

# THE CUTTING EDGE



## DaVinciAudio Labs Master's Reference Virtu Tonearm

Master Reference, Indeed

Jonathan Valin

To cut immediately to the chase, when used with the AAS Gabriel/DaVinciAudio Labs Mk II turntable and the Goldfinger Statement cartridge, the DaVinci Master's Reference Virtu tonearm is the most realistic-sounding pivoted tonearm I've yet heard in my system. It seems to combine most (not all) of the robust, lifelike tone color, three-dimensionality, powerful bass, and wall-to-wall soundstaging of a great straight-line tracker like the Walker Black Diamond III with the exceptional low-level resolution, transient speed, and much (not all) of the precise image focus of an exemplary pivoted 'arm like the Kuzma 4Point, making for a set of sonic virtues that is unique in my experience—and uniquely appealing.

To be honest, this is not at all what I expected from the Virtu.

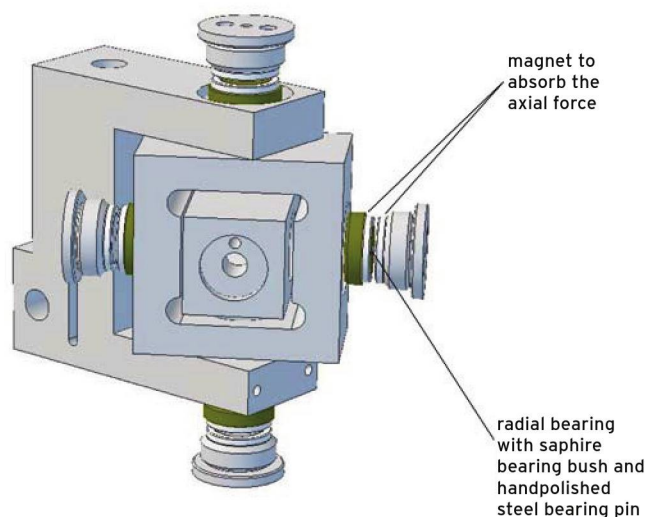
Indeed, when I first heard that DaVinciAudio Labs' Peter Brem planned to replace his terrific *Grandezza* tonearm with a “more fully adjustable” design I was skeptical. Part of the reason for the *Grandezza*'s sonic excellence was the very fact that it *wasn't* highly adjustable. A simple, elegant, beautifully made, twelve-inch tube of tonewood and various alloys mounted in a gimbaled ruby bearing, the *Grandezza* came with none of the extra doo-dads that add functionality, but also add complexity and resonant mass to other great tonearms. All you could adjust on the *Grandezza* was tracking force and vertical tracking angle (and the latter adjustment, which involved decoupling and then raising or lowering the entire arm pillar by hand, was too crude and cumbersome to encourage record-by-record VTA adjustments).

## THE CUTTING EDGE - DaVinciAudio Labs Master's Reference Virtu Tonearm

The Master's Reference Virtu, on the other hand, not only allows for very precise, repeatable VTA/SRA adjustments (by means of a scaled, decoupled, spring-loaded mechanism built into the arm mount), it also permits azimuth adjustment, armtube exchange to better match the tonearm to the weight and compliance of specific cartridges (this fillip won't be available until next year), and easy cartridge installation via a detachable SME-type headshell. The only adjustment not available on the Virtu is anti-skating, but since many, if not most, of today's tonearm manufacturers recommend that anti-skating be set at zero, Peter Brem saw no reason to include a device that no one would use and the effects of which he himself dislikes.

However, the means to greater and more precise adjustability (and thereby fuller and more exact setup of cartridges) is not the only thing that has changed on the Master's Reference Virtu. Indeed, it would be hard to point to something on this tonearm that hasn't been significantly improved.

First and foremost, there is the bearing. As noted, the Grandezza used a very-high-end gimbaled ruby bearing; though also gimbaled, the Virtu uses something substantially different. At a glance, the bearing's gimbal structure looks like it is being held together by four screws—one on the top of the gimbal, one on its bottom, and one on either side. However, each screw is actually securing a unique assembly of parts, comprising a radial bearing—consisting of a sapphire bushing and a hand-polished steel bearing pin—and a magnetic axial bearing (see the illustration).



DaVinci claims that this composite bearing is very nearly frictionless (you can see just how frictionless by watching the astonishing video at <http://www.youtube.com/watch?v=JUsSAzeBvCo>) and virtually chatter-free. As a consequence, the 'arm it guides and supports is said to be considerably less susceptible to resonances than the Grandezza was and to thus remain more perfectly seated in the groove, greatly improving tracking and tracing.

Beyond the magical way it sounds in playback, there is actually some objective evidence that the Virtu *is* every bit as

improved as DaVinci claims it is. For instance, after properly setting azimuth (a necessity regardless of what certain other writers on this magazine may claim), my friend and analog guru *par excellence* Andre Jennings measured the crosstalk (via Dr. Feickert's indispensable Adjust+ Pro software) of the Clearaudio

### SPECS & PRICING

Type: 12" tonearm

Price: \$14,795

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#### JV'S REFERENCE SYSTEM

Loudspeakers: Raidho C  
4.1, Raidho C1.1, Estelon X  
Diamond, MartinLogan CLX,  
Magnepan 1.7, 3.7, 20.7  
Linestage preamps: Constel-  
lation Virgo, Audio Research  
Reference 5SE, Technical Brain  
TBC-Zero EX  
Phonostage preamps: Audio  
Research Corporation Refer-  
ence Phono 2SE, Technical

Brain TEQ-Zero EX/TMC-Zero

Power amplifiers: Constella-  
tion Centaur, Audio Research  
Reference 250, Lamm ML2.2,  
Soulution 501, Technical Brain  
TBP-Zero EX

Analog source: Walker Audio  
Proscenium Black Diamond  
Mk III record player, AMG Viella  
12, Da Vinci AAS Gabriel Mk II  
turntable with DaVinci Mas-  
ter's Reference Virtu tonearm,  
Acoustic Signature Ascona  
with Kuzma 4P tonearm

Phono cartridges: Clearaudio  
Goldfinger Statement, Ortofon  
MC A90, Ortofon MC Anna,  
Benz LP S-MR,

Digital source: Berkeley Alpha  
DAC 2

Cable and interconnect: Syner-  
gistic Research Galileo, Crystal  
Cable Absolute Dream

Power Cords: Synergistic  
Research Tesla, Shunyata King  
Cobra, Crystal Cable Absolute  
Dream

Power Conditioner: Synergis-  
tics Research Galileo, Technical  
Brain

Accessories: Synergistic ART  
system, Shakti Hallographs  
(6), A/V Room Services  
Metu panels and traps, ASC  
Tube Traps, Critical Mass  
MAXXUM equipment and amp  
stands, Symposium Isis and  
Ultra equipment platforms,  
Symposium Rollerblocks and  
Fat Padz, Walker Prologue  
Reference equipment and amp  
stands, Walker Valid Points  
and Resonance Control discs,  
Clearaudio Double Matrix SE  
record cleaner, HiFi-Tuning  
silver/gold fuses



Goldfinger Statement in the Master's Reference Virtu tonearm at 35.5dB L-to-R and 35.4dB R-to-L. These are high among the best and most consistent results he's recorded from any cartridge in any tonearm (and he's tested virtually every one of both on the market). Just as impressive were the Virtu/Goldfinger's THD numbers, which, at 0.21% in the left channel and 0.29% in the right one, are in fact *the* lowest (by a considerable margin) Andre has measured. Of course, sterling numbers don't mean a thing unless they can be validated by ear. Since in this case—as you will soon read—they most certainly can be, it may well be that Peter has come up with the better mousetrap he set out to build.


The bearing isn't the only structural part that is different and improved in the Virtu. While still twelve inches in length, the arm wand, a straight tube on the Grandezza, is now bent slightly inward at the headshell end (presumably to improve tracking), and the tube itself is built of ebony, steel, and aluminum rather than of tonewood and alloys like that of the Grandezza.

As I've noted in previous reviews, a twelve-inch tonearm has some advantages over a shorter 'arm in the reduction of overall tracking error and in optimizing the two points in its arc of travel where that smaller amount of error is ostensibly zeroed out. (Ideally, the second of those two spots should fall within the inner grooves and not in the run-out grooves or label area.) However, a longer tonearm is also inherently more massive than a shorter one; hence, it is harder to optimize its resonance behavior.

While it is difficult to say how much or how little the redesigned arm wand is adding to the presentation given the excellence of the new bearing, were it misbehaving at its resonance frequency or were its resonance frequency outside the 9Hz to 11Hz ideal, one would likely hear this as mistracking or mistracing on heavily modulated passages. Instead, the tracking and tracing of the Virtu tonearm with the Clearaudio Goldfinger Statement mounted on it is, as I noted at the start of this review, as close to (though still not equal to) that of a superior straight-line-tracking tonearm as I've heard a pivoted 'arm come (provided, of course, that the cartridge is precisely aligned, azimuth precisely adjusted for crosstalk, and rake angle precisely set).

What do lower tracking error and, in particular, superior tracing buy you? In a word, more. More inner detail (music-, performance-, and, yes, engineering/mastering-related), superior dynamic range, cleaner transient response, greater density of tone color, better image focus, more precise definition of pitches (and, hence, of the notes being played), a wider, deeper, taller soundstage (on those records with wide, deep, tall 'stages), a remarkable sense of the ambience of the hall in which the recording was made, and, above all else, greater realism. When a cartridge/tonearm is utterly unruffled by the modulations engraved in the groovewalls, when it reproduces colors, intensities, durations, and pitches with the same ease and discernment at all frequencies and all levels on all music, an analog front end can, with great recordings, pull off something





## THE CUTTING EDGE - DaVinciAudio Labs Master's Reference Virtu Tonearm

like the “disappearing act” of a great loudspeaker. The sense of listening to electromechanical parts trying unsuccessfully to mimic the organic whole of real instruments in a real space largely disappears, and you’re left, instead, with the music, the music-makers, the hall or studio in which they were recorded, and the successes and failures of the recording/mastering engineers’ miking and mixing.

In our next issue my long-time friend and colleague Paul Seydor will argue (vis-à-vis the Ortofon, Benz, and Clearaudio cartridges he reviews) that “more” is not necessarily better—or more realistic—in analog playback. I take his point. In so far as more detail emphasizes the miking and the mixing rather than the music and the performance, it is heightening our awareness of the artifice of (and in many instances the failures of) the recording process. However, complaining that the recovery of greater detail often makes records sound more like records is a little like complaining that high-resolution lenses and cameras make photographs look more like photographs. The way I see it, artifice inevitably plays some part in the listening experience on tape, LP, or digital, and in trying to disguise (by reducing the amount of information your system is recovering and playing back) the fact that even a great recording is also, inevitably, *a recording* heard by microphones and recorded to tape or hard drive and not the actual thing heard by ears and recorded to memory is to throw the musical baby out with the electromechanical bathwater. Not only are you deliberately sacrificing low-level (and

high-level) information that is critical to creating the illusion of listening to something like the real thing, you are also chucking out the very cues that allow you to distinguish between a great recording and a less-than-great one.

My disagreement with Paul (and others) on this subject is ultimately a matter of our different listening bias. I am a “transparency to sources” listener; he is not. That said, I want to make it clear that I prefer to hear “more” not because I’m a “detail freak,” but because *in the absence of concomitant losses of density of tone color and other musical details* hearing more from recordings I know well, in and of itself, invariably brings me closer to the absolute sound. Yes, I also hear more artifice on poorly recorded LPs; but (once again) as long as the “more” that I hear from the superior tracing of an LP is not being purchased at the price of “less” of something else that I value equally, I have yet to hear it reduce musical realism. On the contrary, in every single instance the effect of higher resolution has been just the opposite.

Take a bravura piece like the American composer George Crumb’s Four Nocturnes for Violin and Piano (on the Mainstream/Time label). This eerie, floating night music—which passes like shreds of cloud drifting across the face of the moon—requires the violinist, Paul Zukofsky, to make extraordinary leaps in register, from eerie flute-like passages in harmonics to “raps on the most sonorous part of the violin with the fingertips” and “rapid rolls of all fingers and thumb [on the violin body].” (These are the composer’s instructions to the performer.)

## DaVinciAudio Labs Master's Reference Virtu Tonearm - THE CUTTING EDGE



The entire second movement is played pizzicato on the violin; the piano, which sounds as if has been “prepared” is sometimes played this way, too, with the pianist, Gilbert Kalish, plucking the re-tuned strings by key and hand, like a demented harpsichordist. Many of these plucks and pizzicatos (on both violin and piano) are connected to each other by glissandos, creating a swooping, sharply punctuated soundworld reminiscent of the close of Bartók's Third String Quartet.

Add to this mélange all sorts of bouncing bow effects and hammered chords on the piano (often in its bottom octaves), and you get a dynamic/harmonic/temporal challenge that severely tests the tracking and tracing of any tonearm/cartridge.

I'm tempted to say that the Virtu/Goldfinger sails through this challenge, but that isn't close to a good or complete or accurate enough description. What this wonderful 'arm/cartridge combination does do is reproduce the subtlest tone colors and dynamics—such as those wispy, fleeting harmonics in the violin's topmost register or the seabird swoop of the glissandos—and the most dramatic tone colors and dynamics—such as the tight, quick, incredibly realistic snap of violin strings against the violin's neck in the second movement pizzicatos, or the sharp resonant rap of Zukofsky's fingers on the violin body, or the pounding bass-range chords of Kalish's piano (the harmonics of which linger like smoke from doused candles)—with exactly the same gorgeous density of tone color, astonishingly realistic dynamic range and scale, utterly lifelike durations (on starting transients

no other combination of 'arm and cartridge I've yet heard, save for the Walker Black Diamond Mk IV/Goldfinger, comes close to the concise, explosive, fool-ya-realistic snap of those violin pizzicatos), and exceptional definition of pitches (particularly in the hard-to-parse bottom octaves). It is a cliché, but the Virtu/Goldfinger simply doesn't break a sweat on any modulation. It never sounds as if it is losing its way—resonating every-so-slightly in the groove and, thereby, every-so-slightly blurring detail or slackening its grip on pitch, color, intensity, and duration. I don't mean by this to suggest that the Virtu/Goldfinger sounds “over-controlled” or “over-damped.” It does not—ever. It just holds its line through those jagged vinyl canyons like the best racecar on the toughest road course imaginable. It also, and this is the payoff, sounds incredibly realistic (on the best recordings).

I've talked about realism and hi-fi systems in my Raidho C 1.1 review, about how we are invariably surprised and delighted when a voice or an instrument or a group of instruments momentarily fools us into thinking we are in the presence of the real thing. Why the surprise and delight? Because we don't really expect a contraption like a hi-fi system to make great recorded music sound “real”; we expect it to make great recorded music sound like a great recording.

Fed by the Virtu/Goldfinger and Constellation or Technical Brain electronics, the tiny Raidhos were capable of more than this (and their big brothers, the C 4.1s, are capable of more still). On the right LPs, such as the Crumb piece on Mainstream/

## DaVinciAudio Labs Master's Reference Virtu Tonearm - THE CUTTING EDGE



Time I just discussed, a system like this can not only fool you for a moment; it can literally make your jaw drop for an entire cut. Even with the best hi-fi and the best discs, we simply don't expect this *duration* of realism—don't expect the illusion to last beyond the brief (usually transient-related) moment that the rabbit is pulled from the hat.

Well...all I can say is that with the Virtu/Goldfinger (and the right speakers and electronics) be prepared to radically readjust your expectations when it comes to the absolute sound of the finest recordings. Whether it's the Crumb piece or Kyrstof Penderecki's eerie Cello Concerto on Muza, which, in addition to having very very deep-reaching (and with the Virtu exceedingly well-defined) bass, also combines harmonics, pizzicatos, col legnos, spiccatos, and other tricky-to-reproduce-realistically effects, or the thrilling majesty of Britten's Prelude and Fugue for String Orchestra on Argo, or Poulenc's deft, daffy Concerto for Two Pianos on Decca (which also has exceptionally deep, powerful bass and a wall-busting soundstage) or—to radically change the tune—Lou Reed's youthful voice and Steve Hunter's wailing guitar on *Rock 'n' Roll Animal* [RCA], the Virtu/Goldfinger is capable of bringing instruments to eye-rubbing, mind-boggling life. No, the Virtu/Goldfinger can't do this trick with all the instruments on these recordings, and it can't do it all the time. But it does it more often and more successfully than any other (non-linear-tracking) analog front end I've reviewed.

Before summing up, I'd like to note the Virtu's way with ambience retrieval. In Issue 229, I commented on the Crystal Cable Absolute Dream's lifelike ability to reproduce not just those things that we can see on a stage but those that we can't, such as ambient air made vibrant by the energy of music and music-makers. The Dreams are, indeed, great at preserving this, but, let's face it, unless the front end retrieves such extraordinarily low-level information in the first place no amount of fidelity further down the line will compensate for what has been lost. In other words, Absolute Dream's utterly neutral, completely uncolored, highly realistic way of reproducing ambience is every bit as much (if not more) the Virtu/Goldfinger's way of retrieving ambience.

So what are the downsides of the DaVinciAudio Labs Virtu? First, there is its staggering price. At \$14,795, it is clearly not intended as an upgrade to a Rega RB301. You'll need money-to-burn to buy this little item and a near-religious devotion to analog. (And don't forget, you'll also need an AAS Gabriel/DaVinci 'table, which will put you out another \$76k, and something like a \$15k Goldfinger Statement or \$8.5k Ortofon MC Anna.) However, this is one case where the money you've spent won't leave you scratching your head. You'll hear the difference the Virtu makes in sheer realism immediately.

Second, there is the absence of anti-skate compensation. For nearly \$15k, you might think that Peter would've thrown this in like slaw or fries to accompany the burger. That he hasn't means he truly doesn't believe that it is necessary or desirable. You, on the other hand, may feel differently. At around \$5k, a tonearm like the Kuzma 4Point gives you anti-skating, and even though I always set its anti-skate to zero or nearly zero the Kuzma arguably has slightly more focus at centerstage than the Virtu (though not at stage right or left).

Third, apropos of the Kuzma, there is the overall balance of the Virtu. The new DaVinci 'arm is inherently warmer and more beautiful-sounding than something like the 4Point, which tends a little to the cooler and more clinical side. This isn't just a matter of the Goldfinger Statement being a warmer and more voluptuous cartridge than the Ortofon I have mounted on the Kuzma. Though the Virtu is by no means a dark or otherwise-colored-sounding tonearm, it is inherently richer (and arguably more natural) in timbre than the Kuzma 4P, which, of course, doesn't keep the Virtu from also being the highest-resolution, most dynamic, deepest-reaching pivoted tonearm I've heard.

As I started out by saying, mounted with a Goldfinger Statement and paired with the AAS Gabriel/DaVinci Mk II turntable, the DaVinciAudio Labs' Virtu is the most realistic pivoted tonearm I've reviewed. Naturally, it earns my highest recommendation and is, at least for as long as I'm allowed to keep it (I couldn't possibly afford to buy it), my new reference (alongside the great and greatly improved Walker Proscenium Black Diamond Mk IV). **tas**