



Van den Hul Black Beauty Moving Coil Cartridge

A Thoroughbred Tracer

by Larry Brotzen

Resolution, resolution, resolution” is how A.J. van den Hul responded when asked to describe his new Black Beauty Grasshopper moving coil cartridge. If you’re looking for a phono transducer that resolves the information hidden in your recordings, this cartridge wears the wreath of roses. But his thoroughbred is no cold analytical machine. His beauty plucks heavenly strings and blows burnished brass in spades on your turntable. Not only does this cartridge reproduce the natural timbre of acoustic instruments, but it accurately delineates the space of the recording venue as well. These adjectives inadequately convey the beguiling fashion in which this cartridge reproduces the emotion and feeling of music.

BREEDING A WINNER

The Black Beauty communicates the musical moment in a way that few other moving coil designs are able to do. It is analogous to the difference between someone telling you about a wonderful meal and actually savoring it yourself. This cartridge strutted its stuff right out of the paddock. Suddenly, I heard things that had never been evident before. But most of all, what I heard was simply ravishing.

The Black Beauty departs from previous Grasshopper designs in a number of ways. To begin with, the Black Beauty’s cantilever is shorter than previous Grasshoppers (and many other cartridges). Van den Hul, the cartridge’s designer, feels that the shorter the cantilever, the better the pulse transmission and dynamic performance. The cantilever however, because of the cartridge body’s shape, protrudes more forward than most cartridges; this may prove problematic when setting overhang in some arms. Van den Hul anticipates that future iterations of the Black Beauty will have two sets of holes to aid in setting cartridge overhang.

Among the cartridge’s other refinements are the addition of an extra Samarium-Cobalt magnet to the front pole piece of the cartridge. In addition, the Black Beauty uses two rear pole pieces in parallel to reduce magnetic resistance. The rear pole pieces are neither Alnico or Samarium-Cobalt, but a proprietary, enhanced strength, rare earth magnet that enables better sonic resolution.

Van den Hul feels that an especially critical feature of the new cartridge’s design is an increase in the number of “magnetic steps” in the armature. Simply put, these Weisz complexes refer to the density and arrangement of individual atoms within the magnetic material. Increasing the number of “magnetic steps” or Weisz complexes allows the cartridge to respond more quickly and capture even finer nuances from the groove modulations. To quote van den Hul “...this magnet doesn’t sound 'lazy' or undynamic like less magnetic materials, but exerts a stronger magnetic field without running into the problem of 'rest magnetism.'” This is one reason that van den Hul sternly advises against fluxbusting moving coil cartridges (see [Sounding Off](#)).

TRAINING A THOROUGHbred

Setting up of the Black Beauty is a little different than other moving coil cartridges. To begin with, the correct VTA (vertical tracking angle) is attained when the rear of the arm is two or three degrees above horizontal (you read that right friend). In this design, the center of movement is in part determined by the 20 to 21 degree angle created by the straight line that connects the coil and the tip with respect to the record surface. You then add about 2 or 3 more putting your cartridge at about 22 to 23 degrees. This setting most approximates the angle of the record groove which mimics the angle of the original cutter head (at least for current LPs — editor). This particular angle was originally selected to allow the vinyl shavings created during the mastering process to escape.

The manufacturer recommends initially setting the tracking force to about 1.5 gms, a cinch with the electronic Winds stylus pressure gauge. As the cartridge breaks-in, decrease the VTF to about 1.45 gms; after 50 hrs, reset the tracking force to about 1.4 gms. After the cartridge is fully broken in (approximately 100 hrs), I found sonic nirvana at a tracking force of 1.15 grams. Remember that a change in VTF is always accompanied by a change in VTA.

Van den Hul believes, along with Harry Weisfeld of VPI, that antiskate is not an important parameter. He suggests keeping the antiskate to a minimum of about 0.6 to 0.8 grams, as van den Hul does. The Black Beauty performed best when the antiskate was set to the smallest value.

TECHNICAL TIP

Correct VTA is with the rear of the arm 2 to 3 degrees above horizontal

When it comes to loading, van den Hul suggests experimenting with different values (300 ohms to 47 K) and I agree! Among the loading values tried were 300 and 500 ohms and 1.5, 21 and 47 K. Overall I preferred the 21 K setting because of correctness of balance between air and truth in timbre. Oddly enough 300 ohms, trading off between some loss of air and definition for additional sweetness of tone, came in second.

One small tip when setting azimuth with this or other cartridges. Overtightening the record clamp can produce a measurable 2 dB change in crosstalk level and a concomitant loss of resolution and space. Just gently snug it down. Representative channel separation figures for the Black Beauty are >33 and >30 dB at 1 and 10 kHz, respectively. Also don't overtighten the cartridge mounting screws. The cartridge should be firmly mounted so as not to affect the sonic properties. LAST is the only cleaning fluid van den Hul recommends for use with the Black Beauty.

Finally, the Black Beauty's 0.325 mV output shouldn't present a problem for the vast majority of today's top notch phono stages such as the Joule Electra, Conrad-Johnson Premier 15 or Jadis JP80MC phono preamplifiers. No loss of dynamics or obtrusive tube rush were noted when using any of the aforementioned tube phono stages or preamplifiers. Van den Hul may offer another version of the Black Beauty rated out around 0.7 mV for preamplifiers that can't handle low output MCs.

(Remark: Due to further improvements, our BLACK BEAUTY has been renamed to The BLACK BEAUTY Special-X, which has slightly altered specifications. Our GRASSHOPPER "BEAUTY" currently is available in a number of versions. —A.J. van den Hul B.V.)

RACE DAY

The Black Beauty possesses an uncanny ability to unravel differences between different pressings of a given recording. Take for example, the original 1S and reel-to-reel release and the Classic Records reissue of Reiner's *The Pines of Rome* (RCA LSC 2436). The Classic release was clear, cold and refreshing as a mountain brook, while the 1S and the tape were sweeter and more seductive. At times you wished for more sweetness in one or more clarity in the other. What I found astonishing was the cartridge's accuracy, whatever the vision of the different mastering styles. There is no real choice here. Both versions have a legitimate place as musical reproduction. But the real take home message of this comparison was that there was no difference between the LPs and tapes placement of instruments and ambience. This is the stuff cartridges are supposed to do!

The hallmark of this cartridge is its rich and vibrant midrange. Not only were you able to listen to an accurate replay of the kaleidoscopic orchestral tonal colors but, you could sense the buoyant good spirits of the music in the performance. This was accompanied by exemplary bass extension. Timpani roared on *The Pines of Rome*; double basses shook. Best of all, the bass isn't woolly or loose, but maintains the rhythmic pulse of the music. The bass extension on the Classic release is a true torture test for your system!

There's no truer test for midrange reproduction than the human voice. One of my favorite reference discs for female voice is Maxine Sullivan's *Maxine Sullivan* (DCC LPZ 2038). The Black Beauty lets you hear all of Sullivan's voice; the chest tones and the nasal and head cavity resonance that all great singers possess. Add to the mix, the ability to capture the soul of her voice. You know this is Maxine Sullivan, with all the warmth and life experience it communicates. In addition, the Black Beauty differentiates between Sullivan's and her side men's separate mikes because of the difference in sound between acoustical spaces.

The Beauty is equally at home on small scale acoustical settings. Witness the magic of Gene Ammons's saxophone on the "Someone to Watch Over Me" cut from *nice an 'cool* (Analog Productions Moodville 18). Not only can you hear every breath and rasp of the reeds of the sax on this tube remastered album but every subtle nuance of Richard Wyand's demure accompaniment. The old van Gelder magic half tempts you to go up to the left speaker and wipe away the saliva accumulating in Ammons's sax. See if you don't develop a small tear in your eye when you hear Ammons's mournful rendition of "Something Wonderful" from the King and I.

Another example of the Black Beauty's ability to resolve low level information is must-have *Bola Sete Bola Sete's Tour de Force* album (Analog Productions APR 3003). Every pluck and resonance of this brilliant Latin guitarist's instrument is reproduced with an exquisite vitality. The syncopated resonance of the percussive blocks amid the sparkling commentary of the drum's trap set infuse every chord on Sete's guitar with rhythmic life. You can't help but tap your foot to the music.

Last but not least, the Black Beauty's upper octaves are unique in my experience. Other cartridges get the shimmer

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SOUNDING OFF

Contrary to the conventional wisdom, A.J. van den Hul sternly advises against fluxbusting your moving coil cartridges. Van den Hul avers that degaussing a cartridge reduces the number of magnetic complexes in the magnet for all moving coil designs. On one hand, fluxbusting helps realign the magnetic complexes which become more disorganized over time. On the other hand, the cure may be worse than the disease because fluxbusting reduces the number of Weisz complexes and realigns the atoms into larger, less refined aggregates. The end result according to van den Hul is that you need to fluxbust your cartridge more and more often — with a gradual decrease in overall resolving power. So, while a cartridge may sound better after each degaussing, its resolving power will gradually decrease due to incrementally coarser reorganizations of its magnetic complexes. Or as A.J. would say "you will end up having to degauss your cartridge after each Beethoven symphony."

and sparkle of a triangle but none allow the struck notes to soar out over the orchestral texture like the Black Beauty. There is no mistaking the size of this recording venue. What was even more amazing to hear was when the percussionist deadens the ringing of the triangle on the "Tame Bear" movement on Elgar's *The Wand of Youth* EMI (EMI ESD 7068).

ENTERING THE WINNER'S CIRCLE

By now you've probably guessed that this is one special transducer. The Black Beauty is one of those rare products that set new standards for analog playback. Is it the ultimate cartridge? It is certainly a candidate. After listening to the new 45 rpm remastering of Atulfo Argenta conducting Manuel de Falla's *Three Cornered Hat*, I can only say for now that I'm betting on this thoroughbred to bring home the roses.

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