

## Ophidian Ffion: dare to be different

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### Ophidian Ffion speakers

As a reviewer who has form for turning the spotlight on less well-known brands, I find a particular pathology often on display in audio dealer showrooms really quite fascinating. Say a customer auditions three contending models of speakers; among them is one that isn't the creature of a big brand A or B but from C, a much smaller, upcoming manufacturer. C costs considerably less, and in listening tests sounds superior to the other two. Which one does our customer choose? Correct: A or B.

Three decades ago a meme in IT circles was: 'No-one ever got fired because they bought IBM.' Today, a version of the same idea drives many audio system buying decisions. Great sound needs to be partnered with canny marketing and if the latter is missing then new entrants to the audio sector can really struggle to get commercial traction.

Speaker designer Gareth James knows all about the balance required. His journey in audio began when he was in his teens, with an inherited pair of Sansui speakers. It quickly morphed into something of an obsession and by the time he turned 18 he was designing and building studio monitors and bass horns in the garden shed. Later, he studied audio visual systems and 'a little acoustics' at Salford University and it was there that he decided to make audio his career.

He started his company Ophidian 12 years ago and until now has made steady if perhaps not spectacular progress in building his brand. Ophidian's existing five speaker models are all what we might term conventional. The only feature that marks them out from any number of other commercial designs is a unique driver loading scheme that James has named Aeroflex. It is a hybrid of transmission line and conventional porting, and James says that it achieves superior low-end performance without the downsides of either alternative.

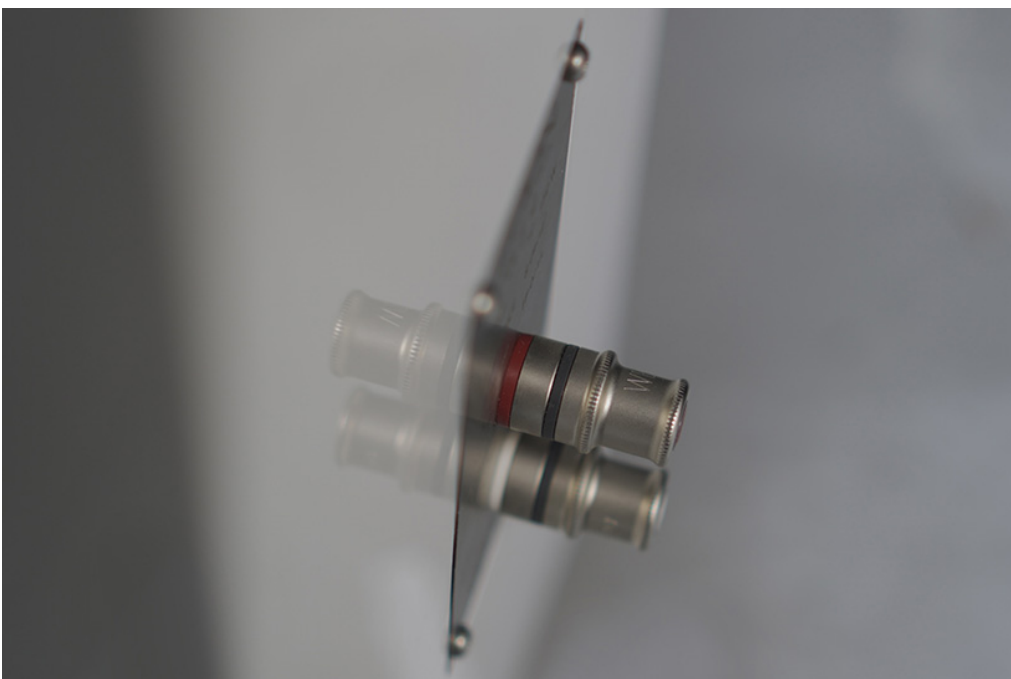
When I reviewed the mid-price Ophidian Incanto, the control and expressive power it exhibited was impressive, as was its overall tonal balance and quality of driver integration. At the time I wrote that there wasn't another speaker that I had heard at or around £6,000 that I'd rather own. Today, something like a year on, my view remains the same. That existing range of Ophidian speakers starts with the Minimo 2, a so-called bookshelf model that retails at £1,100, and tops out with the £12,000 Voodoo. The latter is a beast of a floorstander; 1.3m tall with two 10-inch woofers, a seven-inch aluminium mid-driver and a 22mm soft-dome tweeter.



### Expectations

If the gods of fairness are smiling down, Ophidian's market profile may now be about to change as James launches his most ambitious design yet; a full-range floorstander that will form the entry point to a new three-model premium range all using the same design principles. The Ffion, named after his daughter born earlier this year, will be priced at £8,500 (including VAT), available through UK dealers as well as internationally direct.

The Incanto had set high sonic expectations and I was mildly worried that the Ffion, trailed by James in an exchange of emails as a real departure from the norm design-wise, would be a let-down. I should have been more trusting because the well run-in Ffion turned out to be every bit the sophisticated transducer that the Incanto is – and then some.





The Ffion is distinctive. Standing just a fraction over a metre high without the supplied spikes, it is not only James's first commercial design with a downward firing woofer, but the cabinet tapers from the 264mm wide base up to the top where the 22mm soft-dome tweeter – the drive unit from SEAS that is used in the Incanto – sits facing forwards in a baffle just 132mm wide. The overall effect from the front is of a narrow triangle with the top point chopped off.

The woofer is mounted in the bottom surface of the cabinet. Beneath the tweeter is a 125mm mid/bass aluminium cone driver. Both these latter drivers share a sealed and damped – in other words infinite baffle – chamber. Beneath it is the separate much larger chamber that forms part of the woofer's Aeroflex loading. The Ffion's cabinet walls and internal baffles and bracing are constructed from 18mm HDF, the truncated triangular form adding further strength and minimising standing waves by presenting few parallel surfaces to the internal energy.

The Ffion uses all three of its drivers well within their design parameters, the 2nd order crossover points at 170Hz and 2.5kHz being substantially distanced from the frequencies at which breakup modes would intrude. This is not an on-the-edge design, forced to work by the application of brutal roll-off slopes, padding and notching, but a design where the drivers operate comfortably within their respective low-distortion sweet-spots with minimum intervention from the crossover.

### Low distortion

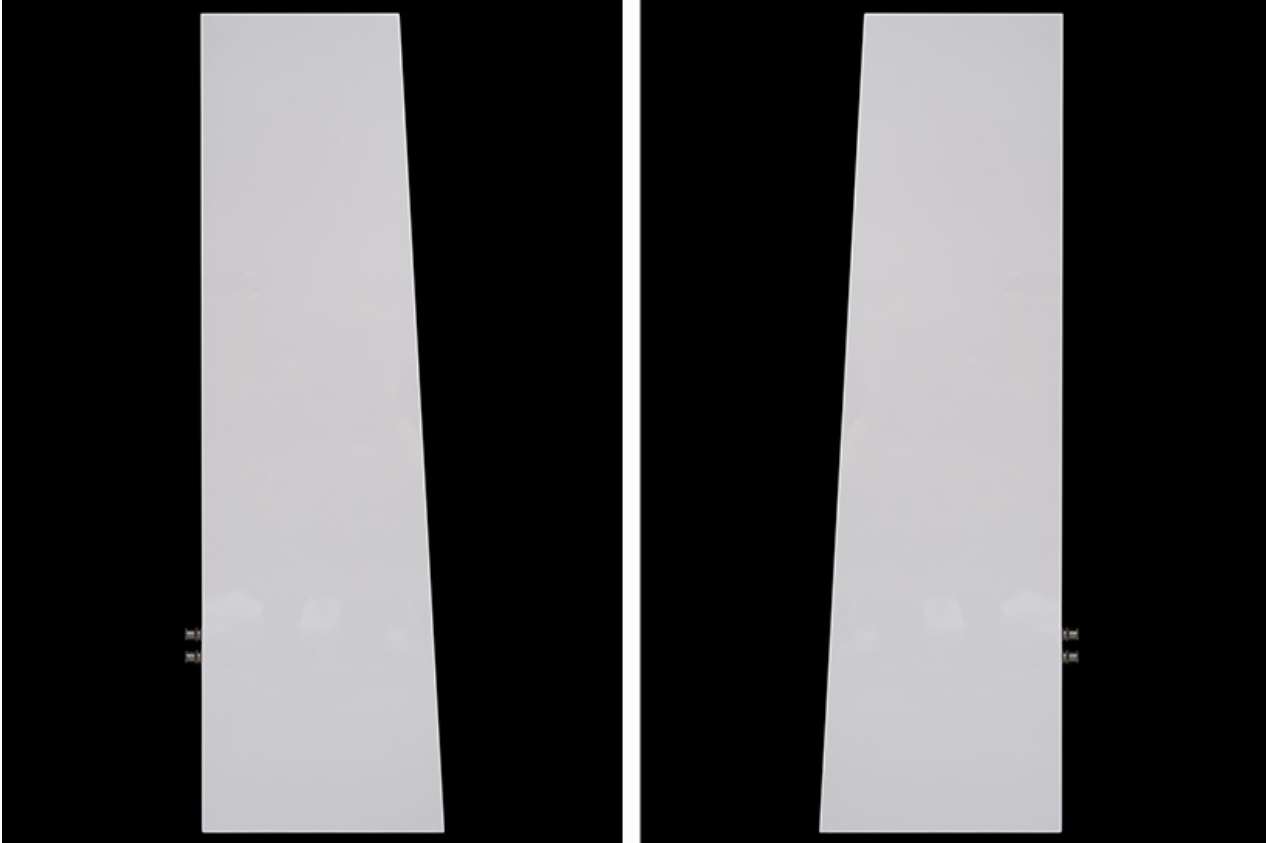
The crossover components, air cored inductors for low distortion and non-inductive metal oxide resistors for faster impulse speed, are all sourced from Mundorf. Somewhat unusually the crossover is not mounted on a single board, but implemented on three separate boards, each close to the driver that it feeds. James explains: "Multiple inductors in close proximity can induce crosstalk. Most designers orient them at 90 degrees to each other to reduce this likelihood, but there's nothing like a good 100 centimetres of separation and a thick internal panel to really minimise the effects."

The Ffion's Aeroflex woofer loading terminates near the top of the rear panel behind a grilled vent. James says Aeroflex dimensions and other details are different in each of his designs. "Aeroflex is a quite elastic term and one that best describes the end goal rather than a prescribed formula for internal layout. In the Ffion, the main bass volume is above the driver and to the front of the cabinet while the loading port runs from the bottom of the rear of the cabinet vertically up to the exit at the top rear. There are some similarities in the layout to a tapered quarter wave tube although the taper dimensions don't conform to traditional calculations. Ultimately the end goal was fast and accurate bass with decent extension."

James delivered the review sample Ffions, helped with the initial set-up, and then left them with me for two weeks. The following day I moved them so that the driver centres were 81cm from the side walls and 132cm from the front wall, with their faces slightly toed in towards the listening position in the four by six metre listening room. They were driven for the duration of the evaluation by the household reference Quiescent T100MPA monoblocks (135 Watts per channel) through regular multistrand copper speaker cables.

## Ophidian Ffion

James says the Ffion's frequency range is from 32Hz to 25kHz (-3dB), and that linearity is within +/- 2dB over that range. I heard no reason to disbelieve him; in the listening room the Ffions exhibited sufficient energy to produce the lowest fundamentals of a recorded concert grand piano with a pleasingly credible weight and tonal content. The sound, even at the lowest of the low-end, proved to be fast and linear too; in particular with no group delay to cause tooth-sucking disapproval.



### Class-leading

Extended listening also showed from a second perspective that the Ffions' hybrid loading is more than marketing spin. Advocates of transmission line point out that it can exert more control over woofer movement than porting can, and thus reduce the amount of low-end distortion that if left unchecked scatters harmonics up through the midband to mask detail. The Ophidian Incantos had exhibited a notably strong level of clean control over recorded material, but the Ffions push unwanted noise and distortion even further below the hearing threshold to a point that I consider class-leading.

They also deliver a high degree of expressive dynamic engagement, and combine it with a fine ability to transcribe subtle events in the recorded material including more tonal and textural detail than we might be used to hearing for the money. That's all subjective judgement of course, and readers may take it with an appropriate pinch of salt, but I expect that when measured the Ffion will post notably better than average distortion figures.

Another audio electronics designer was also visiting the household at the time James delivered and set up the Ffions, and after we three had listened to a few tracks he turned to James and complimented him on the integration between the three drivers. Used to listening through speakers that cost twice as much as the Ffion, and whose tweeter is concentric with the mid-woofer, he thought that the Ffion's tweeter and mid-woofer, mounted one above the other, behave sonically as a seamless point source from 170Hz upwards. James is clearly, and I think justifiably, proud of his latest creation, but he accepted the compliment with just a humble nod.

### Mesmerising

Once I had moved the speakers the following day to their position for the rest of the evaluation, a further sonic quality became particularly apparent: the Ffions create a sonic image like very few alternatives, with a depth, width and solidity that can be described in no other terms than simply mesmerising and to which the over-used term holographic can rightly be applied. It's tempting to ascribe the stand-out spatial abilities in particular to the ultra-narrow baffle that the tweeter and mid-woofer occupy, but as James noted in an exchange of email once I had been

running the Ffions for over a week, multiple design elements contribute here, as well as to the overall particularly strong performance.

“You’re right that the tweeter sits with a bare minimum of woodwork above and to either side of it, but that on its own would not be enough to produce imaging of that quality. The main factor is the inherent lack of noisy cabinet resonances which is largely down to the cabinet shape both inside and out. There are almost no parallel surfaces within to generate standing waves. The rest of it is down to the quality of the components used, from the crossover components that interfere with the signal as little as possible, to the drive units themselves which all utilise powerful low distortion motors with low moving masses for maximum dynamic response. Aeroflex is also a key part as it doesn’t leave the bass lagging behind.”

James is so convinced of the rightness of his design concept that the Ffion is going to be the entry level model in a three-speaker Ophidian premium range, the largest and most costly of which will feature separate top-mounted cabinets for the tweeter and mid-range driver, rather in the manner of some Wilson speakers. Serial production of the Ffion begins in September this year and prototypes of the two larger models are already in testing.

### **To buy or not to buy?**

So, what are the chances that Ophidian Ffions will be flying out of dealers’ doors one-a-minute come the end of the year? Slim, I’d say, and not just because dealers that I talk to regularly all say the sector is currently as flat as a pancake.

It’s also because Ophidian’s Ffion poses a real challenge to the insecure audio buyer. As with all of Gareth James’s speakers, fit and finish are exemplary, and that’s because the cabinets are made for him by the same cabinet maker that supplies many of the major speaker brands and the drivers he uses too are made by the same specialists that many major brands source theirs from. As the Ffions and the Incantos demonstrate (I have no in-home experience with others in the range) James’s painstaking and astute engineering means sonic bang-for-the-buck is of an extremely high order.

Buyers that choose a pair of Ffions based on what their ears tell them are in for years of smug sonic satisfaction. Those that walk on by because the Ophidians wear the wrong badge... well, it’ll be their loss.

### **Specifications**

*Type: 3-way Aeroflex loaded floorstanding loudspeaker*

*Crossover frequencies: 170Hz, 2.5kHz*

*Drive units:*

*Bass: 200mm damped paper cone*

*Mid/bass: 125mm aluminium cone*

*Tweeter: 22mm soft dome*

*Nominal frequency response: +/-3dB 32 – 25,000 Hz*

*Nominal impedance: 6 Ohms*

*Connectors: single wire binding posts*

*Sensitivity: 87dB @ 2.83v/1m*

*Cabinet: HDF*

*Dimensions HxWxD: 1020 x 260 x 250mm*

*Weight: 20kg*

*Finishes: walnut veneer, RAL colour lacquer*

*Warranty: 5 years*