

AMG VIELLA 12 TURNTABLE AND TONEARM

A STATEMENT PRODUCT FOR THE REST OF US

JONATHAN VALIN

PHOTOGRAPHY BY JOEL SALCIDO

istening to the superbly recorded track "Gone" from Melody Gardot's first album Worrisome Heart [UJC] on Werner Roeschlau's new Analog Manufaktur Germany (AMG) Viella 12 (or V12) record player, I had one of those goosebump-raising moments that occasionally make this tired old hobby of ours seem brand-new again. In this case it wasn't just because Gardot sounded "real," although she did (and for a good deal more than a moment); it was also because she was sounding real via a turntable/tonearm that (cartridge aside) was virtually the least expensive item in my system. Thanks to the Raidho C 1.1s I've gotten used to this sort of thing—well, more used to it—at least when I play highly select LPs back via the \$90k Walker Black Diamond Mk III, the \$100k+ AAS Gabriel/Da Vinci 'table newly equipped with Da Vinci's superb Master's Reference Virtu 'arm, and (the "bargain" of the bunch) the \$38k Acoustic Signature Ascona 'table with Kuzma 4Point 'arm that I reviewed in our last issue. But via a \$16.5k record player? That has seldom happened before (and over the years I've reviewed several such products). Yet... this time it did.

Oh, the bass wasn't as rich, full-toned, and bloomy as it is through the Walker or Da Vinci (although, frankly, the Ortofon cartridge is probably part of the reason for this, as bass-range fullness and warmth are not its foremost virtues), and maybe the stage wasn't quite as wall-to-wall wide or deep as it is through those *über* 'tables (although there's a bit of ditto in this, as well), and maybe tonal balance was a little on the leaner, "top-down" side overall (triple ditto), but when it comes to that elusive combination of image focus and extremely low-level timbral, textural, dynamic, and performance-related details—coupled, of course, with the absence of hi-fi artifacts like grain, color casts, and resonances—that makes a well-recorded singer like Gardot sound "really there" as opposed to "hi-fi there," the AMG V12 simply has the magic touch.

As I said in my review of the (much more expensive) Walker Black Diamond Mk III in this issue, audio is a game of inches, and the difference between a presentation that doesn't quite "fool ya" (even though it may sound great in many hi-fi ways) and one that does (at least on the right cuts) is a step function. Some systems just can't negotiate that itty-bitty distance between the lip of the next step and its landing. All other things being equal, it takes a great source component (and a truly great source) to give a stereo that final boost up. Judging by what I've heard, the Viella 12 has to be considered a great source component.

How this came to pass is anything but a lucky accident. From the age of 14 AMG's chief cook-and-bottlewasher Werner Roeschlau was trained as a machinist. He subsequently studied mechanical and aeronautical engineering and went to work for

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the huge German electronics firm Siemens before becoming an airline pilot for Lufthansa—a life experience that comes into play, oddly enough, in the design of his tonearm (see below). Werner indulged his lifelong passion for machining, engineering, and audio by opening his own machine shop north of Munich (for which, see my sidebar), where he uses almost 1 millioneuros worth of CNC lathes, mills, and saws he's purchased to manufacture turntable parts and sub-assemblies (and other precision items) for well-regarded European hi-fi firms. Since retiring from commercial aviation in 2005, it is only relatively recently that he has turned his talents (and his CNC machines) to the production of his own line of 'tables and 'arms, the AMG V12 being his first effort. (There will be others.)

Like the Acoustic Signature Ascona, the V12 uses a beautifully crafted (though not as massive) plinth, CNC-milled from a billet of water-cut aircraft-grade aluminum and fitted with three retractable aluminum feet tipped with steel-copper spikes. Three hex-head bolts and a bubble-level built into the top of the plinth make the precise leveling of these feet a snap. (The plinth can also be had with optional hardwood trim.)

The Viella 12's 12.5"-wide, twenty-four-pound platter is also CNC machined in-house from aircraft aluminum, with a weighted rim for an enhanced flywheel effect. To provide locomotion for this platter, a precision-made rubber belt runs from the pulley/flywheel of the V12's two-pulse, brushless 24V DC motor (housed on the plinth but acoustically decoupled via five constrained-layer metal/rubber mounts) to an aluminum subplatter fitted with a hardened 16mm axle-bearing—CNC-machined and lapped in-house. The axle is itself constrained in the bearing well by two sealed, dynamically-lubricated radial bearings and statically-lubricated axial bearings.

The outboard power-supply for the turntable motor attaches to the motor housing via a supplied umbilical. Speed is selected via three lighted capacitive buttons built into the plinth—one for 33.3 rpm, one for 45, and one for 78. (The selected button changes color and intensity to indicate that it is the one that is "on.") The Viella 12 has perhaps the most elegant speed-adjustment procedure of any turntable I've used. You simply hold down whichever speed-button you want to adjust for five or six seconds, which puts that speed into "memory mode." You then press one or the other of the remaining two buttons to gradually increase (topmost of the two) or decrease (bottommost) rotational speed as your strobe or software indicates. It is a simple and fool-proof system of extremely high accuracy of .1%. Every turntable should be this easy to work with.

As elegant and beautifully made as his turntable is, it is Roeschlau's dual-pivot tonearm that is the star attraction. Even though it doesn't look like much at first glance—a twelve-inchlong, perfectly straight, pencil-thin, black-anodized, aircraft-aluminum arm-tube with a shiny, two-piece, decoupled stainless-steel counterweight at its bearing end and a black headshell at the cartridge one—this nondescript item involves a truly ingenious bit of engineering that, as far as I know, has never been implemented before in a tonearm.

As I said earlier, Roeschlau is an aeronautical engineer who spent several decades piloting international flights for Lufthansa. He not only flew jet airplanes for a living; he also flew gliders and helicopters. And it is the latter that gave him the idea for his unique toneram bearing. Apparently, 'copters use thick "spring-steel wires" to keep their rotors precisely aligned in the rotorheads. Thinking that a bearing that was good enough to keep high-precision, high-torque mechanisms like helicopter rotors precisely aligned and constrained was good enough to

Set-Up Notes

The AMG V12 is a breeze to set up and adjust. All you need to have on hand is a laptop and Dr. Feickert's incomparable Adjust+ software, if you want to set rotational speed and azimuth just so.

The actual turntable and tonearm parts fit together with the Germanic precision with which they were designed and made. The armboard attaches to the plinth via Allen head screws, with just enough play built into the engraved mount to allow for precise adjustment of spindle-to-pivot distance via a protractor. The V12 'arm fits into the bayonet-like opening in the armboard like a hand into a well-made glove. All of the tonearm adjustments—overhang, VTA, VTF, antiskating, azimuth—are easily implemented via a supplied set of different-sized hex screwdrivers (and lucidly explained in the excellent instruction manual).

What was the rub with the Oracle Delphi turntable—attaching the drive-belt to the platter/subplatter/axle, while lowering the whole assembly into the axle-bearing well and somehow at the same time hooking the "free end" of

the belt around the turntable-motor's flywheel—is here a non-issue, thanks to a two-pronged wooden tool supplied with the 'table. With the V12, you hook the belt around the circumference of the subplatter and slip its "free end" over the two prongs of the wooden tool (the other end of the tool fits around the spindle atop the platter). The prongs hold the belt tense at just the right offset so that, once you settle the platter/bearing assembly into the bearing well, all you have to do is slip the belt off the prongs with a single finger and it snaps precisely into place around the motor's grooved flywheel. Like everything else about the AMG V12, it is a thoughtfully and elegantly engineered solution.

The V12 comes with an excellent reflex-style clamp that screws down onto the 'table's decoupled, two-piece, threaded spindle. Three different AMG 1.5m DIN-to-RCA tonearm cables are available: a very good one for \$300, a better one for \$600, and the best, which I used and recommend if you can afford it, for \$1,500. A mat is "built into" the platter—no additional mat is necessary, judging by the sonics. JV



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keep a high-precision, low-torque tonearm in place, Roeschlau adapted the idea to fit his V12. Using two 0.5mm-thick spring-steel wires he created a helicopter-like vertical tonearm bearing. It may sound a bit wild (and it is certainly unconventional), but judging by the sonic results his spring-steel bearing works exceptionally well, not only constraining vertical movement but also allowing fine azimuth adjustment while simultaneously eliminating bearing-chatter (as there are no bearings to "chatter"). The V12's horizontal bearing comprises hardened tool-steel axles "precision-ground to a backlash-free fit with needle roller-bearings." Once again, judging by the incredibly high resolution and extraordinarily precise, lifelike imaging that this 'arm is capable of (which, in my experience, bespeaks superb tracking and tracing), it too works like a charm.

Not only is Roeschlau's 'arm a veritable sonic vacuum cleaner when it comes to the recovery of low-level detail, it is also highly and easily adjustable. An acoustically-decoupled precision locking system built into the bearing housing allows you to change VTA during play, while acoustically-decoupled magnets also built into the bearing housing provide adjustable (and defeatable) magnetic anti-skating.

Even though I'd heard the AMG V12 sound great at several different trade shows, in rooms that were either nominated for or won my Best of Show awards, I didn't honestly expect it to compete with my far-more-expensive references. And, to be fair, in certain hi-fi respects it doesn't, though the degree to which it falls short of the these much pricier 'tables and 'arms depends a bit on the cartridge being used. I've mentioned the V12's tauter, somewhat leaner and less bloomy deep bass, its slightly (and I mean oh-so-slightly) less expansive soundstaging, and its cooler, "top-down" tonal balance, though the Ortofon A90, as noted, is certainly playing a highly significant role in all three of these areas, as well as in the V12's strengths. (With the fuller, richer, less "analytical" Goldfinger Statement, for example, the AMG is considerably fuller and richer in bass and balance, bespeaking the V12's exceptional transparency to sources, though it is still not, let it be noted, quite as full and rich in bass or balance as the Walker, Da Vinci, or Acoustic Signature with the same cartridges.) Nonetheless, the little that the Viella 12 may be lacking here and there is overwhelmingly made up for by its core strength. Let's face it: When it comes to high fidelity, realism (on those records that are capable of sounding realistic) is the whole she-bang. Everything else doesn't matter-or doesn't matter nearly as much. And, as noted, this contraption sounds real.

Lest you think the V12 is a one-trick pony, its fool-you-realistic presentation isn't restricted to female vocalists. Yeah, it's thrillingly "alive" sounding on Gisela May's contralto on Eterna/DG's marvelous recording of Brecht and Weill's mordantly amusing Seven Deadly Sins. But it is just as alive with the four male singers who make up May's "family" (the bass sings her mother!) or with the clarinet, dobro, and cymbals on the aforementioned Gardot disc, or with Ran Blake's silvery piano and David Fabris' dark, slashing guitars on NoBusiness' piquant Third Stream LP Vilnius Noir, or with the beautiful LSO strings, winds, and brasses on RCA's famous recording Venice (though no stereo system I've heard can reproduce the scale and scope of a symphony orchestra). From the bass right through the ceiling, this record

player/cartridge is capable of extraordinary low-level resolution, natural timbre, lightning transients, and (as noted) the kind of 3-D imaging that makes instrument and voices—wherever they are located on the stage—"pop" into lifelike presence, replete with the realism-enhancing performance-and-engineering details that tell you, for example, exactly how a singer in shepherding his (or her) breath, what parts of his chest, throat, mouth, and nose he is using to invest the words of a lyric with expressive color and narrative power, and where he is standing vis-à-vis the microphones and other singers/instruments on stage as he performs.

SPECS & PRICING

Type: Unsuspended, beltdriven turntable with integral tonearm, outboard motor controller, and screw-down clamp

Dimensions: 20 5/8" x 8" x 12 7/16"

Weight: 56.4 lbs.
Price: \$16,500 including 12"
tonearm and wood skirt;
\$17,000 for black lacquered
skirt \$15,000 with no skirt;
AMG 1.5m DIN to RCA
tonearm cables: Basic for
\$300, Special for \$600, or

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musicalsurroundings.com

JV'S REFERENCE SYSTEM Loudspeakers: Raidho C1.1, MartinLogan CLX, Magnepan 1.7, Magnepan 3.7, Magnepan 20.7, Estelon X Diamond Linestage preamps:

Linestage preamps:
Constellation Virgo, Audio
Research Reference 5 SE
Phonostage preamps: Audio
Research Corporation
Reference Phono 2 SE
Power amplifiers: Constellation
Centaur, Audio Research
Reference 250, Lamm ML2.2
Analog source: Walker Audio

Proscenium Black Diamond

Mk III record player, AMG Viella 12, Da Vinci AAS Gabriel Mk II turntable with DaVinci Master's Reference Virtu tonearm, Acoustic Signature Ascona with Kuzma 4P tonearm

Phono cartridges: Clearaudio Goldfinger Statement, Ortofon MC A90, Benz LP S-MR, Digital source: Mac Mini/ Wavelength Audio Crimson USB DAC, Berkeley Alpha DAC 2

Cable and interconnect:
Synergistic Research Galileo,
Crystal Cable Absolute Dream
Power Cords: Synergistic
Research, Shunyata King
Cobra, Crystal Cable Absolute
Dream

Power Conditioner:

Syngergistics Research Tesla III

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









As was and is the case with the Raidho C 1.1, the secret to the Viella 12's success is not just the more it is supplying in the way of information, but also the less it is adding while doing so. Like the great Raidho, through most of the audio range the V12 has the kind of grainless transparency that allows you not just to see into but to almost see through the images of instruments and vocalists-to the back of the stage and the other instruments and vocalists behind and around them. There is no opacity—no transparency-obscuring color cast or scrimlike texture—blocking your view of the music-makers. So many audio components subtly insert themselves between you and the soundfield, adding just enough of their own electro-mechanical emphases to let you know they're there and thereby reduce the transparency of the presentation (when the recording being presented is transparent). The V12, for the most part, does not. It has, through almost its entire range, the peerless, unobstructed, see-through purity of the best sources, analog and digital.

In my previous experience, only the finest turntables and tonearms have been consistently able to do what the AMG V12 does (at least with the Ortofon MC A90 or Goldfinger Statement in its ingenious tonearm)—and, let's face it, you have to be filthy-rich to afford a Walker or Da Vinci, and still pretty damn well-heeled to opt for an Ascona. Obviously, this feat of engineering smarts and manufacturing prowess earns my warmest recommendation (and sincere applause). Like the \$17k Raidho C 1.1 (or the, alas, discontinued \$4k Ortofon MC A90), the Analog Manufaktur Germany Viella 12 is a relative rarity—a truly first-rate (and truly original) audio component that, while by no means cheap, is still within the financial reach of folks who aren't made out of money. The V12 may not give you everything that a Walker, Da Vinci, or Acoustic Signature gives you, but what it does supply on select recordings—the extended sense that you are in the actual presence of real performers in a real space—is more than enough to justify its price and this rave. tas



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Werner Roeschlau and the AMG Factory









Photo 1 (far left), CNC machine milling V12 plinth. Photo 2 (left), finished V12 plinth. Photo 3 (right), computerized lathe. Photo 4 (far right), lathe fitted with bits to mill bearings.

Werner Roeschlau's Analog Manufaktur Germany occupies a three-story row-house in a little village near the Danube River about an hour north of Munich. As I noted in the text, Roeschlau has been manufacturing precision parts at this facility for some of the world's best-known turntables for over a decade. During the last couple of years he has begun to put his own novel ideas about turntable and tonearm design into production, with the AMG Viella 12 being his debut.

Like so many of the great German and Swiss analog engineers I've met, Roeschlau is a most interesting and cultured man with a fascinating backstory (for which, see my review). As I've already noted, he has been involved in milling-machine work since he was a teenager, while the fact that he later became an engineer and an airline pilot makes an interesting parallel with Ernst Benz, founder of the cartridge-manufacturing firm Benz Micro, who was/is also a pilot. A man of unbounded imagination and exceptionally varied skills, Roeschlau has already invented one of the most ingenious tonearm bearings around. It would not surprise me in the least to see him execute other novel ideas in the near-future. In a world of me-toos, he is the genuine article—an original thinker with the manufacturing experience and engineering background to flawlessly execute his own designs.

When Robert Harley, Jim Hannon, and I visited Werner's Bavarian factory, we got to see a V12 being made. The first stop was a CNC milling machine (Photo 1), which turns a block of water-cut aluminum into a finished plinth in about an hour and fifteen minutes (Photo 2). The CNC milling machine is on the first floor of the AMG factory. Opposite it on the same floor is a 384,000 German mark computerized lathe (Photo 3) that is used to turn the V12's platter, tonearm, bearing housing, counterweights, etc., depending on the bits attached (Photo 4). (Everything but the V12's turntable belt is made inhouse—to the highest standards.)

A computerized saw is used to cut bar-metal to size, depending on the part to be milled, and on the shop's second floor, a microscope (Photo 5) is used to QC the small parts used in Werner's 'table and 'arm, such as the "helicopter-

like" spring-steel bearing here pictured. Tonearm and motor assembly is done on the third floor.

It is worth noting that the V12's level of craftsmanship generally costs a great deal more money than what Roeschlau is asking (and in fact does cost a great deal more money—on the order of \$25,000 to \$40,000—in the record-player parts and sub-assemblies that AMG fabricates for other concerns). It is also worth reiterating that many companies don't precision-machine in house (because of the huge investment required to purchase CNC machines—and the skills and experience necessary to operate them). The constituent parts of many of the most popular and highly regarded 'tables currently on the market are not machined in-house but fabricated by suppliers and rebranded and assembled by the company selling the 'table (although those parts are, it should also be noted, often designed in-house and custom-built to order).

Just to show that Roeschlau is still thinking well ahead of the curve. My last photo (Photo 6) shows a prototype of an experimental, self-lubricating, hydrodynamic turntable-bearing, which floats the platter on a microscopically thin layer of oil (like the Walker Black Diamond Mk III floats its platter on a microscopically thin layer of air). This nifty device—yet another example of fresh thinking—will probably make its appearance in a subsequent (and far more expensive) AMG turntable. JV

Photo 5 (bottom left), microscope for QC.
Photo 6 (bottom right), hydrodynamic turntable bearing.





MANUFACTURER Comments

Critical Mass Systems MAXXUM Equipment Rack

Justin and I want to thank Jonathan Valin for allowing us the opportunity to become part of his highly evolved and ever-changing stereo system and for sharing his experiences with our equipment in *The Absolute Sound*. Thank you, Jon.

By precisely selecting and sequencing materials in the rack architecture and doing the same in the filter (damping) systems, the size, distance, and detail of images can be enhanced. MAXXUM is our best effort to put you in the critic's section of the concert hall—about 8 to 12 rows back seated at the height of the conductor, the best seat in the house!

Joseph and Justin Lavrencik
Critical Mass Systems

Walker Proscenium Black Diamond Mk III

We are pleased to receive this review from Jonathan Valin, who has repeatedly tested and compared our turntable against the established names in and newcomers to the turntable market. Time after time, the Proscenium turntable retains its place at the top of the heap and as the reference table for Jonathan's system for nearly eight years.

As the review notes, the Proscenium turntable continues to evolve. Our never-ending quest for jaw-dropping vinyl playback led to the new tri-air suspension configuration that keeps the air-bearing feet filled so there is no waiting for them to re-fill. And, while we do not feel that shutting off the pump manually is an onerous task, we will offer remote pump shutdown in the future

Proscenium turntable owners will continue to be able to upgrade their tables to the latest specs so that their initial investment is rewarded by allowing them to keep current as the state-of-the-art audio playback advances. Thank you to Jonathan Valin, Andre Jennings, and TAS for allowing us to share our quest with everyone who loves audio and great music.

Lloyd Walker

AMG Viella 12 Record Player

Thanks to Jonathan Valin and TAS. When I met Werner Roeschlau at his factory in July 2011, I knew I found somebody very special. I challenged Werner to make a "statement product for the rest of us" and he rose to the challenge, improving his design while making it more cost-effective to manufacture.

The AMG platter has an inset PVC mat, bonded and precisely machined to appear as a single entity. The AMG subplatter is actually an aluminum flywheel integral to the platter bearing. The platter sits on this sub-platter/bearing assembly



and the decoupled spindle fits into the top of the platter. There is no physical contact between spindle and platter bearing, thus isolating the record and stylus from any unwanted vibration.

Werner produces his DC sinewave-driven motor completely in-house. The large pulley is connected to a heavy flywheel and the motor bearing is a miniature replica of his platter bearing. The armboard is machined from solid aluminum and is calibrated with a scale engraved on both armboard and plinth, allowing precise spindle-to-pivot distance. This also provides quick and accurate change of tonearms. It is a privilege to be associated with Werner and AMG.

Garth Leerer Musical Surroundings

Graham Phantom Supreme Tonearm

In Paul Seydor's comprehensive and complimentary review of the Phantom Supreme (and which we, like any hard-working manufacturer, appreciate having our work acknowledged by such a keen eye and ear) there is little to add that would not be hyperbole.

I hope this review brings home one point I have been trying to promote for years: there is no reason to assume that a tonearm and turntable from the same manufacturer will be the only good combination. The best example of tonearm design will, indeed, provide superior performance on any of the good, well-designed turntables, no matter whose name is on it. Thank you for listening objectively, and for a fine review!

Bob Graham

Siltech Explorer Cable

Many thanks for Neil's fine and thorough review of our new entry-level Siltech Explorer Series interconnects and loudspeaker cables. As Neil mentions, cable design and fabrication using real science and state-of-the-art manufacturing is finally maturing away from dubious claims, poor quality materials, and shabby construction. At Siltech we're proud to be using analysis tools such as Tektronix 70GHz TDR, Rhodes & Schwartz UPL FFT analyzer, Bell 50kHz magnetic analyzer—gear normally associated with NASA's development labs rather than the audio industry. We have always been about cutting-edge engineering.

Our goal is to create signal transfer paths that don't alter content, a target harder to hit in lower price points, which is why we're happy Neil experienced the lack of overall colorations he describes. Purchase value and sonic performance have been the hallmarks of our company since we first opened our doors so many years ago.

John Bevier & the Siltech and Audio Plus Services Team

