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S700
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APRIL 2014

"It's not just the components
that make your system sound
good, it's how they interact."

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Flax works

The secret's in the ingredients says **David Price**, who finds the Aria 926 floorstanding loudspeaker a most appetising listen

Why is it that some steaks taste like sun-dried cardboard, while others are dripping with flavour and have the texture of warm butter? It's not that difficult a question to answer, is it? The finest food needs ingredients of the best quality, prepared in a skillful way that doesn't hide the natural goodness. And so it goes for loudspeakers too – no one ever made a great one with sub-par drive units and cabinets that weren't fit for purpose. But just like steak, even a good speaker can be ruined if it isn't cooked properly, or is badly served. Of course, if it doesn't use the right raw materials in the first place, it can never be right.

That's why Focal's announcement that it is using a different cone material in its new Aria 926 speaker is more significant than you might first think. This French company has spent much time looking into drive unit cone materials over the years, and has used markedly different formulations to many of its rivals as far back as the eighties. The material that a cone is made from is critical, as it's the contact point between the speaker and the air it is there to move. It affects the transient response of the driver (the ability to accelerate quickly to catch the leading edge of a note), its rigidity (the cone needs to behave like a piston, moving in and out without flex) and the resonance or lack thereof (the cone needs to be well damped so that it doesn't colour the sound).

Focal has traditionally used Polyglass for its lower-end designs and W sandwich cones for its premium Electra and Utopia ranges. First launched back in 1985, the former comprised a cellulose pulp cone for good damping, together with a layer of glass microspheres in order to increase the rigidity. But the 900 Aria showcases a new recipe – the French speaker specialist has cooked up a sandwich of glass fibre, a special type of textile fibre called flax and glass fibre again. Flax is said to have been around since the fourth century

BC, and used by the Egyptians as protective cloth for mummies, no less. As luck would have it, France is the main cultivator in Europe of flax fibre – principally in Flanders, Picardy, Normandy and the Pas-de-Calais region – and it is thought to be among the very best in the world. What the use of flax brings to the party is a way to damp the glass fibre; the latter material is very rigid and light (hence its popular use in sports cars), but it isn't the most acoustically inert. Flax is, however, so the two should make a happy combination.

The Aria 926 is more than just some bass/mid drivers, however. It also sports new tweeters with phase-optimised crossovers, plus a more classic and timeless look for the cabinets compared with the Chorus 800 series it replaces. Specifically, the new TNF high-frequency unit uses an aluminium/magnesium alloy inverted dome for low mass and high stiffness supported on Poron suspension, which is said to aid linearity and fitted with a front plate waveguide for decent dispersion. The bass and

midrange drivers get special injected Zamak baskets and Klippel optimised motor systems. This three-way speaker runs the tweeter from a claimed 28kHz down to 2.4kHz, where it crosses over to the 165mm midrange driver, then at 290Hz two 165mm woofers start to come into play.

Compared with the old 800 series, the new 926's cabinets seem to have evolved just as much as its drive units. With a leatherette (PVC) finished front, real walnut veneered sides (gloss black is an option) and a glass top, this new loudspeaker presents itself well visually – as well as feeling rather classier than previous mid-price Focals. Although not as conservative as a Spondor A6R, for example, they're a lot more grown up and

The new cone material gives a smoother and more subtle sound

less obviously 'styled' than before. The finish is very good, if not quite superlative, meaning these boxes will look classy wherever they are.

Inside the shell is a combination of 18mm and 24mm high-density fibreboard, with non-parallel sides and careful bracing. The cabs are loaded by a single bottom-mounted reflex port, and this works correctly when the supplied aluminium plinths are fitted. Inside, the

FOCAL ARIA 926
FLOORSTANDING LOUDSPEAKER **£1,798** **IN-DEPTH**

DETAILS

PRODUCT
Focal Aria 926

ORIGIN
France

TYPE
Floorstanding loudspeaker

WEIGHT
25kg

DIMENSIONS (WxHxD)
294 x 1,035 x 371mm

FEATURES

- 1x 25mm Au/Mg TNF inverted dome tweeter
- 1x 165mm and 2x 165mm flax mid and bass drivers
- Quoted power handling: 40-250W
- Quoted sensitivity: 91.5dB/1W/1m
- Quoted frequency response: 45Hz-28kHz (+/- 3dB)

DISTRIBUTOR
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IN-DEPTH FOCAL ARIA 926
 FLOORSTANDING LOUDSPEAKER £1,798

midrange and treble sections have their own sealed enclosures with non-parallel walls to minimise internal standing waves. Round the back, single-wired binding posts are to be found. Overall, the new Focal presents itself as a thoroughly modern and sophisticated speaker, and also proves easy to drive with amplifiers of fairly modest power – including tube designs.

Sound quality

The Focal family sound is generally very fast, sharp and engaging; these speakers go loud without compression and punch hard on transients, making them lively listeners. And the new 926 doesn't lose any of these good things, but it seems to do everything with a little more elan than you'd have got from the earlier 800 series. There's a sense that the new cone material gives a smoother and more subtle sound, yet it is no less detailed – indeed it's quite the reverse. I find the 926 to be a fine advertisement for its maker's new driver technology, sounding as it does 'all of a piece' and really rather natural. Certainly it's never screechy – as some rivals can

be – or dull. Instead, it strikes a considered balance that preserves all those key characteristics we know and love from Focal, yet seems to do things in a more mature and even-handed way than the company's past offerings at this price point.

The result is a big, expansive and open-sounding box that's smooth and detailed from bottom to top. Being a three-way, it feels like it has a lot in reserve, so when crunching crescendos arrive – such as that powerful electric guitar noodling by Bill Nelson in Be Bop Deluxe's *Modern Music* – there's no sense of the speaker sounding breathless and lapsing into stridency. At the same time, those flax cones invest the midband with a transparent feel, meaning it is better able to show the differences between recording studios than many other similarly priced boxes. The Be Bop Deluxe disc sounds a little bright and bracing, whereas Isaac Hayes' Stax-recorded *Shaft* is a whole lot warmer and more sumptuous – it's good to know the speakers aren't adding too large a sonic footprint.

HOW IT COMPARES
 Traditionally, Monitor Audio's £2,300 GX200 is the one to beat, and has a very lavish finish that's more impressive than the Focal. It's also a three-way design, but doesn't have the power and scale of the Focal. In return you get its lovely ribbon tweeter, which has a beautifully finely etched high frequency performance. It's also very transparent and detailed. The Spondor A6R (£2,495) gives a bigger sound than the MA that's very smooth and beguiling and natural, even more so than the Focal in some respects. The 926 has the edge on physical scale, but the Spondor has a wonderfully intricate and involving quality that keeps the 926 honest. As ever go and try all three before you buy, if you get the chance.

Tonally the 926 is a real gentleman, then. *Cafe Regio's*, which is a beautifully rich analogue track, is every bit as warm as it should be, yet shuffles along nicely without the sense that the speaker is losing the rhythmic plot. Although a little softer sounding, those flax cones are just as fast at capturing the attack transients of a snare drum rim shot or the dull pounding of the bass drum, and the result is an extremely enjoyable yet most unfatiguing listen. In absolute terms, there's just a little bit of warmth in the upper bass, which is always an issue with larger floorstanders that aren't hewn from granite. It's far from an unpleasant effect and indeed careful room placement minimises it further, but you'll hear tighter bass guitar sounds from chunkier speakers further up the Focal range.

You might think that with a slightly sweeter midband sound, the metal tweeter will stick out a little more than with previous Focal boxes, but it proves enjoyably smooth. Age of Love's eponymous single is an exquisite slice of trancey dance music, from the genre's halcyon days back in the nineties, and the 926s jump in with aplomb. At high volumes, this speaker is quite superb; distortion is so low that you can push it right up to the point that your flares start flapping, the Aria slamming out vast

The finish is very good and the Arias will look classy wherever they are

tracks of full, tuneful bass without the merest hint of complaint. Across the mid, the 926 is excellent – fast and poised and wonderfully engaging – and treble glistens away with a lovely crisp yet smooth hi-hat sound.

The fact that all four drive units are matched up to one another so well makes for a very convincing stereo soundstage. Whether it is the epic rock of Genesis' *Los Endos* or the beautiful acoustic *Aerial Boundaries* by Michael Hedges, the Focals cope superbly for a sub-£2,000 speaker system in the tricky job of reproducing the spatiality of the original recording. Of course, higher-end designs – and particularly panel speakers like Quad's 2805 – do better, but the 926 is still very convincing. It seems to push forward beyond the plane of the speakers quite easily, but doesn't ram the music down your throat. And it can hang instruments back very convincingly,



There'll be none of that bi-wiring here folks...

FOCAL ARIA 926
 FLOORSTANDING LOUDSPEAKER **£1,798** **IN-DEPTH**
**ON TEST**

Focal claims a high 91.5dB sensitivity for the Aria 926, but our measured pink noise figure of 89dB suggests that this is rather optimistic. Very low impedance helps achieve this: despite the claimed 8ohms nominal figure, we recorded a minimum modulus of 2.9ohms – exactly as specified by Focal – at 113Hz. This is low even for a nominal 4ohms design. Impedance phase angles are high so the EPDR (equivalent peak dissipation resistance) dips to a very low 1.3ohms at 85Hz, indicating that the Aria 926 is a pretty tough load for its partnering amplifier. Forward frequency response, measured on the tweeter axis, was essentially

flat in trend up to 12kHz, above which output rises because of the low first breakup frequency of the TNF tweeter (at about 23kHz). As a result the response errors 200Hz-20kHz were rather high at ± 5.2 dB and ± 5.3 dB respectively whereas below 12kHz the response was flat to within ± 2.0 dB – an excellent result for a passive speaker. Pair matching error was also of the first rank at just ± 0.5 dB over the same frequency range. Bass extension (for -6dB ref 200Hz) was fair at 50Hz. The cumulative spectral decay waterfall shows fast initial energy decay and only low-level resonances in the treble. **KN**

too – with the overall effect of a very spacious and phase-coherent recorded acoustic.

Conclusion

As a fan of Focal speakers, I have always been aware that they need a certain sort of source to partner them for best results; their upfront and engaging nature makes them lots of fun, but they won't flatter poor front ends gladly. Now though, the new flax cones make the latest mid-price Focal speakers far more amenable to a wide variety of systems. You no longer need to make excuses, and need worry less about partnering equipment. If the Aria 926 is anything to go by, this new cone material marks a step-change for the company. Overall then, these new floorstanders are an unqualified

success; I really enjoy my time with them and I would recommend them to anyone in the market for such a thing. With power, passion yet sophistication and breeding, there's a lot to like here •

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★	LIKE: Easy sound, but with great speed and detail; build
VALUE FOR MONEY ★★★★★	DISLIKE: Nothing at the price
BUILD QUALITY ★★★★★	WESAY: Highly capable, fine looking mid-price floorstanders
EASE OF DRIVE ★★★★★	
OVERALL ★★★★★	

Q&A**Raphael Triomphe**

Home audio product manager, Focal



DP: Why did you decide to use flax in your new cones?

RT: A driver cone has to comply with three criteria – lightness in order to accelerate very quickly and then obtain a good sound definition, rigidity to minimise the distortion in the bass and finally good damping to obtain a neutral sound. Very quickly in the research, our engineers concluded that a mono material solution could not be used to reach the performance requested. So the composite solution in a sandwich construction was the only one to follow and flax as the core material was the ideal choice. It has fantastic structural properties, being naturally light because the fibre is hollow, the density of flax is very low and equal to 1.54. The rigidity of flax is very high, indeed the tensile elongation of the fibre is very low (1.5%) and the Young's modulus is similar to Kevlar. Flax is made of 80% cellulose, which is great for damping. This technology allows us to manufacture different types of cone for the midrange (light) and bass (stiff) units.

Why was aluminium/magnesium chosen for the tweeter?

Aluminium is a light material that provides good damping while the magnesium brings rigidity. This is three and a half times more rigid than titanium, the previous material used by Focal to make tweeter domes.

What's the thinking behind the styling of the 900 series?

The 'techno design' is over. For Aria we wanted to get rid of all the unnecessary touches and create a highly desirable acoustic object. That's why the driver screws have been covered by brushed metal rings and the front grille is now magnetic. Aria has been conceived as an elegant piece of home furnishing: simple, with great stature, quality materials and soft shapes, which will resist the passage of time. We used glass on the upper face because it is a very resistant material, and it brings a nice contrast with the matt-like finish of the front baffle.