



**APRIL 2003** **Shanling T-100 with Parts ConneXion mod**

Rightfully, beautiful women resent being judged on their looks alone. The Shanling T-100 has suffered similar disrespect. In certain Internet cases, this has even prompted the equivalent of tasteless and adolescent dumb blonde jokes. Being Chinese has only compounded this further - as though world-class industrial design, Far-Eastern origins and reference caliber performance couldn't possibly coexist. Racism. Audio misogyny. Harsh preconceptions. Not exactly reactions that inspire audiophile brotherhood, curiosity or open-mindedness.

Thankfully all it takes is listening; *not* to preconceptions and uneducated judgments but the real thing - the actual player. Even in the presence of acknowledged bleeding-edge greatness, this Shanling doesn't wither. The Zanden Model 5000 MKII DAC -- whose owners on record mention it in the same breath as the Lindemann SACD player and dCS gear -- is one bona fide yard stick for true state-of-the-art RedBook playback. Its designer Kazutoshi Yamada and international sales manager Hideo Kitazawa showed this working-class writer unbelievable kindness when informed that, in the wake of its recent review, their vaunted valved DAC was ready to return to Osaka-City/Japan. "You clearly love music. We want you to keep it as your reviewer's reference."

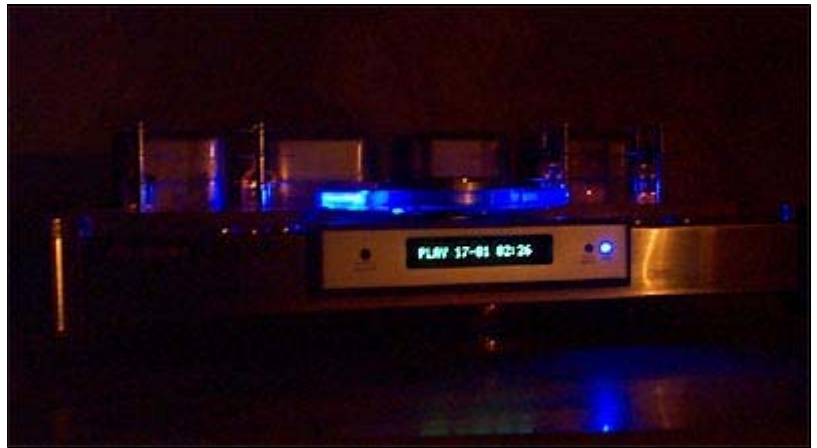
How to respond safe to feel unreasonably blessed? I'm now in cherished possession of a true statement digital front-end. Needless to say, today's review subject would find itself compared. How much remained possible beyond its performance? How close would it come for 1/4th the price? But first, the prosecution's case evidence. Is the Shanling's raw sex appeal safe for audiophile consumption? Should domestic manufacturers lobby for a trade embargo to protect their home turf? *You* be the judge:

With 6N3 tube and transistor-powered outputs; separately valved headphone socket; bare-head Philips 1201 top-loader; Pacific Microsonics PMD-200 digital filter, Crystal's 8420 sample-rate converter chip and four Burr-Brown PCM 1704 DACs; defeatable 24/96 upsampling; 0 to 100 digital-domain remote-controlled volume that adjusts both mains and headphone outputs in parallel; 3-stage display dimming; your choice of soft or pointy feet with spike protectors; included white handling gloves, a twin test CD and custom power cord, with packaging every bit as sophisticated and professional as the unit's looks - the Shanling T-100, make no mistake, is one all-'round class act of the highest order.



Three blue diodes embedded in the hinge of the acrylic cover, especially at night, make for a very tasty light show. Orange tube glow reflects

off the stainless steel cover to mingle with the dark blue rays spilling from the central orb, itself set off against the cyan display. The gold accents on the integral pillars, the tube rails' and lid hinge's champagne trim add more visual charm. The nomenclature's engraved rather than silkscreened to spell design detail in yet bigger letters.



This theme of obsessive industrial design execution continues on the unit's right side. It houses a frontal headphone socket and rear power switch to keep the fascia free of clutter. You know how much gear places its power switch (or even the headphone socket) on the rear panel where you can't conveniently get to either?

The back accommodates the IEC power inlet and five deluxe CMC US-made RCA sockets that look for all the world like top-line WBTs - transistor and tube analog outputs, one coaxial digital output at either 16/44 or 24/96 depending on whether upsampling is engaged or not. The two blue LEDs to the right of the display indicate 24/96 or HDCD detection respectively, the duos of push buttons flanking the self-clamping lid control play/pause and stop to the left, previous and next track to the right. The tube covers don't dismount though the top ring can be unscrewed. Rather, you wiggle the valves out from in-between the thin steel rings.

The champagne/gold theme continues with the RC-02A remote that offers the usual direct track access; 24/96 engage/defeat; scan, repeat1/all, random and programming; display brightness; and volume up/down and mute. Its effective infrared coverage beam is laterally narrower than others, hence a closer on-axis perspective is required to securely prompt commands.

The transport lid is manual and outfitted with a self-centering puck. The moment the cover is closed, the laser automatically reads the TOC. That's a 4-second process. To cue up track 8 on a 17-track CD took 8 seconds. Depending on the flatness of a CD loaded, the initial mild whirring noise either abated entirely for inaudible spinning or continued to be audible up to 3 feet



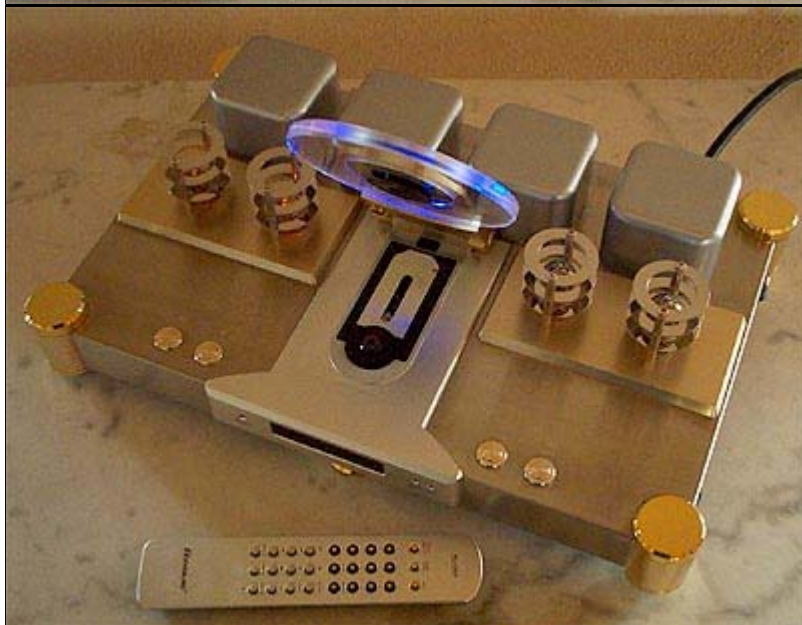
## 6moons audio reviews: Shanling T-100

away. If upsampling is defeated, the HDCD indicator lights up during the initial TOC scan but then extinguishes unless the CD is HDCD encoded.

At 27 lbs and 17.5" W x 11.5" D x 4.5" H, the T-100 requires 9 inches of total clearance for the lid to fully open and *stay* open by itself.

The Parts ConneXion mod involves replacement of the stock 6N3 main (not headphone) output pair with Western Electric 396As. It also upgrades the four stock OPA 2604s to proprietary OPA 627 adaptor pcbs. In the power supply, the mod entails 9 ultra-fast, soft recovery Hexfred International Rectifier and Fred Vishay-Telefunken diodes; 2 Black Gate electrolytic capacitors and 4 Auricap metalized polypropylene bypass capacitors.

For the valved output stage? 18 Audio Note Tantalum 0.5 and 1 watt resistors in the signal path; 4 Black Gate standard-grade electrolytic output coupling capacitors and 2 Auricap metalized polypropylene coupling bypass capacitors. For the solid-state direct stage? 14 Riken Ohm Japanese 0.5-watt, gold-lead carbon resistors in the signal path; 4 Black Gate standard-grade electrolytic output coupling caps; 6 Burr Brown high-performance, audio-grade dual OPA 2134 op amps.



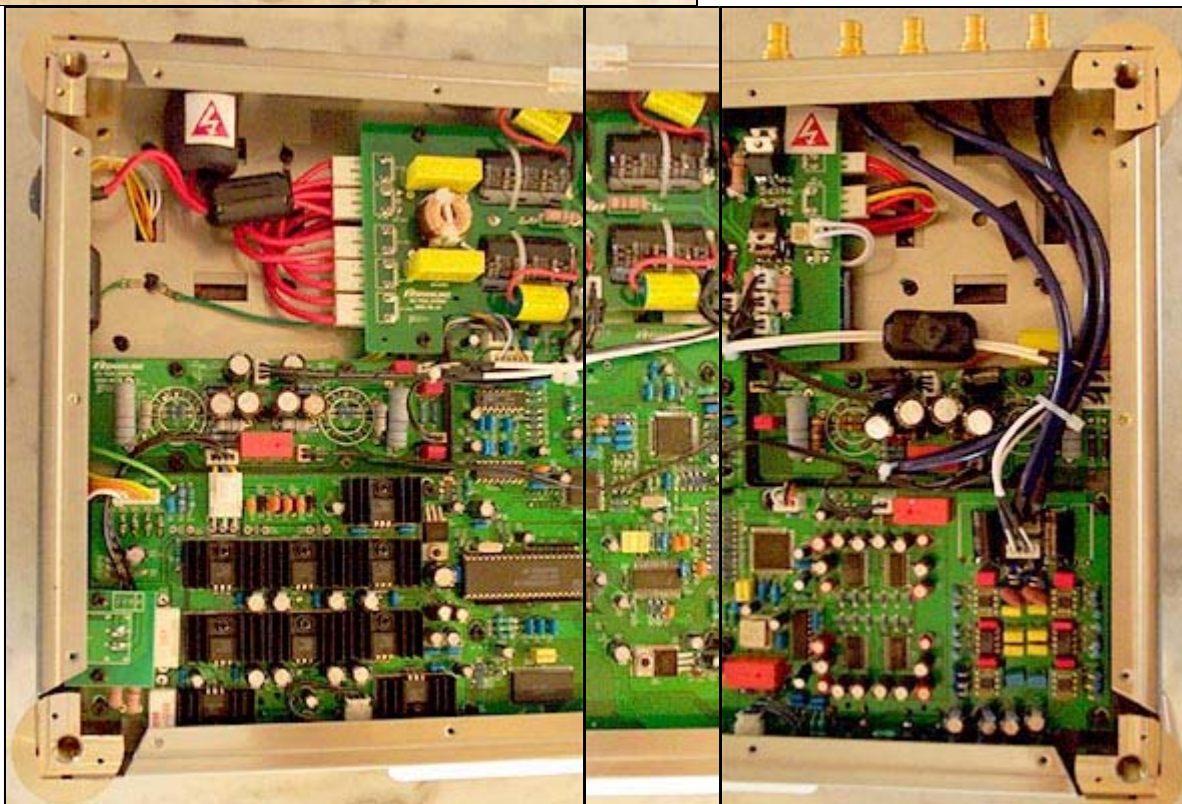
Additionally, the Parts ConneXion installs 4 feet of Cardas coaxial 21 awg shielded output wire; 2 sheets of Soundcoat dampening for the internal chassis; and TRT silver-content wonder solder for all modification joints.

This mod takes 7 hours to perform and upholds the 12-month factory warranty.

As with the already reviewed Jolida JD-100 and Music Hall CD-25, this modified Shanling T-100 is a special Graham Company exclusive with the Parts ConneXion. Atlanta-based, it sells completely modified, brand-new units for \$2,690 plus shipping. Or, it arranges for retroactively installed mods at \$1,200. Since the stock T-100 retails for \$1,995 through Music



Hall, acquiring an already-modded player through the Graham Company equals a \$500 savings over contacting Graham's Walter Liederman for this particular upgrade at a later time.



Some easily seen modification changes are the big yellow Auricap bypass caps in the upper central sector; the resistor upgrades around the four upright silver-bottom storage caps in the middle right; the four OPA627 adaptor PCBs around the six yellow lateral caps in the lower right-hand corner; the six OPA 2134 chips divided by heat sinks in the lower left-hand corner; the output hookup wire in the upper right-hand corner.

But enough window shopping already. How well does this machine carve the digital tracks?





Have you done the audio math already? You'll realize that the T-100 offers four different sonic flavors: transistorized or tubed 24/96; transistorized or tubed PMD-200 (plus the valve-powered 1/4" headphone jack). Adding unsightly tarnish to Sam Tellig's upsampling as the cure-all magic bullet, we find that in *this* particular case, upsampling introduced a modicum of stiffness, digital edge or angularity that interfered with the more organically fluid qualities of the Pacific Microsonics filter. Now, I'm not dissing upsampling per se - it works great in the Bel Canto DAC-2 and Cairn Fog. But, as the Zanden DAC's antiquated 16/44 architecture already demonstrated so eloquently, upsampling is not the universal panacea to combat digital's willfulness quite as unilaterally as its supporters would have you believe. Implementation of technology and power supply sophistication clearly are more important qualifiers than leading the number's war parade with the latest interpolation trickery. Here it introduced a certain tension and forwardness. That might go for enhanced resolution on paper but didn't sound as natural. Hence, all subsequent comments are with the 24/96 upsampler defeated, a simple and instantaneous remote control exercise.



The differences between solid-state and thermionic outputs with the modified player? Less pronounced than one might expect. The sand links were drier, with leading edges -- especially in the bass -- more pronounced. The glass links created a sense of billowing in the soundstage, slightly longer trailing edges, a dose of harmonic warmth in the vocals. The noise floor and hence dynamic range were a bit better following the transistor route. In solid-state gear, slamming tracks, while sharper, also drove with more traction to become rhythmically more incisive. The already sizable soundstage grew even deeper and more delineated in the far reaches. The thermo version was a bit more intimate, with more liquidity and softer performer outlines.

While I can't be sure, I imagine that the stock player's twin feeds exhibited far greater differences. Throwing designer parts at either while improving power supply filtering probably pushed both not only upwards but also closer together. Depending on the music, or even just specific elements, my preferences weren't entirely for the valves. Take *Alcazar De Cristal* [Aavidis/Ethnic, B 6823, 1996], a brilliant Flamenco crossover album by Carmen Linares' favored guitarist, Rafael Riqueni.

Expectedly, the embedded string quartet benefitted from the added suaveness, that silky sheen that tubes bestow on bowed strings. Equally expectedly, the rapidly plucked guitar strings gained a degree of ferocity going the other route. The cor anglais' alto-oboe timbre sunk lower into the diaphragm with the valves, Juan Reina's typical Cante Jondo (with those peculiarly stretched out ah-iiiiii embellishments) had less of that bite and metallic overtone glare, which gypsies deliberately cultivate for the hoarse edge that projects songs about pain and loss with unvarnished authenticity. You get the picture. While by no means drastic, either feed had its own signature. Assigning validity wasn't as simple as remotely changing inputs on my preamp, to play non-committal soldier of fortune who defects to whatever side pays out more.



To put the Shanling's solid-state performance into context, I juxtaposed it against my just reviewed [Cairn Fog v.20](#) 24/192 reference player. In *exaggerated* loudspeaker terms and to make a quick point, the Cairn was the Merlin VSM, the Shanling the Cremona Auditor by Sonus Faber. The Chinese player was weightier, with a few more creamona pounds on its frame. Le français was leaner, lighter, sparklier, and, possibly, endowed with an even lower noise floor.

The Cairn guided the ear to spatial low-level data. The Shanling appealed to the heart with its greater image density and concomitant wallop - two different seats to the same great performance, preference a matter of ancillary gear and overall system voicing.

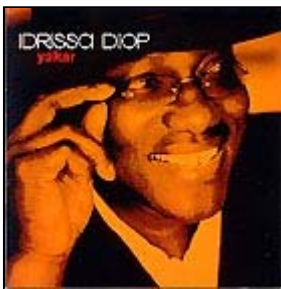


Comparing the Parts ConneXion modified Jolida JD-100 to the Shanling's tubed outputs conjured up push-pull versus single-ended valve performances. The JD-100 was gutsier, more thick-blooded and romantic, the T-100 slimmer, far closer to the Cairn's intellectual esprit. In floral bouquet terms, the Jolida suggested a Hawaiian hibiscus -- tropical, sensuous, intense -- the Shanling a refined whiff of rose - subtler, more ethereal than earth-bound. Western Electric 396A versus commoner's Svetlana 12AX7? Reader Vince Bezdecke, proud owner of Pass Labs preamp and 600X monos driving Apogee Scintillas, finds the Sylvania black plates the winning ticket in his Jolida, outperforming Mullard and Telefunken rarities and annihilating his friend's Wadia 21i in the process. Without tube rolling myself (possible too with the Shanling within the 2C51 family of small-signal valves) I can't comment. However, the chance exists that I haven't yet heard my JD-100 at its best. How about the Shanling versus Zanden?

The Model 5000's treble is a thing of rare beauty, of ephemeral refinement and elegance unique in my slowly swelling digital rap sheet (I haven't yet heard the dCS or Lindemann players which owners feel are its equals). Despite sticker shock, this led to its Blue Moon Award for "analog high-definition digital performance". The squirrely caption's apparent contradiction was my attempt at pointing to its uncanny combination of resolving the most obscure low-level data while retaining a palpable sense of analog ease - and this without the benefit of a properly matching dedicated transport like the Accustic Arts, Burmester, new Ensemble or an older CEC or Forsell that likely would extract a lot more. In the absence of such overdrive, the \$1,200 worth of Sonic Frontiers-heritage modifications grafted atop the stock Shanling brought it scarily close to the Zanden. On relatively simple and timbrally benign material, the *main* difference? A remaining sharpness that became identifiable only in direct comparison, by subtraction.



Call it the difference between a \$45 and \$70 bottle of fine Spanish Port. The former entails a faintly lingering flavor of raw alcohol that the smooth mellowness of the more expensive spirit completely transcends. On harder-driving, inherently edgier material like Idrissa Diop's Funk-Juju-LatinJazz fusion *Yakar* [Tinder, 861112, 2003], the element of high-energy relentlessness -- which, especially at realistic live levels, eventually becomes a distinct inner ear pressure that's grating away at your nerves -- was buffered and held at bay by the Zanden's greater airiness and superior decay lengths. The somewhat drier, somewhat coarser texture of the Shanling caved in to this kind of onslaught to reveal the hidden stinger. The Zanden was also slightly better at separating densely packed passages such as the choral fugue in Mozart's *Requiem*, the complex interlocking lines of Bruckner's Eighth, resolving both the orchestral and vocal sections while conveying a clearer sense of their many-headed constituents.



However! By playing essentially the same leagues, distinctions narrowed such that, were you to assign percentage points and call the Cairn/Jolida as occupying opposite poles in the high 80s range, the Cairn with a slight lead, the Shanling would belong into the 93 band, with the Zanden sans ultra transport occupying the 95 marker as the best *Redbook* I've yet heard. Each measly point in these rarefied strata is obtained at *great* cost. This rating leaves some headroom for future contenders for the crown. Note how tightly spaced these players are. Now juxtapose \$2,695 with \$10,000. That's a lot of bright green for what under these conditions was a rather close call. To make matters a bit more complicated? Walter Liedermann called toward Review's End. Being a most excellent salesman, he waxed poetic about the equivalent modification to the new Shanling T-200 SACD player.

With Sony's new triple-A KHM-234 transport as used in their latest \$4,000 machines; a new analog-domain, digitally actuated volume control for high-rez amp-direct setups; and yet higher levels of internal construction, he claimed it sounded even better than the T-100. *On regular CDs*. The magic phrase. Walter sure knew how to fish. Was I interested in a brief comparison? Am I a properly vetted audiophool cruising down Main Street for some heavy

action? With capitalist synapses firing off regardless, I first quipped "How much?" \$3,500 for the hotrod T-200, an \$800 upcharge over today's subject. The prospect of added SACD and yet better Redbook playback made this special seats baksheesh -- in our strange audiophile world of skewed priorities -- seem relatively insignificant.



"Yeah," I croaked, "bring it on. Do me." Three days later, Walter's personal unit arrived. I was all set for a quick tête-à-tête of digital French, er *Chinese* kissing, between the 100 and 200 models in this T-terminator series from Shenzhen. This product seems poised to rewrite what -- once made over by a masterful Canadian tweak -- music lovers should expect sonically, featurewise *and* visually from statement digital at mid-level prices.



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## AUDIO REVIEWS


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Like Lloyd Walker managed a few weeks back -- daring me with his Velocitor power accelerator while promptly delivering on what, simultaneously, was clearly proud-papa excitement to be mistrusted for proper reviewer distance -- Walter Liederman proved to be right, too. I'm an ex-salesman. Being sold *and* closed by another while remaining critical throughout the process is an - er, *interesting* proposition that combines resentment, humor and admiration in equal parts. To wit, the T-200 was audibly superior and not by an insignificant margin. Catch phrases that suggested themselves? Weight, image density, focus and low-level retrieval. For the most overt improvement, imagine each tone a miniature round peach while remembering that certain peaches are really nectarines in disguise - they look very similar but flaunt a smooth skin whereas peaches are fuzzy.

Depending on ripeness, some are firm, some are juicy. The *basic* taste is the same, but the juicy ones explode in your mouth with greater force. The T-100's outlines were peachy -- slightly fuzzy -- while the T-200 was a nectarine: Polished smooth yet cutting a clearer profile without the minor surface blurring. If tones had taste, the T-100 would have been a firm peach, the T-200 exuding that extra ripeness of juicy sweetness and tart acidity triggering secretion responses in your mouth. Listening to this tangible difference while fishing the river of diction for more descriptive visuals, I felt stuck on the darn peaches. However, I thought of a laser knife that would perform two narrow parallel cuts through two of the sticky orbs. Right through the middle of the fruits and the centers of their pits, it'd leave two thin round slices, one for each fruit. The T100's had a large pit whose sliver fell out of the slice. It left a hole with a thin ring of flesh on the circumference and the slightly furry halo of the skin surrounding it. The T200's slice had no pit in the center. It was solid flesh center to edge and with a smooth skin all around.



Calling such a presentation fuller and denser would be accurate but I dare imagine that our peachy detour added a certain important element. Playing Gale Hess' "In Love Alone" [*The Waltz King* by Cafe Noir, Carpe Diem Records 1994, 31012-2] delineated another one - a firmer hand with off-center images, an effect I had first experienced very potently while rewiring my entire system with HMS Gran Finale/Energia cables. The clarinet and viola accompaniment on the edges of the stage was as robust and solidly manifest as the central vocals; as clearly present as the adjacent Sinti solo guitar and the shrum-shrum rhythm guitar and double bass behind them. Switching back to the T-100 seemed to shrink the stage laterally, albeit not in actual spatial terms. The density or focus simply faded the more it withdrew from stage central.

The performers *themselves* didn't waver or move further inwards. Rather, they just weren't as strongly drawn to create the illusion of narrower width. Concomitantly, the T200's greater materialization of the stage edges made those elements seem louder, giving the impression of more detail, greater presence and more data.

The Romanian 4-octave concert cymbalom is a relative to the Indian santoor and smaller Turkish qanun. Played with two cotton-covered mallets, in the hands of a master like Ion Miu, it's capable of producing up to 30 notes per second. This creates a shimmering aquatic effect of breathtaking fluidity, each metallic note strung unto the next as rapidly as a gushing rain stick. The Romanian pan flute, first brought to international prominence by virtuoso Gheorge Zamfir, has turned into a veritable concert instrument. At the lips of an Ulrich Herkenhoff or Simion Stanciu 'Syrinx', it can play J.S. Bach or Handel transverse flute concertos that are technically challenging already for a fingered instrument.

On the Marcel Cellier recording *Romanian Gems* [Pierre Verany 1994, 750004] Simion and Ion join forces with the organist, in the very Swiss canton church of Cully/Vaud that, in 1969, had witnessed the first-ever recording of organ and Romanian ney between Cellier and Zamfir. The T-100's rendition of the cymbalom concentrated on the bright hammered string attacks but failed to include the zither's very sizeable box for the darker timbre of more sonorous cavity resonances which the T-200 resolved. And while Stanciu's panflute tone is innately slimmer and breathier than landsmen Radu Simion's or especially Dorel Manea's, the T-100 put him on an additional 5-day Jenny Craig diet.



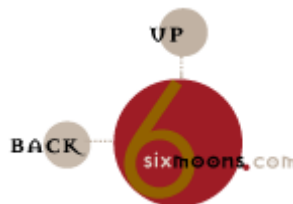
In short, the SACD player's capacity for RedBook magic exceeded that of the very good CD-only machine. Due details to follow in the upcoming feature review. For today, my sour premonition is fixated upon the fact that unless I can scare up a suitably impressive transport, my new Zanden DAC has been bested. But back to the subject at hand. The \$2,690 modified T-100's sonic prowess was every bit as impressive as its visual or feature-set panache. My *only* complaint? The even vertically challenged acceptance range of the remote. For commands to be registered, it requires you to hold it at the same level as the player. An overlooked, non-essential but elegant detail? Complete black-out of the display rather than the heavily attenuated but still visible illumination. With these minor nits out of the way, how about the last feature, headphone performance?



For comparison's sake, I drafted my trusty Antique Sound Lab MG Head and Grado RS-1 phones into service and wired the former into the T-100's solid-state outputs. And? The Shanling's got the soul of tone but not the power. On dynamically compressed Pop recordings, with its digital volume control bypassed to full output, the ASL's matched dial was at 10 o'clock, just right with this fare but sans headroom for the T-100. On a nouveau tango MA Recording with optimized dynamic range, the Shanling/Grado combo was clearly underpowered, not able to deliver the requisite output voltages for lift-off. Granted, these wooden Grados are a tough toad - er, load. *Sonically*, and with simpatico discs of appropriate compression EQ (i.e. recorded to sound as loud as possible) the Shanling pulled head-to-head with the MG Head but exhibited marginally higher noise floor. I didn't have other headphones handy to explore this issue at more length.

Extrapolating in reverse from my recent experience with the equivalently modified Music Hall MMF-CD25 versus its stock shadow, I garner that the stock Shanling is a good while not great player at its \$1,995 price. However, once done in and made over as here, it achieves true greatness. Mark my words - overlooking it as just another pretty face then would be a big (and likely very costly) mistake. Disregard its 24/96 upsampling and be prepared for a very smooth, "non-digital" sound that does all the audiophile things you expect. Far more importantly, it allows you to forget about them to get intimate with the music and relish in it, the audiophile judge disbarred from the district. And *that*, after all the fancy talk about specs and fit'n'finish, glow-in-the-dark romance and flavors of tone, is what it's really all about. With pre-delivered and to-die-for build quality, the Shanling T-100 Level 1 Mod machine becomes a high pedigree beaut *all around*. Hadn't its bigger brother, the T-200, significantly eclipsed its performance for "just" \$800 more, the T-100 would have waltzed away with one of our Blue Moon Awards. *That* should tell you all you need to know. In closing, consider what might happen should our friends in Asia catch up in the tweak department. In a few more years, domestic makers may well wish our government *did* impose trade embargoes with China. No longer just a land of cheap labor, China seems poised to eventually turn into an audio super power. *This* Shanling player's just the beginning. Review of T-200 and matching EL-34 amplifiers to follow.

Manufacturer's [website](#)  
US distributor's [website](#)



Modification [contact](#)  
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