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The Upgrade Train

Herron Audio VTSP-1A Line Stage

BY JERRY KINDELA

For many of us, the heart of a system resides in the line stage. Theoretically, a line stage's sole function is gain—without coloration, without subtraction, without addition to the original signal. Like the heart itself, with its valves, chambers and convoluted but symmetric construction, a line stage is supposed to work quietly in the background, regardless of the demands placed on it. Few line stages, however, quite deliver enough of the theoretical when confronted with the practical. Keith Herron's VTSP-1, as fan and reviewer kudos attested, came pretty damned close when it appeared on the high-end scene a couple of years ago.

Mid-way through last year, Boss Myles sent along an early production model used for review in *Ultimate Audio*. He wanted to acquaint me with high end's possibilities. More than acquaintance, the VTSP-1 presented an opportunity to learn about the meaning of dynamics, instrument placement across and into the soundstage, enveloping harmonic structures, the timbre of instruments, resolution, air and all the other elements that mesmerize the ear/brain interface into a willing suspension of disbelief. Like an exceptional psychotherapist, the VTSP-1 steadily reframed my perceptions, and continues to do so in its latest iteration, the VTSP-1A.

MOD SQUAD

The VTSP-1A incorporates, according to Keith, 18 modifications or upgrades, and while a number of these are proprietary, a significant number of changes were aimed

at speeding up the volume control servo. Says Keith, "The volume control consists of a chip containing 128 precision resistors along with 128 electronic switches. We originally designed this section to reuse 14 steps, by navigating through a transition place we call the 'downshift.' As you lower the volume, the mechanism uses external electronic switches to drop the volume 14 dB and then boost it 13 dB.

"As part of the upgrade process, we tried raising the control voltage on the electronic switches, and to our surprise, this cleaned up the signal. We thought we were clean before, we thought we'd done everything by the rules, but we learned something," he laughs, bemused.

Keith Herron may be onto something here. But your system from front to back must be capable of detecting such subtleties, as even Keith himself opined in a "Manufacturer's Response" to criticism

that his original combination linestage/phono stage, the VTPH-1, was a tad shy in bass and dynamics, particularly with leading edge transients: "Accurate bass response along with dynamic contrast and freedom are qualities that can be realized... by optimizing the total system synergy (proper selection of cables and associated equipment, ...impedance matching and room treatment)." Isn't this always the case?

During the 1A's residence, my system was updated, upgraded and so on. In the final version it consisted of two front-ends, the Sony SCD-777ES SACD and the Ayre Acoustic D-1 DVD/CD players, both stellar in performance (reviews and listening notes to come); Nordost Quattro Fils throughout and SPM Reference speaker cables (which had been added to the existing Kimber Bi-Focal XLs, Nordost Pulsar Points, assorted Echo Busters and Spendor SP 7/1 and FL10 speakers); Walker Audio directional bare-silver wire jumpers, fronted by two sets of Walker's High Definition Links, and Walker Valid Points Super Tuning Kits. Each of the changes in the entire system had been added incrementally, and sonics were assessed before any further modification or addition was made. As the change progressed, it became increasingly clear that no matter what transpired, the VTSP-1A's utter neutrality reflected only the evolutionary changes. The VTSP-1A is a special creature indeed, unwaveringly true to the source.

EASY LISTENING

I began serious listening for this review with several discs that would test the Herron's ability to disappear: Roy Hargrove's *Crisol Habana* (Verve 3145375632), *Alice in Chains Unplugged* (Columbia CK 67703), and *Uncommon Ritual*, featuring Edgar Meyer, Bela Fleck and Mike Marshall (Sony Classical SK 62891).

Hargrove's compact disc, a bit on the dry side from lower midband upward, nevertheless offers a unique opportunity to assess dynamics from slightly different perspectives of the same piece of music. "O My Seh Yeh," an intricately layered, often powerful, often delicate Latin piece, both starts and closes the compact disc. The first iteration is performed nearly half as quickly as the second, which itself is well textured and layered, but somewhat differently.

The Sony front-end resolving power—capable of delivering the demands presented by this song's complex interplay among the multiple horns and saxophones, the three-man percussion section, as well as piano, bass and guitar—didn't make the Herron flinch. The VTSP-1A relayed clearly and cleanly the intricate layering of various percussive effects, left to right from mid- to rear-stage, along with a dry-sounding syncopated kick drum clearly positioned deep center, whose echo nevertheless fills a significant volume of space from left to right when the song opens. Each position relative to the others remained solidly anchored in its own fundamental envelope, yet more importantly, each instrument's harmonics (to the degree possible) extended outward to embrace the harmonics of its neighbors without fusing into undifferentiated sound.

This ability on the Herron's part to retain instrumental timbres and textures extended to the massed horn sections, whether those on the left or right sections of the stage—a very difficult trick to accomplish—and to the guitar slicing quick arpeggios and complex chord progressions closer to the right speaker. The Herron's ability to place instruments while maintaining clear musical and harmonic perspective allows one to enjoy Latin music's complexity, without having to work at listening into the mix. In fact, Herron's non-interference, merely its neutral gain, allows you readily to hear such things as a horn entering a nano-beat before the rest of the section, or to be able to note that each horn has its own brassy or reedy signature, even when several are playing the same line simultaneously.

On the second iteration of "O My Seh Yeh," the tempo increases significantly, yet one can still hear identically into the mix, the Herron keeping time, and resolution as well, with the time change. The Herron's resolving power is such, that it's a simple aural act to note that on this version of the



song, the percussionists have chosen to focus more on the decay time of their instruments. For example, not only can you distinguish the various notes on the conga's skin, but the "inside" reverberance as well, without missing the smaller but significant percussive effects generated by the other players.

Though I've never been a big lover of Alice in Chains, their *Unplugged* is something else, particularly as a tool for assessing clarity of signal transfer. Recorded live at the Majestic Theater at the Brooklyn Academy of Music, the compact disc has a big feel to it, in large part due to ambient echo effects off the theater's walls, nooks, crannies and interstices. Relaying this acoustic, while maintaining even a modicum of appropriate soundstage layering, becomes a large task, yet the Sony details it and Herron carries it along without congealing a beat.

Scott Olson's guitar work has a holographic texture to it, replete with the buzzing of strings from his deft fret work. More importantly, the Herron allows the direction of his strumming strokes to pass through unhampered, uncolored, whether with gravity or upward against it: You can readily hear the first note or two of the chord, which is the cue. The Herron maintains such clarity so well that mere sound is elevated to music, even music one might not always appreciate under other circumstances. Take Layne Staley's voice as another example. While its style may best be described as nasal in nature, coming from the larynx, and its range rather limited, through the Herron Layne's voice assumes a more natural, more fleshed-out feel.

In college Keith Herron, who came from an instrument-playing family, was a drummer in a small group of the Brubeck style. This becomes evident, in some counterintuitive fashion, when you hear how well the Herron deals with drum kits, their dynamic power and their infinite potential for delicious variety. To understand, all you've got to do is listen to the introduction to Alice in Chains' "No Excuses." Sean Kinney sets up the song's unity with a

powerful kick and tom drum rhythm, filled with sizzling high hat and other metallic percussive flurries. Each of these has a beginning, middle and end, but most notable is the resonant depth of the tom tom: The Herron reveals both the inside and outside of the drum, and even though the guitars and voices quickly fill the mix leading to a potential loss of the drum kit detail, that does not happen.

Dynamic? Indeed, though a tad light in upper octave air around the cymbal work, but not so much that it detracts from near-realistic presentation. It's certainly a hair cleaner than with the original lineage.

GOING DEEP

But what proved nettlesome to this point was the bass response. Down to upper midbass, the reproduction was clean and tight. Various finger pluck and bowing artifacts, such as the distinct sound of rosined hair sweeping across the strings, were readily apparent. Below that, it was a different story—not necessarily bloat, but an accented roundness, a bit too much ripeness for my taste. As configured, my system is capable of delivering nearly faithfully (just a pinch of softness, but nothing egregious) almost down to the open E bass string, roughly 40 cycles. The system will go lower, but with added roundness to the bass lines.

Was it the Herron, or was this a problem with the engineering or mastering side?

Edgar Myer's bass playing on *Uncommon Ritual* came through without a hitch, proving that perhaps the earlier compact discs were true to Red Book form. The Herron relayed the transient response of Myer's bass, which is recorded a tad on the dry side (arguably the result of Sony's 20-bit single-bit-mapping technology), as quickly and cleanly as the higher octave instruments of Bela Fleck on banjos and Mike Marshall on assorted mandolin-family variants. Meyer's "Chance Meeting" reflected particularly well how the Herron manages to maintain a clear separation between Fleck's banjo and Meyer's incredible bowing. Fleck, positioned directly in

Herron

front of Meyer, manages to flourish between lightning-fast runs and slower individual note lines, while Meyer counterpoints an alternate melody line. The Herron manages to retain the position, the amplitude and the texture of the respective instruments, even when both are playing dizzily fast, one stacked directly in front of the other. The Herron does not meld the overtones nor soften the initial transient response of either instrument; it merely lets them through. The mark of an extremely competent linestage is the ability to reveal the most minute detail in appropriate time, an especially difficult task when confronted with the click of a pick attacking the strings of a banjo in rapid succession, while a bass string is bent in a glissando, all in the midst of an orgy of complex note structures. And the Herron VTSP-1A is that good.

Much of the preceding was noted while listening to Sony's second generation 777ES SACD player, but I had not expected what was possible in replay—or how the utilitarian-looking Herron VTSP-1A could truly respond—until I ran the suite of discs through the Ayre D-1. More air and extension, more space, cleaner delineation of harmonic structures, improved staging and resolution, better, tighter yet fuller bass—in fact, more of everything. Sure, much of it was subtle, yet palpably so, but I learned an invaluable audio lesson (again, damn it!) in the process: You don't know what's in the way of the signal until what's there is removed. In this case, it was a slight grain and distortion throughout the frequency range, a grain that withholds the ultimate in reproduction reality (but so it should be, considering the Ayre costs over \$8,000, compared to the mid-\$3K Sony). What is key here, however, is the Herron VTSP-1A's ability to act as the proverbial, and I hate writing this, "straight-wire gain." The Herron gives you what you put into it, period.

SPLITTING SONIC HAIRS

Nits? To be sure. For starters, there's no remote. Keith Herron believes that a remote circuit would hurt his linestage's ability to remain neutral, but nevertheless some higher-priced (that's an important point) linestages manage the trick. Perhaps more significant is the resonant quality of the chassis. Isolation on Nordost Pulsar Points and serious mass loading, via

TECHNICAL HIGHLIGHTS

The rigid circuit board's layout is pristine and uncluttered, reflecting the 1000 hours of development time devoted to building a cross-talk-free environment. Keith Herron avoids hand-wiring, saying that this often leads to inconsistent results from unit to unit. The bulk of the 1A's 18 changes went toward improving dynamics, bass response and transparency by speeding up the operation of the unique volume control servo (see article for Keith Herron's in-depth explanation). Additional work went into lowering distortion in the matched quad of grey-plate Sovtek 6922s, riding atop board-mounted porcelain tube sockets.

The tube circuit is unique, according to Herron: "One section of one of the two tubes per channel is used as a gain cell, running wide open. There's a method of running the 6922, minus the use of an external plate resistor, that cancels distortion. This approach allows you to 'free run' the tube at full natural gain, called the mu, and that's what sounds best. The other triode per channel, operating as infinite resistance, supplies current to the gain. In effect, this approach cancels out the nonlinearities in transconductance and plate resistance."

The VTSP-1A, with 72,000 µF of storage capacity, allows for high voltage to be developed through a servo-driven multiplier. It also has four levels of regulation, allowing the linestage to run from 80-140 volts at 50-60 Hz. Keith cautions against coupling the VTSP-1A into an AC sine wave regenerator run at higher Hz settings: "In an effort to eliminate distortion causing harmonics to come off the powerline, our circuits are designed to ignore high frequencies that are created by a sine-wave regenerator. Under such conditions, our unit will simply not start up." For maximum benefit to be realized from the VTSP-1A careful impedance matching between pieces of equipment, especially the amplifier, must be considered: Power amplifiers with an input impedance below 20 K will not reproduce a full-sounding bass.

Herron's web site, www.herronaudio.com, breaks down the upgrade policy pricing structure. Keith notes that consumers who purchased the VTSP-1 after January 1, 2000 will pay only shipping costs for an upgrade.

Walker's lead-filled pucks, considerably cleaned up the resolving power of the linestage, whose chassis resonates and buzzes somewhat to the slightest tap of the finger (in all fairness, roughly one-third of the chassis top must be vented to prevent the 6922's from overheating, but the venting surely leads to increased vibration). And finally, while Keith has worked hard to eliminate the occasional but mildly noticeable rasp when turning down the volume (is this where the downshift is engaged?), it's still there, though even less apparent and occurring less frequently. Please note, you hear the effect—noticeable at the 8:30 position, rather than at 9:30 in the original version—when the music isn't playing.

Minor nits aside, the Herron VTSP-1A, with over 1,000 hours of circuit design time to eliminate cross-talk at every possible electronic cusp and juncture, is as distortion free as any component I've heard to date. This exquisitely linear linestage retains whatever the source transmits, keeping the material intact in a phase-coherent, timbrally accurate soundscape

deep and across the entire expanse between, and often outside the borders of, the speakers. And, it does this so matter-of-factly—without traditional tube coloration—that you'd swear you were dealing with solid-state. Is it better than the original version? Yes.

Now you tell me whether that's not how you'd like the heart of your system to function—unless, of course, you're unsure whether you want to insert the VTSP-1A's ruthless ability to reveal both the good and the bad of your system? ●

► **Herron Audio VTSP-1A Line Stage.** Herron Audio, 12685 Dorsett Road, Suite 138, St. Louis, MO 63043. Tel.: (314) 434-5416. Fax: (314) 434-6629. Web site: www.herronaudio.com. Designer: Keith Herron. Description: Pure tube linestage, no global feedback. Tube complement: 4 x Sovtek grey-plate 6922s. Frequency response: 1 Hz to beyond 100 kHz; 20 Hz to 20 kHz ± 0.1 dB. Gain: 14 dB. Input impedance: 100 K. Output impedance: 100 Ohms. Detachable AC cord: Yes. Dimensions: 19 x 3½ x 10 inches (w x h x d). Weight: 16 lbs. Price: \$3,995 (check web site for upgrade pricing).