

Vertere Acoustics DG-1 Dynamic Groove record player with MM cartridge

by Chris Martens

Vertere Acoustics is a British high-end audio manufacturer whose founder and CEO is none other than the famous audio designer/entrepreneur Touraj Moghaddam, who also co-founded the firm Roksan. Moghaddam is among other things a veteran analogue audio design expert who helped create Roksan's well-loved Xerxes and Radius turntables and also Roksan's NIMA and SARA tonearms.

After departing from Roksan and founding Vertere, one of Moghaddam's first acts was to develop and launch the spectacularly good (but also stratospherically expensive) Vertere RG-1 Reference Groove turntable and Reference Tonearm (hint: the arm alone costs more than both of my household vehicles combined!). Over time, however, Moghaddam eventually developed two (somewhat) less expensive analogue systems: SG-1 Super Groove turntable with SG-1 MkII tonearm and the even less costly MG-1 Magic Groove turntable, also with the SG-1 MkII arm. Moghaddam prefers calling all three of his analogue systems by an old-school yet elegantly descriptive moniker: record players.

From a performance standpoint, Vertere's first three record players were winners, which comes as no surprise given that the SG-1 and MG-1 both shared design DNA with the cost-no-object RG-1. The catch, if there was one, involved the fact that even the least costly of these record players—namely the Magic Groove system—was still quite expensive and not by any stretch of the imagination an 'entry level' rig. Wisely, Moghaddam recognised Vertere had no product to meet the needs of serious music lovers who are either budget constrained or simply want an easy-to-set-up and almost 'plug-n-play' record player—one that would sound really good, but with a minimum of fuss, bother and tweaking. With precisely such prospective customers in mind Vertere set about creating the DG-1 Dynamic Groove turntable and tonearm, which was released late last year and is the subject of this review.

Vertere proudly states, 'the DG-1 Dynamic Groove Record Player is our most affordable design; the easiest to set up and use, and also contains some of our most innovative thinking.' They aren't kidding. In its home country the DG-1 sells for £2,750 (thousands and thousands of pounds less than the next model up in the range), while in my home country the DG-1 sells for \$3,895 (not exactly 'entry level', but also not wallet-crushingly expensive either). In order to achieve these price points while preserving Vertere's sonic values, the Dynamic Groove represents an artful mixture of pre-existing and new-to-Vertere technical design ideas.

The DG-1 turntable uses a cleverly cost-reduced reiteration of design concepts drawn from Vertere's upscale models. Thus, the design starts with a futuristic-looking plinth made of three layers of cast acrylic: black on top, clear in the middle and black again on the bottom. The plinth serves as the mounting point for the unit's illuminated push-button-type on/off and speed control switch, the turntable's user-selectable mood lighting (which causes the clear layer of the plinth to glow with soft white light when the DG-1 is plugged in), and the four-point silicon rubber isolation elements that go between the main plinth and a separate sub-plinth that carries the platter/main bearing and tonearm. Last but not least, the plinth provides integrated hinge attachment points for the DG-1's included non-resonant acrylic dust cover.

Beneath the plinth is a rectangular, tray-like steel chassis that houses the DG-1's 24-pole synchronous motor, drive circuit, tone arm signal output jacks and ground connections, and three adjustable feet that support the turntable as a whole. Interestingly, the 24-pole precision synchronous motor is said to be the same as the one used for the RG-1, SG-1, and MG-1, but one that is controlled by an all-new circuit 'derived from that developed for the flagship RG-1 Reference Motor Drive.' In the RG-1, the motor controller gets its own outboard chassis separate from the turntable proper, but for the DG-1, says Vertere, 'the advanced electrics have been



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designed down to a single microprocessor PCB, which is both addressable for precision setting during manufacture and programmable for future upgrades.’ In practice this means the motor and its control circuit are essentially a matched set that is tuned during manufacture for an absolute minimum of noise. Within the DG-1’s steel chassis, copper/stainless steel shielding protects the motor control PCB from unwanted interference.

The DG-1 uses a main bearing featuring a polished stainless steel spindle that rides in a brass housing on a ‘super precision tungsten carbide ball, avoiding the need for complex regimes of lubrication...’ Both the spindle and bearing housing are said to achieve concentricity, roundness and bore tolerances of < 5 Microns. Mounted atop the spindle flange is a comparatively thin but precision-machined aluminium platter plate whose topside features a PETG bonded record interface mat and whose underside features a cork/Neoprene/nitrile bonded resonance control disc. The platter is driven at its rim by a ‘bespoke silicon rubber drive belt for smoothness and durability’.

Some of the most innovative thinking in the Dynamic Groove record player has gone into its unorthodox and distinctive looking Groove Runner tonearm. The overwhelming majority of tonearms on the market (Vertere’s included) use either straight or tapered tubular arm shafts, but Moghaddam

recognised that a tubular arm done properly would be cost-prohibitive for use in the DG-1. Taking a clean-sheet-of-paper approach, Moghaddam created a flat profile, non-resonant, three-layer arm that, in place of traditional signal wires, uses a one-piece ‘flexible PCB sandwiched into the arm itself to carry signal from the cartridge to the output terminals.’ Like some of Moghaddam’s other arm designs the Groove Runner features a primary cartridge counterweight at the rear of the arm and a smaller forward-mounted weight for fine-tuning tracking force adjustments.

One of the main innovations found in the Groove Runner is its highly unconventional bearing system, which consist of Nylon threads. Yes, you read that correctly; there are no metal-on-metal bearings of any kind in the DG-1 arm. Instead, the arm is suspended and rotates in the horizontal plane around a single Nylon thread, while two Nylon threads support an arm carrier plate that allows the arm to move precisely in the vertical plane. What’s so clever about this solution is that Moghaddam’s ‘thread bearings’ are light, noise-free (because there is no ‘play’ in the bearings whatsoever), friction-free and inherently self-damping. Further, the thread bearing system eliminates the need for a separate anti-skating mechanism because anti-skating force can be dialled-in by applying more or less twist to the single thread from which the arm is suspended (Vertere provides a top-mounted adjustment knob ▶



▶ for this purpose). To adjust the stylus rake angle (which some call VTA) users can loosen a grub screw and then raise or lower the bearing housing as desired.

My original intent with this review was to try the DG-1 with Vertere's recently released moving coil cartridge, but apparently some other *Hi-Fi+* team member already had 'dibs' on it. Consequently, Vertere suggested that I try its Dynamic Groove 'starter bundle', which consists of the DG-1 turntable and arm factory-fitted with a seemingly too-modest Audio-Technica AT VM-520 moving magnet cartridge (this review was scheduled and completed before the launch of Vertere's own Magnito moving magnet cartridge). Without wishing to seem an audio snob, I confess I came into this review with misgivings about the A-T cartridge. My thought: Can any £100 phono cartridge possibly deliver true Vertere-grade sound quality? However, I was flat-out wrong, because as it turns out the DG-1 can and does extract astonishingly fine results from the A-T VM-520. Other equipment used for my listening tests included Vertere's Phono-1 MkII phono preamplifier fitted out with a DG-1-style front panel, my reference Rega Osiris integrated amplifier (a largely undiscovered high-end giant-killer), and a very revealing pair of YG Acoustics Vantage loudspeakers.

From the outset I was struck by how quiet the DG-1 is. With many turntables in this price class I am usually aware of subtle, low-level 'groove rush' noises, but these were virtually non-existent with the Dynamic Groove. Next, I was impressed by the relaxed openness and airiness of the DG-1/VM-520

combo, which went a long way toward conveying soundstage width and depth. A perfect example would be almost any track on The Paul Desmond Quartet's *Live* [A&M Horizon]. *Live* is every bit as impressive as Proprius' famous *Jazz at the Pawnshop*, but with even more impressive musicianship, and in a good system *Live* can convey a vivid and believable impression of hearing the quartet perform at the Bourbon Street jazz club in Toronto. And that is precisely the result the DG-1/A-T combo achieved, and with grace and style to spare.

Next, I turned to an old favourite, Charles Wourinen's *Ringin' Changes. For Percussion Ensemble* [The New Jersey Percussion Ensemble, Nonesuch], which is not only a striking and deeply moving percussion piece, but also a stringent test for analogue system tracking capabilities, transient capabilities and large and small-scale dynamics. Once again, the DG-1/A-T combo showed unexpected grace, energy, and finesse with a performance whose timbral purity, transient agility and expressive but not overwrought dynamics would have put many more costly turntable/cartridge packages to shame. In short, the Dynamic Groove forcefully reminded me just how good moving magnet cartridges can sound—and without breaking the bank.

Another thrilling challenge came in the form of 'Calliope' from Al Di Meola's *Scenario* [Columbia], which features a dream team of fusion-orientated musicians: Di Meola on electric guitar and guitar synth, Bill Bruford on Simmons electric drums, Tony Levin on Chapman stick bass and Jan Hammer on Fairlight CMI Organ. 'Calliope' opens with a slow, ▶

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- eerie and evocative statement and then later transitions to a fast-paced and wildly syncopated movement where Di Meola and Hammer’s solos let it all hang out while Bruford and Levin create a powerful, intricate and very precisely timed propulsive groove. My past experience has been that some systems featuring moving coil cartridges occasionally lose composure on this very high-energy track. However, the DG-1/A-T combo traced the grooves cleanly, exhibiting plenty of energy yet none of the subtle ‘raggedness’ some cartridges show as the track’s dynamic and transient demands become increasingly intense.

A different kind of test was posed by an older recording of Brahms’ *Ein deutsches Requiem* [Nordeutscher Rundfunk Symphony Orchestra and Chorus, Nonesuch], where the second movement (‘Denn alles Fleisch es ist wie Gras’) has long been a favourite musical treasure. Honestly, vocal intelligibility is not always all that it could be on the movement and in this recording, yet the DG-1 system digs a very creditable job of minimising most (though not all) of the vocal congestion that can arise on this track. As a result, choral voices sounded clearer, simpler and more direct so that I found it easier to connect on an emotional level with Brahms’ reflection on our inevitable mortality.

Finally, I was floored with the DG-1 system’s handling of ‘Chant’ from Nils Frahm’s *Solo* [Erased Tapes], which was performed on the giant, 3.7m tall, Klavins MS370 upright piano located in Tübingen, Germany. I have savoured digital versions of this track through some extremely fine DACs and I frankly did not expect the DG-1/A-T rig would be able to compete. But once again, I was wrong. The Dynamic Groove system not only captured the extraordinary bass depth and presence of the Klavins piano, but also did a more revealing and better-than-digital job with the piano’s upper register harmonics. The analogue system also excelled in terms of conveying a sense of the size and acoustics of the recording venue. This is quite impressive.

The DG-1 exhibited no operational glitches at all during my tests, save for a minor ‘stiction’ problem with the tonearm’s cueing mechanism (the cueing platform would not always fully lower the arm/cartridge to the record surface). Apart from this, the DG-1 was simple and easy to use. The Dynamic Groove is a suave and sophisticated sonic overachiever; it

TECHNICAL SPECIFICATIONS

Type: Belt-driven turntable with flat profile thread-bearing equipped tonearm

Motor: 24-pole synchronous motor with microprocessor-driven speed and noise control circuit

Platter: Precision machined aluminium with PETG bonded record mat and with cork/neoprene underside damping layer

Belt: Bespoke silicone rubber

Bearing: Polished stainless steel shaft, precision-machined brass bearing housing, and tungsten carbide ball. Bearing system requires no lubrication

Plinth: Three-layer cast acrylic structure with adjustable feet and four-point silicone rubber isolation for a sub-plinth that carries the main bearing and tonearm

Tonearm: Three-layer flat profile tonearm with Nylon thread bearing/anti-skate system. Tonearm embeds a gold-plated flexible PCB, which serves in place of conventional tonearm signal wires and that provides one-piece, end-to-end connections from the cartridge to the turntable output jacks

Interconnects: 1m pair of D-Fi interconnect cables

Turntable Dimensions (HxWxD):

130mm × 469mm × 384mm

Tonearm Dimensions: Effective length, 240mm

Turntable Weight: 8kg

Tonearm Weight: 280g

Price: £2,750 (turntable and arm); \$3,895 US

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makes a perfect introduction (or reintroduction) to the world of analogue playback. While even higher analogue performance is certainly possible (and is precisely what the upscale Vertere models provide), the Dynamic Groove starter system offers such well balanced performance for an accessible price that it may prove all the analogue system many listeners will need or want. +