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PLAY TIME!

Exclusive Quad's slick Artera CD/amp



Vinyl spotlight

DS Audio's amazing
LED phono cartridge

Sonus faber

Chameleon T speakers

Budget Esoterica

Denon DCD-50/PMA-50
Compact player/DAC
& integrated amp

Leema Libra

High-res USB DAC/preamp



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Jazz on film

From Bessie Smith to
Glenn Miller and 'Bird', p28

Rotel flagships

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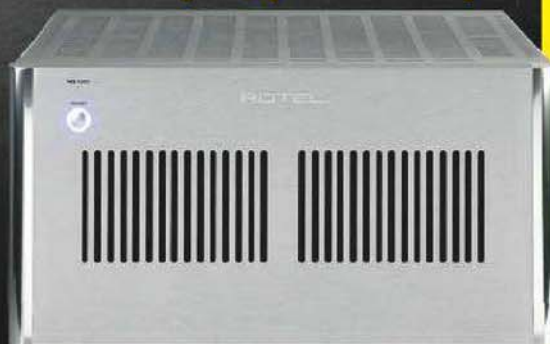


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Quad Artera Play/Stereo

An all-new range from Quad, in the middle of its catalogue, kicks off with the Artera Play CD player/DAC/preamp and Stereo power amplifier. Quad for the 21st century?
 Review: **Ken Kessler** Lab: **Paul Miller**

It's one of those made-up words, but I had to ask Quad, 'What does "Artera" mean?' Explaining the new Artera Play combination CD player/DAC/preamp (£1400), and matching 140W/ch stereo power amp (£1500), I was told, 'We see these as the lifeblood of musical entertainment for the modern generation of audio enthusiasts. The Quad Vena [HFN Jan '15], from "Venous", was the first to appear. The Artera, from "Arterial", naturally follows on!'

Er, OK. Such sanguineous references are a break from musical terms or alphanumeric combinations, and it is as easy to pronounce, in nearly every language, as 'Kodak', so I'll leave the nomenclature. Suffice it to say, Artera will grow into a range to fit between the Elite [HFN Jan '11] and Platinum series [HFN Jan '13] in terms of price, while adding a new look, circuitry and facilities.

AN EXPANDING SERIES

Peter Comeau, Director of Acoustic Design at IAG, Quad's parent company, says that, 'Over the next 12 months, Artera will expand to offer a variety of components to suit the different ways in which people organise their music playback systems. Additional functionality such as wireless streaming via Wi-Fi and Bluetooth will be integrated into a flexible range of system solutions.' [See boxout, p39.]

He points out that Artera Play is the first Quad component to use the 32-bit ESS Sabre 9018 8-channel DAC chip, although IAG sister-brand Audiolab has employed it since 2010, in the 8200CD. It is thus with the benefit of five years' experience that Quad has based its latest CD player/DAC on the same technology. Of prime importance in ensuring that this unit will make the most of modern digital sources, the asynchronous USB input supports high-resolution media up to 384kHz/32-bit.

RIGHT: The latest iteration of Quad's famous current-dumping amplifier topology is used here in dual-mono form, with only the massive PSU transformer shared between channels

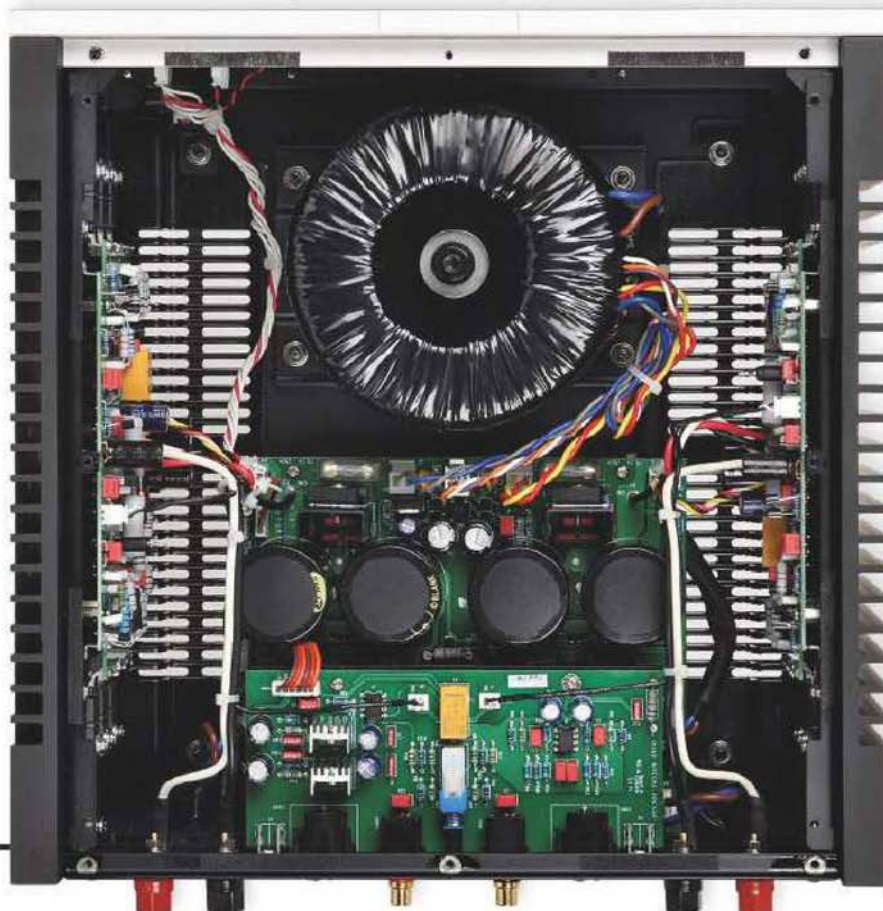
Curiously, though, the Play – while hosting a more than ample number of digital inputs, including two coaxial, two optical and USB-A – is not equipped with that most useful, if not-quite-hi-fi, means of ingress: Bluetooth. I know, it's typically sub-fi, and Comeau said that some future Artera models will have it, but it sure is handy for casual listening. Also, Bluetooth encourages usage from other family members, eg, offspring wedded to their phones. Other omissions (and I admit that the first of these is strictly a personal hunger) are SACD playback and a headphone socket.

Analogue is addressed through two pairs of line inputs. Ensuring flexibility, outputs include digital via both coax and Toslink

optical, and single-ended analogue through RCAs or balanced with XLRs. As the Stereo also accepts balanced or unbalanced signals, I used the latter. In addition to the necessary RCA and XLR inputs, the Stereo's back panel also contains multi-way speaker binding posts, a trigger socket and the main on/off rocker.

All that remains on the back of the Play to describe beyond the inputs, outputs and AC power is the 'send' trigger output to switch on the Stereo. Power on, out of standby, is accomplished with either the front panel on/off switches on both components, or with the remote. When switched off, a small red light below each fascia comes on as a reminder that they are in standby.

'I abandoned the touchscreen and gave in to reason: using the remote'





LEFT: The Artera's all-new look refers to the minimalism of Quad's classics, especially the Play (top), which – thanks to its round display/touchscreen – recalls the look of every Quad preamp that had a rotary volume on its left

Aah, the remote! This is your salvation. That round fascia display is also a touchscreen, a multi-function source selector and volume control – though it is not that precise in use. I abandoned practising various methods of tapping or grazing my fingers against it, holding it down for accessing volume mode, etc, and gave in to reason: the IR remote.

Aside from CD eject, the best way to operate the Play is with this handheld. Because the remote performs all other functions besides the usual source select, volume control and CD play/pause/stop/skip, it is worth reading the manual. It will show you how to program tracks, and to

operate seemingly hidden functions, like auto-shut-off times (when the unit receives no signal for a set period) and the truly useful, user-adjustable digital filters. These are covered in PM's Lab Report [p41], and I would add that the filters do give you four options for voicing the Play when used with CD or digital inputs. Because they're available with only a couple of taps on the remote, you can do your A/B comparisons from the listening position. They are not subtle in their effectiveness, and are as marked as the benefits of AudioQuest's JitterBug USB 'magic bullet' [HFN Oct '15].

In most basic terms, the Play's analogue preamp section is a balanced,

Class A design. The DAC processes the aforementioned (up to) 384kHz/32-bit material as well as DSD at 64/128/256 files through the USB input. It also features – and this is becoming a legacy feature for some, one must admit – a new slot-loading CD mechanism. This buffers data from the disc before feeding it asynchronously to the DAC.

The Artera Play measures a tidy 320x320x105mm, a very similar footprint to the 53mm taller Stereo. Both have separate glass panels that fit into the top recesses and heatsinks along their sides, so they're handsome, modern-looking and oozing luxury. You even get a choice of black or silver front panels. One is advised not to stack them, but I suspect that one could without concern: never did the Stereo – which uses the latest iteration of Quad's Current Dumping technology [see KH's boxout, left] – run warm.

FIDDLING WITH THE FILTERS

In addition to Yter balanced cables I chose Crystal speaker cables to feed MartinLogan Motion 15 bookshelf speakers and Summit hybrid ESL floorstanders. In both cases, power was never an issue, so let's dispense with that element right away: the Stereo is a suitably powerful unit that withstood much hammering without ever shutting itself off. This really is the 'Great Grandson of 405 II' and 'Grandson of 909', and a

CURRENT DUMPING

Class B power amplifier output stages are far more efficient than the Class A alternative, and a lot cheaper too, because they don't require such large heatsinks. But Class B has a problem: it isn't possible to stitch together the two halves of the output stage such that the 'join' is perfectly linear. So Class B output stages always generate 'crossover distortion', although with careful design and the application of negative feedback this can be reduced to very low levels. Down the years there have been many attempts to elaborate Class B to eliminate crossover distortion, the most famous being Quad's Current Dumping circuit, first used in 1975 in the 405. Key elements are a pair of unbiased high-current output devices (the current dumpers), a high-quality low-power Class A amplifier, and a bridge circuit that allows them both to contribute to the output. The dumpers provide a 'first approximation' output signal which is corrected by the small Class A amplifier, providing – it is claimed – the performance of Class A without its poor efficiency. KH



ABOVE: A slot-loading CD mech, plus S/PDIF and DSD-compatible USB ins, feed a balanced analogue stage based around the ESS Sabre ES9018 8-channel DAC, used here in dual-differential mode

source of useable power even for the persistent headbanger.

For digital sources, I used the coaxial output of the Pro-Ject CD Box S Transport, the optical digital output of the Astell&Kern AK120 player and USB output from an iMac. I fed my Day Sequerra FM tuner and the line outputs of the Cambridge Azur 751BD universal player into the analogue inputs, both of which sounded neutral, flat and open, but I suspect the Play will spend most of its time working in digital mode.

In my sessions, the best digitally-supplied sounds came from the on-board CD player, followed by the Astell&Kern into optical, with music downloads of varying high-resolution.

The Play's display also tells you, besides source and volume, the resolution of the digital signal, eg, 44.1kHz for CDs. The following observations will attempt to describe the overall nature of Artera, because there are traits common to all modes.

When I fiddled with the digital filters the one I used most frequently was 'Smooth', followed by 'Wide', but choices changed so often that I stopped trying to ascribe consistent qualities to them. For instance, SHM-CDs from Capitol required a different filter setting from the CD layers on MoFi SACDs, which were different

from AudioFidelity SACDs. Blu-specs were another story, as were Analogue Productions SACDs' CD layers – so things were really confusing when comparing their Beach Boys tracks to those on the SHM-CD 'Best Of'.

A MOMENT OF EPIPHANY

But filtering was a matter of taste, rather than a definitive pointer to purity or accuracy. I harp on this only because it's a feature you probably would not expect to use frequently, yet in practice you'll probably fall in love with the options it provides.

My moment of epiphany came from a standard CD, America's *Hideaway* from the box set, *The Warner Bros Years 1971-1977* [Rhino 081227954291]. 'She's

A Liar' is exactly the kind of West Coast-y sound I love, sort of James Gang Lite. The way the guitar salvo kicked in, with fuzz-guitar textures of such consistency, behind those world-class harmonies... OK, it's a George Martin production, and I know the innate Beatles-ness of it struck a chord, reinforced by the strings sound on the next track, 'Letter'. So, full disclosure of my bias for all things reminiscent of the Fab Four.

I had to check the filter setting because the sweetness of the upper registers was almost valve-like. And yet at no point

'The sweetness of the upper registers was almost valve-like'

PETER COMEAU

Director of Acoustic Design at IAG, Peter Comeau, told *HFN* that, radical look aside, 'The traditional spirit of Quad has always been to cater for the latest developments in music storage and its playback but always to make sure it meets the Quad standards inherent in "the closest approach to the original sound." Thus the Artera series of components includes full digital and analogue playback capabilities with the resolution and accuracy to replay all current and future high-resolution audio sources.

'However, today's consumers are often bewildered and confused by the multiplicity of inputs and controls on modern hi-fi equipment. At Quad, we have never believed that you have to be a "hi-fi geek" to be able to play music at the highest performance level.' Comeau cites the simplified user interface, which leaves an uncluttered appearance that's 'welcoming to all users as well as looking beautiful.'

Credit for the stunning looks goes to Rodney Mead, the man responsible for styling legendary Quad products including the 405, ESL63 and 34 up to the 77 series. 'Over the course of three months,' says Comeau, 'we brainstormed concepts with him and the result was a series of working sketches which were refined into 3D virtual products by our Huntingdon-based industrial design team led by David McNeill. From that point on the industrial design was refined in a series of prototypes to make sure that form fitted function, with the end result that you see today.'

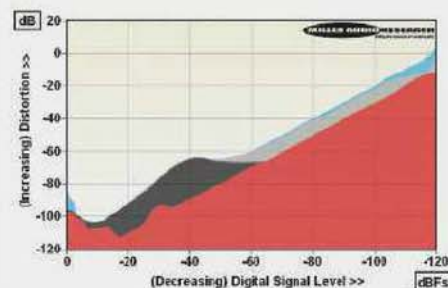


LAB REPORT

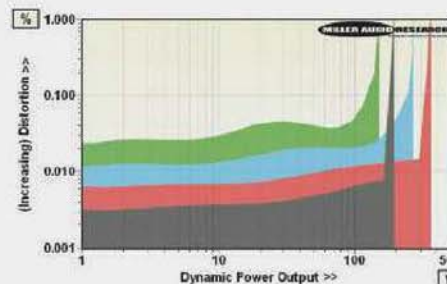
QUAD ARTERA PLAY/STEREO

Quad's Artera Play offers a substantial 4.95V maximum output via its balanced XLRs with a wide 114.5dB A-wtd S/N ratio. Its 'cleanest' performance is via USB, incurring a mere 14psec jitter against 565psec (CD) and 65psec (S/PDIF). Otherwise, the 'sound' of the Play is heavily influenced by your choice between its four digital filters, the default 'Fast' setting trading little or no pre/post echoes (minimal time domain distortion) for poor stopband rejection and significant intermodulation distortion in the frequency domain at 0dBfs. The response also rolls away to -0.8dB/10kHz and -3.3dB/20kHz (or -3.9dB/45kHz and -5.5dB/90kHz with 96kHz/192kHz audio). The 'Narrow' filter is especially aggressive with 96kHz audio – hitting -7.9dB/20kHz and thus not recommended. THD is highest at HF with the Fast filter but this also depends on sample rate (0.35%/20kHz at 48kHz; 0.017%/20kHz at 96kHz and 0.004%/20kHz at 192kHz).

The partnering Artera Stereo power amp easily meets its 140W/8ohm spec. at 165W/265W into 8/4ohm with 195W, 368W, 265W and 150W under dynamic conditions into 8, 4, 2 and 1ohm loads; the output into the lowest loads is current-limited to 12.3A [see Graph 2]. The amp offers a wide 89dB A-wtd S/N ratio (re. 0dBW) and gently increasing distortion from 0.0009% at 1W to 0.0014%/10W and 0.003% at its rated 140W (all at 1kHz/8ohm). THD increases at HF to 0.025%/20kHz and 0.06%/40kHz (re. 0dBW) while the response – flat to a subsonic 1Hz – rolls away to -0.35dB/20kHz and -5.9dB/100kHz, all from a low-ish 0.015-0.053ohm source impedance. Readers may view comprehensive QC Suite test reports for Quad's Artera Play and Stereo by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM



ABOVE: THD vs. digital level (via S/PDIF, Smooth filter, red; Fast, black and CD (1kHz, grey; 20kHz, blue)



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Current limit is 12.3A

HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	165W / 265W
Dynamic power (<1% THD, 8/4/2/1ohm)	195W / 368W / 265W / 150W
Output imp. (20Hz–20kHz, Play/Stereo)	116ohm / 0.014–0.053ohm
Freq. resp. (20Hz–20kHz, Play/Stereo)	+0.0 to -2.71dB/+0.03 to -0.35dB
A-wtd S/N ratio (Play/Stereo)	114.5dB (0dBfs) / 89.0dB (0dBW)
Distortion (20Hz–20kHz, Play/Stereo)	0.001–0.0037% / 0.0003–0.025%
Digital jitter (CD / S/PDIF / USB)	565psec / 65psec / 14psec
Power consumption (Play/Stereo)	8W/488W (36W idle)
Dimensions (WHD, Play/Stereo)	320x105x320 / 320x158x338mm



ABOVE: The Artera Play [top unit] has two optical and two S/PDIF coaxial plus USB digital ins, a pair of analogue ins plus single-ended RCA and balanced XLR outputs. The Stereo power amp [lower unit] has balanced and unbalanced inputs with single sets of 4mm speaker posts. Both units seen here with their detachable top plates

was there a softening of the brush sounds or attack of cymbals.

Solo piano at the beginning of 'Today's The Day' was palpably more 'analogue' in its natural chiming, the bass intro to 'Letter' had a roundness and form that delivered in-the-room presence, allied to convincing decay. I played the CDs through the outboard CD Box S transport to see if it also applied to the digital inputs and not just the on-board disc player: it did.

SPINE-TINGLING PRESENCE

With The Beatles' *Revolver* [Capitol SHM-CD UICY-76972], the studio sounds at the beginning of 'Taxman' – including the 'cough' – had a spine-tingling, visceral presence. The layers of sound loops in 'Tomorrow Never Knows' were easily separated. The strings on 'Eleanor Rigby', the liquid feeling of 'I'm Only Sleeping' – this Artera combo encourages deep concentration on the sound, as well as appeasing the casual listener. Lush, gorgeous – choose whatever adjectives you like: the Artera duet respects the music.

Etta James' intensity shone through with the magnificent remastering of 'I'd Rather Go Blind' [Tell Mama – MCA Chess 088 112518-2]. The sense of space with the background vocalists and brass section enjoying their own 'layers' was massive, the openness

encouraging the focusing on each instrument or voice in turn. And the overall 'picture' was consistently authentic in its positioning, depth, width and height to exploit the imaging of both the wee Motion 15s and the dipole Summits.

As you can tell, I'm impressed with this pair. I don't want this to seem a backhanded compliment, but the Artera range has further appeal: to those who are not hair-shirt audiophiles. It is a delight to use, despite my reservations about the touchscreen – after all, most people use remotes when available, unless they sit next to their preamps.

The sound is authoritative and blissfully neutral without being hygienically clean or aggravatingly 'digital-ish'. For practicality, it is a joy to use and an open door to multiple program sources. ☺

HI-FI NEWS VERDICT

Nothing about the Artera range should surprise Quadophiles, as both the Elite and Vena, in their own ways, foreshadowed it. If asked to sum this up with 'high concept' brevity, I would say 'the 99 Series CD player and 405 II power amp meet the 2010s': modern aesthetics, full digital integration and user friendliness to address the 2015 status quo. Artera is a superb effort with a price that's easy to justify. Bravo!

Sound Quality: 88%

