



# BALANCED HEADPHONES

## PART TWO

**Reviewer:** Frederic Beudot

**Digital Source:** Musical Fidelity A5 CD, Accuphase DP55, *Atoll CD200*

**Headphone Amp:** Musical Fidelity Xcanv3, Creek OBH11se, *Rudistor NX-33, HeadRoom Balanced Desktop*

**Cables:** Zu Gede (RCA and XLR), Consonance Billie interconnects

**Headphone:** Beyerdynamic DT911, AKG K701, *Sennheiser HD650*

**Power Cords:** Cobalt Ultimate

**Powerline conditioning:** Monster Power HTS5100mkII

**Sundry accessories:** Isolpads under electronics and speakers, Standesign stand

**Room size:** 15' x 30' opening to 3 other rooms. Short wall setup

**Review component retail:** Rudistor NX-33 (950; balanced AKG K701 by HeadRoom (\$450 + \$300 for mod), Rudistor balanced cable for Sennheiser HD650 (\$150)



In the **first installment** of this series on balanced headphone operation, I looked into the technology and its benefits and concluded that it was a very credible and cost efficient way to improve headphone enjoyment by a significant margin. Here comes the report on the headphone amplifier that started my journey into balanced headphone country - the Rudistor NX-33.

Rudistor is a fairly recent company founded by Dr. Rudi Stor in Italy in 2003. The firm has come a long way in its four years of activity. Even if its main line of business is headphone amplifiers, Rudistor also offers two power amplifiers of somewhat unconventional design. The first one is a single-ended solid state power amplifier with zero negative feedback delivering 2 x 10 watts in pure class A (the RR20 at (1500). The second is a single-ended all tube amplifier using KT88s in triode mode to deliver a full 5wpc also in pure class A (the RR88 at (1900). Rudistor's catalog further includes balanced headphone cables for the Sennheiser HD650s and HD600s as well as two RCA interconnects.

Rudistor's headphone amplifier line is extremely complete and almost everybody will find a component suitable to their budget and desires. The line consists of three single-ended solid state amplifiers, the NX-01 SE ((475), NKK.01se ((990 including an internal USB DAC) and RPX33 Dualmono ((1300); three hybrid amplifier adding dual triodes in the input stage while keeping class A bipolar power transistors for the current stage and ranging from (700 (RP 5.1) to (2100 (RP7B); and two tube amplifiers for electrostatic earphones named Egmont and Egmont Signature ((1300 and (2900 respectively, the signature being available also in balanced guise for (3500).

In the center of the line are Rudistor's balanced amplifiers, starting with the NX-33 and moving up to the two Quad Mono designs (the RPX100, which doubles as a preamp for 2250; and the no-compromise RP010-B MkII for 3500). Then there is the conceptual RP1000 into which Rudi as he is now known on all dedicated headphone forums has packed all his knowledge of amplifier design coupled with the best parts money can buy. The RP1000 is a concept amplifier not designed for commercial production even though three of the four built to date have found an owner. At €10,000 per unit and 3 months of lead time to manufacture, they are definitely not mass-market but Rudi has parts to produce another three or four and then the RP1000 will probably go the way of the dodo. If you have deep pockets and are interested in owning an amplifier representing the ultimate a talented designer can create, act soon.

If you have read the previous paragraph attentively, a few things should be obvious by now. The first one is that all prices are listed in Euros and your credit card will be billed in Euros if you purchase through Rudistor's website (a virtual shop through Amazon.com is also in the works but not active as I write this review). The final price in your local currency will depend on the exchange rate of the moment as well as the fees charged by your credit card company. The good news is that all prices *include* international shipment through FedEx.



The second thing that should be clear by now is that Rudi's naming convention owes more to the Da Vinci Code than any other brand I have encountered. I am still working on the secret cipher I know must reside within.

Before I move on to the NX-33 specifically, I believe it important to highlight a few elements of Dr. Rudi Stor's philosophy that are relevant to all his products and will complement my listening impressions to help understand how intentions actually translate into sonic characteristics. I have reproduced below two extracts from Rudistor's company profile that to me exemplify all I enjoyed during this review of the NX-33:

*"Our mission and philosophy is to design and produce the highest quality audio electronics with the least compromise possible and with no prejudgments on components and circuitry topology, in order to reach the highest real-sound feeling." "We always compare our sound with real life sound. All our team members have direct experience with music, playing instruments, being part of a group or working in recordings, and as 'Company Policy' at least one live concert a week must be on our agenda.[...] Music is our passion."*

I don't know if Rudistor's design team really does attend a concert every week but the NX-33 surely comes close to their ultimate goal of sounding real. The first extract though is also meaningful because Rudi's designs have often been called old-fashioned on headphone forums. Obviously, Rudi cares more about results and quality of implementation than design originality for the sake of originality.

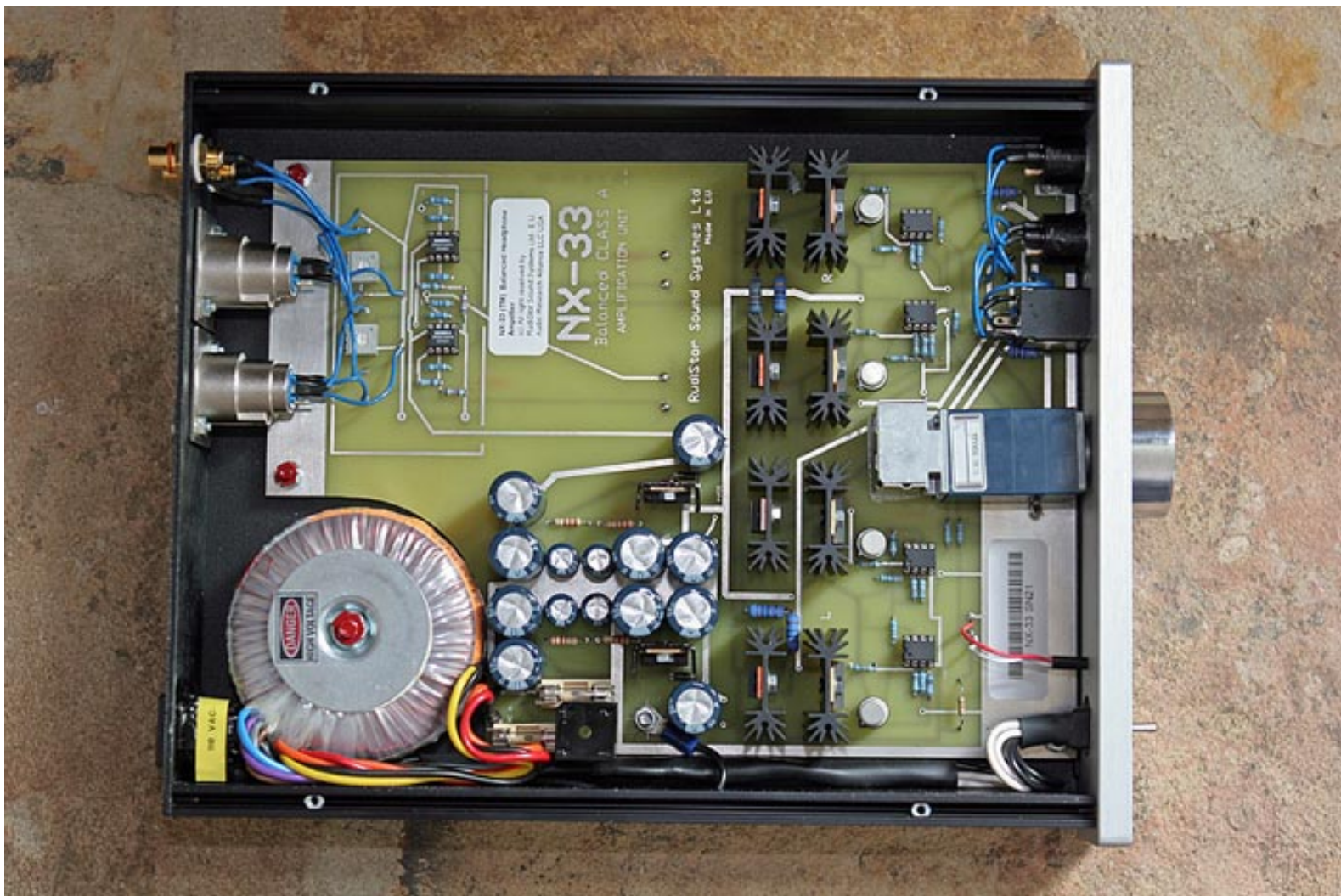
That's very obvious in how production is set up between two labs controlled by Rudistor, one in Italy, the other in Austria. Both are using high-quality parts purchased through German and Swiss vendors to ensure that only highest-grade components make it into your amplifier. As importantly, all amplifiers find their way back to Trieste's R&D lab for thorough testing before they get shipped to their final destination - not the most cost-efficient supply chain but one that ensures the level of quality and service Rudistor wants to offer their customers. Nonetheless, work is in progress to implement a production lab in the US for the models using integrated chips which require a slightly less demanding level of quality control. The all-discrete amplifiers like the balanced Quad-Mono designs will continue to be manufactured and controlled in Europe since they require careful parts matching in each channel and Rudi only entrusts this task to a very few and qualified hands.



By now you probably think that I have spent too much time telling you about the company and not enough about the product. Still, I always find it interesting to learn about a designer's philosophy when it so clearly shapes the company he or she created and how it operates - when the company becomes the vessel to achieve a goal, not an end in itself.

For those of you whose patience I have exhausted and who are more focused on the destination than the journey, the Rudistor NX-33 is the dream of a music lover come true and should rightly belong in Jeff Day's Music Lovers series. If you are into record monitoring, ultra-detailed reproduction and use headphones as magnifying glasses to hear a second violinist fart in the middle of Beethoven's *Fifth*, then the NX-33 is not for you. If you enjoy listening to music (any music, really) late into the night while savoring a glass or two of Valpolicella (a single malt will do too but I would suggest smaller quantities); and if you care more about the forest than the ant on the bark of the fifth tree starting from the back, then come along. The Rudistor will enchant you.

The NX-33, like all Rudistor amplifiers, is strongly built and at 4.5kg (9.9lb) with a fairly low profile (7cm high or 2.8") a fairly dense little box. At 30cm (11.8 inches), it is 1cm deeper than the Atoll CD200 CD player currently in for review but only half as wide (24cm or 9.4 inches). I particularly enjoyed the thick brushed aluminum front plate which perfectly matched the style of the Atoll and Musical Fidelity CD players in my living room. As all married audiophiles, I am very quickly learning how to become style-conscious. It's a necessary survival skill.



The NX-33 has clearly been designed with high-end sensibilities. It offers a detachable power cord allowing you to swap the stock one for any aftermarket cord you fancy. The best part about it is how very well it responded to my fairly basic Cobalt Ultimate power. You might be rewarded even further should you decide to feed it through a cord costing more than the amplifier itself. If that sounds a bit sarcastic, you've got a point but the NX-33 truly responded to a better cord by displaying greater bass control. Secondly, the gold-plated RCA and XLR connectors are bolted to the chassis for a very sturdy feel and just as importantly, are placed far enough apart to allow the use of whatever locking RCA plug you want. I have to admit to getting tired of components which place the left and right RCA connectors so close together that it's almost impossible to lock the connectors without rubbing them against each other or pulling them sideways. Kudos to Rudistor for smartly using the extra room their enclosure provides.

There is only one thing in the NX-33 design that was a mild annoyance - the absence of a tape loop or bypass. It is not a problem when using a preamp or integrated amp with a line-level output but my Onix SP3 integrated in the office system does not have such a provision and I could not insert the NX-33 into the system without disconnecting the SP3 from the CD player first. That's not a big deal really but seeing how much space remains on the NX-33's back, perhaps a thru-put could be added to the next generation of this amplifier? I know that true headphiles have dedicated systems but I can't be the only one left to use the same source for both headphones and speakers. Or can I?



A few more design details are worth mentioning before we move to the listening section of this review. The NX-33 does not have a gain switch but I did not encounter any problems driving the headphones on hand to satisfactory levels by setting the continuous pot somewhere between 9 and 11 o'clock. In single-ended operation, I of course needed to set the dial higher to reach the same sound pressure (for both the AKG K701 and Sennheiser HD650) but I never exceeded 11 o'clock. Even though I do not listen at ear-splitting levels, I doubt anybody would have an issue driving most commercial earphones to ear-bleeding agony. It would be a terrible waste but I don't think there are laws prohibiting it - yet.

As I mentioned in the introduction to balanced headphones, the NX-33 is equipped with a phase splitter after the RCA input, meaning that whatever signal you feed it (balanced or single-ended), it will operate in fully balanced mode thereafter. I was very appreciative of this solution as my reference CD player does not have balanced outputs. Nonetheless, I was able to enjoy almost all the benefits balanced operation has to offer. Do not listen to the sirens insisting that you absolutely need a balanced source to fully enjoy balanced headphones.

From the introduction, you will also recall that the benefits of balanced mode really fall into two categories, those coming from the common ground removal accessible to all balanced amplifiers; and those only accessible by a fully balanced designs. The NX-33 is of this latter category, meaning that it uses four separate amplifiers, one for each of the normal and inverted legs of the signal on each channel. To keep costs under control, the NX-33 was designed around four single-ended ICs with tight specifications operating in pure class A (the amp does get warm but not too hot to touch by any means). Its mightier and costlier brethren, the RPX-100 and RP010B MkII, replace those integrated chips with discrete components. The NX-33 is also equipped with a single-ended headphone output which is active at all times in parallel to the balanced outputs. Alberto Gomez, Rudistor's representative for the US and Canada, indicated that there was no issue with running two headphones simultaneously from each output but I did not try it myself.



It was through this ¼" plug that I first sampled the NX-33 as the balanced headphones had not arrived yet. To tell the truth, it was not love at first listen. Even though it was already broken in, compared to the Musical Fidelity Xcan, the NX-33 had less dynamic contrast, was less detailed and had a hard time extracting bass notes from the single-ended AKG K701. It sounded flat and dull overall. I have since learned to appreciate the subtle nuances the NX-33 is capable of and which the X-can has no idea even exist. Overall however, I stand by my first impression. Using the NX-33 single-endedly is just wasting \$1200. Half that amount can bring as much if not more to the table (and I am sure that Rudi's SE amps would do that just fine as well). Until you have tried the NX-33 balanced, you won't have any idea of what it is really capable.

When I finally plugged in the balanced AKGs, it did not take very long before I realized I was dealing with a different amplifier of the same smooth signature sound but now energized and dynamic. The first thing I noticed was its silence. Blacks were darker than the night. This amplifier has no hum, hiss, noise, static, nothing at all. I thought the Xcan was fairly silent but in operation, the Rudistor proved to be simply *free* of any noise, the direct benefit of which was that details rose effortlessly over this dark background.

The NX-33 is reasonably detailed but it does not go at it by adding a silver lining to the music. It simply lets the details float naturally to the surface as the music dictates, not forcing any forward if that's not where it belongs. From that perspective it reminded me of my dear FJ OM speakers that deliver details in the same fashion, with nothing forced or artificial - no magnifying effect.



The second trait the NX-33 shares with the FJ speakers was tonal density and richness. I have recently rediscovered an Erato recording of Vivaldi's *Concerto for two mandolins* by Claudio Scimone and I Solisti Veneti [Erato 2292-45203-2]. Through the Rudistor NX-33 and AKG K701s, I could clearly differentiate both mandolins, not just their mere locations but tone colors. The nuances of sonority that my Mc2275 and FJ OMs only hinted at were rendered very clearly through the headphones. The second movement of this concerto is a very touching duo for mandolin and through the NX-33 I could hear both the metallic voice of the instruments and the more woody timbres of their bodies in all their hues - fully captivating and enthralling.

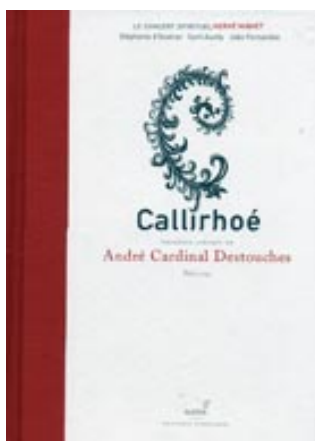
I had to force myself to listen with this level of analytical attention. The main strength of the NX-33 was to draw me deeply into the music. More than once did I settle with my note book only to re-emerge over an hour later without a single word written down. This was the hardest part of this assignment, coming back from a deeply emotional involvement into the music to find words that would describe accurately what the NX-33 sounded like.

I spent a lot of time going through my records of the 1960s to enjoy them through the Rudistor. There were multiple reasons for that. For one, the NX-33 lets tape hiss sound natural, not bright, aggressive or disturbing, just a gentle reminder of the age of the record lingering in the background but easy to forget to focus on the music. The second reason is related to the richness of tones already mentioned which those old master tapes have in spades. The NX-33 does full justice to the tonal richness of those records. Finally, whenever remastering was done properly, those recordings have tremendous micro and macro dynamic life and the NX-33 served both faithfully. It was capable of great swings while preserving all the small ripples of sound the microphones captured.

Sviatoslav Richter's recording of Beethoven's *Piano Concerto No. 1* with Munch and the Boston Symphony, recently reissued by RCA [BMG 82876-59421-2 classic library] is one such recording with Richter's typical gigantic sound and physical domination of the instrument. His use and abuse of dynamic contrasts while loading each note with multiple layers of tonal subtleties has never come across as it did through the Rudistor and AKG. If you have never heard Richter's very physical rendition of the *Appassionata* recorded on the same disc, be prepared to be overwhelmed. The NX-33 reproduces a piano with its full scale and harmonics unrestrained, a treat that my speaker system is not fully capable of. As Richter uses the full extremes of the piano's dynamic capabilities, the effect is impressive to say the least. If the NX-33 in single-ended mode struggled to deliver the bass notes, there was no worry about it in balanced mode.



The bass was deep, tight, rich and detailed, as if it were really about two different amps. In a way it is, with four versus two ICs driving the voice coils of the earphones.



Another set of discs that have spent a lot of time in my CD player of late is *Callirhoé* by André Cardinal Destouches. This recreation by Herve Niquet and Le Concert Spirituel is probably the very best interpretation of music from the mid 1700s I have ever heard [Glossa GES 921612-F]. This period lost between Lully and Rameau and politically characterized by decadent regencies is mostly forgotten today and so are most of the composers who illuminated those days. Who remembers Mouret, Collasse or Destouches? Only Campra's *Requiem* saved him from absolute anonymity.

Destouches' work of all the masters of this time is probably the most worthy of resurrection and *Callirhoé* is a perfect example. As with all of Glossa's editions, the recording quality is exceptional, balancing intimate portrayls of the musicians with a perfect rendition of the concert hall acoustics. The orchestra on period instruments has all the required acidic and metallic tones characteristic of the era but the NX-33 manages to keep them from being aggressive as is so often the case with lesser electronics.

I have kept the most impressive part for the end though. The NX-33 is a giant when it comes to vocal reproduction. As I have pointed out a few times already, no component will get my attention if it can't reproduce the life of the human voice accurately (that's a minimum) and with all its emotional content intact (that's the Graal). On both accounts, the NX-33 scores an A.

Paired with headphones as transparent as the AKGs, you can hear into the midrange as deep as the recording and source allow yet nothing sounds forced, contrived or out of place because voices come through rich and smooth, detailed and clear, so near, present and real yet supple and sweet. When it comes to midrange reproduction, the NX-33 and AKG are kings of paradoxes, perhaps what sounding real is all about.

Going back to *Callirhoé*, a young counter tenor I had never heard before, Cyril Auvity, inhabits the part of Agenor. He is one of the most expressive Haute-Contres I have heard in recent years. The increased interest in baroque music over the past 20 years has seen quite a number of new counter-tenors appear on international scenes and that's fantastic as that tessitura had almost disappeared. Unfortunately, many confuse mannerism with authenticity and technique with emotion. Cyril Auvity's refreshing interpretation is a good reminder of what the differences should be. Served by the NX-33 and AKG, I could feel I was there in Metz a year ago when he was putting all his sensitivity into his singing. Awesome.



At this point in the review, it is time for me to tell you that the NX-33 is not perfect though if it were otherwise, there'd be no need for Rudistor's more ambitious designs. A few things come to mind after hours of careful listening. The NX-33 achieves its non-fatiguing, non-aggressive and rich sound by making a few concessions. First off, the leading edge of notes is clearly rounded and smoothed which contributes greatly to the feeling that one can listen forever without suffering fatigue. Simultaneously, it gives the NX-33 a somewhat more relaxed and slower presentation than the Headroom Desktop that I'll review in the coming weeks. If you pair the NX-33 with laid-back cans like the Sennheiser HD650s, it will clearly go too far into the peace and love side of things and veer directly into boredom.

The same thing will happen if you pair the NX-33 with a laid-back source. What you need is detailed neutrality for both source and cable and then let the NX-33 do the seasoning. Let it add texture, richness and smooth sweetness where it excels. This brings me to the second area where Rudistor hopefully goes further with the discrete designs - low-level detail retrieval. I know I started by saying that the NX-33 does details well and allows them to surge over dark backgrounds. That is true yet the Headroom Desktop goes even further in its ability to retrieve ultimate minutiae (though sometimes it goes too far as we will see). The NX-33 errs on the side of ignoring the finest of details in order to avoid sounding clinical. I can only applaud that choice but the very best tube amps I know do both, musicality and detail. To be fair, none of those cost \$1250 and I would bet that Rudistor's Quad Mono designs make significant improvements in that area.

Finally, the NX-33 falls a little short in sheer drive power and depth of bass (as well as control) vs. the Headroom Desktop. That's another reason why I did not find the match with the HD650 as synergistic as that with the AKG which naturally has very tight bass and welcomes the slight mid-bass bloom the NX-33 contributes. Again I feel the discrete designs should be able to go further in bass drive and control without sacrificing any of the fantastic musicality the NX-33 offers. Bass in Peter Gabriel's *So* is of the highest quality -- deep, solid and detailed -- but the NX-33 could not recreate it with the full size, control and impact the Headroom Desktop is capable of. The NX-33 does not do excess. It does refinement and elegance but in this particular instance, excess may actually be closer to the truth.



I have kept my biggest beef with the NX-33 for last. It is an addictive drug! Yet it will have to return to Rudistor. Thousands of dollars in house repairs are awaiting me this spring so the NX-33 *must* leave though I don't look forward to saying goodbye. When paired with the balanced AKG K701 (and I would bet that all transparent and clear-sounding earphones would fair very well), it has deeply and permanently changed my perception of what a great earphone amp can do - and it's not just more details.

Over the more than two months that I have been listening to the NX-33, it has grown as a more important part of my musical enjoyment from day to day. It is not a monitoring tool nor even a reviewer's tool since it has too much of a personality to allow proper evaluation of other gear. It is a musical instrument designed to provide as much enjoyment of music as possible, focusing on the musical flow, not just the notes.

As I was wrapping up, I wanted to leave you with a few words that would best describe the signature sound of the NX-33. *Organic* was the first one that came to my mind, *involving* the second and *elegant* the last. Maybe that's all I should have written but you may not have believed me had I not gone through all the audiophile attributes first before finally concluding that they don't really matter when it comes to the NX-33



Frédéric Beudot