



DARTZEEL

PHB-108 MODEL OPE

Reviewer: Mike Malinowski

Source: Walker Proscenium Gold turntable; Walker Reference phono preamp; Clearaudio Reference Wood cartridge; Magic Diamond cartridge

Preamp: VTL 7.5 Reference

Amp: VTL S-400; *darTZeel NHB-108* [on review]

Speakers: Wilson X-2 Alexandria

Cables: Speaker Cables - Transparent Opus, Omega Mikro Ebony; Interconnect to amp - Transparent XL w/MM; interconnect phono to pre - Omega Mikro

Stands: Michael Green racks, VPI phono stand, Zoethecus

Powerline conditioning: Furman Balanced Power, Walker Audio Velocitor, PS Audio 300

Sundry accessories: Valid Points resonance control discs; ASC tube traps; Echo Buster absorbent and diffuser panels; Argent Room Lens; separate 90-amp sub panel feeding five dedicated cryo'd outlets; Loricraft Model 4 record cleaner

Room size: 22' x 17' x 8' (double sheetrock on 2"x 6" framing in basement)

Review Component Retail: \$18,181



Introduction

Products that attempt to place themselves as a SOTA contender usually generate a buzz and often, controversy. Case in point? The darTZeel NHB-108. Its reputation includes being a *tube-sounding* solid-state amp with spectacular holographic presentation, sweet harmonic richness - possibly a world beater. Others claim it's perhaps too expensive and underpowered to be a true statement amp. The answer? The amp is indeed something special in design, construction and performance. And yes, it is somewhat controversial. Let the journey begin. At first glance, the amp appears rather unimposing. A set of adjustment tools and suction cups for removing the top are packed with the amp. Viewed next to other super amps, the darTZeel would not call attention to itself. Compared to a Halcro, Levinson, Krell or VTL, the darTZeel is diminutive.

Compared to a Wavac or Viva, it lacks their exotic and universally valid cosmetics. It's a bit a case of David vs. Goliath. Looks however can be deceiving. This understated Swiss beauty proves the adage that size doesn't matter. The *Never Heard Before* NHB 108 is one man's 20-year obsession to build what he considers the ultimate amplifier. Did he succeed? Pretty darn close as we shall see.

The design

From the well-written and informative technical manual and discussions with the importer, the passion of Hervé Delétraz becomes evident. All design criteria were based on sonics and essentially with zero regard to cost. The exterior combines a thick gold-anodized faceplate with red heat sinks and a smoked-glass top plate. This hand-made amp is constructed with meticulous and fastidious attention to detail. All case elements are CNC machined from a billet of aluminum alloy to maintain rigidity and low resonance. The case contains three modules, the mother plate, the transformer platform and heat-sink modules, all assembled with stainless steel screws. The 108 features a 20mm false bottom machined from the billet and a 5mm bottom plate that form a sandwich. All wiring is routed through this sandwich to eliminate electromagnetic field influences, an added bonus the extreme rigidity of the chassis. This is one serious piece of equipment. Hervé Delétraz claims component lifespan of 40 to 50 years.

Hervé takes the dual mono design to its limits within the confines imposed by a single-chassis stereo amp. Left and right channels and their individual power supplies are all isolated from each other. darTZeel claims that regardless of chassis, an amp is either true dual mono or not. No marketing hype here. Transformer and audio circuits are all mounted on different suspensions, each tuned to eliminate different resonant frequencies. All sections are first aligned, set with cotter pins and then tightly coupled to the chassis. Nothing has been taken for granted in the design. The entire chassis and sub chassis are tuned to control medium and high vibrations for tonal accuracy. The external feet, radial to the center of gravity, damp low frequencies to complement the internal suspension of the active components. Had one first seen this amp at a show, one might assume that the smoked glass top was a special show feature to display the interior electronics. You'd be wrong.



As you will learn over and over here, nothing is for show. It's all for the sound. Hervé chose glass for its sonic advantages: *"Its crystalline inert structure combined with the rubber foam seal functions as an internal noise killer. And contrary to metal, glass is totally transparent to magnetic fields, thus avoiding the inherent magnetic loop that metal would induce over the power supply transformers. Last but not least, the internal housing is much less polluted by magnetic ghosts."* I promised myself not to use the obvious and proverbial comparison. Alas, it's unavoidably true. This thing is built with the precision of a Swiss watch. With that out of the way, we can proceed.



Physical design

The gold-anodized fascia contains the left and right orange eyes -- fully functional indicators --, a power nose (the on/off switch) and continuing the design metaphor, rack mount handles for ears. It sounds corny but is actually very functional. I wouldn't describe the overall appearance as elegant. However, there is something very interesting about its cute look that gives it a distinctive personality. The eye indicators display five states of operation:

1. Lights off (eyes shut) either indicate a blown fuse or power down
2. Illuminated (dull orange) means a signal is detected at the inputs
3. Dimmed (half brightness) occurs when the input signal disappears for about a minute
4. Bright flashing indicates clipping
5. Dull flashing signals high DC offset (more on this later)

In a fitting touch of class, each amp carries a gold-plated plaque engraved with the owner's name on the front left corner. The back panel offers the standard XLR and RCA inputs plus the unique Zeel 50-ohm input designed to connect to darTZeel's upcoming pre-amp with impressive claims of sonic benefits. In the center resides a standard IEC power inlet. A power cord of apparently conventional design is included.

One assumes that an owner of this amp would fit it with a high-end power cable. I tried three. The Elrod Statement exhibited the most powerful bottom end but was somewhat slow. The Omega Mikro was lightning fast but lacked in the bottom. This was probably a little unfair and perhaps not entirely safe seeing how the amp's max power rating exceeds the published spec for the Omega. Finally, the cryo-treated Silent Source Signature was perfect, offering 90% of the speed of the Omega and 90% of the weight of the Elrod. The NHB-108 is rated at 160 watts into four ohms; 100 watts into 8 or 2 ohms. The wide bandwidth design covers 1Hz to 1Mhz +0/-6dB with 1% THD and -- according to darTZeel most importantly -- zero temporal distortion. Internally, close examination shows an amazing attention to detail but for this kind of money, that's expected.

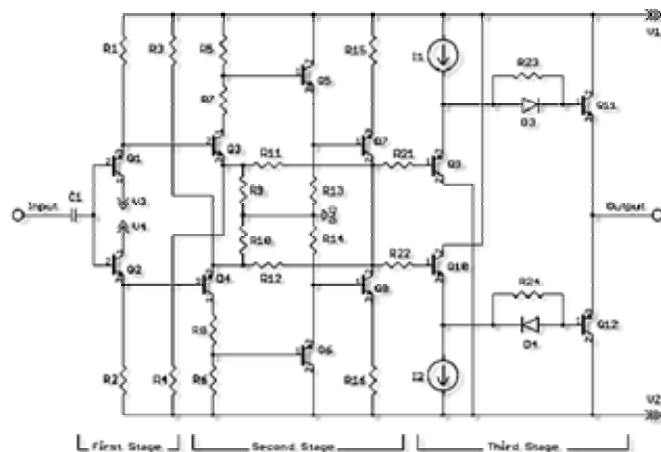


History

Hervé Delétraz's quest to build the ultimate amp began in the mid 80s with a digital amp design. The component limitations of the era, unpredictable interactions with varying speaker loads and jitter ended his grand digital experiment. The search for the state of the art began again but now in the analog realm. By 1999, the basic amp circuits were finalized and the darTZeel NHB-108 was born. The elimination of global negative feedback was a passion bordering on obsession. To understand the role of feedback in amps, you need to understand Hervé's analysis of distortion not just in amplifiers but in the sound of musical instruments.

Hervé defines distortion as any change in the original signal. A harmonically rich musical instrument exhibits natural harmonics at 20 to 40% of the fundamental. These harmonics are a form of musical distortion. Our designer's point is that natural acoustic music has massive harmonic "distortions" or content. When these are added to the relatively small harmonic distortions of an amp, the non-linear mathematical summation produces incrementally small increases in distortion. According to darTZeel, the elimination of Total Harmonic Distortion (THD) "...does not seem to be a determinate factor in the accuracy of reproduced sound." darTZeel postulates that designers who rely on sophisticated designs with tons of op amps, transistors and other electronics -- while at first seeming pure -- add their own electronic signature to detract from the purity of the recorded sound. Likewise, darTZeel suggests that Intermodulation Distortion (IMD as the combining of frequencies and their harmonics) results in a beating tremolo that produces warming, cooling or drying artifacts depending on the combination. Hervé believes that IMD, like THD, is not musically detrimental and therefore benign at low levels. If THD and IMD are not culprits for poor sound according to this view, what is? Transient Intermodulation Distortion (TIM). It "...occurs when the negative feedback (NFB) loop is in a state of overflow, something that arises more often than you might think since the NFB correction always is applied after the phenomenon to be corrected appears. During these very short intervals, the amplifier can produce more than 100% THD and/or IMD." darTZeel prefers to call it Temporal Distortion. This insidious audible distortion screws up amplified sound and is what the NHB-108 seeks to eliminate. By applying several small local negative feedback loops instead of a global loop and extending frequency response to reduce phase shifts, Temporal Distortion (TD) is claimed to have been eliminated.

That's great in theory but each solution seems contradictory - high bandwidth requires global feedback; low feedback equals poor frequency response. During his 20-year design period, Hervé feels he pulled it off. The 108 employs zero global feedback and combines it with frequency response to 1MHz. To accomplish this, darTZeel chose bipolar transistors -- ultra linear and fast -- for a straightforward signal path: "In the NHB-108 model one, the audio signal travels through only 6 transistors from input to output, maintaining low THD and IMD level. Without any global NFB, the output stage operates in a fully open loop! The slowest transistors used have a bandwidth of more than 30MHz, much higher than any Mosfet. This extreme intrinsic speed allows total phase respect across the whole audio range without any static or dynamic deformation. In brief, no Temporal Distortion."

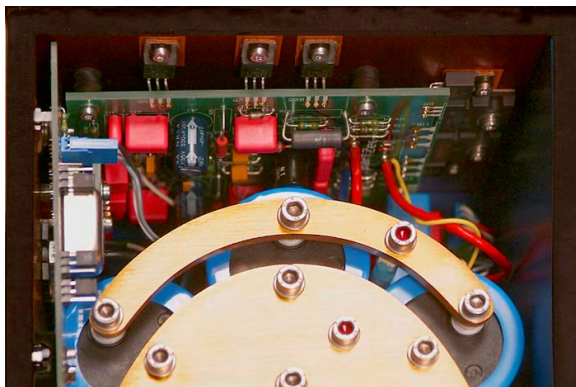


The 108 circuit design is based on three criteria: Simplicity | Purity | Reliability. Simplicity was followed by way of only 14 transistors. Fanatical attention to detail extends to internal component layout. Placement of every device relative to input circuits, power supplies, transformers and output devices reflects deliberation to minimize any deleterious effects on the sound. *"The internal volume was exploited down to the last cubic centimetre. Output power devices are located less than 10 centimetres from the huge crescent-like bus bars. All the energy coming from the capacitor reservoir can then effortlessly flow to the output bipolar transistors."*

Purity was pursued by way of avoiding switches, connectors, fuses or relays except for the XLR inputs in the sign path. There's only one pair of output devices and no current limiting. *"A single, small, local symmetrical DC NFB leads to extremely wide bandwidth without addition of any multi-polar phase shift including the very low frequencies. The use of a very compact printed circuit board reduces track lengths to the strict minimum."*



Reliability: Without the use of exotic components, darTZeel claims 20 - 40 years for component life. Some components such as the power switch have an estimated life of one million on/off cycles. Reliability extends beyond individual parts to the protection of amp and speakers. Hervé eschews the term "protection circuits" in favor of a supervision or monitoring circuit kept completely outside the signal path. This circuit is analog and uses components selected for longevity. Dubbed the crowbar circuit (essentially a power thyristor), it shorts the power supply by blowing a fuse. Simple and elegant except for the time needed to replace a fuse. It is very unlikely that a tripped thyristor would ever fail. These devices can draw about 1200 amps of peak current while a crowbar operation draws about 300 amperes for a few milliseconds. This huge inrush current exceeds the fuse rating by a factor of 50, hence darTZeel describes their sacrificial demise as "evaporate". That's how quick the fuse melts down when the crowbar circuit activates.



Several conditions will trigger the monitoring circuit: Mismatched impedance | Short circuit at the speaker terminals | DC output voltage drift greater than two volts | Powering up the amp without a connected load. The output stages are protected by a smart current-sensing system outside the signal path using Hall Effect electromagnetic sensors with magnetic coupling. This circuit allows for essentially unlimited peak currents while providing safety in the case of a catastrophic event - a simple but expensive solution.

Setup

Setup is relatively straightforward. How complex can it get for connection of a solid-state amp? One unique feature is a three-way input selector on the rear that sets for RCA, balanced or the unique 50-ohm BNC Zeel input.

DarTZeel claims this input will produce the most accurate sound and will be incorporated as an output option of their new pre-amp. The balanced inputs are truly balanced via floating transformers. Although not complex, the amp probably has a few idiosyncratic tendencies above average. Even in the world of today's esoteric pieces, most amps are more or less plug & play. With the power off, connect the speaker and preamp cables, select the input and you're pretty much done.



A couple of extra considerations for the 108: There are two internal impedance settings [below]. Factory default is 3-ohm to 8-ohm. A low impedance setting accommodates speakers less than 3-ohm. Unlike most conventional designs, the 108 uses only one pair of bipolar output transistors per channel. Most will use dozens of output transistors, which paralleled will yield high output current into low impedance loads. According to Hervé, such massively paralleled output devices become a sonic liability causing, among other sins, temporal distortion *"...by degradation of propagation time delay uniformity, each path not being of identical length to the others."* The impedance switch selects the output windings of the power transformer in parallel or series, delivering high voltage or high current depending on switch position yet keeping the output transistors in their safe operating range. DarTZeel claims 90% of the "musical magic" after five minutes of playing (the amp never shuts off totally unless it is unplugged).

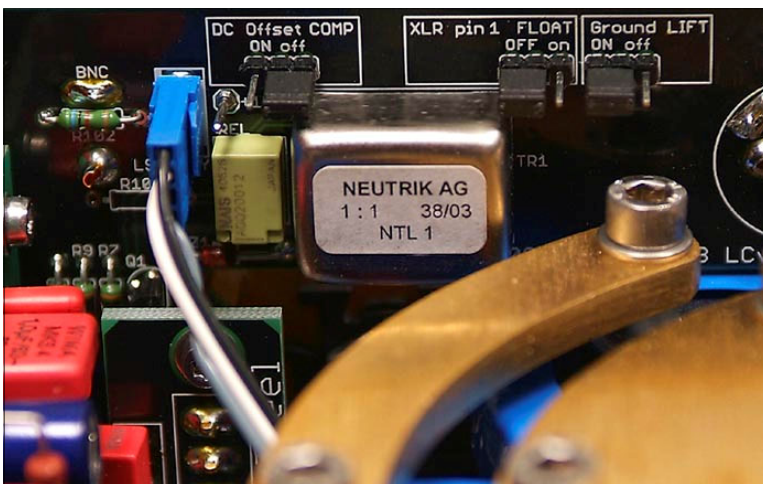
The 108 is powered by two volts all of the time to extend the life of internal components, especially the capacitors. It also allows the amp to warm up in just five minutes after defeating what is really standby. Another factor is that of *sustained bias power*. A given component, being active or passive, lasts longer if some bias voltage, however low, remains applied to its terminals. For electrolytic capacitors, this small polarizing voltage keeps their internal electrolytes in perfect chemical working condition. An interesting side effect of this "sustaining bias power" is that the amp will still quietly play even when you turn the power off, an indication of the audio circuit's simplicity according to darTZeel. While most are familiar with RCA and balanced inputs, how about the firm's 50-ohm BNC connection? Hervé's research concluded that "...the one and only means for transmitting an electrical musical signal with no alterations and losses over a long distance is with impedance-matched lines from end to end."



Coaxial cable impedance matching is used in applications like radars, microwaves and computers to eliminate loss regardless of cable length. With no 50-ohm output source in my audio arsenal, this feature was a merely academic curiosity for me.

Electrophobia

There are three internal jumper options with three small jumper sleeves for each that connect to two of three metal posts. These in effect act as a single-pole double-throw switch. Two jumpers affect the grounding and are used to eliminate hum. Since I had no problems, these remained in factory default mode. The third one does have an audible effect. Quick history recap: the original design by darTZeel eschewed any type of monitoring or control circuit including DC compensation. The original circuit demanded that if excess DC at the output was detected, the user would have to manually trim out DC with a multi-meter. The problem from a practical standpoint was that certain users would resist sticking a screwdriver into the innards of a live amp especially with the following warning from the manual: "Do not forget that the amplifier will be powered on! Never touch the copper bus bars, which are at a potential difference of 115 Volts DC. A short circuit induced by the screwdriver will partially evaporate the blade by instantaneous melting of the metal of the latter!" For the electrophobes or generally cautious among us, darTZeel (in the B version of the amp) installed an automatic DC compensation circuit which can be switched in or out by the placement of that third jumper. Being bold and fearless, I set the jumper to "off", turned the amp on and waited for the eyes to flicker to warn of excess DC at the speaker terminals. There was no flicker. This setting reduced the noise floor for blacker backgrounds and slightly improved micro detail. All of my listening comments reflect the DC compensation circuit defeated. If required, the trimming procedure is really not that difficult and similar to my Walker Reference phono preamp. Like Delétraz, Walker believes in the deleterious side effects of DC compensation circuits and avoids them like the plague. Overall, this is really no more complex than adjusting the bias on a tube amp. No big deal.



System

The NHB-108 was in good company in my reference system. Speakers are the incomparable Wilson Alexandrias, pre-amp the VTL Reference 7.5, with the Walker Proscenium Gold and Reference phono preamp as source. Cabling includes Transparent Opus, Omega Mikro and Silent Source. A Furman Balanced Power feeds the Walker Velocitor S for all line-level equipment.

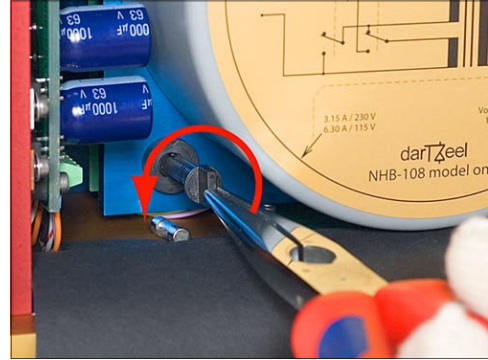
Warning - danger, Will Robinson

The NHB-108 has a few rules. Mess with them and the crowbar circuit will terminate the internal fuses with extreme prejudice.

Given the design choice of convenience or sonics, Hervé chose sonics. Not that the amp is difficult to use but it's not a Sony receiver either. Rules: Never turn on the amp without speakers connected | Never short the terminals | Don't switch the input selector with the power on | Don't disconnect the input source with the power on | Don't connect low impedance speaker without first selecting the internal switch. Slip up and the sensing circuit will, in the words of darTZeel, "vaporize the fuse". That's infinitely better than vaporizing your tweeter. The fuse is located next to the transformers. Fuse changes require use of the supplied needle nose pliers. It's not brain surgery but certainly not as convenient as rear-mounted fuses on other amps. Eventually you will slip and have to replace fuses. Big deal? Not - but roaming inside an amp might not be your cuppa tea.

Break-in

The 108 needs break-in. Let me rephrase that. It requires a metric ton of break-in. My break-in procedure is very simple. Place product in the equipment chain, listen for a short time, leave it running and leave for days. Come back, listen and repeat the process until the sound stops changing. My unit was not new. It was a review sample forwarded from another industry reviewer. For this piece, it took 2.5 weeks of continuous playing in addition to whatever the previous reviewer had put on it to arrive at sonic stability. It would have been an unforgivable mistake to evaluate this amp before then. Some components reveal their true character right out of the box and offer incremental refinements over time. Other components change character. The darTZeel belongs to the latter group. The amp starts off sounding like a nice little tube amp - sweet, fairly dimensional, with a polite bottom end - nothing to get excited about.



Soundstaging at that point is average for a high-end amp - good but not world class. A few hundred hours into the process? Zowie! The authority and majesty of the low end explodes out of nowhere. What started off polite ends up powerful. A previously slightly recessed soundstage now blooms out into the room. The amp transforms from "really nice" to "holy shit!" Let's get past the break-in debate nonsense of some who claim the amp does not change but it's actually the listener's growing familiarity and adjustment to the sound. No doubt about it, this amp changed big time. Listen to the opening drum whacks of Jennifer Warnes' *Famous Blue Raincoat* [Rock the House Records] out of the box and then thirty days later.



A stranger off the street raised on Bose could hear the difference in one second. It's that real. From warm, sweet and polite to ballsy and three-dimensional in 30 days à la Jules Verne. I hear your questions. "Is it right for an amp costing almost \$20,000 to require a month's continuous break-in to perform to potential?" Frankly, I don't care about the break-in time. For those who are bothered by this phenomenon, I respect your opinion. You could argue that for this money, one should demand close-to-optimal performance out of the box. It's a respectable argument. But since I have never owned a high-end product that performed without break-in yet, I am less offended than most. To me it's part of the game. In a strange way, listening to a product that sounds good out of the box and gets better and better as time goes on is perversely *fun*.

Clarity, no congestion

Throughout my many review sessions, I continually noted three points: simplicity, clarity and harmonic richness. The 108 has the ability to take the most complex and congested music and present it in a beautiful, rich, musical and simplified way. Carol King's *Tapestry* [Classic Records] is filled with an immediate connection to her voice. This amp is able to unravel complexity and present a startling picture. This clarity is not the same as detail. Although I love detail in the music, never at the expense of emotional presentation. The imaging here is spectacular. You can reach out and touch the performers but again without excessive analytical detail. You get focus and clarity without the slightest hint of grain, hardness or stridency. Dull? No way. DarTZeel offers the compelling immediacy of low-power tube amps with the speed and PraT of solid state. This is a solid-state tube amp - warmth without bloat. The amp is spectacular in how it reveals the harmonic structure of instruments. It combines solid-state attack and tube decay, allowing you to hear/feel the essential emotion of the music.



Some amps tend to get forward, hard and congested when pushed. Not the d'Arts. Everything remains in place at all levels - subtle micro-details of the best SETs with the power of transistors. Add the harmonic richness of tubes and holy Christmas - this brings music to life. With Janis Ian on *Breaking Silence* [Analog Productions], I don't know what is more interesting - the warm and melodic voice or the presentation of the complete and rhythmic background presented with a new simplicity and clarity. It's possibly a touch too heavy in the bass, which I never thought I'd say with my current room and acoustics.

Coherence

Having played the high-end game for many years with a high-resolution system, I understand the phenomenon of spotlighting. Detail becomes the end all and be all, each instrument stands out individually and unnaturally as though cut and pasted into the acoustic picture. The coherent waveform of the entire sound plus the ability to focus on specific sounds is to me one of the key distinguishing elements of the live music event versus reproduction. The darTZeel brings reproduced music a step closer to that natural coherence.



The musical waveform emanating from the speaker forms an extraordinarily coherent sound that naturally blooms into the room. Yet with that continuity, the individual instruments are still there for your sonic viewing pleasure. Some amps give you spectacular individual notes but no emotion. With the dartz you get both. Quincy Jones' *Hip Hits* [Mercury] is 60's fluff pop set to big band jazz sound. The arrangements span from serious and sophisticated to fanciful, with Quincy having obvious fun in a multi-miked hi-fi kind of way. Interestingly, the darTZeel's coherence brings it all together. I've seen the effect before with tubes - a wonderful midrange and dimensionally articulate soundstage with great harmonics. Unfortunately, valves sometimes dulled the leading edge of transients, softening the brass to, contrary to its natural sound, become transformed to warm and melodic.



The darTZeel doesn't blunt transients nor glazes things over. As your listening mind begins to wander down the warm beautiful tubey path, the ferocious blat of trumpets cuts through the room in startling relief to the luscious sound for the best of both worlds.

Harmonics

DarTZeel hits a home run for fine textures and richness of strings. Neville Marriner, *Mozart: Eine kleine Nachtmusik* [Angel] shows off the harmonic lushness of the amp. No touch of violin hardness or steeliness, just the correct amount of weight and richness that is ethereally beautiful. Timbres with the 108 are natural with just a touch of sweetness. In food terms, smooth, creamy and sumptuous. The Reiner/Chicago Strauss Waltzes [Classic Records] invite one to be drawn into the rhythmic sweetness and be swept through and along with the music. If the midrange ain't right, nothing else matters. The d'Art nails the midrange, approaching if not exceeding my beloved Tenors - rich, pure and truthful.

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The opening drum notes of "Bird on a Wire" [Jennifer Warners' *Famous Blue Rain Coat*] show the depth and power of the bottom. The 108 totally changed my perception of this record. Something that I heard a hundred times over now comes across with new power, force and emotions. The claimed frequency response for the 108 indicates a wideband flat response without a hint of an emphasized low end yet the darTZeel presents music with a realistic foundation previously unheard in my room.

Listener Fatigue? Not.

Fatigue is non-existent. Three, four or five hours later, you are still looking for more. The sign of a great piece is that urge to rediscover favorites, running around like a kid saying "let's listen to this one, then this one and that..." The Walker Proscenium and the X-2s did it for me. So does the darTZeel now.

Dynamics

Whatever I threw at it, the 108 kept its cool. From Big Band to Zeppelin, the dartz took it all in stride, including my torture test of the Utah Symphony with Berlioz' *Symphony Fantastique* [Reference Recordings]. The dynamic impact of the recording was as forceful and alive as I've ever heard. From the delicate inner detail to the prodigious crescendo, all was presented in the proper space and detail. I tried to make the eyes blink to indicate clipping after 100dB worth of *Led Zeppelin II* [Classic Records]. The 108 failed to bat an eyelash.

Soundstaging

Soundstaging is often a one size fits all, either bigger than life, constrained between the speakers or somewhere in-between. Amps and other audio equipment generally have their own unique character that will impose its definition on the stage. When it goes wrong, you get a ten-foot tall singing head and other such anomalies. The 108 allows the music to fill its own natural space. Big band jazz should be reproduced - well, *big*. And it is, filling the room. Likewise small jazz and voices should not be wider or more massive than in person and with the darTZeel they are not. It's not the end of the world to hear a somewhat inflated soundstage -- some might even prefer it -- but to hear an amp reproduce the appropriately sized acoustic space differently for each recording is really cool. None of these characteristics overwhelm the sonic presentation with the possible exception of the deep bass and warmth. Even then these transgressions are extremely minor.

But does it rock?

Everyone has those special 'go to' albums, those lifelong favorites we know intimately. These recordings send you back to a special time and place or allow you to zone out. For me it's the toe-tapping PRaT of a Pop group or Classic Rock. If the equipment in question brings that ineffable smile to my face and I involuntarily move to the music, I know that we have a winning piece of equipment on our hands. I won't insult you with discussions on depth, soundstaging and other audiophile buzzwords.

Hey, it's only rock and roll. But for me, it better be fun. Does the 108 deliver Rock & Roll? Let me tell you, Zeppelin, Elvis, Santana and Talking Heads through the darTZeel/X2 combo is a hell of a lot of fun. With its prodigious low end, the driving bass lines charge like a muscle car. The opening moment of *Stop Making Sense* [Talking Heads, Simply Vinyl, "Burning Down the House"] will blow you away with tremendous power and authority. The clarity and lack of hardness just begs for the volume to be turned up. Perfect rock amp? Well, Rock can be hard, raw and bright. If you like those characteristics emphasized, look elsewhere. Hard, raw and bright are not in the 108's vocabulary.



Who wouldn't like this amp?

Is this the perfect amp? Nothing's perfect. Does the darTZeel have the last words in iron-fisted control of the speakers? Nope. It's better than most tube amps but not as good as the best solid state. With my previous Levinson 33hs, there was no doubt who was in charge. The amps were boss especially in the lower octaves. The darTZeel lacks the last word in bass tautness but do not mistake this for flabbiness (distinctly not the case).

Secondly, this is a medium-power amp. However and as with tubes, there's a lot of perceived power for 160 watts. Truly cruel speakers might have a problem. But since the X-2s are very efficient for traditional speakers, it's pure speculation on my part. Still, it's fair to point out that power freaks desirous of ear-bleeding levels into brutish speakers may need to keep looking. Because this is a sweetly melodic amp, an overly warm system might not be the ideal fit. That's talking extremes. For the big meaty part of the bell curve, the 108 should be a superb if expensive fit for most any system I can think of.

Summary

Hervé started this journey with the premise of designing not just another amp but one that was truly better. Did he succeed? Spectacularly so. The 108 is a dazzling tube-sounding amp cavorting around in the guise of transistors. It has the best traits of tubes and solid state - magic midrange with spectacular soundstaging. It is harmonically rich and satisfying. The sound touched my soul. It infused air around the instruments and made music come alive with a deep and powerful low end. It is truly involving, with a gorgeous liquidity that conveys the emotion of the music. Having graduated to tubes, I thought I'd never look back. The darTZeel has made me rethink that premise. It's a stunning piece of equipment that has raised my system to a new level of performance. Highly recommended.

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darTZeel comments:

We at darTZeel are extremely pleased having received such a rave review on the NHB-108 model one. I personally believe that this review comprehensively summarizes all previous ones and adds even more to the understanding of our company's philosophy.

I was particularly glad in reading that Mike found the bass no less than fully present and delineated. It's the first time a reviewer reported that the bass could be a little bit on the heavy side. Other reviewers described it as being a little shy. My guess is that it will mostly depend on the speakers used. The Alexandrias are very big speakers so it's not surprising that they should excel in the bass. The NHB-108 was designed for extreme transparency. Most users report back to us that their speakers usually sound better than ever before when powered from our amp, to the point that occasionally speakers would have to be repositioned to cope with a room's low frequency modes. Thanks to its lack of phase shift even at extremely low frequencies, the NHB-108 can reproduce very deep bass not previously heard, especially when using flagship speakers like the Alexandrias.

Thank you, Mike, for spending enough time with the NHB-108 to fully capture and share what this machine really is about and what we tried to achieve. The rather long break-in period is unfortunately difficult to cut down at the factory, both because our customers usually want their machine as soon as possible and also because the moment we put the amps into their shipping cartons, the capacitors drain and lose their charge, requiring days or weeks to achieve full reformation again. Once plugged in and broken in, the sound keeps shining even after powering the NHB-108 off for days, provided you don't unplug the power cord.

While the break-in process make strike non-audiophiles as unusual, nobody would argue that a brand new car doesn't also need some time before it drives best. While working well at first ignition, I always noticed that my cars were much more pleasant to drive after, say around 40,000 miles or so. Is it the car which really performs better or the driver who gets fully accustomed to the machine? Certainly both. The same is true for audio gear, I think.

Thank you again for this beautiful and revealing review.

Hervé Delétraz