

AUDIO VALVE'S RKV Mark II in test

GREAT END-OF-THE-MILLENNIUM HEADPHONE AMP ROUNDUP

By Dan Schwartz

Here we have the very sort of thing that drives me crazy. Four tubed headphone amplifiers (Holmes-Powell, Moth Audio, AudioValve, EAR) and three solid-state (Grado, Headroom, and McCormack), and after a respectable amount of listening, few sound anything like the others. What originally started out as four became seven, should have been eight, went through delays because of problems with delivery, and some last-minute auditioners entered the chorus line.

Headphones offer a distinct difference from conventional listening, with both advantages and disadvantages. The ability to enjoy music when one's family requires quiet is balanced by the possibility of enjoying music when you can get the little bastards quiet enough to not be heard through the ?phones. A true High End headphone set-up can also offer a kind of intimacy to the source that speakers will never match, by removing the room from the listening equation. Even a mediocre set-up can offer that improvement, but it may not convey the nuances that your high-quality speakers might. The main disadvantage to headphone listening is displacement of the soundstage. Instead of a three-dimensional soundstage appearing in a window in front of you, the soundfield is reduced to a plane inside the head. This has one virtue, though - with many CDs, the sound can be quite reasonable but produces a flattened soundstage that is no fun. Headphones render most sources equal in this respect, and many otherwise unenjoyable CDs pleasant. Since I use headphones every day in my studio, the finger of fate pointed at me for this survey. I do recording in a variety of ways: sometimes as a session musician, which can involve using headphones as the only way of hearing yourself - and can lead to pretty serious skewing of your sound to tape,

if you adjust your tone to what you're hearing, which with the most common studio ?phones doesn't resemble a bit what's actually being recorded. Sometimes I am by default an engineer using my own multi-track portable recording set-up. Here I prefer to have the best headphones available when using an open microphone in the same room with the equipment, but over the years it has become a little less critical in that one gets familiar with one's methods and gear and learns to trust one's work and instincts. The choice of headphones is frequently limited by the necessity of using closed-ear types to prevent bleed from the ?phones into the mikes, but I find that the best-sounding so far are always open-eared. In the first round of the reviewing process (my first headphone amp review appeared in 1993), I settled on the Melos SHA-1 amp and the Grado HP-1 ?phones, with the Sennheiser 580 ?phones as an alternative. But time marches on--the Melos started developing problems I couldn't get fixed, it was drilled wrong for proper rack-mounting, and was unwieldy. So I found the original Grado Labs-built Grado Signature HPA-1 headphone amp as a reasonably low-cost, ultra-portable alternative. This time out, Scot Markwell procured the new Sennheiser 600s ?phones for me, which I immediately purchased, and the first amp to arrive came along with a set of modified Grado RS-1 ?phones, which I found uncomfortable, and so wheeled a proper set out of John Grado (wheedling being the foremost of the reviewer's necessary skills). And so here we have the review set-up - these two sets of phones along with the old HP-1s driven by the tape-outs of the EAR G-88 with the Immedia RPM-2/Immedia Arm/Lyra Clavis DC for analog and the Theta Data III/Genesis Digital Lens/Theta Gen Va/96k DAC/Illuminati cable set-up for CDs.

For comparison's sake, music was also heard through BEL 1001 Mk IV or EAR 509 Mk II amps and a custom set of d? Appolito-configured dynamic speakers built by Richard Marsh. (Though if you really want to irritate yourself, try referencing between speakers and headphones a lot. I saved it for the clinches).

We spent months waiting for the arrival of the much-hyped Cary CAD-300SEI tubed integrated/headphone amp. After many zig-zags, it became clear that we were not going to get it. Life goes on. The first amp to arrive was the \$4,500 Holmes-Powell DCT-1 single-ended model. I love this thing and picked it as my one Golden Ear award victim. Nothing has happened between then and now to shake out of its place as pick of the litter (although the appearance of a fourth tubed amp, though a prototype and unreviewable, lessened my regret at losing the Holmes). The DCT-1 puts out 500mW at 30 ohms using 6072A input and 6005 output tubes. Holmes-Powell estimates a typical tube life of 5 to 10 years (and half that for commercial use, whatever that means). The thing will handle a driver load of 25-600 ohms, which means that, unlike the other tube units, no special accommodation need be made for switching ?phones. At the time of the Golden Ear deadline, I wasn't confident in my assessment of the Holmes-Powell's accuracy, only of its romantic beauty. I now am more confident that it's not particularly accurate - I simply don't buy that the 1987 off-the-shelf CD of Abbey Road, which sounds so mediocre compared to vinyl elsewhere, truly sounds as good as it does with this thing.

If this is right, then everything else is not good enough. But I'm just as certain that the DCT-1 is the most pleasurable (and significantly most costly) of the amps I reviewed. With either set of ?phones, it's capable of enhancing the details of a recording to a degree of apparent intimacy that is both an education and a sensual delight. In only one instance was this too much of a good thing: the new CD of a 1971 Graham Nash/David Crosby Los Angeles performance entitled ?Another Stony Evening? released by Grateful Dead Records. I don't want to overstate the negative effects of headphone listening with this one, but it was recorded straight from the board, and live mikes are rarely very good. In this case, they were the industry-standard Shure SM-57s that I avoid using in recording. And none of the amps reviewed could make up for the fact that the intimacy of the ear-to-driver relationship was just too much on the cheap mikes, including the Holmes-Powell.

Of course, it's just that ear-to-driver relationship that makes headphone listening so pleasurable and problematic. With a good set-up, nothing can match the degree of detail you hear. Likewise, nothing can overwhelm the ear as fast - the better the set-up, the longer you can listen, but fatigue can set in fast, especially if you succumb to the temptation to listen too loud to get more of that intimacy. One of the hallmarks of a better set-up is a lessening of that urge to turn it up.

Around the same time the big macher of amps arrived, so did its reciprocal: the tiny, inexpensive, wood-enclosed, battery-only (2-x-9v) Grado Labs amp. Pocket-sized, you don't expect big things out of it -- and you don't get them. But for \$350, it will outperform your basic single-chip tape-deck headphone output driving lower-impedance phones like the 32-ohm RS-1s. Compared to the larger and more expensive units, the Grado seems slightly coarse sonically, but on its turf, it holds its ground respectably. Only the lack of AC-option really irritates me about it ? one would like to leave it on to be assured (at least for reviewing purposes) of having it perform at its best. I went through one pair of 9-volts just doing what I thought was a decent warm-up ? and stopped.

The Grado seems like a steal compared to the \$1,333 solid-state Headroom Max. I couldn't find any justification for this thing. It's ugly and sounds dark and closed-in. It has a couple of circuits that might justify it if you find they work for you - they did zip for me. One is a kind of cross-talk-inducing circuit that is supposed to ameliorate the hard left-to-right imaging of typical headphone performance, along with a filter designed to compensate for some losses induced by that circuit. I could hear them working away, but found nothing valuable in them, or indeed the entire device. I recall a Headroom amp I listened to in '93 with a circuit that was described as similar in function that I found more effective than that in the Max.

If you're going to throw \$1,333 at the problem, then save a few bucks and listen to the tubed \$1,190 Audiovalve RKV. Now, this thing represents good value for money and would probably be the winner of this sweepstakes if dollars spent vs. performance gained were the prime criterion. A dual-mono OTL design based on PCL 805 or PCL 85 tubes, it uses an IC-based auto-biasing circuit. In its stand-alone form, it's meant to drive ? phones with a load of 100-2k/ohm. The company sent it with a little optional transformer box called the Impedancer (\$390), which plugs into the main unit via a quarter-inch plug and provides additional outputs switchable from 8 to 16 to 32 ohms, perfect for driving the Grados. It has a stated output of 3 watts, 400 ohms, and a damping factor of 3500. Visually, it's a nice squarish black and gold box that looks like Audiovalve's amplifiers, smoky see-through on the sides for that nice tubular glow. A visitor suggested that it looked like an old-fashioned box camera. Sonically it's a bit more straightforward sounding than the DCT-1, not quite as lush and warm, not quite the same sense of ? enhancement. ? But respectable in every sense -- open and beautiful. Much the same can be said sonically of the Moth Audio s2A3, with one important exception. It took me a long time to understand the difference between these two amps.

If the Holmes-Powell is Hawaii, a sound off by itself, the Moth and the Audiovalve are the two American coasts - of a continental body, cohesively in the same family, but not identical. I spent days going back and forth between them, trying to qualify that difference and realizing gradually that I was coming to prefer one. (It took the appearance of a fourth tubed contender to clarify the difference - one that plunked itself sonically squarely in the center - say Lawrence, Kansas.) That sonic exception is the way in which the Moth characterizes noise. After a bit, I called the designers to suggest they come by to check into why it was so noisy. Like any designers, they were taken aback. And this time, they were right - unplugging the input silenced it. Absolutely. No noise whatsoever. So what was bugging me? It was the way in which the unit treated recording hiss, whether from LP or CD. Accuracy is hard to judge when, to use the Japanese phrase I love, you're playing ball on running water. Three sets of headphones, all different. Seven amplifiers,

all different. How do you judge accuracy? Objectively, you don't. You need to be intimately familiar with all aspects of the recording and production chain and process to get even close. Recording starts with an imperfect transducer, ends with an imperfect transducer, and what happens between is audio, which is still somewhat mysterious.

So you listen and listen and bring all your experience to making an informed opinion. And it's my informed opinion that the Moth Audio s2A3 exaggerates hiss; and though that may be less easily discernible in musical information, this quality made me feel easily fatigued. The Crosby/Nash CD is a great example, and the one I used to finally chase this down. After a while, the recording hiss became distracting only with the Moth. Moth sent over a technician to check this out and he heard it, plain as day, and agreed. We tried some measurement equipment he had brought, with all four tubed amps, and though the frequency-sweep and square-wave response tests showed us some interesting things, we could find nothing pointing to this quality. This is not to say it can't be found, just that we didn't with that simple equipment. I also found myself, without fail, turning the Moth up when I plugged into it on A/B rounds of the various amps - something I did with none of the others. Something about it made me want more ? oomph.?

But let's talk for a moment about the Moth's appearance. This thing is beautiful - a few thought it prettier than the DCT-1 ?in a mad-scientist sort of way,? as one fan put it. Inside, it's functionally elegant, which I learned because it's apparently persnickety about its output impedance - you have to undo 16 small Philips screws to get at the guts, though once you do, changing the impedance is ingenious and fun. But the designers must assume you have one set of ?phones and so don't want to change loads very often, or they'd do something about

Second, the unit is a prototype, which TAS does not review. But it taught me a lot. It's the Kansas resident that helped me understand the differing ways in which the Moth and the Audiovalve treated noise and other signals in the same audio band. Most importantly, using recordings I've done, on which I am playing bass, and also knowing de Paravicini's characteristic rendition of low frequencies (his hand-wound transformer design is extremely wide bandwidth), I was able to determine something all three of the other tubed amps had in

I use EAR equipment in my home system and as the primary components of my recording chain, including the tape recorder, and I am leaning on de Paravicini to design interfaces for high-bit and sampling rate hard-disc recorders for me.

I bring this up to explain the final comparison between the \$350 Grado and the \$750 McCormack Micro Integrated Drive. For many recordings, I find these two so near to identical sonically, I'm unsure I heard a difference. But the opening track on Martin

I want to digress one final time on the subject of accuracy and musicality in recording, and I am going to borrow a phrase from elsewhere in the fine arts: "Magic Realism." (Think of the books of Gabriel García Márquez or the paintings of Edward Hopper.) If one thinks about some of the great audiophile recordings, such as the Layton or Wilkinson albums, one realizes that what is being heard is not particularly close to the sound of a real orchestra in any literal sense - i.e., the string tone may be "simply gorgeous!" but is in

those 16 screws. I listened to it mainly with the Sennheisers, since that's what the designers themselves recommend. I had them install a dummy load on the speaker outputs¹ so I could pop my ? phones in and out - another convenience limitation, but one that is addressable. The chassis has two little windows that show you the drive tubes and a mirrored black finish on top out of which protrude the pair of 2A3 tubes, which are finely bulbous. A true audiophile delight, in need of its own stand or your top shelf. At \$1,800, the fit and finish are a bargain.

Okay ? now for the mysterious fourth tubed amp. I can't review it for a variety of reasons, yet I must discuss it because in the end it proved crucial to my determinations. It's a prototype EAR amplifier. First, I do business professionally with EAR principal and designer, Tim de Paravacini, and the sudden arrival of this prototype may well have been the result of my telling him that I was in the midst of reviewing tubed headphone amplifiers.

common. It sounded like an audible phase shift from the mid-bass on down, as if the bass were spread out around the center of the soundstage, rather than focused in it. My guitar sounded rounded and a little hollowed-out through the DCT-1, the s2A3, and the RKV - all pretty much alike, which I may well have not picked up on with no other basis for comparison. In my other reference - my speaker system - I had to listen through a room. But the moment I heard the bass in the EAR prototype, I knew I was hearing the closest to accuracy in that sonic region. I was even able to demonstrate this to Moth Audio's tech. The EAR prototype gradually became my reference point. I don't want to belabor the point of accuracy, because to determine what is accurate in headphone listening is beyond me - maybe beyond anyone. But the EAR ? signature,? if such a range of products can be said to have one, is one that fits well into my listening biases.

Carthy's brilliant ?Signs of Life,? a solo vocal with extremely close-miked steel-string-guitar version of the BeeGees ?New York Mining Disaster, 1941,? finally proved the break I needed. Trusting the EAR bass as I do, I found the Grado's rendition of the bottom end of Carthy's guitar the more convincing of the two, i.e., more in line with the EAR than the McCormack and giving a somewhat greater sense of solidity. For practicality and appearance, I give the edge to the McCormack. While it costs more, I prefer its slightly larger size (less likely to follow along when you move with the ? phones on) and you can plug it into the wall. And on Telarc's Arvo Pärt CD and John Gardiner's Beethoven Ninth on DG, I couldn't hear a difference between the two with confidence. Indeed, especially for the money, both acquitted themselves quite well by comparison to the more expensive and exotic amps, proving the old adage about how much more you pay for that final few percent of refinement.

every sense much too filled with detail and shimmer to resemble what one really hears in a hall. The Neumann microphone capsule is far too non-flat in its response, near- or far-field, to give you the real thing. That much is sure. But equally sure is that the results nonetheless contain pure musical magic. And that is the best of audio. One could create a scale of 0-100 and place recordings anywhere along it, ascribing a value from the 0 of reality to the 100 of magic. I would put my favorite recordings of the Beatles somewhere near 100, and the more literal recordings of Altarus' Chris Rice or the new solo piano recording by Tim deParavacini with his new M-S line microphone² somewhere around 50. The RCAs? Well, they're pretty high up and vary with pressing.

Drawing a conclusion from all of this is not particularly easy unless one places some restrictions on the choosing: If I could, I would choose the EAR prototype above all other comers for its sense of accuracy and the useful relative compactness of its package, bearing in mind my somewhat neurotic quest for accuracy where I believe none exists. But the EAR is out. So, for pure visual and musical aesthetics, I still stand by the beautiful to hear and see Holmes-Powell DCT-1. In the price vs. performance race, the AudioValve RKV, at nearly one-fourth the price of the Holmes is nearly all one might want. I am reluctant to dismiss the gorgeous Moth s2A3 out of hand - I want to suggest that should the reader find one available for the listening, do it, and simply bear in mind my experience. Among the solid-state contenders, I give the slight sonic edge to the Grado (over the more ergonomic McCormack), which somewhat compensates for the nuisance of its battery-only operation. It is clearly the place to begin if one is just getting into this kind of thing.