



EQUIPMENT REVIEW

Vivid Audio Giya G1

by Jason Kennedy

There are a few people in this industry who give the distinct impression that they know a lot more about the audio engineering field than the majority. There are a lot more that try to give this impression, but that's only natural and when you've been in the game for a few years it gets easier to spot the genuinely knowledgeable. Loudspeaker designer Laurence 'Dick' Dickie is one such character; a man who served his apprenticeship at B&W's Steyning research labs in the days when they went in for real blue-sky thinking. Dickie went on to make an enormous impact on the company's range. He was after all responsible for B&W's most radical speaker ever, the Nautilus; a model whose technology has been trickled down across that company's entire range and beyond. He also came up with Matrix bracing technology before that. Clearly an original thinker. Nowadays he splits his time between pro audio company Turbosound and South African speaker maker Vivid Audio.

The Vivid Giya (pronounced Geeya) G1 is the company's largest and most ambitious model yet, something reflected in its high £34k price tag and a high and extraordinary bit of cabinet design. Perhaps more than any other speaker around right now, the Giya is the natural successor to the Nautilus. It uses tapered tube technology for all four sections; treble, mid, upper bass and bass in this four-way design. Unlike the B&W, it manages to incorporate reflex loading on the bass section, making it more efficient and capable of higher volume levels than its ancestor.

Giya stands over 1.7 meters high and weighs around 70kg; given that it's made of essentially lightweight materials, this gives you some idea of its 180 litre volume. One which

looks rather less substantial than that might suggest if you've come across a box that even approaches this size – most big loudspeakers don't break the 100 litre mark.

What differentiates Giya from all the previous models in the Vivid range is a proper name – one which is apparently the name of a South African dance – and a pair of side firing bass cones. When Dickie started working on what was originally dubbed the G1 he suggested a version of the K1 that was twice its volume with front and rear firing bass drivers. But the low 220Hz crossover point meant that this arrangement was problematic, so the drivers were placed on either side of essentially the same cabinet shape.

The result was ungainly to say the least, it practically had a beer belly. This meant that Dickie could start with a blank sheet in terms of shape, his aim being to build a speaker with sufficient internal volume that was also as elegant as possible. It was lengthy process that involved plasticine modelling, in much the same way as cars used to be prototyped, and further refinement of the design in CAD. One early idea was to incorporate an active sub resonance bass enclosure, the system used in B&W's PV1 sub, but realising how difficult it can be to sell active or even partially active speakers the company went for a passive vented system.

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The existing Vivid D50 midrange and D26 tweeter drive units were incorporated into the G1 along with a customised version of the C125 bass unit. The latter only needs to cover the upper bass in Giya so the magnet was given a shorter gap because it doesn't need to allow so much travel, and an exponential tapered tube was built to suit. For reasons we can only hazard a guess at, Dickie looked into using a diamond dome tweeter in place of the aluminium D26 but decided that the trade off: smoother roll-off above 40kHz versus reduced efficiency – Dickie reckons 9dB – made a good case for staying with metal. For the bass enclosure a new C225 drive unit was developed, this has a beautiful cast chassis with thin but deep ribs connecting the periphery to the motor system, the whole thing being shaped like a nose cone. Unusually it is devoid of mounting points for fixings, instead the C225s are held in place by a torsion bar between their magnets, the chassis edge being decoupled from the cabinet with an O ring. The driver has a three inch, long travel coil on a highly vented former – the tube that joins the centre/dustcap to the coil and to which the suspension is connected. This former is 40% open in order to relieve pressure behind the dust cap yet maintains mechanical integrity.

The most radical aspect of Giya is the use of a tapered tube (TT) or inverted horn for the bass system. The benefit of the TT is that it damps out reflections of the energy coming off the back of the cone, but merely adding a port to a cabinet with a TT reduces low frequency output from the port. Dickie discovered that by increasing the cut-off frequency of the TT to four times that of the port tuning frequency produces a bass system with good port output and no reflections. Producing a system that virtually eliminates in band resonance. The tapered tube on the Giya is formed at the top of the cabinet where it begins to curl around the circular opening, the reflex ports are of Vivid's preferred reaction

cancelling variety and sit either side at the back near the floor.

The idea to incorporate a hole into the cabinet came about when Dickie sat down with his artist neighbour Chris Stevens. I seem to recall that he also enlisted the help of an artist for the Nautilus, clearly there's something to be said for this approach to cabinet design if you are looking for a visual statement. These sketches were used to make a series of plasticine models – easily the most enjoyable part of the process I'm told – and the preferred shape was used as a template for the CAD process that resulted in a design that was prototyped in June 07 and unveiled at CES in January 08.

Unlike the existing Vivid range, Giya's size meant that it needed to be built light. This was done by making a sandwich of GRP skins with a foam core for stiffness. The reaction cancelling arrangement of the bass drivers obviating the need for structural mass in the cabinet.





► The result is a very elegant, sculptural loudspeaker that is chock full of original ideas, there's barely space to go into them all but it's worth pointing out that the mid and treble domes are not hemispherical as is the norm but have a catenary shape. This is very close to a parabola and was chosen because it pushes up the first resonance compared to a normal dome. The Giya cabinet is stiffened by glass fibre grids that run horizontally across it and account for much of the weight.

The crossover is built into the base. The option of taking it right out of the cabinet was considered because it offers the benefit of taking this sensitive system away from resonances but it would have compromised the visual side of things too greatly. According to Dickie, the key with crossover placement is to take it out of the field of the magnets in the speaker which has been achieved here.

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The cable terminals are hidden under the speaker and cables get to them via a cut out at the back of the base, this makes changing cables a two person job but does give the speaker very clean lines.

When I reviewed the Vivid K1 recently I was frankly blown away by its speed and lack of distortion. It was hard to imagine what could be done to improve on that model. By adding the bass system in Giya G1, the company has proved that there is yet more to be discovered in my music collection. It's not just about extension and power in the bass either but that certainly plays its part.

The Vivid designs achieve a rare degree of resolution and they make you acutely aware of the characteristics of the equipment used to drive them. When I had the K1 here I also had Leema's Pyxis preamp and Altair IV monoblocks and this proved to be a fortuitous combination, the speaker letting you know just how fast and real the amps can sound.

When the Giya arrived, I was using a top notch Naim 500 system and this also worked extremely well although its character is quite different to the Leemas as you might imagine. But the speaker seemed very happy in the company of either. It's a highly articulate design which delivers a degree of bass precision that is extremely rare. By taking away the traditional characteristics of a wooden cabinet, Vivid has made a bass system that goes all the way down

and yet can start and stop with the same poise as it manages higher up the band. By removing cabinet resonance to this degree the speaker seems intrinsically quieter, as if it has a lower noise floor, and can let reverb carry on for longer because it's not joining in and muddying detail.

You also get a strong sense of effortlessness. This is partly a reflection of the partnering equipment, but certainly not entirely and makes some of the most challenging material become significantly more appealing. I have some Kraftwerk remixes of Yello tracks which can be a little uncomfortable with many systems, but which were almost musical with this set up. The low frequency vibes of Me'Shell Ndeggeocello reveal that Giya can deliver the sort of bass one associates with large active designs when driven by an amplifier of NAP 500 class. The effect of removing overhang, which seems to be apparent in all wooden cabinets that deliver real bass is quite strange. It gives bass instruments the subtlety and dexterity usually only apparent with instruments that produce largely mid and high frequency notes. In hi-fi terms, it makes the bass sound fast, but this usually means less extended and edgy. Not so here – this is tight and deep.

You can also play at high level without losing any of the composure, in fact things get better, you can feel the grip of the bass and appreciate the scale and depth of the imaging all the more easily. There's the timing, the Giya responds to the Naim system's immaculate timing with glee, so much so that beat strong music can become ►



► additive. The contrapuntal interplay between bassist Avishai Cohen and his drummer and pianist become a thing of wonder. Steely Dan's 'Gold Teeth' has a formidably tight groove that draws you right into the piece and kicks any ideas about changing discs, pressing pause or any other intervention into touch when its reproduced with this degree of groove power.

When the Naim system made its move, I went back to the regular Classé amplification and Resolution Audio Opus 21 disc spinner and struggled to get as engaging or revealing a sound. It was probably more evenly balanced but the amps in particular sound a little sluggish through a speaker that's as revealing as the Giya. Salvation came in the strange shape of a Japanese power amplifier called Digital Do Main B-1a. This is not a digital or class D design but is built around an obsolete output transistor called the V-FET, obsolete until this company resurrected it that is. The B-1a has a volume control so you can bypass the preamp and hook up a single source for a direct injection of intensely dynamic and fast musical reproduction. The amp's openness and speed allowed the Giya to totally transform good recordings into astonishing ones, the most impressive example being John Surman's new *Brewster's Rooster* on ECM. A disc that had sounded pretty good but musically a little dull until its full potential was projected into the room by this system. I pretty well had to re-write the album review so startling was the transformation.

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If you want to hear the life, the vivacity in a recording this speaker is one of the most effective tools for the job, its ability to reveal so much and add so little means that you are able to hear right into the mix. The incredible resolution of low-level detail means that harmonics, reverb, imaging and all manner of fine detail are brought to the fore. It's easy to get carried away with the excitement created by the wide dynamic range but it's the small things that really show how subtle this speaker can be. Its high sensitivity also allows it to work remarkably well at low volume levels, the detail is all there alongside a musical realism that is very rarely achieved without cranking it. A useful result from the point of view of both your ears and neighbourly relations.

Unfortunately it can't make all of your records sound fantastic unless you are very selective in your listening that is, the shortcomings of lesser recordings are inevitably revealed but this doesn't stop the music shining through. The extra openness afforded means that even noise infused albums like *OK Computer* give up fine detail that is usually smothered. The deliberate guitar distortion on Cougar's *Patriot* album is uncanny in its realism, I was concerned that I'd overdone the level at one point only to realise that the sound was on the disc all along.

Clearly with a speaker of this transparency, neutrality and ability the quality of ancillary components is going to be in the spotlight, it will show you precisely what your amp and source sound like. This should be fine in most instances but be careful about blaming the speaker if the result is not what you are after. While the Digital Do-Main produced a fantastically dynamic and live result I suspect that a slightly smoother and more powerful amp would be even better. It's hard to stress just how well the Giya G1 addresses the problems that usually afflict loudspeakers, it manages to seemingly eliminate perceived distortion and reveal the music in all its dynamic, tonal and temporal glory. It's very expensive to be sure but few speakers at any price are its equal. +

TECHNICAL SPECIFICATIONS

Cabinet: reinforced advanced composite

Finish: high gloss automotive

HF driver: 26mm catenary dome aluminium

MF driver: 50mm catenary dome aluminium

Mid bass driver: 125mm aluminium cone

Bass driver: 225mm aluminium cone x2

Sensitivity: 91dB

Impedance: 6ohm nominal, 4 ohm minimum

Size (HxWxD): 170 x 44 x 80cm

Weight: 70kg

Price: £34,000

Manufacturer

Vivid Audio UK Ltd, Old Barn, Rosier Business Park, Coneyhurst Rd, Billingshurst, West Sussex RH14 6DE
T 01903 530005
www.vividspeakers.com

