

van den Hul Black Beauty phono cartridge

A. J. van den Hul calls the Black Beauty a phono cartridge “just for friends.” In a way, this Black Beauty was made specially for me — it’s been tweaked for an undamped linear-tracking arm. Says so right here on the box: “FORSELL VERSION.” But before you explode, know that Mr. van den Hul will be pleased to do the same for you. He’ll adjust the suspension of any Black Beauty or Grasshopper series cartridge for your arm and table. Or, should you specify, for “the preamp and load impedance, a particular brand of records to be played, the type of music generally played (jazz being more dynamic and classical more spacious and detailed), and other personal/sound preferences.”

That’s not to say that you can’t stroll into a vdH dealer and abscond with the goods there and then. You can send the cartridge to the Netherlands and have its suspension tightened up at a later time, if necessary. Should you be able to forgo immediate gratification for long-term pleasure,¹ you can order one through your dealer made to your specifications. Production time for a Black Beauty, described as a “resolution-improved” version of the Grasshopper IV, is about two weeks².

1: Then you’re not an audiophile! —**Jonathan Scull**

2: Please call your authorized distributor for delivery time. —**A.J. van den Hul B.V.**

The importer was quick to point out that van den Hul is one of the few designers who constantly strives to maximize the interface of cartridge and phono preamp. To begin with, there are two available versions of the Black Beauty³.

3: Due to further improvements, our BLACK BEAUTY has been renamed to The BLACK BEAUTY Special-X. Our GRASSHOPPER “BEAUTY” currently is available in a number of versions. —**A.J. van den Hul B.V.**

The low-output specimen I examined generates 500µV and retails for \$4000. The high-output variant boasts a mighty 2mV and can be had for \$5000⁴, its higher cost reflecting the greater number of turns in its “24-karat enamel-insulated matched crystal” gold coils.

If you’re running a low-noise solid-state phono preamp with lots of gain, the low-output version will be fine. A hybrid or all-tube phono preamp might be better suited to the high-output version. Then again, 2mV can swamp some MC phono inputs, so the 650µV Grasshopper IV GLA might be more appropriate. “The operating costs are the same in the sense that they both run \$500 for a standard repair,” the importer explained. “If you’re straddling, the ‘Hopper IV might be a safer bet.” The IV GLA (gold, low output, alnico magnet) runs \$5000⁴ and has been my favored reference cartridge since its debut.

Technical notes

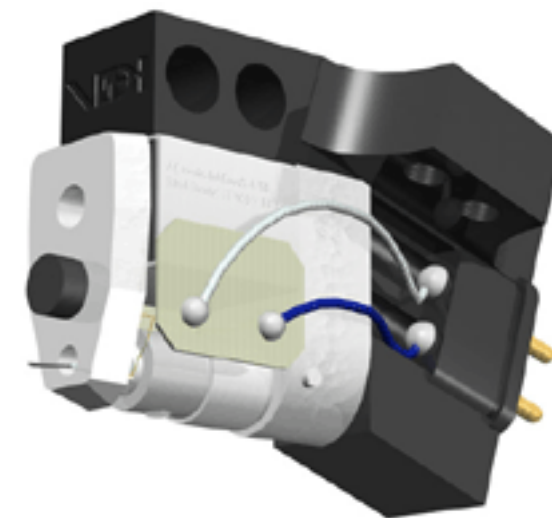
The Black Beauty’s body (really, the motor carrier assembly — there *is* no body as such) is fashioned out of black polycarbonate. The material and shape are said to “dramatically reduce” resonances excited by the motor. The bodiless construction eliminates another chatter-prone design element while keeping the weight down. For the record, the Black Beauty weighs a relatively svelte 8.5gm in its stocking feet.

Please note:

The article’s following two paragraphs discuss the former Black Beauty’s square armature; The current design — named: The BLACK BEAUTY Special-X — in most of its available versions is now equipped with a cross shaped armature, which due to its higher channel separation shows less cross-talk and with it a cleaner and more detailed top end of the audio spectrum. —**A.J. van den Hul B.V.**

The armature, around which the coils are wound, is square, which is said to increase output by 25% over a cruciform former. Therefore, phono-preamp gain can be *reduced* by the same amount, which in turn improves the signal/noise ratio by 25%, or about 2dB in real terms. vdH: “The more iron involved, the higher the output per turn. The resolution of very low signal levels is improved because the higher output level allows less masking of the groove information by preamp noise.”

The square armature also results in a better contact area with the dampers for “a better grip of the rubber on the modulator.” The inner support wire that positions the armature in its gap is selected for low metal-fatigue characteristics.



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Description: Moving-coil phono cartridge with boron cantilever. Stylus shape: VDH-1S. Stylus radii: 2µm x 85µm. Equivalent stylus tip mass: 0.32mg. VTA: 22°. Frequency range: 5Hz-65kHz. Recommended tracking force: 1.2-1.4gm; 1-1.2gm optional. Output voltage at 1kHz at 5.7cm/s: 500µV RMS. Channel separation at 1kHz/10kHz: >33/>28dB. Recommended load impedance: >500 ohms. Recommended tonearm mass: 6-10gm.

Price: \$4000. Standard rebuild: \$500. Approximate number of dealers: 35

Manufacturer: van den Hul BV, the Netherlands.

Web: www.vandenhul.com

“You will never find a loose coil ‘hanging’ around; even after a heavy accident this very rarely occurs,” says vdH. The front and rear pole pieces are a full 2mm thick, reducing crosstalk between channels. A pair of silver eddy-current dampers around the magnet and its rear pole further reduce crosstalk.

The new cartridge doesn’t use the alnico magnets found in the IV, but a proprietary type said to deliver better channel separation and higher resolution. (Mum’s the word *chez* vdH; I never discovered the material’s identity.) The boron cantilever of the BB is shorter than the IV’s, so the cartridge rides quite low. That means it’s more robust, and “resistance against accidental mechanical overstress is increased.” Compensating for its shorter shank, the Black Beauty is tapped with four mounting holes rather than two, ensuring proper overhang adjustment on a wide variety of arms.

The Beauty uses the same 1S variant of van den Hul’s patented miter-shaped stylus as the ‘hopper IV and III. (The Grasshopper III is still available with copper, silver or gold coils for between \$2700 and \$5000, via special order.) The cartridge incorporates a more or less standard vertical tracking angle (VTA) of 22°. Like all vdHs in my experience, it liked to run a touch down at the rear for best focus and tonal balance. Interestingly, the recommended load impedance was greater than 200 ohms ⁴, which I found to be right on the money.

4: The recommended load impedance for the standard version of the Black Beauty’s latest design — named: The BLACK BEAUTY Special-X — is > 500ohms. —**A.J. van den Hul B.V.**

Over the years, A.J. van den Hul has taken a fair amount of heat for the relatively high compliance of his ‘Hopper cartridge line. The importer explains it thus: “Some swear by a sniff cantilever, some insist unipivot arms are best, others air-bearing. It’s all a matter of balance. Mounting a noncompliant cartridge to a fixed-pivot arm can be a little hard on the vinyl. A stiff cantilever might work well, though, on a more compliant arm. Conversely, a unipivot arm with a very compliant cartridge can prove to be a bit loosey-goosey, if you know what I mean, and that’s not too good for the vinyl either.

“But because van den Hul cartridges are compliant, they’re kind to the vinyl *and* address a broader range of approaches to analog playback. Remember, Jonathan, no one person has the single right answer. Higher compliance means our cartridges track better than some more stiffly sprung types. But that also means that arms with high horizontal mass need some stiffening of the suspension, as in your case.”

I think my suspension needs a little stiffening too. Ahem. The ‘Hopper III and derivative Symphonic-Line RG-8, two earlier, higher-mass designs that I’m familiar with, were a little touchy about

the Forsell’s undamped air-bearing, linear-tracking arm. The combined mass of the cartridge and arm developed some serious side-thrust as the stylus traced the lead-in groove to the beginning of the information area, and pulled up smartly there to begin playing. I took to lowering both cartridges rather gingerly into the beginning of the information-carrying part of the groove rather than the lead-in to avoid those lateral forces on the suspension. The sound was good enough to make futzing around like that worthwhile, although admittedly the situation wasn’t ideal.

The newer, polycarbonate-bodied ‘Hopper IV and Black Beauty don’t suffer this indignity. Their lighter mass develops less lateral energy, and their suspensions are fully up to the task of taking the load, especially as tweaked for the Forsell. The only downside, if you can call it that, is a longer break-in time — say, about 60 hours rather than the 40 or so it took before. And a tighter suspension doesn’t mean the Black Beauty can’t be used in a damped pivoted arm like the Spothem SpJ/La Luce, with which it mated beautifully. But since the cartridge on hand was specifically adjusted for an undamped linear-tracker, I primarily ran it on the Forsell.

The physics behind the armature is quite interesting. (Correct: I have *no* life.) It’s made of what vdH calls “practically Weisz-domain-free iron.” He goes on to explain: “Ferromagnetic materials don’t change their magnetic polarization per atom, but rather in aggregates or domains. When the size of these domains is decreased, each magnetic field change is responded to by the material’s polarization in a higher number of smaller steps. This expresses itself in a reduced-modulation noise level. The modulator’s armature shape is also very helpful here. The result is a signal waveform practically free of steps. The much-reduced noise floor results in an enhanced sense of resolution and spaciousness. This noise floor is the sum of modulation noise plus

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Associated Equipment

The Forsell Air Force One did most of the work, with brief but musical moments on Ms. Spothem’s La Luce turntable and SpJ arm. The Forsell and its Flywheel sit atop a pair of Signal Guard II anti-resonance platforms, which help greatly in isolating them both from the environment. Phono cable was exclusively XLO Signature. A good deal of time was logged on the Nagra PL-P, using its hot-rod tape outs and with its internal MC transformers engaged, volume adjusted with the input potentiometers. Other preamps included the YBA Signature 6 Chassis with its own MC transformer modules and the Expressive Technologies SU-1 step-up. (The dynamics were incredible.) I also had good luck with the Balanced Audio VK-P10 phono stage on its own internal step-up transformers into both the BAT VK-5*i* and the new Classé Omega line-level preamp. I used a variety of amplifiers: VTL MB-1250 Wotans, a pair of Classé Omegas, Nagra VPA monoblocks, and the dual-mono Forsell Statement.

Speakers were our JMLab Utopias. Cable systems included Synergistic Research Designer’s Reference, and upgraded DR with the Discrete Shielding option. Cardas Golden Reference, XLO The Limited, and TARA The One were also in the system. I wired up the RCA-to-XLR Canorus cable when running the Nagra PL-P into balanced amplifier inputs. Power cords were Synergistic’s Designer’s Reference Squared Master Couplers.

ASC Studio Traps and Argent RoomLenses rounded out the acoustic treatments, with plenty of Black Diamond Racing, DH Labs, and PolyCrystal cones throughout. PolyCrystal racks and Cable Towers have become indispensable *chez* 10.

surface noise. With the strongly reduced modulation noise, only the record-surface noise is left. The extremely-low-level groove information, therefore, is no longer masked, and that means the sense of spaciousness and resolution improves a lot."

That's why Mr. van den Hul has long advised *against* fluxbusting moving-coil cartridges. He explains that degaussing reduces the number of those pesky "Weisz magnetic complexes" in the magnets. Fluxbusting *can* help in realigning those complexes that have become disorganized over time, however. On the other hand, the cure may be worse than the disease, as fluxbusting reduces the number of these complexes and realigns the atoms into larger, less refined groupings. As a result, postulates vdH, you'll need to 'bust your cartridge more often, with a gradual loss in resolving power. It may sound better after each degaussing, but the continued reorganization of the "magnetic complexes" becomes more coarse, as does the sound.

I'll take his word for it.

Setup

Setting up the Black Beauty was fairly routine. I'm used to handling van den Huls, but just a little care and forethought make them (relatively) easy to mount. The cantilever, slightly less protuberant than the 'Hopper IV's, seemed a tad less inviting of disaster in the form of sticky fingers, pets, and cleaning ladies with strip-mining in their hearts.

I began with the headshell more or less parallel to the platter and a VTF (vertical tracking force) of 1.35gm, as routinely used with the 'Hopper IV. A good place to baseline VTF with Grasshopper- and Black Beauty series cartridges is to apply enough weight that the stylus emerges from the center of the hole in the pole piece (the front face of the cartridge) when under load in a moving groove. This may change over time as the suspension loosens up, so check it again after the cartridge fully breaks in. (van den Hul suggests 200 hours as about right, but you'll be hearing most of what the Black Beauty can do after about 60 hours of play.) After a little experimentation, I settled on 1.25gm of VTF for optimal tracking, focus, body, extension, smoothness, and tonal balance.

I set azimuth with the (unfortunately) now-discontinued Audio-Technica AT6020 Cartridge Analyzer and test LP. Best readings for lowest crosstalk between channels was found with the cartridge just a nudge from perpendicular as seen from the front.

Black is beautiful

The sound of the Black Beauty phono cartridge had a gestalt slightly different from that of the 'Hopper IV GLA I know so well. Where the IV is sharply focused, layered, startling, and dynamic, the BB was more round, almost opulent, with huge amounts of air and a *very* strong sense of the original recorded acoustic. While the Beauty's imaging was a bit less finely focused than the IV's, its imaging was convincing, even astounding at times in its own right. I found this to be a paradox of sorts. One usually associates air with transparency, but every rule needs its exception.

I was hugely entertained by the large, airy acoustic of Duke Ellington's *Jazz Party*. The palpability was greatly enhanced by the sense that the recording studio had been transposed into our listening space! (This was especially true with the Nagra VPA monoblocks.) It was awesome — the believability factor, if you will, was extremely high, and the room boundaries of the recording studio were perfectly explicated, as much sensed as heard.

The *Ansermet Memorial Album* was breathtaking in this regard, the air and sense of original acoustic highly involving and enjoyable. The "launch" of acoustics into this superbly re-created space seemed natural and unforced, the decay as fully developed as I've ever heard. It was fascinating to hear Ansermet scold and cajole the troops, and to listen for the change in acoustic between the rehearsal and the performance itself. Evidently vdH's "resolution-enhanced" description of this cartridge isn't hyperbole. Signal decay seemed to retain its *integrity* as part of the acoustic event, right down into the noise floor and below.

I suppose that that might be an element of the extraordinary sense of air I heard, textured and alive with sound and tonal color. In the past, I've described how individual boundary layers of air can surround performers on a soundstage, and noted how they relate to each other and the larger acoustic of the recording venue. With the BB, there was absolutely no sense of any *grouping* of individual air-layer boundaries. Rather, the "near-field" integration of the performers in relation to each other and the larger space was seamlessly presented as a single acoustic entity.

And it didn't take a large concert hall to make that apparent. Concentrating easily on the tonal color shimmering off Milt

I used and highly recommend the following analog devices and unguents: The Winds Arm Load Meter, a decent level, LAST Stylus Cleaner and Treatment, Record Research LP #9 cleaning fluid, my old ZeroStat antistatic gun, Shun Mook and Harmonix record weights, and a fresh dental-floss drive belt! Oh yes, and the *Cardas Frequency Sweep and Burn-in Record*.

—Jonathan Scull

J-10's Mini R2D2

I'm putting the LPs I spun in a sidebar because the albums are all my absolute favorite best-of-the-best, and heartily, hugely recommended to all music lovers.

Jazz-wise, you can't lose with Milt Jackson and John Coltrane's *Bags & Trane* (Atlantic 1368), *The Modern Jazz Quartet* (Atlantic 1265), and *Bags Groove* (OJC-245, with Miles Davis, Sonny Rollins, Milt Jackson, Thelonious Monk, Horace Silver, Percy Heath, and Kenny Clarke — what a lineup!). Then there's *The Timekeepers/Count Basie Meets Oscar Peterson* (Pablo 2310-896), *It Don't Mean a Thing If You Can't Tap Your Foot to It* (Pablo 2310-909, with Milt Jackson, Ray Brown, Cedar Walton, and Mickey Roker), *Ellington Jazz Party in Stereo* (six-eye Columbia CS 8127), *Ellington Indigos* (six-eye Columbia CS 8053), *The Intimate Ellington* (Pablo 2310-787), and Miles Davis' *Ascenseur pour l'échafaud* (Fontana 836 305-1, with Barney Wilen, René Urtreger, Pierre Michelot, and Kenny Clarke). Just incredible, all of them.

I also listened to Cassandra Wilson on *New Moon Daughter* (Blue Note 8 37183 1), and Dead Can Dance's sensuous *Spiritchaser* (4AD DAD 6008). For classical I listened to Jascha Heifetz's electrifying traversal of the Sibelius Violin Concerto (RCA LSC-2435, with the CSO), and one of my all-time faves, the *Ansermet Memorial Album*: his last recording with the New Philharmonia Orchestra, Stravinsky's *The Firebird* (London FBD-S-1) — a two-record set including the rehearsal!

—Jonathan Scull

Jackson's mallets in *The Modern Jazz Quartet*, and especially *Bag's Groove*, the Black Beauty's integrity in replicating the acoustic delivered a vivid, natural, intimate sound. Even on close-miked female vocals, the air and space were remarkable. Cassandra Wilson on *New Moon Daughter* sounded exceptional — highly palpable and involving. The BB climbed all over female vocals like a randy gigolo anxious to please.

Harmonic development in the midband was also of the rich and textured variety. Now, my 'Hopper dishes out about as much as I consider seemly, the BB even a bit more. Is either "wrong"? Not on your life! It's a matter of taste, setup, and even associated equipment. The rich harmonics were a part of the heightened resolution characteristic, I'd say. Bloomy, rich, textured, nuanced — you won't be able to put the thing down! This was accompanied by lots of *body*. Corporeal? Don't ask *and don't touch*, because that's what you'll feel like doing to the wonderfully dimensional characters you'll suddenly find cavorting in your listening room.

Against the 'Hopper

Of course, life is all about compromise. There's no question that the Grasshopper IV is faster on the leading-edge transient, more "see-through" transparent and dynamic. The IV has more Startle Factor, and *that I really love*. The faster leading edge seems to pull the music along with a touch more verve and snap than the Black Beauty managed — the IV is a bit more on the pace. The BB wasn't slow by *any* standard, however. Along with its snappier transients, the IV is also more macrodynamic than the Beauty — partly due, I'd say, to the overall gestalt of the new cartridge, partly because of its slightly lower output. Don't scoff; that extra 150µV made for a perceptible boost in ballage, as it were, especially with the all-tube Balanced Audio Technology VK-P10 phono preamp.

Balancing that was the Beauty's superb ability with *microdynamics*, aiding and abetting the all-encompassing sense of air. Listening to the awesome bass on Dead Can Dance's *Spiritchaser* (4AD 46230-2) left me in no doubt that both cartridges handled the nether regions with power and aplomb. The BB was a little less quick and transparent down there, but actually dug deeper than the IV, and with slightly more heft and power.

In the highs, the Beauty proved alluring, sweet, and attractive, if a tad less incisive than the IV. The 'Hopper sounds more dynamic and extended, perhaps even a touch more linear, but the Black Beauty *also* embodied these same characteristics, if not quite so well as the IV does in some ways, and better than it in others. One is not less for being different from the other.

Then, too, I'm *really* splitting hairs. Believe me, these are two great cartridges; matched with the right system, they're both as good as it seems to get around here.

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Beauty is more than skin deep

I think van den Hul has this right. Low-noise high-gain, solid-state phono stages like the YBAs will get their best out of the Black Beauty, although the Nagra PL-P had more than enough clean tube gain. Given that, I still *ever so slightly* prefer the Grasshopper IV for its shimmer, pace, large-scale dynamics, and excitement. The Black Beauty sounds slightly more restrained, a little more harmonically fleshed out throughout the frequency band, and a touch more forgiving on top. Certainly its most endearing quality is the wonderful, breathable sense of air it drops over soundstage and listener with no apparent effort at all.

The Black Beauty has a little more Koetsu in its soul than the 'Hopper IV, along with an equal dollop of vdH family values like extension, linearity, speed, transparency, imaging prowess, and air. The vdH is no Koetsu, however, and that works both ways. If anything, other than its close relation to the 'Hopper IV, the Black Beauty reminds me of the Wilson-Benesch Analog, a cartridge close in price and similar in sound. Of the two, the new van den Hul gets the nod for its refinement and top-to-bottom integration.

As they say on the TV Food Network, it's all a matter of taste. Highly entertaining, highly musical, highly recommended. Keep those analog fires burning.

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