized by low core loss, excellent electromagnetic noise suppression, and much improved frequency response. The claimed result is a betterment in every parameter of performance. In the tradition of all Zanden Audio gear, Yamada-san wanted the 8120F to surpass the previous model's capabilities even though both designs share the same circuitry. When he discovered that the Tamura transformer had been discontinued, he wished to ensure that a new choice of transformer would improve the sound of the amp. Thus, the Finemet transformer was chosen for the 8120F—the additional "F" signaling the change.

Digging more deeply into the matter of this change in output transformers, I was told that, even though the core material is manufactured by Hitachi metals, Zanden Audio takes these cores to



a company called Tsuge Denki. It is Tsuge Denki, then, that winds the complete transformers around the Finemet cores. The Finemet core material itself is a nanocrystalline material, consisting of densely packed, thin ribbon-like strips. These strips can vary in thickness. The thinner the material the less energy loss. However, it is also more difficult to manufacture or fabricate finished transformers with such a thin and delicate material. Tsuge Denki's use of these extremely thin laminate Finemet cores produces what is claimed to be excellent cohesion. They also employ a unique process to polish the cut edge of the core material. The result of this qualities—extreme thinness, density, cohesion and the polished edge—are assumed to ensure maximum performance of Zanden's Finemet core transformers.

In this sense, the choice of transformer followed Zanden's basic philosophy of design to bridge the gap between the sound of live and recorded music. The company does this by tinkering with and testing new parts, reviewing traditional circuits, answering personal dissatisfactions, and keeping in mind the sound of live music in an acoustic space. Yamada-san's electronics, he said, are designed to sound natural and well-balanced, neither minimizing nor emphasizing any particular aspect.

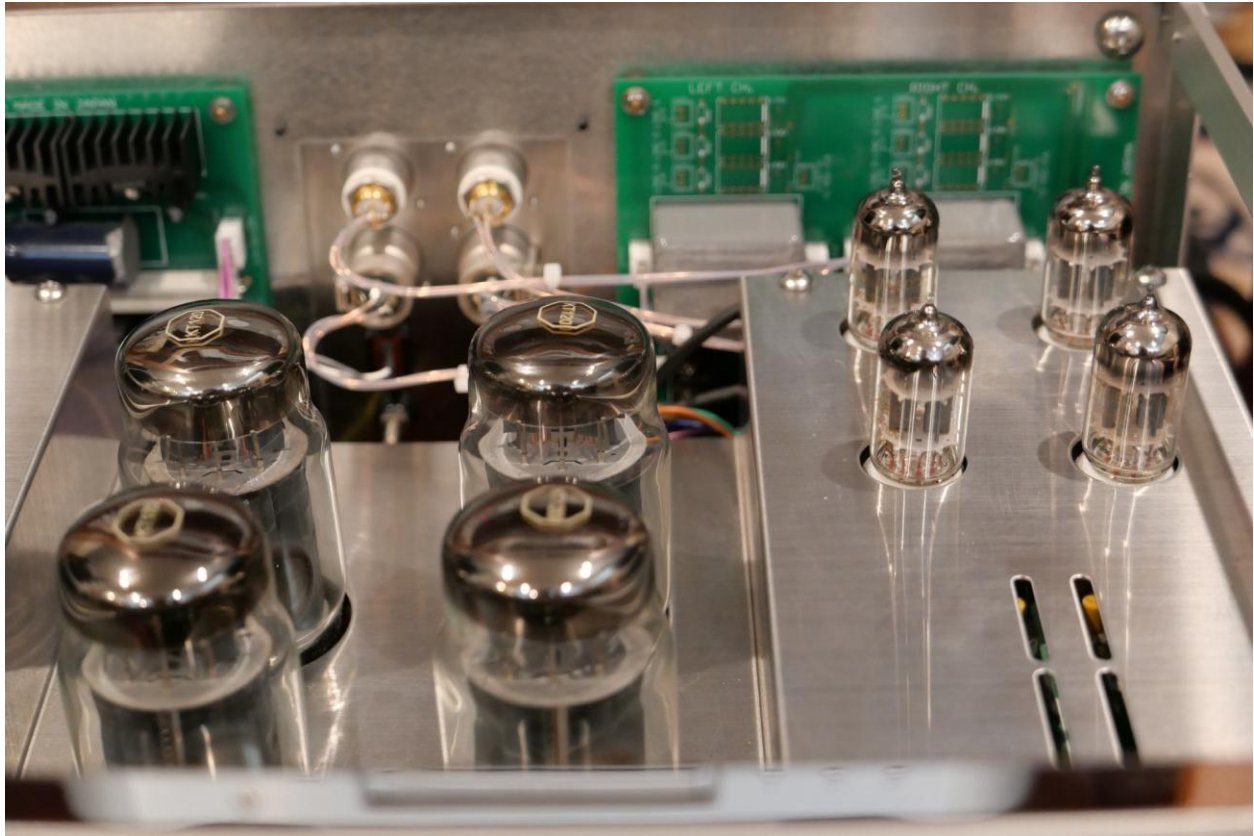
"From a young age," he wrote, "I have been fascinated with music, as both a listener and performer. I graduated University with a degree in electrical engineering and have been designing electronics since then. In addition to any technical background I have participated in over 500 live performances as an audio coordinator. This is the reference I use to evaluate all audio products."



Description and Installation

Sometime in late May, Federal Express delivered a somewhat massive, square, and heavy (125 pounds) box covered in yellow and black tape, with an imposing blue packing strap wound around the thick cardboard. The box itself sat on a cardboard base a shade larger than its dimensions (23" x 22" x 20"). I had the driver slide it onto a dolly near the front of my garage and thought about how I'd handle unpacking and moving it into my system. I'd recently had meniscus surgery on my right knee and, five years before, I'd partially torn my right Achilles tendon lifting a 110-pound solid state amp when I packed it in a move to my current home in Oregon. The thought of lifting another bigass amp put some kind of fear into me. Luckily, within a day or two of the Zanden Audio amp's delivery, Eric Pheils, a strong and sturdy Midwesterner, said he'd like to come up from the Bay Area, where he was visiting relatives, and would unpack and install the amp for me. Whew!

Ten days later, Eric was at my door and we got down to the garage (I live in a split-level house with a half-basement accessible to the garage) where he pushed the huge box that contained the amp into the side of my listening room. Opening up the box revealed an inner box and then the amp nested within polystyrene floats inside of it. In one of the voids was a stock power cable in bubble wrap that Eric removed and set aside. He then lifted the inner box out of the outer, then the amp out of the inner box and placed it on the floor.



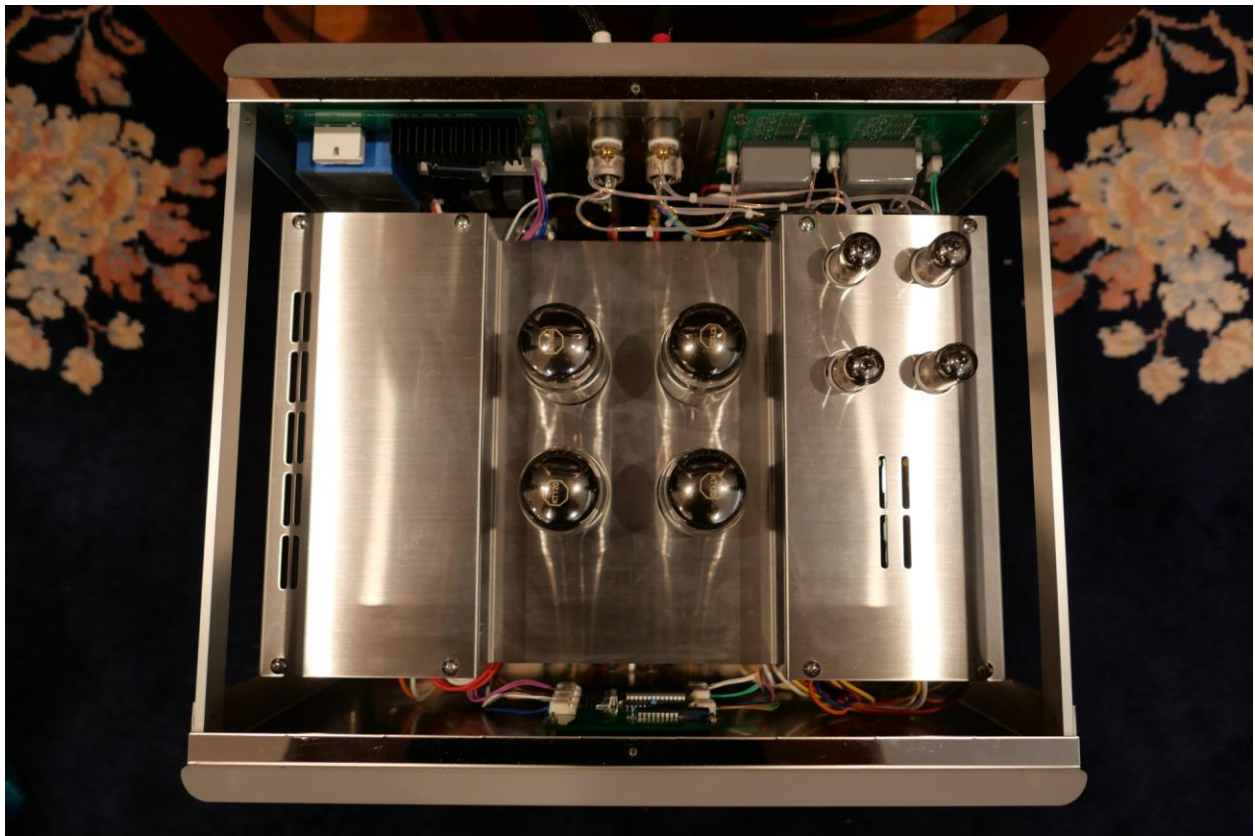
That took some strength! Around the amp was a plastic bag that Eric took off and put away.



Revealed was the 8120F—a large cube of a thing, measuring about 16 1/2" W x 14 1/4" D x 12 1/2" H. And it weighs a whopping 102 pounds! On its face is a white acrylic plate with smoothly beveled sides and the Zanden Audio logo at its center above a power button that was nearer to its bottom edge. It rested on four compliant feet. Around its sides and top is a removable cowl of stainless steel, polished to a mirror finish, that is also very thin, lightweight, and perforated with seven rows of long oval ventilation holes. Eric grunted and lifted the thing and placed it on the [Townshend Seismic Platform](#) I had ready in front of my [Box Furniture](#) audio rack. It bounced lightly for a second on the isolation springs of the Townshend, then settled down. Eric asked me for a hex-wrench, so I gave him one of my folding key sets. He found the right size, then unscrewed the hex nuts that anchored the steel cowl around the 8120F.

Inside were nested four boxes of Tung Sol KT120 output tubes and four smaller boxes of

Electro-Harmonix 12Au7 signal tubes, all neatly bubble wrapped. He removed the wraps, took each of the tubes out of their boxes, then seated them one-by-one securely into the ceramic sockets on the top board inside of the amp. He replaced the cowling, screwed the hex-nuts back in, and then it was my job to hook the amp to my system. For wiring, I used Zanden Audio speaker cables with spade terminations to connect to my [Ascendo](#) System M speakers, a pair of Zanden balanced interconnects that went to my Zanden 3100 preamp, and a Zanden power cord attached to an Audience aR-T6 line conditioner with an [Audience](#) frontRow HP powerChord that went into a [Furutech](#) GTX-D NCF(R) AC duplex receptacle on a dedicated line for AC.



The Zanden Audio 8120F is a push-pull power amp that produces 100 watts of output at maximum (90 watts nominal) with a remarkable frequency response of 7Hz-100kHz (-0.5db). It has both balanced and single-ended inputs with impedances of 100k Ω (RCA) and 7k Ω (XLR). Output impedance is 4 Ω /8 Ω . The warranty is for two years.

On its front is a power button with an LED light on either side that glows red on stand-by and turns green on ready. Their glow is a soft circle of a gauzy shine that comes through from behind the white acrylic faceplate, and there's a pleasing sequence of muted clicks once they turn from red to green.

Around back is a set of clearly labeled connections arranged vertically on a 3" wide and mirror-polished stainless steel strip. First, at the bottom, there is an IEC inlet and fuse holder side-by-side; then, going up, three pairs of speaker taps (8ohm, 4ohm, and COM); a ground pin; a

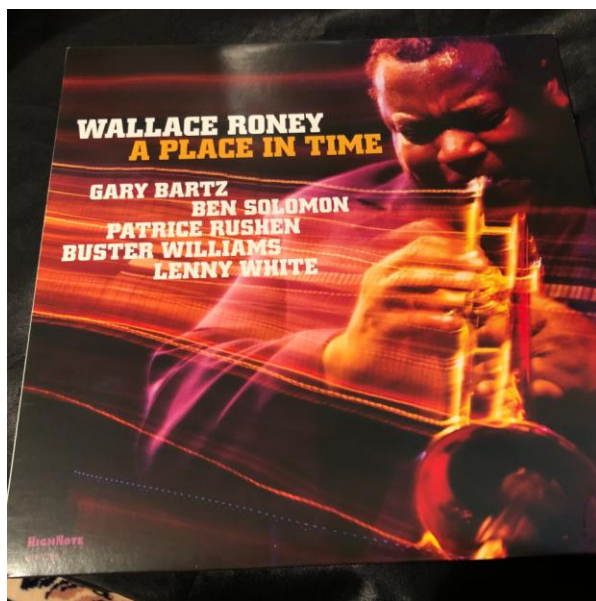
vertical pair of trigger input and output for 3.5mm stereo mini-phone jacks; and finally, a pair of XLR inputs and, at the very top, the RCA inputs. There was plenty of room around each connector for mounting my wires. The speaker posts had screw-down plastic caps that tightened easily with just my fingers.



Zanden Audio 8120F: Listening

As it was a demo unit, after barely a few moments in my system, the Zanden Audio 8120F produced a wondrous, pulsing momentum to its sound. Even more, it was expressively rhythmic and produced quick tonal shifts in emphasis so that the music had a remarkably sensuous quality that made the amp sound as though it were a powerful Class A triode rather than an A/B push-pull. I can't be sure, as it has been years since I heard them, but the new Finemet output transformers seemed to bring the 8120F closer in sonic character to Zanden's 9600Mk2 monoblocks, its 845-tubed big brothers in the Classic line that used these same transformers. Yet, unlike a SET presentation (from most any amp but Zanden's), often lavish in the midrange but restricted in extension, I also heard a fine balance throughout the frequencies, an even-handedness that avoided any striations of sound in complex choral music or shortfalls in extension whether in rendering electric bass or the refined topnotes of opera singers. Soundstaging was deep and bountiful with instrumental colors, as though there were a proscenium filled with viscous images that was aglow with inner life, supremely rich in an

organic presentation. And the Zanden Audio 8120F sounded like this with every kind of source I threw its way, digital or analog.



Initially, I tried things out with analog, using my [TW-Acoustic](#) Raven AC turntable, Raven 10.5 tonearm with a [Koetsu](#) Sky Blue MC cartridge, and a Koetsu step up that fed into the MM inputs of a Herron VTPH-2 phono. One of the first LPs I spun with the 8120F in my system was the late Wallace Roney's *A Place in Time* (Highnote HLP 7295). The lower end timing amazed me—bass, piano, and drums locking together throughout the tracks to create a momentum I can only describe as majestic. On “Elegy,” for instance, Lenny White’s chatter of cymbal and snare work bunched tightly around Buster Williams’ rapid line on double bass, Patrice Rushen’s piano chiming absolutely on time and seeming to push the grand flow of

every measure. Roney’s trumpet doubled with Gary Bartz’s alto sax to make for beautifully bloomy choruses, while the soundstage shimmered in the changes, each instrumental image solid in the grand mosaic of sound.

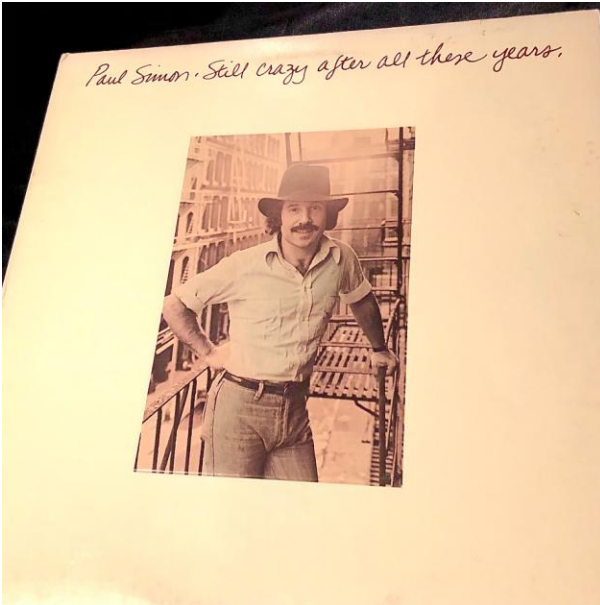


Freddie Hubbard’s *Hub-Tones* LP (Blue Note BST-84115) extended these observations, his trumpet sounding extraordinarily clear and pleasantly piercing on “You’re My Everything,” the track filled with his characteristic rapid runs, expressive rhythmic emphases, and a lovely tonal control. Reggie Workman’s bass was steady and Herbie Hancock’s piano old school in its runs and chordings (reminiscent of Wynton Kelly), but Clifford Jarvis’ drums were especially brisk and snappy.

Hubbard’s first solo was piercing, sassy, and completely in charge; his second mellow and smooth, blending gorgeously with James Spaulding’s bluesy style on alto sax. The keys to it all were amazing clarity, timing, and expressive dynamics in each instrumental performance.

I thought the Zanden Audio 8120F even more adept when it came to music with a touch more sparkle and contrapuntal drive than afforded by traditional combo jazz. Paul Simon’s “50 Ways to Leave Your Lover,” for example, from *Still Crazy After All These Years* (Columbia PC 33540), produced a sensuous curtain of music like a current of light rushing underwater through the sea. It was almost spectral and certainly spellbinding, carrying ornamentations on each of the

instruments, percussive and tonal, as though the glints of creatures turned like costumed players in a masque suspended in the brilliant wash as it moved and didn't move before one's eyes. Steve Gadd's pressrolls on snare and chomping hi-hat work possessed a multi-sync punch alongside his kickdrum. I could hear the impact on the skin of it, followed by the reverberance of the deep resonance, like a bulging vapor of sound. John Tropea and Hugh McCracken played off one another on electric guitars to make for catchy, rhythmic strummings and slinky fills. And Simon's plaintive tenor on lead vocal added a puckish brand of sass, his witty, sybaritic, and anecdotal lyrics pushing a bemused narrative throughout the song.



With operatic music, I tend to use yet another analog rig. It's that Artemis turntable with Helius Phaedra arm and Koetsu Gold MC cartridge going into the Zanden Audio 120 phono. Arias and symphonic music sound smoother, more refined to me this way, the unique suspension of the Artemis perhaps allowing for more nuance and delicacy in the analog signal. I listened to Mozart's *Don Giovanni* (DGG 136282), with the Ochester des Nationaltheaters Prag under Karl



Böhm, and reveled in the wondrous singing. Zerlina and Don Giovanni's duet "Là ci darem la mano," performed by Reri Grist and Dietrich Fischer-Dieskau, produced lovely harmonies, the two vocal lines clear and distinct. Grist's was a classic ingénue's soprano, pure with a sweetly captivating vibrato, while Fischer-Dieskau's baritone was strong and insistent, his voice dripping with mock sincerity. On a subsequent track, "Or sai chi l'onore" sung by tenor Peter Schreier as Don Ottavio, his recitative sounded urgent, the orchestra lush but ominous behind him. Birgit Nilsson's sung Donna Ana's aria that followed with flourish and lustiness, her top notes clear and thrilling, ferociously sailing through the air

of my room. Then Schreier's aria in response came in a measured pace, with a stately character, holding to a fine vocal line, maintaining a sweetness of tone, grace of the melody, and emotional intensities of the lyrics. With an unshakable poise, the Zanden Audio 8120F locked on all these vocal lines and never lost its grip on their musicality, never dissolving into confusion or harshness. There was only a pure, clear sound.



Turning to performances with a digital source, an [Auralic](#) Altair G1, I streamed Joseph Haydn Cello Concertos by John-Guihen Queyras with the Freiburger Barockorchester under Petra Müllejans as director (Harmonia Mundi Qobuz 24/28). Queyras' cello came through rich and full-bodied on the first movement, *Moderato*, to Concerto No. 1 in G Major, there was a sense of the cello's woody inner resonance, the reverberance of its thick strings in double-stops and bowed sautillé striking my ears with special thrills. The Barockorchester's period instrument strings sounded fine and brisk throughout, with a sense of weight and compelling momentum, their physical breadth spread

clearly left to right with a sense of real depth. And I was delighted by the contrast and range of tones and timbres among all of them, with the violins especially sweet and refined. Tuttis were melodious and more tasteful than imposing, which is appropriate for a period sound. Overall, the music was clean and clear, with absolutely no smear.



I also streamed three different recordings of Pergolesi's *Stabat Mater*, yet most preferred a 96.0 kHz recording on [Qobuz](#) by the Ensemble Amarillis with Sonya Yoncheva and Karine Deshayes. Its first movement "Stabat mater dolorosa" is a gorgeous, captivating duet, representing the Virgin Mary's lament at the foot of the cross for the death of Jesus.

Yoncheva's soprano and Deshayes' mezzo-soprano wove together and spun apart, their two vocal lines sometimes parallel, sometimes varying, often intersecting, creating a lavishly sensuous performance as though their voices were two butterflies fluttering over a withered peony. Yoncheva

has a fine vocal color but also a power that could pierce with fraught emotion. By contrast, Deshayes possesses a throaty mellowness so that their tremolos warble beautifully together. And when they harmonized, I could feel each of them reacting to one another, blending and separating, Yoncheva's soprano blooming, while Deshayes sang in earthy colors. The Zanden Audio 8120F demonstrated a steady power throughout, holding fast to the vocal quality of both singers through shifting notes and timbres, exhibiting as much control over the audio signal as the singers did over their voices. There was no chalkiness, grain, or glossiness indicating strain

on the consistency of its power, and the string tones of the ensemble held their integrity as well. The amp was able to sort and track the intricate vocal lines in their subtle timbral and dramatic shadings as well as handle the timing and peak dynamics of the accompanying strings.



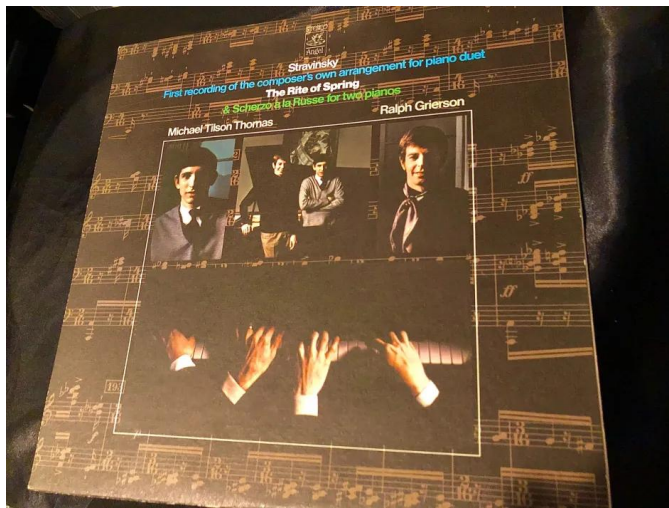
With my [Esoteric](#) K-05x SACD player, I heard yet more gorgeousness in Thomas Tallis' *Spem in alium* sung by the 21-voice choir of the Huelgas Ensemble, led by Paul Van Nevel on *Utopia Triumphans* (Sony SK 66 261). At the start, the choir slowly ramped from pianissimo to fortissimo without hash or grain, the soundstage a pleasingly diffuse cloud until the mass of voices fell away to isolate on a single soloist or the few that stood out in a section. The feeling of it was of a great, multi-piped organ transported into my listening room, with only a touch of brittleness at highest volume. But the multi-voice finale was appropriately sublime and delicate with a clear soprano

lead before the fulsome, full choir crescendo. Hung afloat in the air of my room, there was an ethereal aura to the prolonged, sustained, and final harmonized note.



Turning back to analog, this time using my Woodsong Garrard 301 with an [Artisan Fidelity](#) Groovemaster 12" arm and an [Ortofon](#) 90 th Anniversary SPU feeding my Zanden 120 phono, I played Annie Lennox's "Walking on Broken Glass" from *Diva* (RCA 88985419511). Lennox's vocal sailed above a luscious soundfield in a grand soundstage of depth and breadth taller and wider than my room. There were detailed inner textures and good separation of the instruments—harp, nylon-stringed acoustic guitar, tambourine, synthesizer, drum kit, chorus, and electric bass. Lennox's voice was alternately brash, punchy, and earthy or spectacularly eerie and pleading. The Zanden Audio 8120F sorted all of these

with distinction, the instruments layered and separate in air, Lennox's insistent vocal soaring over them.

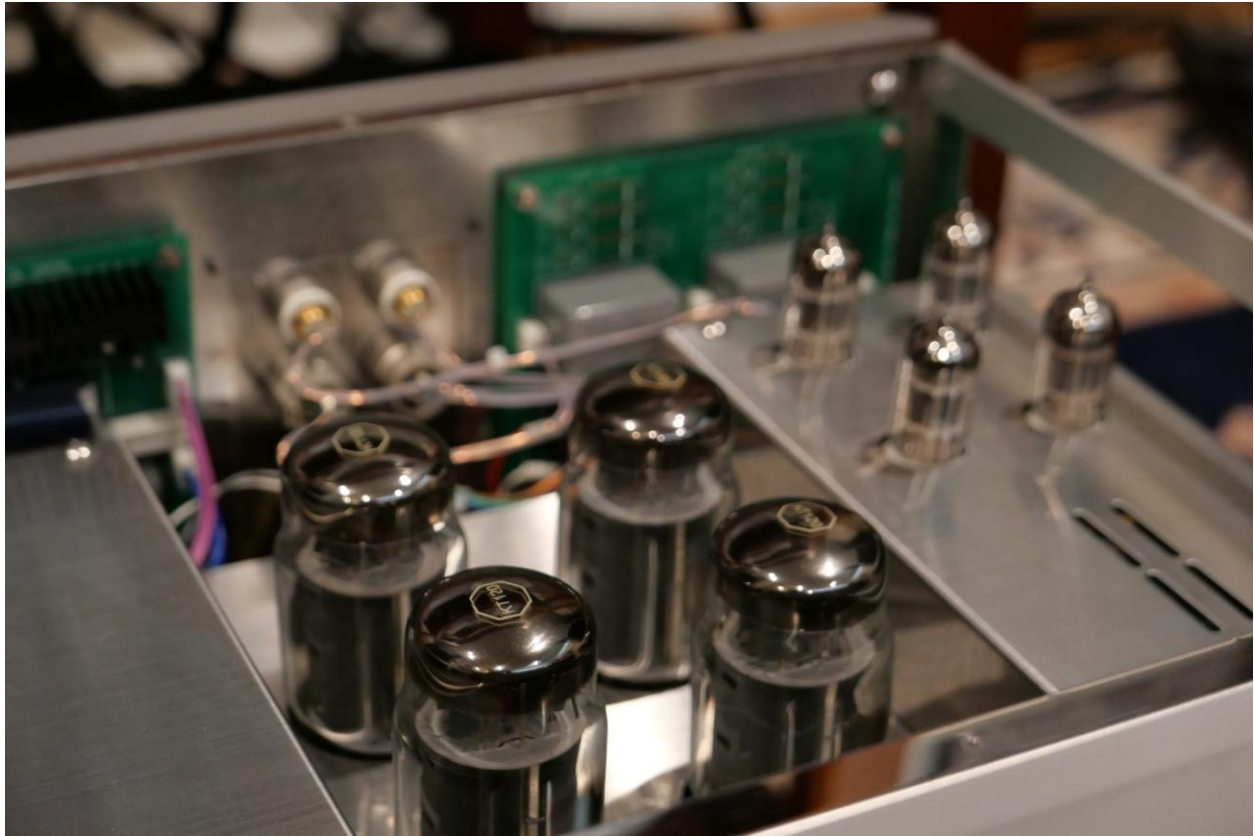


For all this quality and excitement, I have yet to cite Stravinsky's *Rite of Spring*; *Scherzo à la Russe for Two Pianos* LP, featuring Michael Tilson Thomas and Ralph Grierson (Angel S-36024). I played it on the Helius set-up with Koetsu Gold MC cartridge. "Part I: The Adoration of the Earth" was absolutely thrilling with diverse tonalities, crystalline trillings, complex chordings, rapid arpeggios, bombastic and lyrical passages, and startling clusters of high-pitched notes of tremendous energy and stunning effect. There was the anticipation of suspense

and dread intermingled through much of the movement, which was an aural feast in full frequencies and dynamic range, characterized by the speed and precision of each pianist. There were a plethora of pleasing dissonances and swift changes of eccentric tempi, and it seemed as though every note from each measure of the orchestral score was anticipated in this earlier score for pianos. Deep bass drum strikes, screeches from an overblown piccolo, the sautillé of double basses, timpani strikes, horn and trumpet parts were all rendered on the keyboards for the four hands of two pianos. Haunting and hypnotic effects gave way to staccato clusters and lyric arpeggios. And the overall narrative message of the piece seemed clearer, more starkly realized when not dazzled by the full orchestral rendering. The "build" of Stravinsky's masterpiece stood out, the full intellectual coherence of the composition became much more apparent and striking, and the copious palette of pianistic techniques came together in the clear repetitions of motifs and sonic gestures. The Zanden Audio 8120F captured the varying momentums, the speed and power, full extension, the manifold textures and timbral contrasts of both pianos with complete precision.

Zanden Audio 8120F: Comparison and Conclusion

I must admit, I was skeptical that Zanden's new 8120F could significantly better my system's sound with the original 8120 amp. I expected nuances of improvement, touches of sparkle perhaps, more extension or tightness in the bass. I did not expect the greater dimensionality to everything, the heightened naturalness and sensuality, the great and generous foundation of bass that supported a finer emergence of sound throughout the frequencies. My trusted Zanden Audio 8120 felt a smidge more analytic by compare, alas drier on orchestral music, less weighty on rock and jazz, somehow just missing the lavish pulse of things and superb refinement that the 8120F captured. Via the newer amp, operatic voices held their places in air a touch longer, the tails of their notes ashimmer as they fell into a blacker silence. Jazz saxophones squawked with more bite and sung with more sonority. It wasn't a huge difference, mind, but the kind of significant one that we audiophiles seek out and treasure most in the finest gear. It made music more enjoyable. It brought the playback of analog and digital recordings much closer to live than I'd ever heard in my home system before.



If you seek a powerful tube amp that can drive large three-way speakers of moderate sensitivity, you should not miss considering the Zanden Audio 8120F. To me, it is at the top of the order of the best high-powered valve amplification devices I have heard— stereo amps like [E.A.R.'s 890](#), the JL5 from [Convergent Audio Technologies](#), and [Valve Amplification Company's Signature 200 IQ](#), or the JA80 Mk II monoblocks by [Jadis](#). Sure, Zanden's latest power amp is expensive, but, at this level of performance, the cost of it, though significant, is not the major point. That's what I told myself, anyway, as I have just ordered the Zanden Audio 8120F as my new reference.

– Garrett Hongo –

SPECIFICATIONS & PRICING

Zanden 8120F Stereo Amplifier

Nominal power output: 90Wpc

Maximum power output: 100Wpc

Input impedance: 10k Ω (RCA); 7k Ω (XLR)

Transformer taps: 4 ohms, 8 ohms

Analog input: RCA and XLR

Frequency response: 7Hz-100kHz (-0.5db)

Tube complement: Four KT120, four 12AU7

Dimensions: 426mm x 308mm x 379mm



Weight: 46.2 kg
Price: \$30,500
Warranty: Two years, parts and labor
Zanden Audio North America
zanden-usa.com
Contact: Mr. Eric Pheils
E-mail: eric@zanden-usa.com





