GIYA Cu
OWNERS GUIDE

VIVID audio

TABLE OF CONTENTS

CHAPTER 1:
Introduction 1

CHAPTER 2:
Getting Started 2

CHAPTER 3:
Unpacking Instructions 3
Positioning 5
Cabling and Connections 7
To Spike or Not 10
Running In 10
Warranty 11

CHAPTER 4:
Specifications 12

CHAPTER 5:
Contact Details and Conformity 16
Vivid Audio Ethos 17

CHAPTER 1 **INTRODUCTION**

We're very happy that you chose our Vivid Audio GIYA Cu Loudspeaker system, so please spend a little time reading this manual to help ensure that you are equally happy with your purchase.

These loudspeakers are the culmination of many years of research by our design engineer Laurence Dickie and his R&D team. These speakers feature a range of unique drive units and enclosures which deliver an unprecedented purity of reproduced sound. All our drivers include novel features, many of which have been patented.
A fundamental design philosophy has always been to keep resonances and the effects of reflection well out of band and this applies just as much to our mid-range units as to our tweeters. We don't take a basically floppy cone and treat it until the resonances are acceptable, we make jolly sure they are not there in the first place!

Similarly, you may have noticed that the GIYA enclosure is a unique rounded form. This is not done for pure aesthetics but is there to completely remove the effects of diffraction from the edges of the cabinet. It houses four separate exponentially tapering horns each tuned to the task at hand. Even the LF section is novel in its use of an exponentially tapered absorber with a vented system, creating the world's first enclosure of this type.

Having perfected a driver and enclosure combination that delivers totally smooth responses, the filter designs are quite uncomplicated with no extra elements required to make up for deficiencies of the basic acoustic designs. We follow the conventional rules for system design quite closely and find there is no need to deviate because we do not have to compensate for any driver idiosyncrasies.

So, having taken all this trouble to develop these loudspeakers we feel it would be only fair that you take the time to read these notes to help squeeze out as much of that performance as possible into your listening space.

CHAPTER 2 **GETTING STARTED**

IMPORTANT NOTES

The silver domed/coned drive units are extremely delicate. They must never be subjected to probing fingers or other sharp objects! If so, certain damage will result and a replacement driver will have to be fitted. This replacement will not be performed under guarantee conditions.

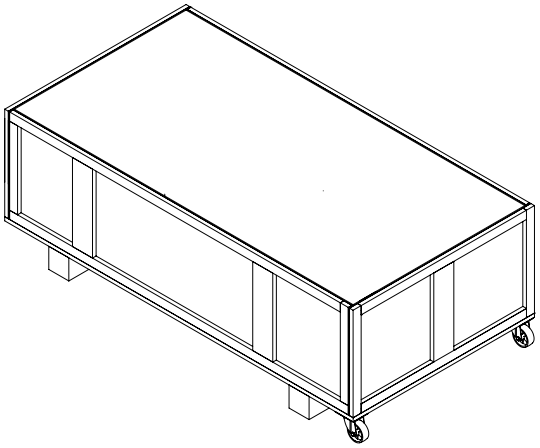
UNPACKING INSTRUCTIONS

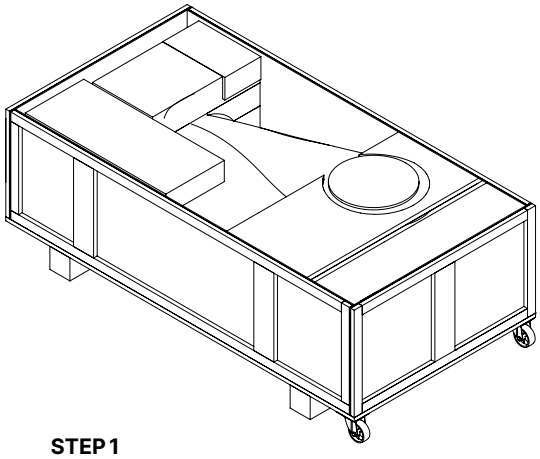
Read these instructions that contain important information about the safe use, installation, and maintenance of this loudspeaker.

- Unpack the loudspeaker following the instruction sheet attached to the shipping crate. The method is also described overleaf.
- Keep potentially hazardous packaging (plastic bags, polystyrene, etc.) out of the reach of children.
- Dispose of packaging in compliance with current waste disposal requirements.

UNPACKING SEQUENCE

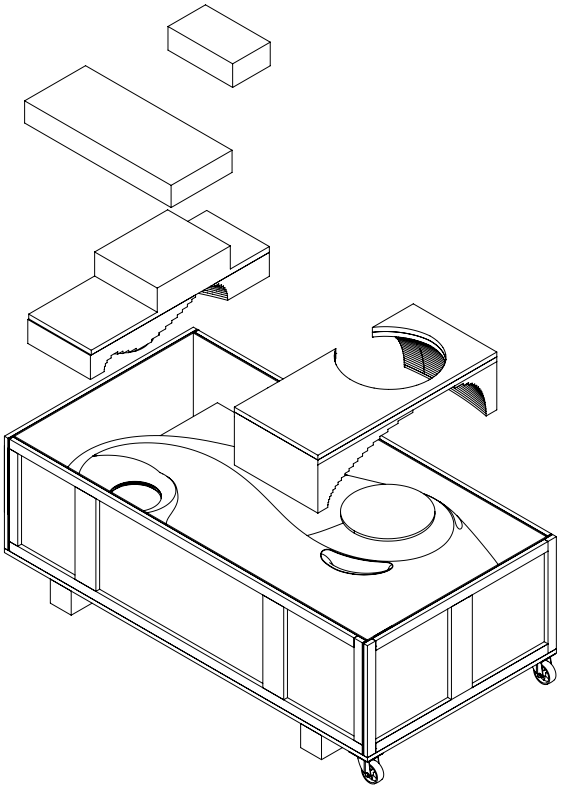
GIYA G4, G3, G2 & G1 SPIRIT Cu





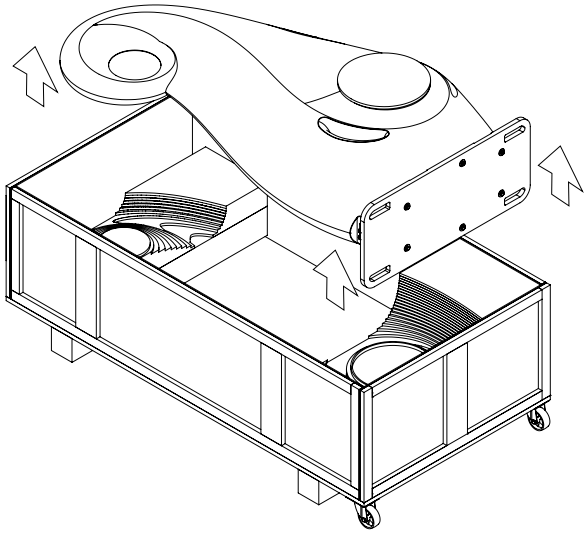
STEP 1

The crate should be positioned on the floor resting on its pallet feet as shown. Remove the ten 5mm Allen Key lid securing bolts. Set aside for use when replacing the lid. remove the (HEAVY) lid CAREFULLY, setting aside for use later.



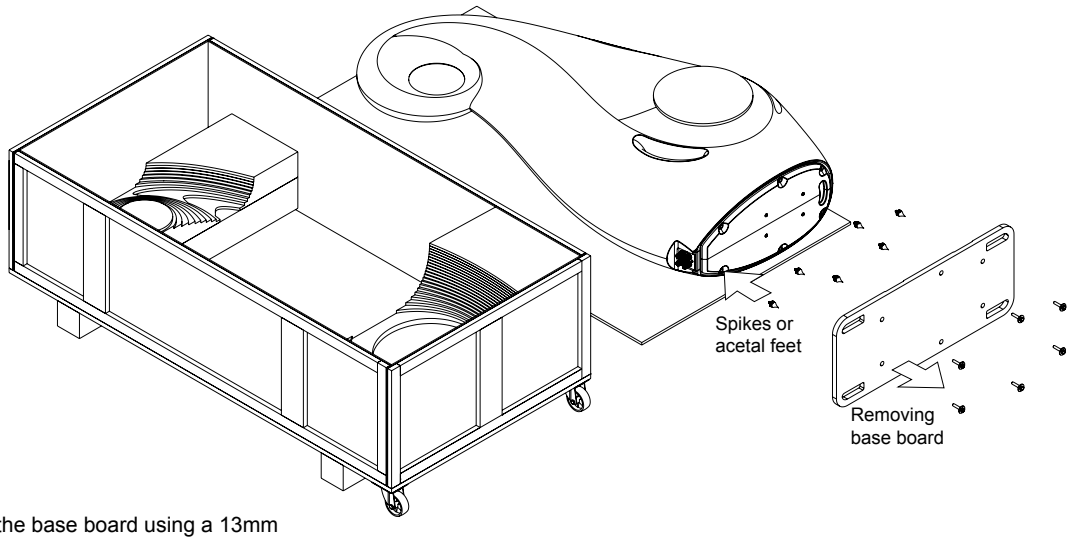
STEP 2

Remove the accessory kit and the two grille boxes. then remove the two upper packaging inserts (Foam rubber and polystyrene). There is also a separate foam rubber protector for the bass driver. this must be removed carefully.



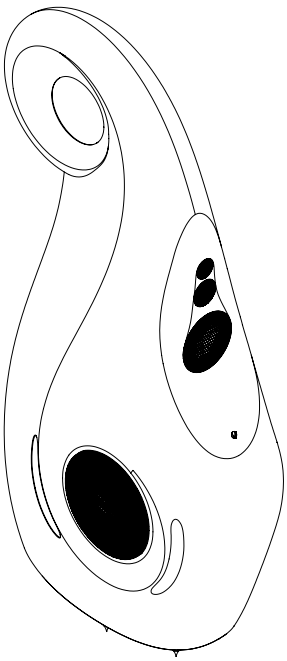
STEP 3

A minimum of three people are required to lift the speaker unit out of the crate, with two positioned at the base and one at the top. Once removed, carefully rest the unit on soft cushioning or the provided packaging



STEP 4

Remove the base board using a 13mm spanner and then insert spikes or acetal feet into the six receptors.



STEP 5

Stand the speaker unit up vertically in position.

IMPORTANT NOTICE

ALL PACKAGING MATERIALS SHOULD BE PLACED BACK INTO THE CRATES AND SAVED FOR FUTURE USE. SHOULD SERVICE BE REQUIRED DURING THE LIFE OF YOUR SPEAKERS, IT IS IMPERATIVE TO REPACK IN THESE ORIGINAL CRATES FOR SHIPPING TO YOUR NEAREST SERVICE CENTRE.

POSITIONING

Vivid Audio loudspeakers are designed with both home theatre and two-channel stereo applications in mind. Because of the intrinsically shielded magnet structure, all our products can be placed near magnetically sensitive equipment if necessary.

For two-channel installations, we recommend as a starting point that you position the loudspeakers at least 0.5m from the rear wall and, if anything, a little further from the side walls if possible. Having two different distances here will help to smooth out the effects of the boundaries on the low frequencies and improve the sense of space and scale of the performance.

As a general rule, the closer the speakers are to a wall, the more the upper bass will be accentuated. Conversely, if you move them away from the walls, only the lower bass will be reinforced. If the walls are of a light construction, these reinforcement effects will be reduced accordingly.

Furthermore, all rooms have resonances at a number of single frequencies that will tend to be emphasised when the speakers are placed nearer the corners, which can cause 'boominess'. So again, if these are problematic, try moving the speakers away from the corners.

Remember that all the rules which apply to the loudspeaker position also apply to the listening position. So if you find that the low frequencies are a little light because you have placed your sofa in the middle of the room to be equidistant from the surround speakers, you may recover some of this low end by moving the speakers back towards the walls. Similarly, if you are in two-channel mode with the listening position close to the back wall and you have excessive bass, try moving away from the wall.

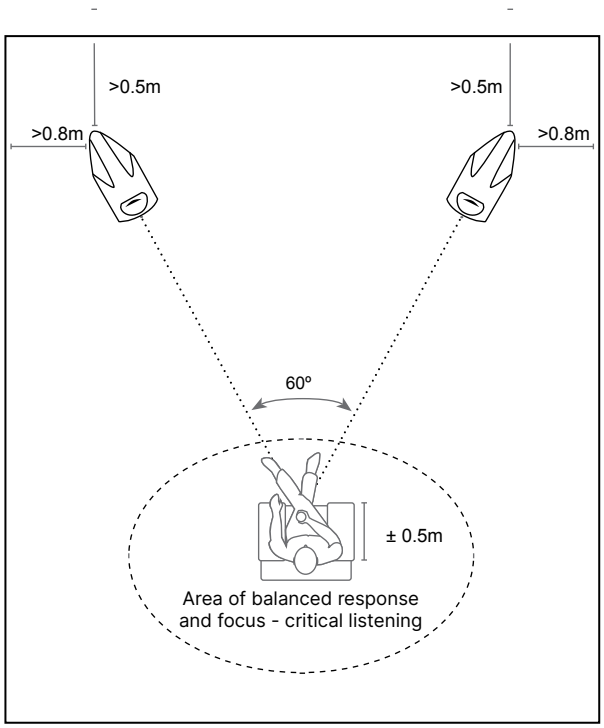


Fig 1

POSITIONING

One technique for finding the best speaker position which exploits this reciprocity is to place a speaker at the listening position and to move around the room to find places with an even bottom end. Then you can swap the speaker and listener and find the same result. This only works for one speaker at a time and the results with both speakers in position may not be quite as you expect, so be prepared to try again.
A good listening position will often be found at the point where the loudspeakers are about 60˚ apart, as shown in Fig. 1. Much closer together than this and the apparent image width will suffer; much wider and you may find a 'hole' in the centre of the image, particularly when seated off to one side.

There is no appreciable beam from any of the Vivid Audio loudspeaker drivers; that is to say, the tonal balance is consistent across a wide angle. This is opposed to some designs where the high frequencies, in particular, quickly fall in level as you move away from a point directly in front of the speaker, as if they were shining out from a flashlight. It is our experience that, because of the very smooth wide sound field produced by our designs, angling the loudspeakers so that they both face a position just ahead of the listener can help to widen the useful area where stereo sound may be enjoyed.

An absence of beaming is also a feature in the vertical plane, so being absolutely at the same level as the loudspeakers is not important. In fact, a perfectly enjoyable sound balance may be found when lying on the floor more or less anywhere between the loudspeakers!

Because of the infinite number of combinations of wall materials, dimensions, and furnishings in the room, it is impossible to give more precise positioning advice than that above. In the end, we strongly recommend that you experiment. So if you are going to fit the spikes to the bases, we suggest that you leave this until the positions have been determined.

CABLING AND CONNECTIONS, ALL SPEAKERS WITH INTERNAL CROSSOVERS

We recommend that you make and secure all connections before turning on any power to avoid short-circuiting the amplifiers.

We don't try to recommend any particular cable because it is an ever-changing field, but we would advise that you get something reasonably thick—say, 2.5 mm² for less than 5m lengths and 4 mm² for longer lengths.

The GIYA is provided with four terminals to permit the use of bi-wiring or bi-amping, as shown in Fig. 2. The mid and high frequency crossover is connected to the right-hand pair of terminals (as viewed from the back) and the low frequency to the other, allowing the user to have separate wires feeding each section connected to a single amplifier output in the case of bi-wiring, or two independent amplifiers in the case of bi-amping. This latter case even gives rise to the possibility of mixing different types of amplifier for the two ranges, but be careful to match the gain and polarity of the two if you are to avoid messing up the basic frequency response of the loudspeaker.
If you are in any doubt about this, you really should talk to your dealer.

Fig 2

Fig 3. For many folks the use of extra wires will seem quite pointless in which case a single pair of good quality conductors will be all you require and the two pairs of terminals must be linked at the speaker using the links provided. In the accessories pack you will find two 10cm lengths each of red and black wire each terminated with a 4mm plug and spade. Link the hi-mid section to the low section as shown in Fig.3. supplied non bi-wired links.

Fig 4. This arrangement will allow you to use amplifier leads terminated with either spade connectors (as shown) or 4mm plugs.

IMPORTANT NOTE: FIGURES 2, 3 AND 4 ARE VIEWS OF THE GIYA TERMINAL TRAY AS SEEN FROM BELOW! THEREFORE THE HF/MF TERMINALS ARE SHOWN ON THE LEFT IN THESE IMAGES.

SPECIAL CONNECTION INSTRUCTIONS FOR GIYA Cu WITH EXTERNAL CROSSOVERS

The GIYA Cu with the external filter option, utilises a Neutrik NL8 umbilical cord connecting the speaker to the cross-over.

This high current (20A), versatile connection allows the speaker to be used in numerous operating modes, including the external passive filter option as supplied.

- Insert and twist the NL8 connector as shown in the drawings below, until a clear click is heard. Fig 5

Fig 5

SPECIAL CONNECTION INSTRUCTIONS FOR GIYA G1 SPIRIT Cu WITH EXTERNAL CROSSOVERS

- The speaker terminals of the external crossover are arranged in the same fashion as the rest of the Giya range where the HF/MF terminals are on the right when viewed from behind.

- Please refer the detailed description of these connections in the preceding pages.

- The crossovers can be used with M8 Spikes (carpeted floors), or with the M8 Polyamide feet, all provided.

SPIKES

One of the innovative design features of the Vivid Audio GIYA Cu design is the use of reaction cancelling drivers and ports, the purpose of which is to cancel out any reaction forces on the enclosure and hence removes the dependency of the overall acoustic delivery on the way in which the loudspeaker is supported on the ground. Nevertheless we do provide six M8 threaded holes in the bottom surface of the base and six corresponding spikes to fit into these points if required for stability on soft carpets. Some have also reported sonic benefits as a result.
We recommend that you have two fairly strong people available for this operation. First tilt the speaker forward onto a soft non abrasive surface, while inserting the two rear spikes and the two in the middle of the speaker. Now tilt the speaker back onto these spikes and tilt backwards to allow the insertion of the front two spikes. Ensure that the speaker is vertical as seen from the front. Adjust the two rear spikes accordingly if not. From the side you will have to verify that the base is horizontal. Don't worry too much about this since it is purely a visual issue so if it looks OK leave it there. If it needs a tweak then use the front spikes to make that adjustment. Once aligned tighten the lock nuts on these four spikes. Then unscrew the two side spikes by hand until they touch the ground, at which point it will become difficult to turn them further. Tighten the two corresponding lock nuts and the operation is complete. Only hand tighten all these spikes - DO NOT USE A WRENCH.

RUNNING IN

It is now fairly well accepted that, despite the protestations of the engineering teams who design loudspeakers and who have difficulty accounting for it, there is a definite period of time during which the sound of the equipment improves subtly. There are definite and measurable changes which occur, particularly for the compliant suspensions, as the various materials used soften up and gradually approach their design values but it really does seem that some other improvements occur. Some well respected authorities have even referred to it as a 'learning' phase. There is also the far more earthly explanation that what is happening is that our brain/ ear combination is becoming accustomed to the new sound balance from the loudspeakers.
Certainly, the great clarity delivered by the Vivid Audio approach can be a little disconcerting at first if you have been used to the sound of mid-range cone break-up and the first reaction is that something is missing. Bit by bit you realise that something is missing and you are really hearing through to the original recording in a way that you never experienced before. This can in itself be rather revealing of poorly edited work but then the original recording engineers may not have had the benefit of monitoring on Vivid Audio loudspeakers so give them a break!

It is not really for us to get involved here with the philosophy or metaphysics of what might be happening but suffice to say that you shouldn't be too surprised if, after owning your speakers for a few weeks, you really get very excited about what you're hearing.

CHAPTER 3 **WARRANTY**

IMPORTANT

- The manufacturer warrants that these loudspeakers supplied will at the time of delivery correspond to the description given by the manufacturer.
- The manufacturer declines all responsibility for damage resulting from improper, incorrect or negligent use.
- Repairs must only be carried out by a service centre authorised by the manufacturer.
- All other warranties, conditions or terms relating to fitness for purpose, quality or condition of the Goods, whether express or implied by statute or common law or otherwise are excluded to the fullest extent.
- This warranty is not transferable and may be extended at the discretion of the distributor in your country.

GIYA G1 SPIRIT Cu

Configuration	4-way, 5 driver
Cabinet material	Glass reinforced balsa cored sandwich composite
Cabinet colour	Piano Black, Lexus Pearl White, Oyster Matte
Bespoke cabinet colour	Bespoke colour options available on request
Drive units	HF: D26 – 26mm alloy/carbon diaphragm dome unit with Tapered Tube loading
	Upper-mid: D50Cu – 50mm alloy/carbon diaphragm dome unit with copper cap and Tapered Tube loading
	Lower-mid: C125-75SCu – 125mm alloy/carbon diaphragm (equivalent 6.5") with 75mm voice coil with copper cap and Tapered Tube loading
	Bass: 2 x C225-100, 225mm alloy diaphragm (equivalent 11.5") drivers with 100mm voice coil in 45mm gap
Bass loading	Exponentially tapered tube enhanced bass reflex
Sensitivity	92 dB @ 2,83 Vrms at 1m on axis
Nominal impedance (Ω)	6 nominal, 3 minimum at 20 KHz no phase shift at Zmin
Frequency range (Hz)	-6 dB points: 25 – 36.000
First D26 Break Up mode (Hz)	44.000
Frequency response (Hz)	29 – 33.000 +/- 2 dB on reference
Harmonic distortion (2nd and 3rd harmonics)	<0.3% below 220Hz, <0.1% between 220Hz and 3.5kHz, <0.3% above 3.5kHz
Crossover frequencies (Hz)	220 - 880 - 3.500
Power handling (music program)	1.600 watts rms
Loudspeaker dimensions	1.600mm (H) x 440 mm (W) x 820 mm (D) - 63" (H) x 17.32" (W) x 32.28" (D)
Net weight	67,4kg (148lbs) internal crossover | 62kg (136lbs) external crossover)

GIYA G2 Cu

Configuration	4-way, 5 driver
Cabinet material	Glass reinforced balsa cored sandwich composite, carbon fibre base
Cabinet colour	Piano Black, Lexus Pearl White, Oyster Matte
Bespoke cabinet colour	Bespoke colour options available on request
Drive units	HF: D26 – 26mm alloy/carbon diaphragm dome unit with Tapered Tube loading
	Upper-mid: D50Cu – 50mm alloy/carbon diaphragm dome unit with copper cap and Tapered Tube loading
	Lower-mid: C125SCu - 125mm alloy cone/50mm voice (equivalent to 6.5” driver) unit with coil copper cap and Tapered Tube loading
	Bass: C175mm – 2 x 175mm metal cone/76mm voice coil (equivalent to 9.5”) drivers with underhung motor design
Bass loading	Exponentially tapered tube enhanced bass reflex
Sensitivity	89 dB @ 2.83 Vrms at 1m on axis
Nominal impedance (Ω)	6 nominal, 4 minimum, low reactance
Frequency range (Hz)	-6 dB points: 29 – 36,000
First D26 Break Up mode (Hz)	44,000
Frequency response (Hz)	33 – 33,000 +/- 2 dB on reference
Harmonic distortion (2nd and 3rd harmonics)	<0.5% below 220Hz, <0.1% between 220Hz and 3.5kHz, <0.3% above 3.5kHz
Crossover frequencies (Hz)	220 - 880 - 3,500
Power handling (music program)	800 watts rms
Loudspeaker dimensions	1.383mm (H) x 360mm (W) x 638mm (D) - 54,4” (H) x 14,2” (W) x 25,1” (D)
Net weight	48kg (106 lbs) internal crossover - 43kg (94 lbs) external crossover

GIYA G3 Cu

Configuration	4-way, 5 driver
Cabinet material	Glass reinforced balsa cored sandwich composite, carbon fibre base
Cabinet colour	Piano Black, Lexus Pearl White, Oyster Matte
Bespoke cabinet colour	Bespoke colour options available on request
Drive units	HF: D26 – 26mm alloy/carbon diaphragm dome unit with Tapered Tube loading
	Upper-mid: D50Cu – 50mm alloy/carbon diaphragm dome unit with copper cap and Tapered Tube loading
	Lower-mid: C125SCu - 125mm alloy cone/ 50mm voice coil (equivalent to 6.5” driver) unit with copper cap and Tapered Tube loading
	Bass: C135 – 2 x 135mm alloy cone units/76mm voice coil (equivalent to 8”) drivers with underhung motor design
Bass loading	Exponentially tapered tube enhanced bass reflex
Sensitivity	87 dB @ 2.83 Vrms at 1m on axis
Nominal impedance (Ω)	6 nominal, 4 minimum, low reactance
Frequency range (Hz)	- 6 dB points: 33 – 36.000
First D26 Break Up mode (Hz)	44.000
Frequency response (Hz)	36 – 33.000 +/- 2 dB on reference
Harmonic distortion (2nd and 3rd harmonics)	<0.5% below 220Hz, <0.1% between 220Hz and 3.5kHz, <0.3% above 3.5kHz
Crossover frequencies (Hz)	220 - 880 - 3,500
Power handling (music program)	800 watts rms
Loudspeaker dimensions	1.161mm (H) x 341mm (W) x 578mm (D) - 45,7” (H) x 13,4” (W) x 22,8” (D)
Net weight	42kg 93lbs (internal crossover - 37kg (81lbs) external crossover

GIYA G4 Cu

Configuration	4-way, 5 driver
Cabinet material	Glass reinforced balsa cored sandwich composite, carbon fibre base
Cabinet colour	Piano Black, Lexus Pearl White, Oyster Matte
Bespoke cabinet colour	Bespoke colour options available on request
Drive units	HF: D26 – 26mm alloy/carbon diaphragm dome unit with Tapered Tube loading
	Upper-mid: D50Cu – 50mm alloy/carbon diaphragm dome unit with copper cap and Tapered Tube loading
	Lower-mid: C100SCu - 100mm alloy cone/50mm voice coil (equivalent to 5.5” driver) unit copper cap with Tapered Tube loading
	Bass: C125L – 2 x 125mm metal cone/50mm voice coil (equivalent to 7”) drivers with underhung motor design
Bass loading	Exponentially tapered tube enhanced bass reflex
Sensitivity	86 dB @ 2,83 Vrms at 1 m on axis
Nominal impedance (Ω)	6 nominal, 4 minimum, low reactance
Frequency range (Hz)	-6 dB points: 36 – 36.000
First D26 Break Up mode (Hz)	44.000
Frequency response (Hz)	39 – 33.000 +/- 2 dB on reference
Harmonic distortion (2nd and 3rd harmonics)	<0.5% below 250Hz, <0.1% between 250Hz and 3.5kHz, <0.3% above 3.5kHz
Crossover frequencies (Hz)	250 - 1.000 - 4.000
Power handling (music program)	400 watts rms
Loudspeaker dimensions	1.011mm (H) x 300mm (W) x 460mm (D) - 39.80” (H) x 11.81” (W) x 18.11” (D)
Net weight	25,4kg (56lbs) internal crossover - 21kg (46lbs) external crossover

CHAPTER 5 **VIVID AUDIO**

To quote from Laurence's Vivid Audio ethos "Through aeons of evolution, the hearing of animals like ourselves has developed an incredibly high sensitivity to resonance and reflection as a matter of survival. Much crucial information can be deduced about the surrounding environment and the presence of imminent danger by listening for subtle changes in these effects."

At Vivid Audio, we believe that the subjective transparency of a loudspeaker system is closely related to the reduction of these two aberrations and have made every effort to keep them to a minimum.

Each driver is designed to be pistonic within their working bandwidth with resonant break-up occurring well above the range of audibility or at a frequency at least five times that of the upper band limit. At the rear of the diaphragm, any cavities which might lead to in-band resonances have been comprehensively vented or coupled to matched absorbers, both actions completely remove them.

Reflected energy from the rearward wave-front is also controlled by minimising the area of any obstruction, such as the struts of the low frequency driver chassis or the dome driver pole pieces, and ensuring that the wave then passes through an adequate volume of absorbent material before meeting any boundaries.

A similar attention to detail is applied to the external surface which dictates that it be free of any sharp features which might give rise to distinct reflections. The gently swept spline curve, which defines the cabinet shape, ensures that the emerging wave-front encounters no perturbation. All aspects of the enclosure design were created using solid modelling to produce the seamless curves and precision features. Such a smooth form and compact enclosure results in an extremely wide mid-band dispersion which gradually narrows with ascending frequency. This natural sounding polar performance integrates with a wide variety of listening environments to give a gently falling power response, the quality of which is widely accepted as being highly desirable. Having a well-controlled off-axis response also widens the usable listening area to include much of the room.

Radial magnet technology permits the mounting of drivers with a minimal separation ensuring the widest vertical beam at crossover while also having an intrinsically low stray magnetic field.

The introduction of copper shielding in Giya has resulted in a significant reduction in mid-range distortion. This has the effect of lowering the general level of the noise floor which has further revealed the various benefits of minimising the effects of resonance and reflection. So perhaps what you hear is not so much a reduction in distortion but a greater awareness of the transparency and space around the instruments.

Having such a flowing line, the natural choice of enclosure material is a fibre reinforced composite. We selected a synthetic resin which is infused into quadraxial carbon & e-glass reinforcement under vacuum. The moulds were cast from patterns cut from solid using multi-axis CNC mills driven directly from the 3D models created in the design process.

The doubly curved form of the cabinet walls possesses a high degree of intrinsic rigidity further enhanced by GRP lateral bracing. These two factors ensure that the structural resonant modes are sufficiently high in frequency. Direct mechanical excitation of the enclosure is, in any case, avoided by rigorous use of compliant mounts for every driver and reaction cancelling between the two low frequency drivers which ensures that there is no net movement of the chassis. Reaction cancelling is further applied to the design of the low frequency venting where a pair of ports, with streamlined profile to minimise air turbulence, are positioned on either side of the cabinet. The result is an extremely stable low frequency performance with a unique appearance.

Individually each one of these actions improves the performance by a small but significant step. Taken together, these small steps add up to a real advance in the art of loudspeaker engineering. But here at Vivid Audio, we include these improvements not just to present an engineering tour-de-force but because we sincerely believe that the use of our loudspeakers will enhance your enjoyment of the music. And that, after all, is what it's all about.

COHERENT ACOUSTIC
Email: info@vividaudio.com

Exponentially tapered tube absorber combined with critically tuned reaction canceling vents
is a Vivid Audio patented technology.

Drivers D26k (CH and IS), D26V (CH and IS), D50Cu (CH and IS), C125SCu (Standard, L, S, Cu), C100
(Standard, S and Cu), C135, C175 and C225 (76mm and 100mm)
are protected by registered patents.
All COHERENT ACOUSTIC products are in conformity with the EMC directive and the low
voltage directive. Availability of models may vary from country to country.

Please visit our website for the details of your nearest authorised dealer and to learn more about us and our technology.

VIVID audio®

www.vividaudio.com