



## Zanden 8120 Power Amp and 3100 Linestage Preamp

Audio Artistry

Jonathan Valin

Ever since I heard Audio Note's single-ended-triode amps (the Ongaku and the Neiro) back in the late 90s, I've been a fan of Japanese artisanal high-end electronics. My trip to Tokyo some years ago only increased my admiration for the Japanese ultra-high end—and my astonishment at its sheer scope, which ranges from some of the most lifelike solid-state gear on the market (such as Technical Brain and BAlabo) to some of the most lifelike tube gear (such as Air Tight, Audio Tekne, and the aforementioned Audio Note SETs).

Though none of these very different brands sounds alike, they all have this in common: very high resolution of very low-level musical detail. Indeed, Naoto Kurosawa's Technical Brain electronics remain my benchmark for the reproduction of low-level musical detail (and for transient speed, which is intimately tied to the realistic reproduction of the location, texture, and articulation of individual instruments).

The Zanden electronics I'm about to review certainly don't break the mold. They are extremely fast, extremely high-resolution devices—maybe not Technical Brain fast and high-res, but mighty close. The thing is that, unlike the solid-state Technical Brain gear, the Zanden 8120 stereo amplifier and 3100 preamplifier are tube components, albeit tube components with a distinctive pedigree and a distinctive sound.

The unique, patented circuits of Zanden electronics are the work of Kazutoshi Yamada, an electrical engineer who, since founding Zanden in 1980, has literally dedicated his life to amplifier design. Yamada's single-minded, near-religious devotion to perfecting his art strikes me as typically Japanese, as is his use of the absolute sound as his reference (since 1980 he has acted as an "audio coordinator" for more than 500 live classical and jazz events). All of Yamada's efforts have been aimed at bridging the still sizable gap between what we hear in actual concerts and what we hear on our stereo systems.

Japanese perfectionism may not be a new story, but for me it is still an inspiring one. Of course, men like Yamada want to earn a living, but they also want to do this "honorably," by creating the finest examples of their art—and in the Japanese high-end community making high-fidelity components is every inch an art, no matter how much science is applied in the process. Such aestheticism is a refreshing change from the "by-the-numbers" approach of many of the foremost engineers here and in Europe, where products are designed and voiced not in comparison to live music but to computer models, to machine measurements, or, blindly and entirely unscientifically, to each other. (As far as I can tell, so-called "double-blind listening tests" that a few speaker- and electronics-makers swear by bear no resemblance to the actual double-blind tests used in real-world scientific experiments, such as medical drug trials.)

Though it is easy enough to hear the results of Yamada's aestheticism and perfectionism in the listening, they aren't fully reflected in the Zanden measurements. Going solely by its numbers Yamada's 8120 stereo amplifier, for example, appears to be just one more Class AB, KT-120/12AU7-based, 90Wpc tube amp with nothing approaching the spectacular bandwidth and vanishingly low distortion of a Technical Brain TBP-Zero or a Solution 700. Though it uses direct-coupling between its second and third stages and "minimum" negative feedback, and is said to be fully balanced in operation, these things in themselves are not extraordinary.

Yes, the amp is handsome in a very Japanese, less-is-more way. And, yes, there is a hint that there is something special about its





“unique circuitry.” (Though he guards the secrets of his circuits closely—to the extent of masking and potting the parts on his triple-shielded circuit boards—Yamada is in print saying that, after decades of research and experiment, he has discovered “correlations between the realistic balance of music and the phase components embedded in the audio signal.” Examples of phase anomalies are inconsistencies in the recording equalization curves of LPs and high-frequency phase distortions caused by the low-pass filters in digital gear. Only by fully accounting for these phase anomalies, says he, can music be reproduced with the “utmost fidelity.”) Still and all, you likely won’t be impressed by reading the 8120’s spec sheet. Same for the tube-rectified, zero-feedback, 5687WB-based 3100 linestage preamplifier.

Once you audition the pair, however, your opinion will change.

This Zanden amplifier and preamplifier are one of those rare combos that somehow manages to be transparent to the sources ahead of it (and the speakers behind it) while at the same time putting a consistently lovely and lifelike spin on timbres. This is not to say that the Zandens are overtly “dark,” “warm,” “beautiful,” “liquid,” or “rich” sounding. They are not inherently any of these things. Like so much other top-rank Japanese audio gear, the Zanden pair is essentially neutral in balance—neither “bottom up” (i.e., dark) nor “top down” (i.e., bright), to quote Raidho’s Michael Børresen yet again. As a result, differences in recording, speaker, and source balance are always clearly reproduced by the Zanden duo. Not only do RCAs sound like RCAs, Deccas like Deccas, Merces like Merces, but the same specific differences in miking and mastering among individual RCAs, Deccas, and Mercurys that one hears through the highest-transparency, highest-resolution gear are also clearly reproduced by the Zandens. And yet, at the same time, the 8120 and 3100

are most attractively and addictively...pliable—to coin a phrase. Which is to say, sonic differences, large and small, are there for observation, but they aren’t insisted upon. Instead, the Zandens seem to find a dollop of natural musical sweetness in whatever balance a recording, record player, or DAC presents them, making everything not just more listenable but more enjoyable and realistic.

I don’t know how Yamada has accomplished this trick, but it is a helluva neat one, reminiscent (for a lot less money) of

## SPECS & PRICING

### ZANDEN 8120 STEREO AMPLIFIER

Nominal power output: 90Wpc

Maximum power output: 100Wpc

Input impedance: 100k ohms (RCA-standard); 7k ohms (XLR-optional)

Transformer taps: 4 ohms, 8 ohms

Analog input: RCA and XLR (optional)

Frequency response: 7Hz-60kHz (-1dB)

Tube complement: Four KT120, four 12AU7

Dimensions: 426mm x 308mm x 379mm

Weight: 46.2 kg

Price: \$19,990 (\$1000 additional for optional balanced inputs)

### ZANDEN 3100 LINESTAGE PREAMPLIFIER

Frequency response: 10Hz-20kHz -0.5dB

Input impedance: XLR, 10k ohms; RCA, 100k ohms

Output impedance: 300 ohms

Analog inputs: Three RCA, one XLR

Analog outputs: Two RCA, two XLR

Tube complement: Two 5687WB

Dimensions: 398mm x 254mm x 103mm

Weight: 9.0 kg

Price: \$12,500

### ZANDEN AUDIO NORTH AMERICA

zanden-usa.com

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### JV'S REFERENCE SYSTEM

Loudspeakers: Raidho C-4.1, Raidho C-1.1, Raidho D1, Estelon X Diamond, MartinLogan CLX, Magnepan 1.7, Magnepan 3.7, Magnepan 20.7

Linestage preamps: Solution 520, Constellation Virgo, Audio Research Reference 10, Siltech SAGA System C1

Phonostage preamps: Audio Research Corporation Reference Phono 10, Innovative Cohesion Engineering Raptor, Solutio 520, Zanden 120

Power amplifiers: Solutio 501, Siltech SAGA System V1/P1, Constellation Centaur, Audio Research Reference 250, Lamm ML2.2, Zanden 8120

Analog source: Walker Audio Proscenium Black Diamond Mk V record player, AMG Viella 12

Phono cartridges: Clearaudio Goldfinger Statement, Ortofon MC A90, Ortofon MC Anna, Benz LP S-MR

Digital source: Berkeley Alpha DAC 2

Cable and interconnect: Synergistic Research Galileo and Galileo LE, Crystal Cable Absolute Dream





what Edwin Rijnveld managed to do in his swooningly beautiful-sounding yet startlingly realistic Siltech SAGA System.

I'm mentioning the SAGA electronics in the same breath with the Zanden 8120 and 3100 because they share several other qualities beyond a see-into transparency that is not bought at the price of lovely natural timbre. For one, like the SAGA, the Zanden duo doesn't sound "tubey" in the fat, old-fashioned, loads-of-second-order-harmonic-distortion sense. It is quick and clean and quiet and quite incredibly finely detailed, with superbly defined bass (perhaps even better here than the Siltech).

For example, in Britten's *Young Person's Guide* (from Reference Recording's *Britten's Orchestra*) at the close of the *Allegro maestoso* that announces the majestic Purcell theme upon which the variations that follow are based, the bass drum is struck sharply—to help signal the end of the thematic exposition and the start of the variations. Provided your electronics don't stumble over transients or muddy up the bottom octaves, this dramatic percussive punctuation mark should sound crisp, clean, and exciting—with beater, drumhead, and shell clearly audible in series.

What may not be clear—or as powerful—is the drum roll that follows this *fortissimo* thwack, like a little flourish as the curtain is raised. Some electronics—particularly some tube electronics, and particularly in the bass octaves—need figuratively to “catch their breath” after large expenditures of dynamic energy such as that initial drum thwack. As a result, notes that follow hard upon in

the same register can sound a bit smeared or compressed, kind of like the electronic version of woofer “overhang.”

Despite the fact that they're powered by tubes, the Zanden 8120 and 3100 have none of this overhang-like effect. The drum roll is as clean and clear and distinctly full and natural in timbre as the *fortissimo* thwack that preceded it. It wasn't all that many years ago that tube gear simply couldn't do a very dynamic sequence like this one—which flies from *fortissimo* to *fortissimo* in the space of two notes—without audible losses of leading-edge clarity, energy, focus, and color.

Again, on an assemblage of deep-going instruments such as Gonzalo Rubalcaba's Fender Rhodes, Mario Parmisano's synths, Ernie Adams' drums, Anthony Jackson's electric bass, and Al Di Meola's own collection of dumbeks and stomp boxes on “Zona Desperata” from *Flesh on Flesh*, a good deal of tube gear would be flummoxed trying to keep track of each musical line without smearing them together, and simply tripping over its shoestrings and falling face forward on really deep notes (and this track goes deep). Once again, the Zanden duo simply sails through this torture test, keeping musical lines clean and uncompressed in dynamic while also preserving intact the full-bodied timbres and complex articulations of every instrument and going right through the floor on the temblor-like deep bass notes. Once again, this is not typical tube-amp behavior.

If you think I'm concentrating on the bass because the Zandens fall short everywhere else, think again. These are full-range

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electronics, whose virtues extend from top to bottom. One listen to the in-the-room-with-you realism they elicit on the lead vocal and potted-in harmony and backup vocals (all Joni, actually) from Joni Mitchell's "Help Me" will prove that these electronics are capable of the same outstanding clarity, speed, energy, and truth to timbre in the midband that make them so stellar in the bass. And their string and wind tone on something like the Reiner/CSO *Pictures at an Exhibition* [Analogue Productions], which in the wrong hands can sound a little gruff, is to die for—a further instance of the Zandens' remarkable ability to find the natural musical sweetness of any recording, no matter how it was recorded, what dynamic level it is played back at, or how busy the instrumentation is.

Although the Zandens are a little less forgiving in the treble than they are in the midband and the bass—which is to say that they won't sweeten or smooth away the bright edge of a too-closely-miked piano, piccolo, flute, or cymbal—they don't exaggerate such miking/mastering flaws. They simply report them. On good recordings, their treble can be startlingly realistic—as fast, clear, lovely, and finely resolved as their midband and their bass. And when it comes to soundstaging—reproducing the ambient space in which a recording was made (along with the three-dimensional disposition of the ensemble within that space)—this Zanden gear is very nearly peerless.

Of course, Zanden electronics have always been famous for their spaciousness (a quality that Yamada has consistently sought to capture in his designs), but the 8120 and 3100 are high among

the most spacious I've heard, reproducing soundstage depth and width (both wall-to-wall and among individual instruments) with just a touch more air and room than virtually anything else I've heard. On the right recordings, this is quite a spectacular effect.

No, Zanden's new stereo amp and linestage preamp don't have the seemingly inexhaustible power and sheer whomp of Soudation's latest solid-state gear (you can run the Zandens out of steam at very loud levels—after all 90 watts is 90 watts); nor do they have all the density of power-range and midband tone color of Siltech's gorgeous-sounding SAGA System; nor do they have all the astonishing resolution and transient speed of Technical Brain TB-Zero line or Constellation's Performance Series; nor do they have all the bloom and 3-D depth of image of Audio Research Reference 10 electronics. But...they come so close to these exemplars for so much less money that I wouldn't want to quibble about the differences.

When you take what they do do—which is reproduce all recordings with an almost magical ear to what makes music sound sweet and lifelike—and when you consider that they do this from top to bottom (simply outstanding bass for tube electronics—indeed, for any electronics) and when you throw in their *sui generis* soundstaging, I don't see how the Zanden 8120 and 3100 can earn anything but my highest recommendation. I consider them reference-quality (they're outstanding matches for Raidho D-1s, BTW), and given that they cost one-third to one-half of what my other references cost, I also consider them ultra-high-end bargains. Go listen for yourselves. **tas**

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