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AUDIO REVIEWS

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While we're still in window-shopping mode, let's complete the tour.





Removal of the tube cages is child's play on both integrated and CDP and merely involves the loosening of 4 hex bolts. Still, be careful not to push the spacers between the black chassis and the floating mirror cover into the component or you'll have to fish for 'em the hard way, e.g. via removal of the bottom cover.



The CDP's acrylic flip lid reveals a deep well with finger spaces in the 12:00 and 6:00 o'clock positions, rubber edge-banding to buffer the lid from the mirror-gloss top, a magnetic puck and a non-suspended hard-mounted laser assembly.



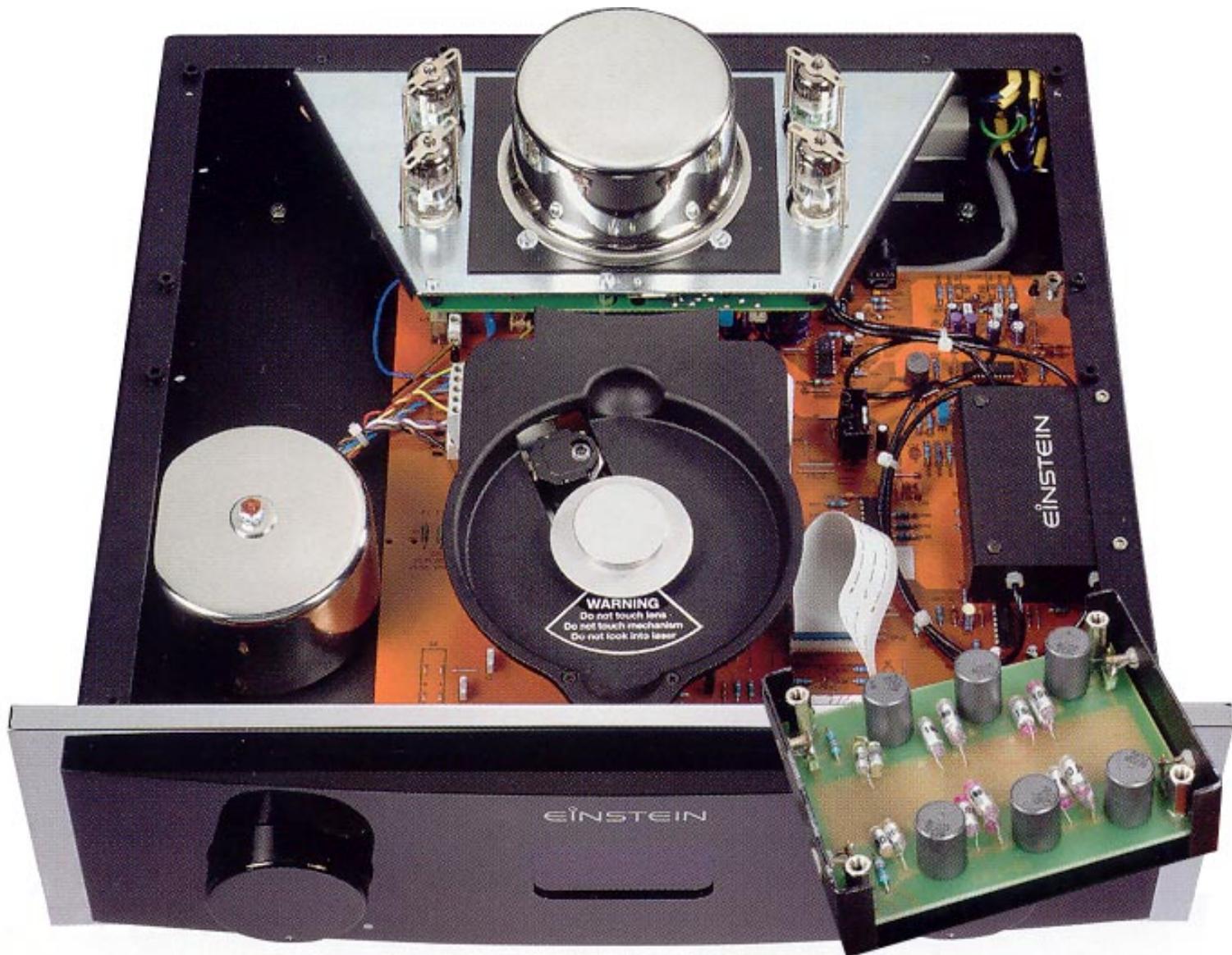
The central display is recessed behind the thick black fascia to create a look of luxurious depth emphasized at night when the wide "window sill" edges reflect the dark blue readout. The latter can be completely extinguished via remote command and display functions include track time played, track time remaining and total time remaining. Remote programming options include shuffle, repeat and program while the front-panel click-stop controls engage play/pause/stop on the left and forward/backward on the right. Just as with the amp, the stock Philips 6922s are outfitted with spring-loaded retainers. Connectivity ports on *The Last Record Player* include single-ended and balanced analogue outputs, one RCA digital output, one grounding terminal and the ubiquitous IEC power inlet with mains rocker. The importer also had included two quartets of NOS Siemens E88CC/6922s to indulge in some tube rolling with both pieces.



Using the same basic black chassis gussied up with the floating mirror cover and the substantial chromed front plate adorned with a slightly curved black face, *The Perfect Tune's* display consists of three blue LEDs that light up with power-on but extinguish except for the central one when the thermal stabilization process -- finalized when the relays click off -- has run its brief course. Because the innards of the black case (only slightly taller than a single rack space unit) are crammed to the rafters [below] and lateral external heat sinks would have ruined the aesthetics, the amp sports eight chimney-style heatsinks front and aft of the tubes. Their hollow central flutes end slightly below the surface facing the motherboard. Both components rest on 2" tall solid columns reflecting the size of the frontal controls, leaving enough power cord clearance for the belly-mounted IEC on the amp but unwieldy pythons of limited bend radius need *not* apply. Presumably the forward location of said IEC was chosen to avoid routing AC wiring anywhere near the sensitive outputs. Mounting this power terminal on one cheek of the amp would have marred appearance by leaving a visible cord hanging off to one side. Alas, I could see certain people bitching when their favorite power cord won't fit. The solution? Have Einstein fabricate a shorter version of their current stock power cord terminated in an IEC, with this tail just long enough to protrude on back where you'd normally expect the power mains socket. Now you could use any overstiff oversized power cord in your repertoire without throwing a conniption fit. Just a thought. Audio's supposed to be a peaceful pastime.



The amp eschews the common numerical volume display. The up/down commands on the central ring cluster of the remote rotate the motor-driven pot without any visual confirmation of setting save for the demure white dot on the gain knob. Consensus regarding overall appearance chez Ebaen? An enthusiastic thumbs up: Clean but architectural, luxurious yet not garish, a perfect balance of two-tone chic. The only real complaint this Americanized German must file as a matter of principle? Those bloody Euro-safe terminals. They spell major frustration for followers of the two-spades-stacked tri-wire brigade (moi) who don't have back-up banana-equipped wires to adapt. Additionally, only standard-size spades will fit and God knows how what's on cables in this regard quite runs the gamut. Taos to Laguna Beach: "Dear Mr. Importer, puhleeze request for US usage that your German supplier outfit future amps with Cardas Rhodium posts. Those accept two spades from any which direction and not just one sized-just-so spade from below. True and admittedly, us Yanks are cultural Barbarians of the first order. Alas, we *do* know how to wire up an amplifier without electrocuting our first-born. Don't punish us with this idiocy. The exchange with the Euro is cruel enough."



The CDP's transport is Rega-based while the analog reconstruction filter is a zero-opamp purely passive resistor/coil affair [insert above] for shallow filtering. This feeds into the quartet of paralleled double-triode 6922s in the output stage. Output impedance is 51 ohms and dynamic range 101dB. The XLR outputs aren't truly balanced and thus not a performance but convenience option [the matching *The Tube* linestage is a fully symmetrical unit from input to output, however].

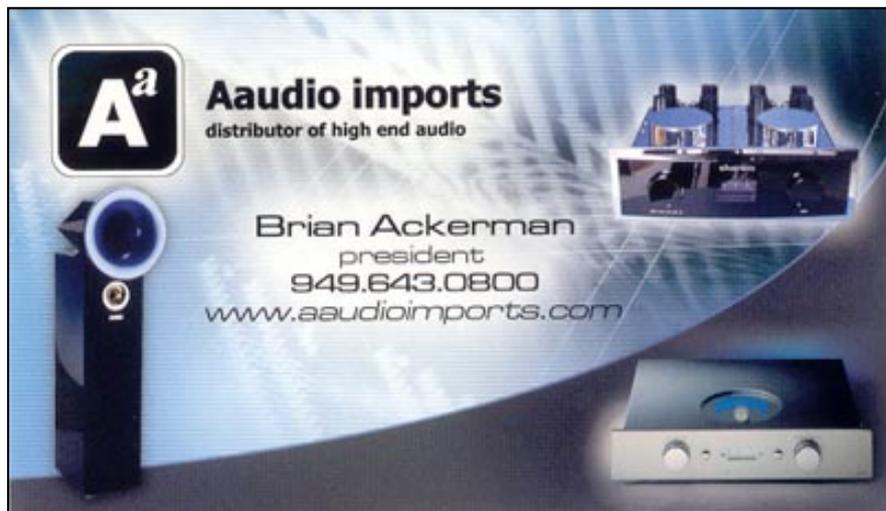
From a standpoint of ergonomics, features, appearance & build, the posts are the *only* niggle your cursed-by-perfectionism scribe can muster since removing finger prints from shiny surfaces is par for the course of said curse. It comes au naturel with the territory of piano-gloss lacquers and fine chrome. The importer needs his goods back by CES hence the full performance review shall publish in 30 days. Considering the pretty singular position of the Audio Aero Capitole when it comes to statement-level tube-powered CD players, I am particularly curious about *The Last Record Player* which is priced considerably lower but seems endowed with just the same peak-performance ambitions. Fortunately, I currently have the Audio Aero Prima DAC in-house which *is* the Capitole simply sans transport function. Substituting the latter with my Accustic Arts Drive-1 should arguably be at least its equal to give us a good idea how both machines would measure up mano-i-mano. Accustic Arts plus my



customary Zanden DAC will be another comparator, of course. Since the holiday is just about upon us when it comes to wish lists and excessive spending, a cursory preview of these goods new to our shores seemed of general *santaclausian* interest. Hence the early publication of what, at this point, is merely the introduction. And here finally is the promised Einstein history as delivered by the firm's own Volker Bohlmeyer. He'll tell us a bit about the people behind these exciting "new" products.



Having sampled *The Last Record Player* for more than a pre-coital quickie already, I can divulge that this is *not* a case of skin-deep beauty at all - and \$300 worth of NOS tubes take things to an even higher level. And if vinyl trumps digital in the bass, then the moniker *The Last Record Player* isn't hubris but well-deserved. But before I give away the farm, here's Volker, with some images courtesy of Brian Ackerman, taken this summer during his trip to Germany when he slyly consummated a foursome distributorship for Accoustic Arts, Acapella, AudioTop and Einstein.



I'm told that Einstein and Acapella collaborate quite a bit and recommend using each other's gear above all others. That's apparently the plan

at CES as well where Einstein electronics will be partnered with Acapella hornspeakers and those famous ion tweeters.



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# AUDIO REVIEWS

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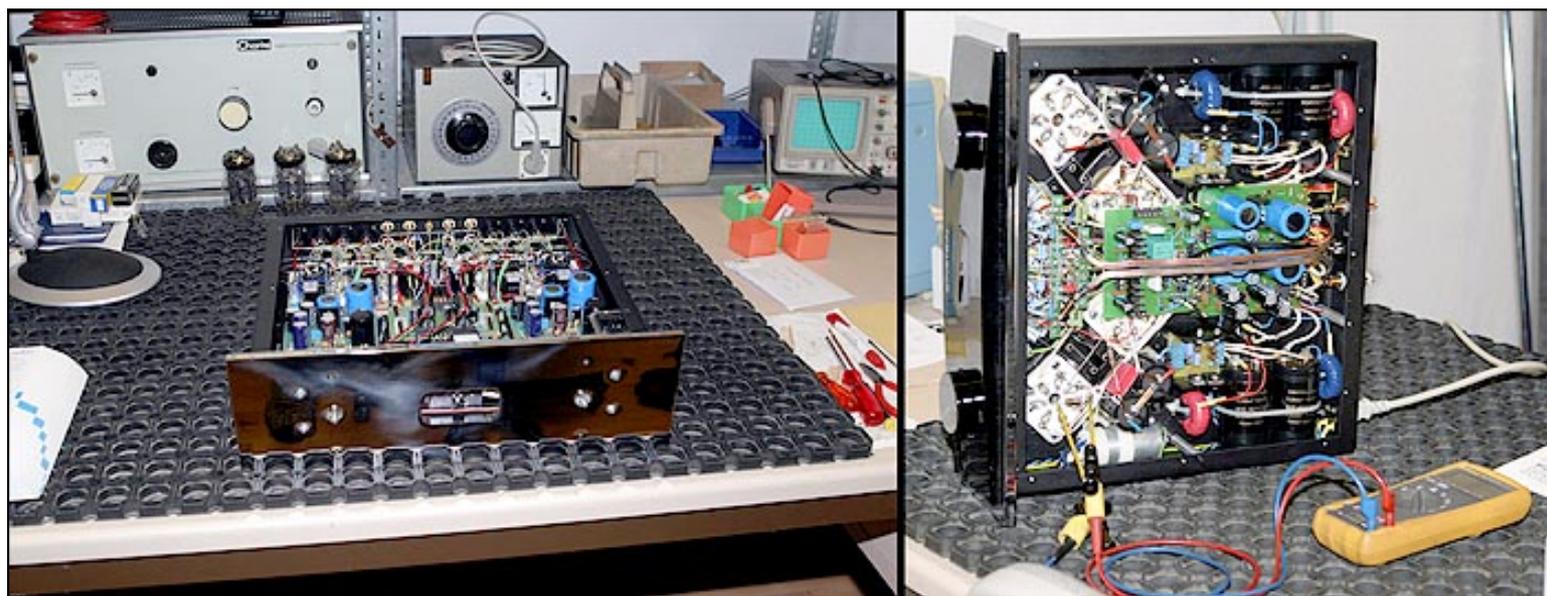


Einstein is located in Bochum, a city of 400,000 inhabitants along the river Ruhr of Germany's industrial Ruhrgebiet corridor and inside the Dortmund/Duisburg/Düsseldorf triangle. While Einstein's final testing and shipping plant shares a building with the management of Bochum's Symphony, the above ladies are not professional operatic performers but party animals captured on camera during Matrix Bochum's 2003 New Year's disco bash.





When I commented to Brian about the lack of owner's manuals with my review loaners, he countered that Einstein thus far had purely concentrated on their domestic market - everything they can build seems pretty much sold by the time it's crated which reportedly already includes something on the order of 300 of the new preamps [below left]. An English site and English collateral materials should be ready by CES when Einstein will grab the bull that's the current US market by the pointy horns. Ackerman also divulged that Volker's a most avid wine collector who will bring some choice bottles to Las Vegas ready for those whose gullets are drying up in the arid desert airs.



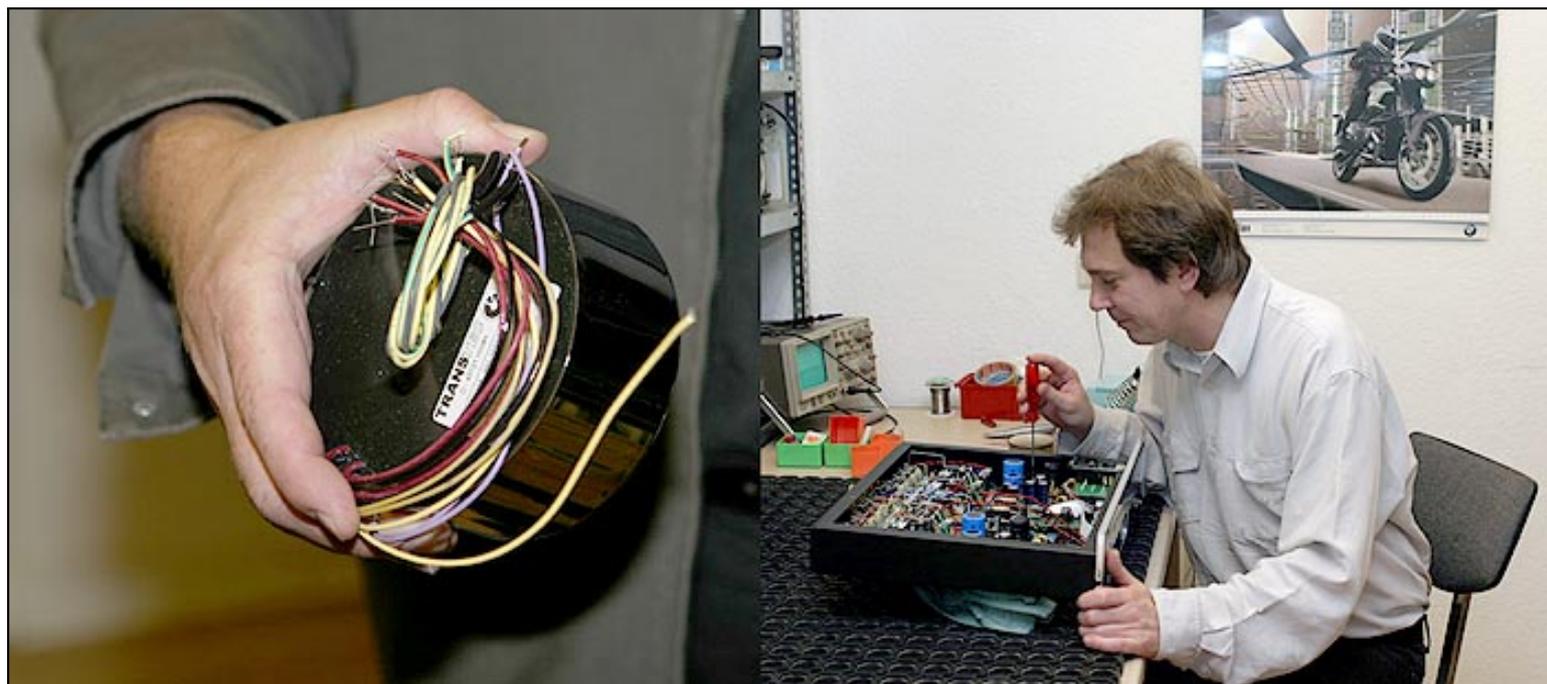
For a brief company history, Volker submitted the following chart:

- 1988: We started to design our first amplifier, an integrated solid-state amp called *The Amp*
- 1990: We launched it to the public and received the first reviews here in Germany (only really nice ones of cause - hmm)
- 1991/92: Other excellent reviews from England, Italy, France, Sweden, Taiwan, Japan and three awards from Japan for one of the best sounding integrated amplifiers (excellent ranking for three years in a row!)
- 1994: New updated version of *The Amp*
- 1995: We launched our first CD Player *The CD* and got nice feedback from the reviewers, again
- 1996: We stopped manufacturing *The Amp* ( we sold about 2300 of them over time)
- 1997: We stopped manufacturing *The CD* and started to design *The Tube* preamplifier
- 1998: We started to design *The Last Record Player*, another tube-based product
- 1999: We launched both products in the market and again, received nice comments from a lot of people (at that time, some reviewers here in Germany advised me *not* to design tube products because there was no future in the modern world for tubes. Really! They told me that we would soon go bankrupt. Today these same people really like

to review our tube products and a lot of other manufactures are now selling and manufacturing tube components. I think tube equipment is the only product which is selling nicely over here.)

- 1999: We started to design our OTL monoblocks *The Final Cut* in 23- and 60-watt versions
- 2001: We launched the *Final Cut* amps to the public and began design work on the integrated amp *The Absolute Tune*
- 2002: We updated *The Last Record Player*, launched *The Absolute Tune* to the public and started to design *The Light In The Dark* stereo amplifier
- 2003: We started to design *The Turntable's Choice* MC phono amplifier
- 2004: USA
- 2005: We will launch *The Light In The Dark* and *The Turntable's Choice*

Before I return the mike to Volker, does it strike anyone else as remarkable that this firm tends to take two years from commencement of design work to final introduction of a product to the public? This suggests the *opposite* of using the first generation of buyers as unwitting beta testers. Very commendable, that - especially with tube gear. Back to Volker:



"In the beginning, we also experimented with speaker designs but fortunately noticed very soon that we didn't possess the proper equipment (beside our ears) to seriously design speakers. So we never touched speaker design and manufacture again and have no plans to do so in the future. At the moment, we spend all of our time and resources to design and manufacture our tube-based product line. We also have designed "nice" cables but they are only as good as other good cables.

When we started to sell our first tube components in 1999, our products were only available in the German-speaking part of the world - Austria, Switzerland and Germany. Due to our strong home market buying up everything we could produce, we never succeeded in selling our product abroad. Although we manufacture a good quantity, we were always too tight in production to go overseas. (For example, we have sold over 300 pieces of our preamp *The Tube* -- price class of ca. \$12,000 -- in Germany alone).

This year we decided to start selling some of our product to the USA. We had some earlier requests but when we met Brian Ackerman, we knew that he was the right person to handle our product. Next year we hope to take it a step further and begin distribution in Japan again. But first, we'll try to do a good job of it in the US!

We currently employ eight people in our company. There's our designer Mr. Rolf Weiler and my wife Mrs. Annette Heiss, an interior designer who is responsible for our aesthetics. Then there are three engineers, one salesman, one book keeper (my mother of course) and myself. I am responsible for the nicer things in life - listening to music, quality control and friendly contacts. My father is "employed" too, of course. He's everybody's darling. What a job!

Our intention to HiFi manufacture is very old-fashioned and similar -- I hope -- to a lot of other audio manufacturers in the

world. We really love listening to music and have noticed that you need some quality tools for that. So we try to manufacture some of the best tools to listen to music in a serious fashion. But, I have to admit, we also need to earn some money to manufacture these tools and be in a good mood to develop sophisticated designs. We don't like to be a "copy shop". So we try hard to realize our own ideas if they make sense, regardless of whether it's a transistor or tube design. If you can take the benefits from both, excellent. At the end of the day and if money doesn't matter, we believe that you will have the very best in listening to music if you go for a *sophisticated* tube design.

Because we are living in that part of Germany which was responsible for the coal and steel supply (the Ruhr Gebiet), we are based out of an old coal-mine building, which is really very nice and quite traditional, a strong building with a good atmosphere in which it is lovely to work."

So there you have it, the background on the *other* Einstein who wanted to return a plumber but got sidetracked by HiFi.



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The *Last Record Player* is neither one of moviedom's famous Soggy Bottoms boyz nor otherwise too guilty of the lesser aspects of inferior valve designs. Plainly put, it doesn't use tubes to go all saccharine or mushy. Needless to say, there *is* a degree of extra harmonic body. Why bother with valves otherwise? But it's deliberately not overdone to avoid getting fat and sloppy. While you might expect to hear the presence of tubes most overtly in the vocal range, it's in fact the treble that appears to benefit the most. A good thing too since that's generally considered the Achilles heel of digital. But let's be clear that this quality is not a function of roll-off but simply a very welcome absence of bite, glare and grit.

Another area where diehard vinylists claim an advantage over digimeisters is in bass extension and weight. This might sound counter-intuitive but anyone who's heard a first-rate turntable setup will agree that with superior vinyl -- the Walker Audio Proscenium Gold comes to mind which I had an opportunity to sample in both the designer's house and moonie Mike Malinowski's -- there's simply more meat in the bass. I doubt the Einstein player could really go head to head in such a comparison but compared to its *own* kind, bass is definitely a very strong suit - weighty and boffo extended.



One of the more compelling reasons to upgrade the stock tubes is a clear increase of control or grip across the board. That's most noticeable in the nether regions but pays dividends further up into the midrange as well. The stock bottles also generate more HF energy which isn't excessive or objectionable but more integrated with the \$300 set of NOS champs. Where the Einstein is merely good but not supreme? The depth perspective. It's simply not as expansive and endless as my reference Zanden (which, to be fair, also costs a lot more, never mind requires a stand-alone transport). The other aspect is resolving power. It's perfectly fine but textures in general aren't as delicate as my usual stack. That last bit of refinement is given up in favor of being just a bit denser, warmer and more compacted. This was clearly noted in the lengths of decays on Todd Garfinkle's excellent *Buenos Aires Madrigals* [MA Recordings] - not as exceptional as via the Zanden which sets quite an impossibly high standard in that regard.

Remember, I'm nitpicking. Far more important than analytical weenie-waxing is asking whether listening to music becomes emotionally compelling. If so, are there any subsequent or intermittent jolts of artifice that spoil the illusion? Do you suddenly find yourself listening to stereo instead of tunes? On something like the just-mentioned disc, I'm watching for a sense of breath and flow to support the innate lyricism in the Italian madrigal sections. In the Argentine Tango interludes, I'm exploring whether the innate energy, vivacious rhythmic drive and emphatic vocal peaks remain intact. Yes on both counts - you feel drawn into the music to get wet rather than kept at bay to count the waves. (Put Robert Duvall's *Assassination Tango* on your DVD-rental list for some killer scenes of high-level Argentine/Uruguayan dancefloor tango.)

This player is smooth but not to the extent of suffocating all excitement. True, it does favor flow over drive. It thus won't ever be mistaken for the Naim archetype. It's creamy, less *focused* on time-keeping duties. This seems to be a result of the overall flow/smoothness axis. Transients aren't overly accentuated. There's more emphasis on the middle of the notes. And that's exactly what I imagine would draw prospective buyers to a tubed machine in the first place. Feeding the Einstein with some agitated fiery fare didn't highlight anything untoward to suggest grave imbalances. Simply think of this as a player that's most fond of bel canto. It sings rather than raps. It carefully enunciates rather than bursting into staccato salvos of high-pressure expletives. So much for a character sketch. Via its digital out, let's compare results with the Audio Aero Prima DAC.



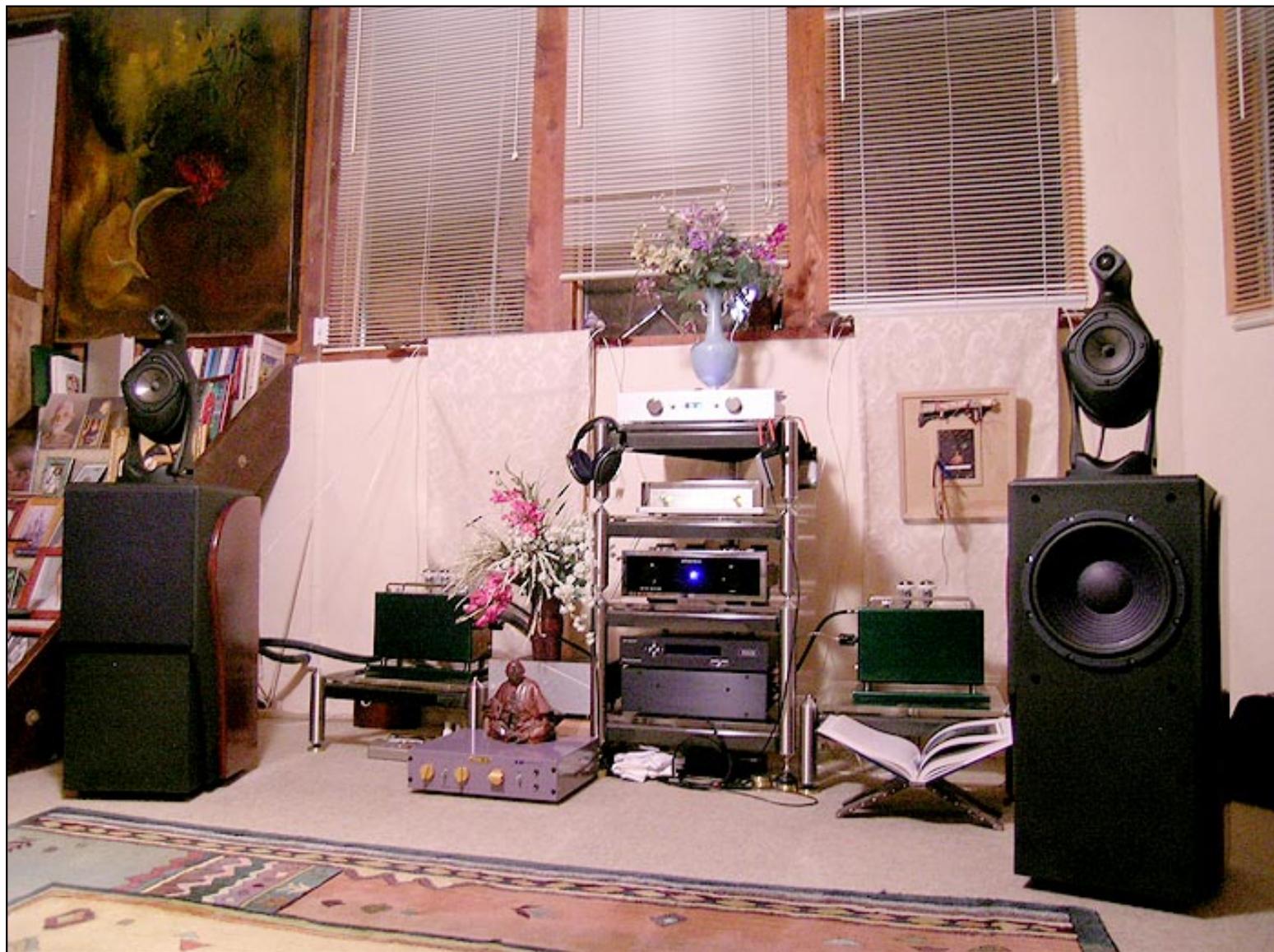
Talking *ankles* for a change, the Einstein was very nice peasant stock - stout, robust, with a solid bone structure. The Audio Aero spelled royalty - refined, elegant, finely boned. The French outboard DAC simply was more resolved and agile, airier and 'faster' to suggest a higher plateau of performance. The Einstein even with the better valves felt slightly opaque by comparison - somewhat overcast, not quite as articulated and thus just a bit homogenized. Nothing drastic, mind you; certainly nothing embarrassing seeing that the Prima is the heart and brain of the accoladed Capitole MkII which, itself, is probably *the* single-box tubed CDP to beat if you aim for top honors in that field.

Coming up second against the reigning champ is nothing to sneeze at, especially when you're talking an additional 2 thousand-or-so. Also, relative limitations such as these only telegraph in the presence of something more exclusive. Taken on its own merit, *The Last Record Player* plays tunes without any obvious shortcomings, being more of a musical instrument than ultra hi-tech machine. That's a welcome break from the resolution-for-resolution's-sake madness that seems to have gripped a certain market segment to favor leaves over trees and trees over forests. To take the melodic and organic qualities which the Einstein delivers in spades -- and which many lack to become more mechanical or sterile -- and combine them with the last word in penetration power simply demands a heavier padded wallet at least in this particular juxtaposition (or perhaps a direct marketing scheme like Resolution Audio has set up).

For those whose systems err on the side of thinness, hardness or nervousness, the Einstein is a one-box antidote. Run it with fast wide-bandwidth solid-state electronics and/or lit-up "fast" cabling and presto: Copaseticity City. Or, run it with its own stablemate which, as we shall see, operates on thinner blood and higher octane fuel to dovetail as though by design. The only ergonomic idiosyncrasy with the player that took getting used to was direct access of tracks higher than 10. If you press >10 and then 2, you get 2. You gotta push >10 (which sets the remote for two subsequent single-digit entries), then 1 and 2. It's just a different way of doing things but I caught on in a hurry.

Where things Einsteinian really got exciting was with *The Last Tune*. Boy does it earn its name for real. It's popular to

think of hybrids as combining the best of both worlds. Occasionally, the typecasting actually fits the crime. That certainly was true of the KR Audio Antares (a reverse hybrid that marries solid-state rectification/drivers to power triodes). It holds true also of this "traditional" hybrid that combines a tube preamp with transistor output devices. It's got truly *stupendous* bass that creates formidable pressurization from down below to add solidity, spunk and scale to the proceedings.



The 4"-ported 12" woofers of the Green Mountain Audio Continuum 3s' truly got their wake up call when *The Last Tune* stood in for my customary 30-watt SEP monos. The monos had plenty of power - but the Einstein added damping factor and current which translated into a stiffer overall suspension. It let me feel every little bump on the low-frequency road that remained previously obscured. That gets a sporty driver more involved in the act of driving - Cadillac show boat be gone. This tightening of overall control had a similar impact on the audio experience. The system cornered harder and my adrenaline went up a few notches in turn.

As previously noted in my Wyetech Labs Pearl review, certain tubed components very keenly select specific valve attributes they consider desirable and with equal deliberation, banish others into invisibility that are viewed as counter-productive. With *The Last Tune*, rhythm and articulation are solid-state bouncy and taut. Midrange seduction is where the tubes are allowed to intrude and do their thing. There's nothing malnourished, restrained or polite about vocals. And unlike *The Last Record Player* which errs on the side of laissez-faire and minor voluptuousness, the *Tune* has an edgy attitude that prevents midrange velvet from turning viscous honey. "Best of both worlds"? *This* Einstein's gotz it.

The trick to this stunt lies in the symmetrical processing of the signal past the differential input amplifier all the way to the

MosFet final stage. That's preceded by an intermediate bipolar driver stage and the four paralleled double-triode preamp bottles. SET-typical 2nd-order distortions are cancelled but the holographic soundstaging and vocal palpability muscle remain in the picture and get plenty of audible exercise when you fire this beast up. I'm back to the Wyetech Pearl. There I stated that it suggested tubes only in its soundstaging and micro-dynamic aspects. *The Tune* adds a controlled element of tone to this picture but otherwise resists further intrusions into the tube camp. While different from the KR Audio Antares, Einstein's particular choice for a hybrid that somehow must bridge dissimilar amplifying devices of specific strengths and weaknesses is pulled off with rare panache and -- as it should for the price -- in far more expansive scale than the Unison Research Unico that borrows considerably less from the valved side of the fence.

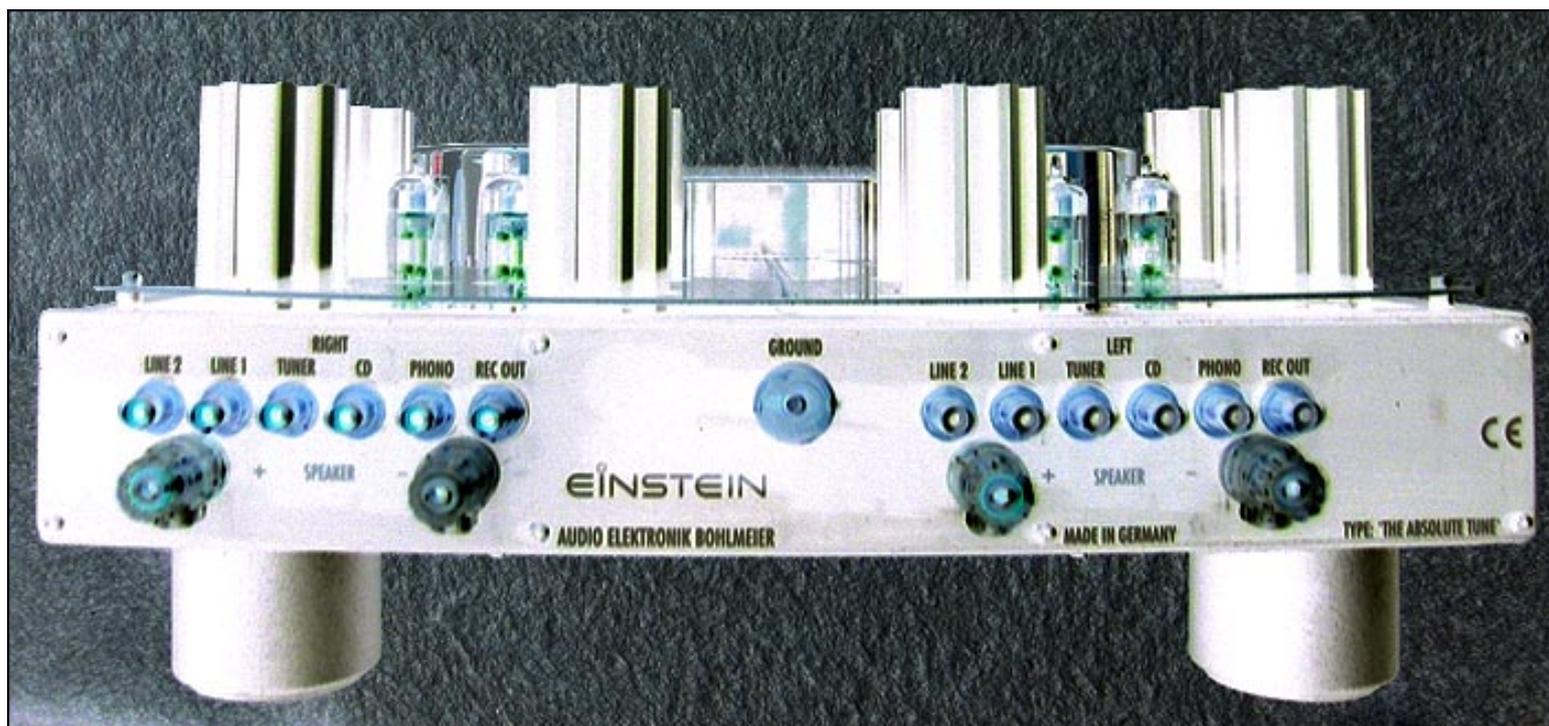


When mated to the CDP, the energetic brio of the *Tune* dominates. It's as though it had plenty of innate moxy to embrace its partner's slightly more sedate temperament without losing significant momentum. It also expands upon its source's spatial soundstaging restraints. Again, this could be a partial function of the balanced signal processing. Whatever, the results speak for themselves and even reaching around the left fascia edge to trip the power mains underneath is convenient and just requires a bit of lateral clearance. Reflecting on the competition that will face these German newcomers to our market, BAT with both its valved VK-D5 and SE one-box players and the VK-300x hybrid integrated might be the natural foes they have to contend with.

Not having heard either outside of show settings, I won't even speculate on sonic comparisons except to say that despite its newness to our shores, Einstein the company & engineering brain trust strike me as being every bit as mature as the folks from Balanced Audio Technology. This firm should thus be in the sights of anyone shopping this particular genre. It won't come as a surprise when I say that in the final tally, *The Final Tune* eclipses *The Last Record Player* when each is measured on its own merit. The CDP will require more careful system matching to minimize potential liabilities of undue combinant density and should be very synergistic with certain silver cables. The integrated amp will only see sources, which accounts for less critical variability to begin with. To boot, it's so well positioned in the particular traits its selects

from the hybrid palette of opposites that I couldn't image anyone cooking up an intrinsically flawed match-up.

Less of a surprise even will be that when these components from the same stable tango together as they were likely intended to, it's not as though they just met for the first time and inflicted pain on one another by misstepping. As a high class remote-controlled essential system (just two boxes but plenty of socketry to expand) and with enough real-world power to drive 88dB 4-ohm speakers, going Einstein follows Audi and BMW precedents - it ain't cheap but it's deluxe and you definitely get what you pay for. Especially those who feel simultaneously attracted and repelled by vacuum tubes -- attracted for sonic reasons, repelled by upkeep and potential failures -- should strongly consider these Einstein boxes. The valves are of the small-signal, non-exotic variety and never interface with your loudspeakers directly. 6922s are neither rare nor expensive. Should you grow adventurous, tube rolling becomes an attractive proposition that doesn't require golf memberships. On that subject, the CDP is more critical whereas the integrated shines even with the stock tubes. Don't let its modest rating fool you - the *Tune* is a real power house!



Even under the microscopic and unfriendly gaze of the 103dB Avantgarde Duos, this amplifier acquitted itself with superb noise levels at common and even slightly uncommon volumes when I cut signal to check for hum and surf. Investigating published measurements in German reviews, I discovered S/N figures of 105dB and IMD values so low that the test bencher annotated them with "this is the hammer for a valve-fitted machine". I take his word for it since it gels with my listening impressions - this tuneful baby really is the hammer and packs a mean and very clean punch.

I'll be very curious to learn how the Einstein separates will perform for *SoundStage!*'s Editor next year. He's used to Lamm and Wilson gear. That should really turn up the heat underneath any upstart contenders. For now, I'm happy to report that despite getting switched from my initial extra interest in the CD player and despite expressing early reservations about the mouthfuls of implied hyperbole in the colorful nomenclatures, all is forgiven -- even the bloody fingerprints that collect like summer mosquitoes on the stainless steel covers -- once you spend a serious stretch with these machines. It's one of those times when my German ancestry instills surrogate pride. The only thing hard to believe about this entire encounter? For how long Bohlmeier & Co. have managed to elude our radars and operate quietly but busy-as-beaver exclusively in Deutsch-speaking Europe. Is our American audio market chopped liver to neglect this long? Perhaps. Actually, in this case, our Teutonic audiophile brethren simply celebrated greed. They bought up everything this firm could make to keep Einstein to themselves. Thanks to AAudio Imports, no more! Makes you wonder what other German-speaking discoveries await. Audionet, Lindemann, Octave, Wiener Lautsprecher Manufaktur anyone?

*Srajan Ebaen*

## Volker Bohlmeier from Einstein comments:

Good Morning Srajan,

I hope you are well and in a good mood for the coming day. I have read your review - really excellent, with a good sense of humor. Many people forget that you should laugh at least once a day. So, here are the "secrets" of our design.

### *The Absolute Tune*

- Built with our own heart blood!!!
- It's a sophisticated design combining ultra-high linearity and a high bandwidth in a balanced circuit. The two tubes per channel form a differential cascade amplifier which converts the input signal to true balanced. The rest of the signal path is built with transistors utilising an absolutely balanced circuit design. For optimum performance, a parallel push-pull circuit is used for the power output stage.

The great advantage compared to conventional power amplifier designs is that we can use the *same* transistor for both halves of the wave form. Therefore, we have an absolutely symmetrical characteristic. This true balanced circuit completely avoids the generation of distortion containing odd-order harmonics and the signal to noise ratio is extraordinary good. Have you tried to notice some hum through the speakers? I think there is no hum and distortion, which can destroy the very fine details in the music. This circuit is very similar to the circuit of our OTL amplifiers *The Final Cut*, except it uses no tubes in the output stage.

The volume control acts as a shunt resistor within the plate circuit of the input stage and is not in the signal path. The input selection is done by relays to keep the signal path as short as possible. The ground connection of the input is switched too, to avoid hum loop. The tape outputs are of course decoupled by buffer amplifiers.

The output relays shorten the output of the power amp when the mute mode is engaged and are not in the signal path either. The amplifier is a dual mono design with separate power supplies for each channel and a magnetically shielded transformer. All important supply voltages are regulated. Similar to our CD player, we take great care with the mechanical aspects to minimize resonances.

Power: 50 watts into 8 ohms

Distortion: equal or better than 0.02 % at maximum output

Signal/Noise: equal or better than 100dB ( at 5 Watts – even better at higher volumes)

### *The Last Record Player*

- See above
- We took great care with the mechanics and digital and analog circuits to achieve a sound with "flesh and `blood". The Last Record Player has a quite high-mass chassis kept on the ground with four feet which also have high mass but are decoupled with a soft rubber to avoid resonances. The transport is decoupled from the chassis via a *Schwingmetallpuffer* (anti-vibrational elements) which are tuned to the weight of the transport. Unless damaged, the Sony transport tracks really excellent.

The transport and digital circuit use separate power supplies and transformer to avoid interferences between the digital and analog sections. The output of the 24-bit DACs pass through a passive reconstruction filter that subtracts the out-of-band-noise from the conversion process. The phase response of this filter is excellent.

The filter is followed by a high-current tube output amplifier running in Class A. This output stage combines high bandwidth and excellent linearity and is capable of driving low-impedance loads down to 100 ohms without any loss of performance.

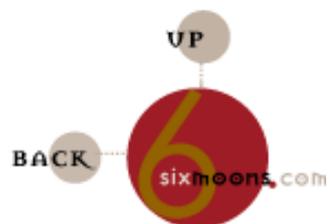
Output impedance: 50 ohms

Distortion: 0.1% at maximum output

Signal/Noise: equal or higher than 100dB

So, I hope this will be of help for you. Best regards from Bochum - cold but sunny.

*Volker Bohlmeier*



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

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