

AUDIO ACOUSTICS

Manufactured for the Ultimate in Fine Art Audio Produce. Est. 1982



The Best Loudspeakers in the World Probably!

Six years ago Audio Acoustics embarked upon an intensive research and development programme, to produce a range of totally no-compromise loudspeakers. Incorporating great originality and lateral thinking, these speakers tackle problems of multiple resonances that are completely overlooked in other commercial designs. The result is a range of speakers that reproduce music with a dramatically superior dynamic range, bringing an extraordinary sense of calm and a unique naturalness to the task.

The design and execution of these exceptional speakers results from an obsessive and painstaking attention to the subtlest details, progressively eliminating successive weakest links and compromises in order to achieve the finest possible performance. To do so requires starting with the very best ingredients, and this has often involved designing and manufacturing the various individual elements ourselves – including, if necessary, the actual materials involved.

Ideals

To produce 'the best' one has to have specific measurable goals. Otherwise, 'the best' is merely a cliché. We therefore started off with a 'clean sheet' approach, and an ideal of perfection to work towards. Working with what is currently available and compensating for the inadequacies of any given component, however well founded, will not achieve perfection.

Our philosophy is to respect fundamental principles and go back to engineering basics, while also taking advantage of innovative 21st century technologies, combined with the finest craftsmanship and meticulous execution at every stage of production. It's an approach that is far from simple, but we believe it's the only way to deliver a radical and clear step forward.

It is easier to design for perfection than to achieve it in practice. There are no short cuts to quality, or quick ways to achieve it. Many hours of skilled work are involved in making every loudspeaker: each masterpiece is a true labour of love.





Carbon Black

Mirabelle Maroon

Sapphire Ti-C

Titanium Metallic a



Fundamental K-2



Titanium Metallic a



Enclosure

The enclosure plays a crucial role in the performance of a speaker, and is actually much harder to engineer than the drive units. Ideally, the cabinet provides a totally inert mounting platform for the drive units, yet it's subjected to all the vibrations and pressures created by those drive units. Vibrations generated in the cabinet walls lead to coloration's and a loss of low level information, and because the enclosure has a much greater surface area than the drivers, even the slightest movement on a molecular scale has a disproportionately large effect.



Having devised an original way to produce an enclosure that controls resonance at molecular level, we have produced the world's first 6-layer laminated cabinet construction. It use three types of membrane, each with it's own specific characteristics, along with stainless steel panels.

The laminated walls are thick, but not excessively so, as the intention is primarily to control vibrations, not simply to add mass and stiffness. From the first few bars of music, the total lack of cabinet coloration and the elimination of enclosure distortion will be obvious.

Port-x

The front port was Uniquely designed for optimum airflow control, eliminating several important internal air compliance factors.

Diffraction

Extensive time and design development has gone into producing a structure that eliminates cabinet edge diffraction effects – a major factor in smearing musical information. Clever internal shaping further eliminates internal standing waves, in conjunction with the third membrane. A time-aligned driver layout further enhances the point source ideal.

Drive units

Most loudspeaker systems operate with diaphragm break-up resonances occurring within the audible operating bandwidths of the drive units. They try to disguise these by one means or another, but the effects of break-up can never be completely removed, and the associated harshness, sibilance and distortion can always be heard.



To do justice to the exceptional enclosure engineering, Audio Acoustics speakers use the very finest and most technically advanced drive units developed and manufactured in conjunction with the world's leading specialists. These are carefully designed so that their diaphragm motion is strictly pistonic and free from resonance across a much wider bandwidth than the frequency range over which they are required to operate.

The unique sapphire and diamond diaphragms we use have just a fraction of the mass of those used in most conventional drivers, yet possess unparalleled structural stiffness, and are driven from a complex advanced magnet structure

We are the first company in the world to use drivers with titanium voice coils and formers, which give awesome results, eliminating distortions and delivering exceptionally high definition and resolution, with startling transient power and extended, organic bass. Once experienced never forgotten.

Our top-of-the-range models have an ultra-wide-bandwidth diamond diaphragm midrange unit, alongside the very latest 'next generation' diamond tweeters.

Wow Resonance
Interconnect



Resonance Control

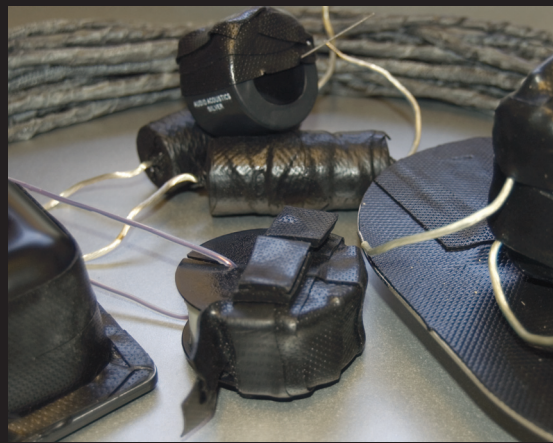
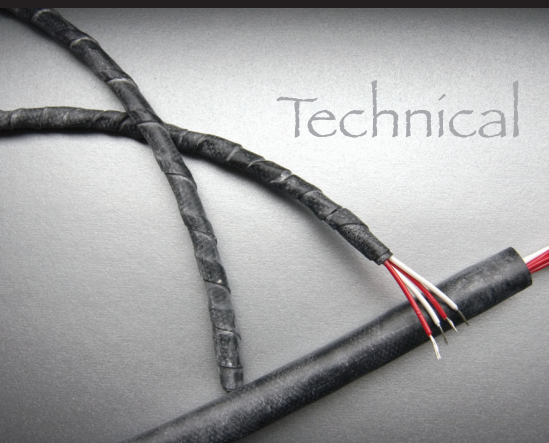
The task of the loudspeaker is to generate all the sounds audible to the human ear, which means it has to cover an exceptionally wide bandwidth, from bass to treble, and an amazingly wide dynamic range, from very quiet to exceptionally loud. The sounds we actually want to hear come from the vibrations of the driver diaphragms and the port. The trouble is, all the other parts of the loudspeaker, inside and out, tend to become excited by all the vibrations going on, and resonate in symphony. It's only by removing and controlling all those unwanted resonant vibrations in every part of the speaker that a truly 'quiet' loudspeaker can be created, where only the wanted sounds from the driver diaphragms are heard.

The single biggest hurdle we have to overcome lies in the control of these resonances. Extensive experimentation was needed to come up with the various control mechanisms that would enable all the different components within the loudspeakers to function without resonances affecting their performance. The consequences of the removal of these resonance effects were truly breathtaking, bringing a remarkable sense of calm and quiet backgrounds to the music.

The specially formulated resonance-controlling membranes we use throughout the speakers are all painstakingly hand made, and even extend to the finest details, like the pure silver electrical connections and 'five nines' silver crimps.

Cables

During the development phase we made some important discoveries about the effects of resonance on internal connecting cables, we have applied these findings to our two ranges of speaker and interconnect cables, which will harmonise and integrate to eradicate problems further up the component chain, offering major system synergy improvements.



Crossover network

The finest component parts are used throughout, with near-zero-tolerance silver capacitors and air-cored inductors. Our top quality silver cables are constructed with extensive use of resonance-controlling membranes. Once all the components, adhesives and membranes are torqued into place, they form a complete harmonious compound sealed structure.

Floor coupling

A unique 3-point floor-coupling system was devised for superior energy isolation. Cone feet, machined from high specification VX steel, undergo repeated hardening and finishing processes, and are finally nickel-plated and polished, producing hardness close to titanium. The result is a durable point able to support several hundred kilos at a finite point, and these locate into matching coupling pucks.



Sapphire Ti-C

Carbon Black





Surface Finish

The Cabinet enclosure has a deep-lacquer metallic finish, created using an elaborate 16-gel Coat™ process devised in conjunction with a world-renowned British lacquer specialist. Successive stages of coating, cutting and polishing take a total of 14 days, and result in a delicate yet durable mirror finish, comparable only to the finest examples found on the custom car scene. A selection of colours is offered as standard, though any chosen alternative may be specified at no additional charge.

The speakers are fitted with top quality WBT Platinum Signature terminals.

In this world of superficial value, we believe we are offering a true alternative. Please contact us with any further questions; or you require an evaluation in your home listening environment with your own equipment; or would like details of your nearest dealer / distributor.

A special thank you to Phillip Pimblott for his invaluable help and moral support.

Shabir Bhatti, Designer

“The power to shape the future is earned through persistence. No other quality is as essential to success. It is the sandpaper that breaks down all resistance and sweeps away all obstacles. It is the ability to move mountains one grain of sand at a time”

FUNDAMENTAL-K2

Frequency Response:	20Hz - 43KHz (+ / -3dB)
Impedance:	4 Ohms (nominal)
Drive Units:	
Bass-Mid:	2x200mm "W" cone
High Frequency:	25mm ferro fluid sapphire concave
Amplifier compatibility:	well suited to amps 12W or more
Nominal Power Handling:	100W
Standard finishes:	Advanced Specialist 16 coat Gel Suspension Finish: Inclusive™ Carbon Black, Titanium Metallic a, Mirabelle Maroon
Size (wxhxd):	295 x 1271 x 400mm
Weight: Per System Pair	265lbs/120kg 2 box



Key Features: Special drivers with resonance control; Four-layer double membrane laminate enclosure; sapphire tweeter; 'W' sandwich diaphragm bass/midrange driver; Resonance Base wired; optimum vented airflow control port; custom wound crossover components to specified nil tolerance values.

SAPPHIRE Ti-C

Frequency response:	19Hz - 33KHz (+/-3dB)
Impedance:	4 Ohms (nominal)
Drive Units:	
Bass-Mid:	2x133cm2 sapphire ceramic; titanium voice coil
High Frequency:	30mm High Resolution Wide dispersion Ferro fluid Sapphire Ceramic Concave
Amplifier compatibility:	well suited to amplifiers 30W or more
Nominal power Handling:	100W
Standard Finishes:	Advanced Specialist 16 coat Gel Suspension Finish™ Carbon Black, Titanium Metallic a, Krystal Metallic a, Mirabelle Maroon
Size (wxhxd):	290 x 1226 x 390mm
Weight; Per System Pair:	300lbs/136kg; 2 box



Key Features; Six-layer treble-membrane laminate enclosure; sapphire tweeter; sapphire diaphragm bass / midrange with titanium voice coil, 'Resonance Base' silver wired; optimum vented airflow control port; custom wound crossover components to specific tolerances; 'nine nines' wiring.

"Passion is powerful... nothing was ever achieved, without it, and nothing can take it's place. No matter what you face in life, if your passion is great enough, you will find, the strength to succeed. Without passion, life has no meaning. So put your heart, mind and soul into even your smallest acts... this is the essence of passion. This is the secret to life"

"I have the simplest of tastes. I am always satisfied with the best"..... Oscar Wilde



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