VIVID audio

VIVID AUDIO - AUDITORY ACUITY

(The clarity or clearness of hearing, a measure of how well a person hears.)

The Vivid Audio team represents 4 decades of experience delivering products featuring more than just innovative engineering and bespoke parts.
Our goal is to produce the world's pre-eminent High-end loudspeaker systems.

Perhaps it isn't the most predictable of locations for such an occurrence but over the last few years, in a leafy suburb of Durban, something remarkable has been taking shape. Born out of the enthusiasm and drive of South African and British engineers, a new force in high-end audio has quietly been building ground-breaking technologies into a range of world-class loudspeakers. Almost every part of each Vivid model is unique and not to be found in any other speaker. No element is taken for granted; innovation and new methods of analysis are used to extract the highest levels of performance from every component. VIVID AUDIO takes pride in assembling all their own drivers and making all speaker cabinets in-house.

Philip Guttentag, who heads up the Durban manufacturing facility, first had the inspiration to get into creating high end loudspeakers back in the year 2000 shortly before meeting up with Robert Trunz, ex B&W president. It was Robert who suggested he invite one of his old acquaintances to join the team.

Based in Brighton England, Laurence Dickie had made a name for himself as inventor of the B&W Matrix and designer of their flagship Nautilus™ as well as the Turbosound Polyhorn™ and Dendritic™ horn systems for professional loudspeakers. Still full of ideas for improvements to monitor loudspeakers Dickie was able to bring a wealth of innovation to the fledgling company.

If there is a central tenet to Dickie's speaker design philosophy it is to strive for freedom from resonance and reflection. Resonances are the product of either structural or acoustic systems where stored energy can oscillate. Reflection is caused by sharp changes in the path taken by the sound. Very often the distinction between the two effects is blurred but the result is an irregular frequency response and smearing of the sound.

Our sense of hearing has evolved to have an astonishing sensitivity to these effects as a matter of survival. There are many situations where vital information is unseen and we must rely on our sense of hearing. For our ancestors this auditory acuity was, quite literally, a matter of life and death. The presence of resonances or reflections in a loudspeaker are what determines the 'sonic signature' of that loudspeaker and for Vivid Audio the ultimate goal is to help the clarity of reproduction by reducing these effects to a negligible level.

AESTHETICS

Evocative of the special spirit of our newest design and proudly symbolic of Vivid Audio's African roots, the name Giya is derived from a traditional Zulu dance. Wrapped within Giya's distinctive shell-like appearance lies an exceptional level of engineering detail and acoustic design.

Vivid Audio is an engineering led company but the importance of industrial design has never been far behind. While the fundamental form of our designs is driven by the internal function, the final design communicates meaning and emotion transcending structure and material substance. In the overt complexity of 21st century technology a key objective is simplification. Deployment of cutting edge analysis, design and manufacturing methods has facilitated the creation of loudspeaker systems exhibiting the full integration of its constituent parts. Enclosure, stand and base merge into a single holistic form using complex splined surfaces. This delivers seamless sculptures of seductive, sensual organic forms.

V1h V1w V1s V1.5 B1 K1

C1

G1 GIYA

G2 GIYA

G3 GIYA

The Drive Units D26

D26 Tweeter with Tapered Tube loading

Our goal in designing the D26 was to create a driver with high efficiency and first break-up frequencies, while using well established diaphragm materials with a proven track record for stability and reliability.

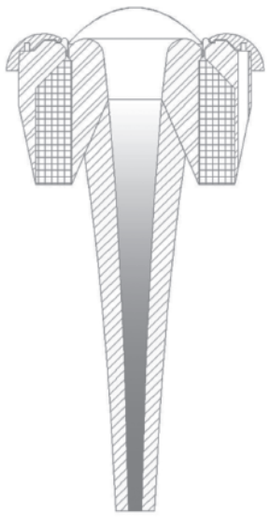
It features an anodised aluminium diaphragm, formed by a unique fabrication technique, into a profile optimised by computer finite element techniques to give an exceptional first break-up frequency above 44 kHz.

A radially polarised magnet system, comprising eight segments of high energy Neodymium Iron Boron material, is employed to maximise the flux through the voice coil while having an intrinsically low stray field, essential if the driver is to be used anywhere near a cathode ray tube (CRT) video monitor or the inductive components of a crossover. Finite element optimisation has again been used to make sure that the flux goes where it should resulting in an astonishing 2.4T in the gap!

An edge wound aluminium voice coil ensures the best match between the aluminium diaphragm and gap flux. Magnetic fluids are well established as a method of stabilising the voice coil temperature; however, the flux of the D26 is high enough to rip the magnetic particles out of suspension in conventional fluids. Vivid Audio has worked in co-operation with Ferrotec Corporation (USA) to formulate a fluid capable of withstanding the extreme conditions that exist in D26.

Our policy of ensuring that resonant effects are kept well out of the relevant frequency band applies not only to the high end but also to the fundamental resonance. Pressure from the rear of the diaphragm must be allowed to escape if this frequency is to remain sufficiently low. A tapered hole in the centre of the pole piece smoothly couples the diaphragm to a fibre damped, exponentially tapered tube which has an acoustic performance identical to that of an ideal enclosure, being completely free of resonance or reflection.

Reaction forces are inevitably experienced by the magnet structure of any driver when a signal current passes through the voice coil. On its own, the magnet motion would contribute little to the overall sound field but when coupled to the horn absorber and enclosure, the combination can possess structural resonant modes which fall in-band. In order to prevent these being a problem, the tube and magnet assembly is isolated by compliant O-rings and in a similar way, the complete driver and horn assembly is isolated from the enclosure.



D50

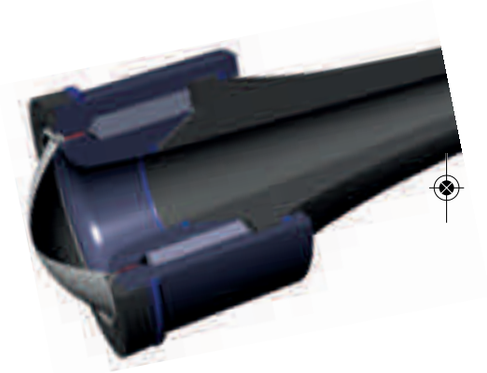
D50 Tweeter with Tapered Tube loading

Where the D26 sets a standard for high frequency reproduction, the D50 carries this philosophy down into the crucial mid band covering frequencies between 880Hz and 4kHz.

Again featuring a computer designed deep profile catenary anodised aluminium alloy diaphragm, D50 maintains pistonic behaviour for more than two octaves beyond its operating band having a first breakup frequency of 20kHz.

A radially polarised rare earth magnet system minimises the overall diameter of the driver allowing the D50 to be used in a narrow enclosure and with minimum separation from other drivers, while still allowing the use of a hollow central pole for an extended low frequency performance. An under-hung edge-wound aluminium voice coil gives the best impedance match, and hence efficiency from the available magnetic flux while finite element design methods ensure that this flux remains constant throughout the gap.

Magnetic fluid is used to stabilise the voice coil temperature with care being paid to the details of the pole design to prevent fluid separation under all conditions.



C125

C125 Bass Mid Driver

In keeping with the dome drivers in the rest of the Vivid range, the C125 has an anodised aluminium alloy cone designed with the help of computer modal analysis to give the highest break-up frequency ensuring pistonic behaviour throughout the reproduced bandwidth.

Use of a large central dome helps to reduce the front cavity volume minimising the perturbations to the sound field from the higher frequency units.

Thermal management in the C125 begins with the use of a short coil in a long magnetic gap. The increase in magnet volume and the weight of the accompanying steelwork is the price paid for the superlative thermal performance which results from surrounding the 50mm diameter copper ribbon coil with cold steel throughout its range of linear travel. The generous thickness of high purity steel surrounding the coil also keeps the gap flux consistent along the whole of its length.

While the primary function of the chassis is to accurately locate the cone and coil assembly and suspensions to the magnet assembly, it also plays a vital part in the conduction and dissipation of heat from the motor system. The struts, while being slender in width, have a considerable depth and follow a parabolic area law to maximise their heat sinking action closest to the magnet assembly.

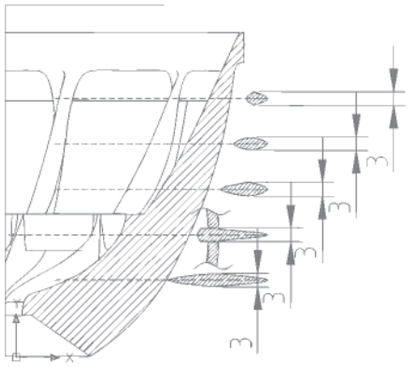
Where so many traditional driver chassis have taken the form of a metal cone with punched holes to ‘let the sound out’, C125 was designed from the outset to minimise the restriction of the emerging rear wave. To this end, the twelve struts of the die cast aluminium chassis have a width of just 3mm resulting in an open area in excess of 90%.

As a further step towards freeing the rearward wave from unnecessary obstruction, a radially polarised magnet assembly provides the highest level of flux from the smallest overall cross-section. A topology that also keeps stray fields to a minimum without the bulky screening cans often found in most video compatible loudspeaker systems.

Again respecting the often-ignored significance of resonances behind the cone, even the voice coil former is unique in being heavily perforated to avoid the usual resonant combination of the cavity behind the dust dome and the hole in the magnet normally added to allow undamped motion at low frequencies.

Floating Drive Units

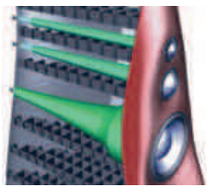
In all Vivid loudspeaker systems the C125 driver ‘floats’ on set of silicone O-rings, ensuring chassis vibration is not transferred to the cabinet resulting in higher levels of acoustic purity. But this would be impossible using a conventional flange mounting system with a ring of bolts visible at the front so instead the weight of the magnet system is transferred to a rear support which is either shared by a second identical driver or by a single rear mounted bolt.



C125S Lower Midrange Driver with Tapered Tube Loading

Designed specially as the low mid-range unit for Giya, C125S has the same diaphragm assembly as C125 but features a magnet system which takes advantage of the smaller excursion requirements of a driver which only has to work above 220Hz. A shorter magnetic gap with reduced coil clearance help increase the flux leading to an efficiency increase of 3dB over the standard unit. C125S is loaded in a manner similar to D50 and D26 with a fibre-filled rear tube exponentially tapered to totally absorb the rear output.

Isolation between the magnet system, the horn and enclosure is ensured by the use of high compliance elastomeric seals between each element. In this way, the reaction forces of the motor system are contained within the driver without direct mechanical excitation of any external modes.



C225

C225 Low Frequency Driver with Short-coil long-gap motor design

From its inception, Giya was to be a four way system so the lowest frequency band could be handled by a driver optimised for that purpose. It is all too easy when designing a bass driver, to put all the effort into a superlative motor system only to use an off-the-shelf pulp cone and heavy rubber surround ignoring the effect these will have on the upper frequencies. Vivid Audio designs have always placed great store in the importance of maintaining good out-of-band performance and, while having a generous piston diameter of 225mm, the all-aluminium alloy diaphragm construction extends the area of pistonic operation to beyond 2kHz thereby maintaining a comfortable margin between crossover and the first break-up frequencies ensuring absolute purity in the pass-band.

C225 shares many family resemblances with the C125 including the highly aligned radial struts used in the chassis construction. These twelve elements, which present the slenderest section and smallest obstruction to the moving air, nevertheless offer a substantial area in the orthogonal direction with which to dissipate heat, with much of that area located where it will have the maximum benefit, along the full length of the central hub which houses the massive magnet structure.

Maintaining the Vivid philosophy of underhung motor design, the C225 uses a 12mm long coil in a 35mm long magnetic gap which gives 23mm of linear travel. A mechanical travel capability of 54mm further ensures the capacity to move massive amounts of air. Moving large amounts of air takes substantial amounts of power and a 75mm diameter aluminium ribbon voice coil permits high power transfer while keeping the coil temperature down so minimising power compression effects. Having such a long gap is great for linear travel but requires a proportionately large amount of total flux. This in turn requires all the available area of the pole to be used for flux guidance so a central vent hole is undesirable, but, thanks to the used of the highly perforated coil former pioneered in the C125, the air within the former can still escape with little resistance and no problem resonance.

Racing Car like Performance

Despite the exceptional gap length, a flux of 1Tesla is maintained evenly along its full extents through the use radial magnet technology. This highly efficient system creates a high level of force from the input current. The result is a driver which couples this tremendous level of shove with a low moving mass of 50g to deliver a truly sports car like performance for the ultimate delivery of fast articulate bass. On its own, however, such a taut driver would give a very bright balance and only really comes into its own when coupled with its computer optimised filter network, the two working together as a unified system rather than separate elements designed in isolation.

C175

C175 Low Frequency Driver with Short-coil long-gap motor design

One result of our novel approach to low frequency system design is that the final transfer function is quite independent of driver parameters. So when it came to creating the G2 Giya bass drivers, with half the radiating area of C225, we were able to preserve the motor assembly unchanged and simply reduce the cone diameter. Of course this means the C175 features an even more exceptional force to weight ratio but, when coupled to its dedicated low pass filter, the subjective result is clearly from the same stable as its larger sibling.

Using the same motor also means C175 shares the same long linear travel as C225 and identical suspension profiles give a similar mechanical performance. And just one glance at the die-cast aluminium chassis design will leave you in no doubt that this driver is 100% Vivid Audio.

Floating Bass Drivers & Reaction Cancelling Mount

In both Giya models the bass drivrs are fitted with silicone O-rings mounted in peripheral grooves. These O-rings guarantee an air-tight seal on to the gently tapered mounting apertures as the drivers are drawn into position by the internal dual-threaded coupler. And, while the drivers are mounted in a reaction - cancelling configuration, the extra decoupling action provided by this compliant mounting absolutely ensures that the last traces of chassis motion will not be transferred to the enclosure so further ensuring the highest levels of acoustic purity.

Passive Crossovers

At Vivid Audio we take the opportunity to consider every aspect of the construction of our products and, while it is customary to use printed circuit boards for most electronic assembles, we have found that for the best results, hard wired crossovers impart a transparency of the reproduction which is unequalled by other construction methods. Each of our inductors is trimmed to be exactly the correct value and assembled by hand onto the hard-wired circuit board together with precision polypropylene capacitors and wire wound resistors for all primary signal circuitry.

C135

C135 Low Frequency Driver

Creating third member of the Giya family, the G3, required the addition of a further bass unit of yet smaller diameter. Again, the question of using a smaller motor was considered but again our approach to low frequency system alignment permitted the use of the same 75mm motor and long throw suspension. In fact a common misconception is that larger loudspeaker systems somehow require a greater power handling capacity when, in fact, it is the smaller designs, in which efficiency is forfeited as a result of the natural laws of physics, which are frequently called upon to absorb more power than the larger models. In G3 full use can be made of the high power motor to extract a surprising level of room-filling LF energy.

Of course reducing the size of the driver cone while preserving all features and materials of construction has the benefit of pushing all break-up frequencies still further out of band.

Reaction Cancelling Mounting

In all three Giya models the bass drivers are fitted with silicone O-rings mounted in peripheral grooves. These O-rings guarantee an air-tight seal on to the gently tapered mounting apertures as the drivers are drawn into position by the internal dual-threaded coupler. And, while the drivers are mounted in a reaction - cancelling configuration, the extra decoupling action provided by this compliant mounting absolutely ensures that the last traces of chassis motion will not be transferred to the enclosure so further ensuring the highest levels of acoustic purity.

Low Pass Filter

Low pass crossover filters for bass drivers typically require large values and the unusual parameters of C135,C175 and C225 mean those in the Giya series are, if anything, still larger, but while it might be tempting to adopt the smaller cheaper ferrite inductors and electrolytic capacitors, we continue to use air cored inductors and polypropylene capacitors for all the main filter components.

At Vivid Audio we take the opportunity to consider every aspect of the construction of our products and, while it is customary to use printed circuit boards for most electronic assembles, we have found that for the best results, hard wired crossovers impart a transparency of the reproduction which is unequalled by other construction methods. Each of our inductors is trimmed to be exactly the correct value and assembled by hand onto the hard-wired circuit board together with precision polypropylene capacitors for all primary signal circuitry.

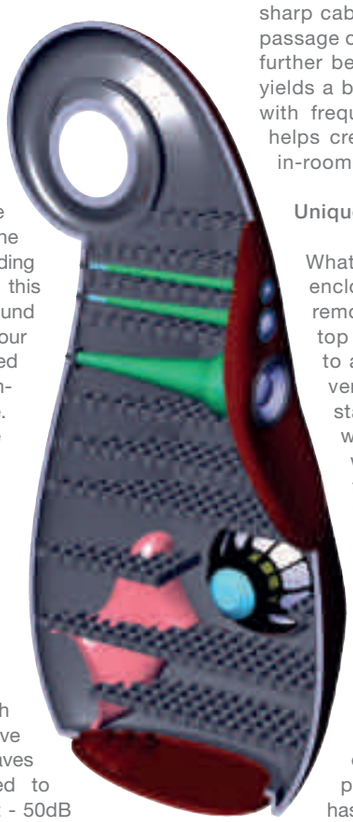
G1 G2 and G3 GIYA

GIYA IS A LOUDSPEAKER SYSTEM LIKE NO OTHER

Their very shape is defined by proven acoustic principles taken to their logical conclusions, untethered by conventional wisdom and common construction techniques. Every element of the design has been refined to an extraordinary degree - from our patented hand-built drive units, to our advanced vacuum infused composite enclosure, to our relentless elimination of resonances and reflections.

Their very shape is defined by proven acoustic principles taken to their logical conclusions, untethered by conventional wisdom and common construction techniques. Every element of the design has been refined to an extraordinary degree - from our patented hand-built drive units, to our advanced vacuum infused composite enclosure, to our relentless elimination of resonances and reflections.

Giya series is defined by its remarkable sense of sonic transparency and tonal naturalness. Principal Vivid Audio designer Laurence Dickie pioneered the application of tapered tube absorbers in Nautilus™ as a means to eliminate destructive resonances and reflections from within driver enclosures. With Giya, we apply this design technique to all four of the driver subsystems in the loudspeaker, including the low frequency section. It is exactly this tapered bass enclosure which coils around to such visually striking effect. It is our innovative combination of this tapered absorption tube with a pair of reaction-cancelling critically-tuned vents that is unique. Our patented technology provides the benefits of near-complete elimination of internal resonances and reflections afforded by the tapered absorber, along with the low distortion, high efficiency, and moderate enclosure size courtesy of the vents.



Frequencies above 220Hz are handled by our well proven and tremendously successful trio of drivers; the C125S low- mid, the D50 high-mid and the D26 high frequency unit. Each driver is chosen to have a first break-up frequency at least two octaves above the highest point it is required to reproduce so ensuring output is, at most - 50dB relative to the main signal.

Unlike our previous models however, the C125S is not required to reproduce low frequencies but is limited to those above 220Hz. This significantly reduces the excursion requirements so permits the flux of the magnet to be concentrated into a shorter gap region thus increasing flux density and in turn increasing efficiency. In addition, the C125S has its own exponential tube coupled directly to the rear of the driver to ensure the ideal loading conditions and freedom from enclosure resonance.

Smoothly Contoured Cabinet

On the front side of the diaphragms, in the area immediately surrounding these three drivers, the cabinet is smoothly contoured to avoid any acoustic discontinuity which might perturb the emerging wavefront so the sound that reaches the listener is not distorted by secondary reflections from sharp cabinet edges. While principally used to smooth the passage of the wavefront for the clarity of the main signal, a further benefit of the smoothly curved enclosure is that it yields a broad horizontal dispersion which declines slowly with frequency. This gives a very even coverage which helps create a huge listening area and a well -balanced in-room response.

Unique Horn Absorbing Cabinet with Port

What really defines Giya, however, is the bass enclosure. Its distinctive curling horn absorber removes the problem of standing waves between the top and bottom of the cabinet while allowing the port to augment the low frequency output with a classic vented box alignment. Simply adding a port to a standard tapered tube loaded driver simply doesn't work since the tube effectively saps the energy which would otherwise drive the port output, but the inventive step employed in the Giya designs is to use an exponential absorber with just the right taper rate; one which permits the horn to fully absorb the internal reflections while on the other hand taking away none of the port output.

To complement this remarkable enclosure a completely new high output bass driver was developed for G1 Giya and is employed in a reaction cancelling configuration with each one visible on either side of the enclosure. An impressive technical story in its own right, the C225 driver includes many of the proprietary technical innovations for which Vivid Audio has become recognised. When combined with our advanced enclosure and filter network design, the result is incredibly tight, articulate bass without a trace of overhang, delivered with impressive authority and solidity.

There are in fact many technical details that are responsible for Giya's remarkable performance, many of them developed and patented by Vivid Audio: catenary dome profiles, open pole radially polarised rare- earth magnet systems, isolating compliant driver mounts, reaction-cancelling bass driver mounts, short-coil long-gap motor systems, highly vented voice coil formers, highly aligned heat-conductive driver chassis, tapered tube absorbers, and a host of other engineering details.

G1 GIYA

G1 GIYA SPECIFICATIONS

Configuration: 4-way 5-driver system
Cabinet: Glass reinforced balsa cored sandwich composite
HF: D26 26mm metal dome unit with Tapered Tube loading, catenary dome profile, radially polarized super flux magnet structure & isolating compliant mount
MID: D50 50mm metal dome unit with Tapered Tube loading, catenary dome profile, radially polarized magnet structure & isolating compliant mount.
LOWER MID: C125S with Tapered Tube loading, short-coil long-gap motor design, 50mm CCA ribbon coil on highly vented former, highly aligned chassis, radial magnet structure & isolating compliant mount
MID-BASS: C125S with Tapered Tube loading, short-coil long-gap motor design, 50mm copper ribbon coil on highly vented former, highly aligned chassis, radial magnet structure & isolating compliant mount.
LF: C225 2 x 225mm metal coned units with short-coil long-gap motor design, 75mm copper ribbon coils on highly vented formers, highly aligned chassis, radial magnet structures & reaction cancelling compliant mount
Bass loading: Exponentially tapered tube enhanced bass reflex
Sensitivity: 91dB @ 2.83Vrms at 1.0 meter on axis
Impedance: (Ω) 6 nominal, 4 minimum, low reactance
Frequency range - 6 dB points: 25 - 36,000 Hz
First D26 Break Up mode: 44,000 Hz
Frequency response (Hz): 29 – 33,000 +/- 2 dB on reference
Harmonic distortion: (2nd and 3rd) < 0.5% over frequency range
Crossover frequencies (Hz): 220, 880, 3500
Power handling (music program) watts rms: 800
Dimensions (H, W, D) mm: 1700, 440, 800
Net weight (kg): 80
Shipping dimensions (H, W, D) mm: (kg): 1807, 895, 600
Shipping mass (kg): 105

Note: TECH TALK - a technical paper packed with detailed explanations of all the unique VIVID AUDIO technologies and a Power Point Presentation entitled MAKING OF GIYA can be downloaded from this website: **www.vividaudio.ch**

G2 GIYA

Following the launch of the G1 in 2008 and the wave of critical acclaim with which it was received, it was decided that this singular product should be joined by a smaller sibling to suit a more modest listening environment.

With just half the internal volume, the G2 Giya was launched in 2010 but was immediately acknowledged as possessing all the qualities of the larger model with a minimum of compromise. Of course there was every reason to expect the mid and high frequencies to be virtually unchanged but the key was the low end performance.

Bass alignment in Giya designs is like any reflex enclosure and fundamental rules of physics connect the size of the cabinet and driver design with the efficiency and bass extension. Judicious juggling of parameters resulted in a response which closely follows the shape of that of the G1 albeit with a modest reduction in output level and extension but completely preserving the essential qualities of the Giya bass speed and articulation.

As with the C225 bass unit used in G1, the new C175 in G2 uses an aluminium magnesium alloy diaphragm but, while it is customary to downscale the motor when using a smaller cone, because of our unique approach to bass alignment it has been possible to employ exactly the same magnet and voice coil as that in the larger driver, giving the same generous linear excursion. Identical suspension profiles also permit the huge 50mm mechanical travel so, despite its reduced size, this driver is still capable of moving enormous amounts of air. Such a light cone and high efficiency motor naturally results in stunning bass 'speed' and articulation.

Every driver and filter network is optimised to give a true fourth order acoustic response through each crossover point. The result is zero phase shift between each successive driver so each pair sums seamlessly as power transfers from one to the next. Furthermore, this type of alignment yields a symmetrical vertical coverage, while the close proximity of the drivers, the result of the use of the compact radial magnet topology, ensures a wide vertical coverage meaning that the listener will experience the same sound whether sitting upright or relaxing in the deepest armchair.

Low pass crossover filters for bass drivers typically require large values and the unusual parameters of C175 and C225 mean those in the G1 and the G2 Giya are, if anything, still larger, but while might be tempting to adopt the smaller cheaper ferrite inductors and electrolytic capacitors, we continue to use air cored inductors and polypropylene capacitors for all the main filter components. As in all the range and for all frequency bands, the crossover filters are hard wired by hand without the use of a PCB, a more painstaking assembly method which is acknowledged to give the most vibrant performance.

All Giya enclosures are built using fibre reinforced skins with a low density core. This type of sandwich structure yields a shell with a stiffness to weight ratio and high dimensional accuracy normally reserved for aerospace applications. Lateral fibre reinforced grids complement the stiff shell and ensure all modes are well out of band and cabinet colouration all but eliminated.

G2 GIYA SPECIFICATIONS

Configuration: 4-way 5-driver system
Cabinet: Glass reinforced balsa cored sandwich composite, carbon fibre base
HF: D26 26mm metal dome unit with Tapered Tube loading, catenary dome profile, radially polarized super flux magnet structure & isolating compliant mount
MID: D50 50mm metal dome unit with Tapered Tube loading, catenary dome profile, radially polarized magnet structure & isolating compliant mount
MID-BASS: C125S with Tapered Tube loading, short-coil long-gap motor design, 50mm CCA ribbon coil on highly vented former, highly aligned chassis, radial magnet structure & isolating compliant mount
LF: C175 2 x 175mm metal coned unit with Short-coil long-gap motor design, 75mm copper ribbon coils on highly vented formers, highly aligned chassis, radial magnet structures & reaction cancelling compliant mount
LOWER MID: C125S with Tapered Tube loading, short-coil long-gap motor design, 50mm copper ribbon coil on highly vented former, highly aligned chassis, radial magnet structure & isolating compliant mount
BASS: C175 - 2 x 175mm metal coned unit with Short-coil long-gap motor design, 75mm CCA ribbon coils on highly vented formers, highly aligned chassis, radial magnet structures & reaction cancelling compliant mount
Bass loading: Exponentially tapered tube enhanced bass reflex
Sensitivity: 89dB @ 2.83Vrms at 1.0 meter on axis
Impedance: (Ω) 6 nominal, 4 minimum, low reactance
Frequency range - 6 dB points: 29 - 36,000 Hz
First D26 Break Up mode: 44,000 Hz
Frequency response (Hz): 33 – 33,000 +/- 2 dB on reference
Harmonic distortion: (2nd and 3rd) < 0.5% over frequency range
Crossover frequencies (Hz): 220, 880, 3500
Power handling (music program) watts rms: 800
Dimensions (H, W, D) mm: 1383, 360, 638
Net weight (kg): 55
Shipping dimensions (H, W, D) mm: (kg): 1485, 740, 556
Shipping mass (kg): 75

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G3 GIYA

Enclosing a volume of just over one quarter of that of the G1, the new Vivid Audio G3 is the answer to those seeking the purity of reproduction of the GIYA series in a package which is easily accommodated into the more typical home environment.

At just over a quarter of the volume of the G1, G3 is the latest Vivid Audio loudspeaker in which the bass chamber resonances have been eliminated by the combination of ported enclosure with a precisely shaped tube. Again this exponentially tapered absorber sweeps over the top of the cabinet to give one of the most distinctive loudspeakers ever created. But in G3 the engineering concealed within this visually striking feature goes further, for it actually contains two exponentially tapered tubes back-to-back, with the second being attached to the rear of the low mid-range driver where it presents a perfectly behaved, resonance-free load.

The new design details do not end there, as a result of the diminutive size of G3, a new approach to the configuration of the system was required to maintain the tweeter height at about 1m from the ground. Now the loop formed by the bass and mid-range absorber is also spanned by the two exponential tubes loading the rear of the upper mid-range and high frequency dome drivers with their matched taper.

The foundation of any multi-way loudspeaker lies in the low frequency band. It is the characteristics of this section which set the levels against which the rest of the system will be aligned. Careful balancing of the size of the enclosure, the tuning and the all-important bass driver specification is required to produce a system with good efficiency while preserving the dynamics, frequency and time response. Our holistic approach to low frequency system alignment allows Vivid Audio great freedom with the bass driver design and, despite the reduced enclosure volume, permitted the use of the same 75mm motor system as the C225 featuring an enormous transduction factor yet resulting in a system free of the typical boomy bass which can result. We are proud to be able to announce the new C135 bass unit which uses ultra-long-throw suspensions together with a matching radially polarised magnet structure for an exceptional linear excursion capability. Coupled with the now familiar Vivid Audio heat-dissipating chassis design, these bass units have an unprecedented margin between thermal power handling and acoustic output meaning the lowest power compression factor of any design to date. These drivers will produce sustained output power levels without showing any signs of distress for indefinite periods of time. But a bass driver design is not only about the low frequency end; it must also reproduce the high frequency part of the band without break-up or distortion and the C135 easily achieves this with a 30% improvement in frequency of the first top-end mode.

Further up the range in all three mid and high frequency bands, the driver compliment is identical to that of G1 and G2 offering the same essential qualities of effortless transparency with absolutely no compromise in specification required to conform to the smaller enclosure size.

The care taken with our driver design and the smoothly shaped external contours of the cabinet all help to give an intrinsically smooth response so when it comes to the crossover filter design it is simply a matter of division of the frequency bands rather than compensating for the shortcomings of the drivers which can so often be the case. Handmade and hard-wired, the crossover construction has been proved to offer superior sonic transparency when compared to the machine-made printed circuit-based commercial alternatives employed by most.

G3 GIYA SPECIFICATIONS

Configuration: 4-way 5-driver system
Cabinet: Glass reinforced balsa cored sandwich composite
Finish: Multi component high gloss automotive
HF: D26 (patented) with Tapered Tube loading, catenary dome profile, radially polarized super flux magnet structure & isolating compliant mount
MID: D50 (patented) with Tapered Tube loading, catenary dome profile, radially polarized magnet structure & isolating compliant mount
MID Bass: C125S with Tapered Tube loading, short-coil long-gap motor design, 50mm copper ribbon coil on highly vented former, highly aligned chassis, radially polarized magnet structure & isolating compliant mount
LF: Tow C135 with short-coil long-gap motor design, 75mm copper ribbon coil (preliminary) on highly vented former, highly aligned chassis, radial magnet structure and reaction cancelling compliant mount
Bass loading: Exponentially tapered tube enhanced bass reflex
Sensitivity: 87dB @ 2.83Vrms and 1.0 meter on axis
Impedance: (Ω) 6 nominal, 4 minimum, low reactance
Frequency range - 6 dB points: 33 - 36,000 Hz
First D26 Break Up mode: 44,000 Hz
Frequency response (Hz): 36 – 33,000 +/- 2 dB on reference axis
Harmonic distortion: (2nd and 3rd) < 0.5% over frequency range
Crossover frequencies (Hz): 220, 880, 3500
Power handling (music program) watts rms: 800
Dimensions (H, W, D) mm: 1161, 341, 578
Net weight (kg): 41
Shipping dimensions (H, W, D) mm: (kg): 1514, 674, 1300
Shipping mass (kg): 65

Note: TECH TALK - a technical paper packed with detailed explanations of all the unique VIVID AUDIO technologies and a Power Point Presentation entitled MAKING OF GIYA can be downloaded from this website: **www.vividaudio.ch**

K1

The K1 floor-standing model is the largest of the range employing the coupled front and back bass driver system and integral stand.

K1 employs a single D50 mid range driver, between 900Hz and 4kHz with the range beyound being handled by a D26 tweeter. Below 900Hz the K1 uses four C125 midbass drivers, two mounted on the front baffle and two mounted on the rear baffle of the cabinet. These four drivers are internally coupled in pairs via screw tensioning units for reaction cancelling. Through the use of innovative crossover circuity, all drivers receive the same signal at frequencies below 100Hz while above this point drive to the lower and rear drivers is progressively attenuated leaving only the front upper driver to operate all the way to 900Hz to ensure good vertical dispersion at crossover.

Fourth order filters ensure phase coherence through both main crossover points resulting in a seamless and symmetrical polar performance. Integral to the K1 enclosure is the stand, made from the same cast carbon fibre reinforced polyester compound as the enclosure, the stand provides an exceptionally stable footing further guaranteed by the use of a total of five spikes mounted around the periphery of the base. Adjustment of the two rear spikes and that at the front sets the correct attitude while the remaining two can then be brought into contact with the floor for maximum safety.

Within each of the streamlined arms are hidden separate conduits to guide the Van den Hul® interconnectioning cable away from the two internally mounted crossovers into the base. Precision machined gold plated terminals are disretely located at the rear of the base to allow a visually unobtrusive connection to the outside world.

K1 SPECIFICATIONS

Configuration: 3 & 1/2 way vented cabinet
Cabinet material: Complex loaded carbon fibre filled polymer
Finish: High gloss automotive
Drive units:
HF: D26 – 25mm metal dome unit with Tapered Tube loading
MID: D50 – 50mm metal dome unit with Tapered Tube loading
BASS: C125 – 4 x 125mm metal coned unit (coupled)
Sensitivity: 89dB @ 2.83Vrms @ 1.0 meter on axis
Nominal Impedance: (Ω) 6
Frequency range – 6dB points: 33 – 36,000Hz
Frequency D26 Break Up mode (Hz): 44,000
Frequency response (Hz): 38 – 33,000 Hz +/- 2dB on reference axis
Harmonic distortion (2nd and 3rd): < 0.5% over frequency range
Cross over frequencies (Hz): 100, 900, 3500
Power handling (music program) watts rms: 600
Loudspeaker dimensions (H, W, D cabinet, D base) mm: 1300, 440, 448
Net weight (kg): 56
Shipping dimensions (H, W, D) mm: 1420, 450, 560
Shipping mass (kg): 70

C1

Vivid Audio products have been designed with home theatre applications in mind from the start and the C1 is our answer to the crucial centre channel application.

C1 is a three-way system employing a single D50 mid range driver, between 900Hz and 4 kHz with the range beyond being handled by a D26 tweeter. Below 900Hz the C1 uses two C125 midbass drivers mounted on either side of the central mid and high domes. The two drivers are identically driven in order to preserve a symmetrical horizontal polar pattern at all frequencies.

Fourth order filters ensure phase coherence through both crossover points resulting in a seamless response. Optionally, the C1 may be mounted on its matched stand. Made from the same carbon fibre loaded polyester compound as the enclosure, it provides an exceptionally stable footing while holding the loudspeaker at a gentle angle to suit most floor mounted situations. To further guarantee the stability of the complete system, a total of five custom spikes are mounted around the periphery of the base.

Precision machined and gold plated binding posts are recessed into the rear of the cabinet and linked internally to the crossover boards using Van den Hul® cable throughout.

C1 SPECIFICATION

Configuration: 3 way vented cabinet
Cabinet material: Complex loaded carbon fibre filled polymer
Drive units:
HF: D26 – 26mm metal dome unit with Tapered Tube loading
MID: D50 – 50mm metal dome unit with Tapered Tube loading
BASS: C125 – 2 x 125mm metal coned units
First D26 Break Up mode: 44,000 Hz
Sensitivity: 90dB@ 2.83Vrms at 1.0 meter on axis
Nominal Impedance: (Ω) 8
Frequency range – 6dB points: 43 – 36,000 Hz
Frequency response: 49 – 33,000 Hz +/- 2dB on reference axis
Harmonic distortion (2nd and 3rd): < 0.5% over frequency range
Cross over frequencies (Hz): 100, 900, 3500
Power handling (music program) watts rms: 300
Loudspeaker dimensions (H, W, D cabinet, D base) mm: 268, 755, 330
Net weight (kg): 23
Shipping dimensions (H, W, D) mm: 370, 945, 450
Shipping mass (kg): 35

C1 STAND

Material: Complex loaded carbon fibre filled polymer
Dimensions (H, W, D): 350, 448, 292
Net weight (kg): 13
Shipping dimensions (H, W, D) mm: 440, 535, 380
Shipping mass (kg): 20

B1

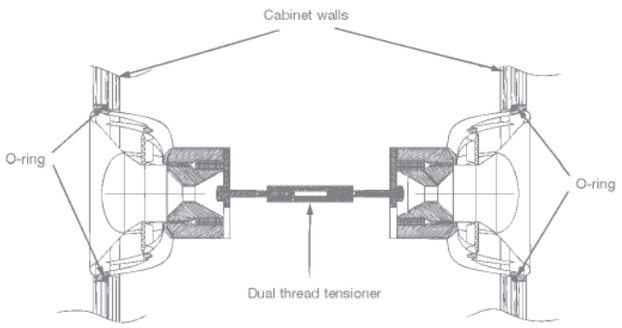
The B1 floor standing model incorporates four drivers in a 3 & 1/2 way system. B1 employs a single D50 mid- range between 900Hz and 4 kHz with the range beyond being handled by a D26 tweeter. Below 900Hz the B1 uses two C125 midbass drivers, one mounted on the front baffle and one on the rear baffle of the cabinet.

These two drivers are internally coupled via a screw tensioning unit for reaction cancelling. Both drivers receive the same signal at frequencies below 100Hz while above this point the drive to the rear is progressively attenuated leaving only the front driver to operate all the way to 900Hz in order to keep the distance between drivers at a minimum around crossover. Fourth order filters ensure phase coherence through both main crossover points resulting in a seamless and symmetrical polar performance.

Integral to the B1 enclosure is the stand. Made from the same carbon fibre loaded polyester compound as the enclosure, this considerable yet graceful design provides an exceptionally stable footing while not detracting from the acoustic environment surrounding the loudspeaker, thanks to the small frontal area of each arm. To further guarantee the stability of the complete system, a total of five custom spikes are mounted around the periphery of the base. Within each of the streamlined arms are hidden separate conduits to guide the Van den Hul® interconnecting cable away from the two internally mounted crossovers into the base. Precision machined WBT® gold plated terminals are discretely located at the rear of the base to allow a visually unobtrusive connection to the outside world.

B1 SPECIFICATIONS

Configuration: 3 & 1⁄2 way vented cabinet
Cabinet material: Complex loaded carbon fibre filled polymer
Drive units:
HF: D26 – 26mm metal dome unit with Tapered Tube loading
MID: D50 – 50mm metal dome unit with Tapered Tube loading
BASS: C125 – 2 x 125mm metal coned unit (coupled)
First D26 Break Up mode: 44,000 Hz
Sensitivity: 89dB @ 2.83Vrms at 1.0 meter on axis
Nominal Impedance: (Ω): 4
Frequency range – 6dB points: 35 – 36,000Hz
Frequency response: 39 – 33,000 Hz +/- 2dB on reference axis
Harmonic distortion (2nd and 3rd): < 0.5% over frequency range
Cross over frequencies (Hz): 100, 900, 3500
Power handling (music program) watts rms: 300
Loudspeaker dimensions (H, W, D cabinet, D base) mm: 1095, 265, 375, 420
Net weight (kg): 38
Shipping dimensions (H, W, D) mm: 1250, 430, 530
Shipping mass (kg): 50



V1.5

While being two-way systems the V1 range of loudspeakers maintain the Vivid philosophy of pistonic operation throughout the frequency spectrum. Available in two sizes, the smaller V1 w, V1h and V1s are best suited to mounting near to boundaries such as wall or desktop use while the larger V1.5 pedestal mount will sit quite happily well away from the walls. With its larger 22 litre enclosure, V1.5 is designed for free field use and is bonded to a stainless steel reinforced resin pedestal which gracefully complements the curves of the enclosure while concealing the twin sets of Van den Hul cabling. External connection is made through four high quality WBT terminals recessed into the heavy cast polyester base.

All V1 models use the C125 aluminium cone driver to handle the range up to 3kHz. Mounted on soft silicone rubber O-rings in the proprietary cast carbon fibre loaded polyester enclosure, structural resonance is kept to a minimum allowing these patented driversto deliver an exceptional mid-range transparency along with an articulate bass common to all Vivid products.

High frequencies are handled by the patented D26 in a variant specially adapted to sit at the apex of a shallow waveguide unique to the V1. Not only does this perfectly time align both frequency ranges but also affords directivity control to match that of the mid-range through crossover, a frequently overlooked issue in two way designs, resulting in the smoothest power response.

V1.5 SPECIFICATIONS

Configuration: 2 way vented cabinet
Drive units:
HF: D26 26mm metal dome unit with Tapered Tube loading
Mid Bass: C125 –125mm metal coned unit
Finish: High gloss automotive
Sensitivity: 89dB/2.83Vrms @1m
Nominal Impedance: (Ω) 8 Frequency range (Hz): - 6dB points 40 - 33,000
Frequency response (Hz): 42 - 30,000 +/- 2dB on reference axis Harmonic
Distortion (2nd and 3rd harmonics): < 0.5% over frequency range
Cross over frequency: (Hz): 3000
Power handling (music program) watts rms: 150
Cabinet material: Complex loaded carbon fibre filled polymer
Loudspeaker dimensions (H, W, D) mm: 1130, 255, 240
Net mass (kg): 23
Shipping dimensions (H, W, D) mm: 1300, 430, 460
Shipping mass (kg): 37 (unit)

V1s s•w•h

V1s

Ideal as a desktop monitor the V1s features a built-in base moulded in solid resin for stability.

V1h

The horizontally mounted V1h is intended for use as a centre channel in home theatre installations but also permits the use of V1 in a studio monitor application.

V1w

Specifically designed for wall mounting, the V1w includes a versatile and easy-to-use ball and socket bracket which allows 30 degrees of rotation in any direction.

V1s • w • h SPECIFICATIONS

Configuration: 2 way vented cabinet
Drive units:
HF: D26 26mm metal dome unit with Tapered Tube loading
Mid Bass: C125 125mm metal coned unit
Cabinet material: Complex loaded carbon fibre filled polymer
Sensitivity: 89dB @ 2.83Vrms at 1.0 meter on axis
Nominal Impedance: (Ω) 8
Frequency range: - 6dB points 42 – 33,000 Hz
Frequency response: 47 – 30,000 Hz +/- 2dB on reference axis
Harmonic distortion (2nd and 3rd): < 0.5% over frequency range
Cross over frequency (Hz): 3000
Power handling (music program) watts rms: 150
Loudspeaker dimensions (H, W, D) mm: 635, 255, 195
Net weight (kg): V1s = 17, V1w = 13, V1h = 15
Shipping dimensions (H, W, D) mm: 710, 700, 360 (pair), 710, 374, 360 (unit)
Shipping mass (kg): V1s = 47 (pair), V1w = 39 (pair), V1h = 22 (unit)

The V1w is suitable for both dry and masonry type walling.

Pallet of Finishes

Every Vivid Audio loudspeaker cabinet is hand finished using an elaborate process to ensure the very best aesthetics and finish quality.

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To prepare the raw cabinet for painting it must first be abraded by hand before applying two layers of high body 2k primer. After each coat the surface is hand polished and inspected until is deemed ready for the application of the colour layers. Three separate coats of the chosen pigment are used to impart extra depth and purity to the colour. After another meticulous surface inspection the cabinet is ready to be over-coated with four layers of the highest quality clear lacquer available. A final hand polish brings the surface to a brilliant sheen before being locked in with two layers of protective wax.

2 standard colours* are available, Pearl white and Piano black. But our range of possible colours is actually limited only by your imagination. Having full spraying facilities and a complete automotive paint mixing unit allows you the luxury of selecting a Vivid Audio product in any automotive finish at an additional cost.

Smoothly Contoured Cabinet

The Vivid Audio Giya is manufactured from a high performance lightweight composite consisting of two skins of unidirectional quasi-isotropic glass reinforced plastic sandwiching a lightweight end grain balsa core. (We use only renewable balsa). This laminated structure ensures exceptional stiffness of the cabinet while minimizing density. Not only does this keep the finished product weight to a minimum but it also pushes the structural resonant modes up in frequency and further out of band when compared with heavier or less exotic structures.

Other speaker enclosures in the Vivid Audio range are manufactured from a highly filled composite consisting of a polyester matrix loaded with milled carbon fibers and oxides of silicon and aluminium in spherical form. The resulting cabinet is exceptionally stiff and inert so providing an excellent foundation on which to mount the drivers.

STANDARD FINISHES

Pearl* (pearl metallic)

Piano* (pearl metallic)

Oyster (metallic)

Arctic (metallic)

Borollo (pearl metallic)

Sahara (metallic)

VIVID AUDIO, its distributors, representatives, agents and retailers cannot be held responsible for variations that may occur in final production.

Design : Jon Kemp Design. Photography : E.A. Kehrli.

VIVID audio

Deutschland
Vivid Audio
Willi Schulte-Niermann
Van-der-Reis-Weg 9
59590 Geseke

Tel. +49 (0) 29 42 98 88 48
www.vividaudio.de
schulte@vividaudio.de

South Africa
Coherent Acoustic Systems
Philip Guttentag
P. O . BOX 343
KLOOF 3640

Tel. +27 31 705 4168
Cell. +27 861 4 VIVID
www.vividaudio.com
info@vividaudio.com

Switzerland
Vivid Audio Schweiz
Art & Sound Gallery
Robert Trunz
Consulting GmbH
Horwerstrasse 64
6010 Kriens

Tel. +41 41 310 37 57
Cell. +41 78 953 94 50
www.vividaudio.ch
techtalk@vividaudio.ch

UK
Vivid Audio UK
Raymond Rowles
The Old Barn
Rosier Business Park
Coneyhurst Rd
Billingshurst
West Sussex
RH14 9DE

Tel. +44 1403 782221
Cell. +44 7950 274224
www.vividaudio.co.uk
uk@vividspeakers.com