

***"Why do you want so much money for your products? & What do I get for my money over all the nice looking shiny box's & shapes available today from other manufacturers for what looks like a fraction less money?"***

Hello everyone now that is a mouthful for a heading. If I may grasp your attention for a few minutes I will endeavor to put forth a fundamental and unique approach to something that has not changed for some time and hopefully at the end you may ponder and question and even possibly want to audition one of our products.

**Thank you for taking the time to read four those who do not in a word: Finite!**

The below is a brief! Amount of what go into an audio acoustics loudspeaker. The Facts only.

**Where does our magical sound come from?**

Well excuse me if I get vague in areas but we have a number of patents and will limit specifics. Our loudspeakers have very little in common with conventional cabinets. The research and development of our composite construction has been a substantial multi million pounds investment and labor to technology over a period of 11 plus years ongoing.

We do not have some very unique findings that alas do not extend from convention in any aspect nor will they integrate any understandings viewed from conventional loudspeaker construction and understanding or integrity.

Our findings are: that the cabinet is a direct extension to the diaphragm of a drive unit, yet paradoxically at the same time is totally a separate and "active" entity on its own and with it own equilibrium in terms of energy incitement and control. This discovery meant that even if one is to produce a cabinet out of pure diamond the fact it has mass will mean it will always be working against it self with the presence of the back wave. So once this eureka moment for me became apparent my objective in producing a stable cabinet has shifted in expectation of form and function forever!

**Hence arguing over whether a cabinet is made of mdf steel or any material known to man is but nigh on irrelevant or incredibly moot at best! -WHAT! YES!**

All will contain mass and store energy which in turn will be its down fall and so in conventional designs one step forward adheres another at best back, agreed, naturally over engineering has produced some acceptable though convoluted results.

With out specifics our cabinet wall is constructed from 30-mm material adjacent to this is our x factor polymer that controls the inception of resonance's; by converting them to heat adjacent to this is another 30 mm material than a adhesive with a multi layer second and third different layer developed membrane is bonded, than follows adhesive and 2-mm's of 316 stainless steel plate that is further bonded and substantially bolted through holding the section together and finally a layer of specifically developed adhesive attaches a 3rd material that absorbs, redirects and eradicated any two points in a cabinet wall, let alone worrying about parallel sides for standing wave problems.

A cleaver combination with the flow port combines a clever solution to the internal air compliance problems.

Naturally basic adherences in design to not having any baffles adjacent to a drive unit and "other" basic half attempted efforts to date are addressed to extreme and perfect completeness.

The merits of our work can be clearly seen and demonstrated in other three main alternatives which offer a level of competence though only in areas of presentation i.e.

The resolution and dynamics of a great horn or compression sensitive system demonstrates dynamics and clarity beyond reproach but works only in a small bandwidth before being plagued by distorting within a few octaves or SPD at best, a total alternative to this type of cabinet is the electrostatic with its breathtaking lack of box coloration naturally and transparency coupled with miniscule levels of distortion, yet again limited with bandwidth and the lack of moving any air to produce a complete concept and lastly a conventional passive box be it substantial in construction lacks the other two technology merits though can move air and produce ample uncontrolled resonance's at the bottom of the bandwidth; combined with and a overall integrity of compromise. These three approaches show us how Fundamental the cabinet is.

Now the Sapphire gives you the benefits of all without the compromise of any.

I will not for obvious reasons elaborate suffice to say the finest and eminent speaker manufactures today are the ones who have a understanding of cabinet importance, and when questioned they may accept that at best as high as a 33% balance between cabinet, component, and driver exists; though we are talking very few people here indeed. Our findings are different.

I would like to take this opportunity to mention also that how a drive unit functions without resonance's interacting with its own function is also a valid point overlooked and our cabinets are designed and constructed so as to allow the drive unit to be a independent separate entity allowed to function on its own without interference of any kind as is the cabinet a separates structure independent of it components function and own distortion noise floor levels! Aah! As is the entire electronic system within. The signal path this way is totally isolated and unaffected by resonances removed from start to finish. Leaving each finite component to function independently and a bit like potting a crossover network but we pot the whole loudspeaker!

I have an interesting-Not/ repeated comment that seems to raise it's ugly head repeatedly that I think is paramount to address and mention to separate the Sapphire OR ANY Audio Acoustics loudspeaker system.

People seem obsessed with the size of the drivers and the fact that it has a diamond diaphragm or not. Yes I am the first to believe in moving air and hardness of material, but this seems to be there beginning and ending to a good loudspeaker system's judgment and sentencing. I would like to get a moot but absolute point across and that is that if the driver is not allowed to function, than it is irrelevant what the unit is made from within scope naturally.

I can get a lot more out of a sapphire hf and spend the money on a competent structure for it to be allowed to work than buy a trophy diamond hf for marketing purposes and a spec sheet and place in a pointless passive thick box. The best component in the world is of little use if used without company that is executed to the same finite unsurpassed design and execution of standard!

Naturally the cosmetics of the cabinet in visual design and function were done for a two-year period to produce form and function and to compliment completeness with a level of timeless beauty to compliment traditional and contemporary surroundings.

Hence the sapphire is at home at the end of a high quality av. set up or a state of the art 2 channel system.

The cabinet finish was co. developed with a British lacquers specialist. Particles are suspended in 16 coats over a substantial base coat process. This in turn is sanded down repeatedly from coarse to extreme fine. Time consuming lengths to a finer and finer sanded flat finish than the polish is applied and buffed to a mirror finish. The Finnish is incomparable to any product or automotive paint finish available today. The process is extensive, long and a true labor of love with patients to produce the end results.

The cabinets are cleverly executed if one contemplates the complexity of construction it would be difficult to build it in a square box let alone a excessive shape of beauty so the construction has been designed in modular plate sections and 886! Fixings are put in by hand from the inside to hold all together naturally attention to specific torque tightening is also applied to relevant fixings. Once all the resins/polymers and adhesives go off it leave's a one whole homogenous unit.

### Why are our products expensive?

Well the Cabinet! That's easy; manufacture your design components from a clean sheet approach so you have exactly what you require? What you cannot do to "impeccability" than get the world finest craftsmen to make for you. Exactly to nigh on nil tolerances and than through out the ones that fail and fall out side perfection. Parts are made in England; USA, Sweden and Germany only assembly is done solely in the United Kingdom with stringent QC at every finite step.

Design and produce specific materials, than ship to various people who are skilled throughout the world who can manufacture absolute components with absolute expertise.

Now execute the cabinet design and machining to a new level of compromise.

Re evaluate how basic principles of air compliance, de-fraction, energy transfer and work from reproduction of "point source" as all noise is generated as opposed to time alignment only on a limited plane in conventional designs.

Time wise the list below gives an idea ONLY of some of the labor involved:

140 hours + Finishing process- 16 gel coat's and base coat preparation process, than very extensive sanding down to a fine finish prior to polishing.

80-hour actual unit construction assembly time.

68 hours in the actual membrane panel's construction and time in the Sapphire SE model

Extensive CNC time, the elaborate cabinet structure involves substantial times on each individual panel part and complexity of cabinet.

30 hours in the application of membranes to various components, drivers and cables etc.

Testing at each stage to build to our high on zero tolerance standard on All components

4 hours testing time

12 hours detailing time for finished item

Totalling between 370-380! Man hours a pair

The above does not include the work involved in bringing this level of product's component together or its extensive production times or cost's involved in the manufacture of compromise free components.

Oh and not forgetting that we made the first sapphire and diamond diaphragms with a purely piston motion coupled with the first titanium voice coil and materials that have resonance frequency break up points above the audible bandwidth mounted on a substantial and independent unique baffle system.

Now compare to any and however elaborate a passive box with generous drivers array and a cross over network can be produced in comparison for a miniscule fraction in cost and in 4 –12 Max! Hours for the pair!

### **We introduced the world first unique resonance controlling cable systems- What is so special about them?**

Well again the cable system has been much misunderstood and is very much considered still by almost all as an accessory only to connect their ancillaries.

Secondary only to substantial ancillary components, though clearly they are fundamentally very important is understood.

My finding to the contra are that a cable system a "connecting system" as a whole from source component's actual components within to the transducer voice coil

Foam's an important and internal part of the chain as say an amplifier.

We are the first people to produce resonance controlled cable systems in the world; and are a fundamental extension developed from the needs of the transducer system, initially to keep the integrity of the signal within the loudspeaker system. Now we are applying this technology throughout the chain.

At this point we offer the transducer, the cable system, and to limit the damage of resonance's on your ancillaries function by implementing the nano pucks and Nano on rack system.

Ideally we would also remove the effects within your amplifiers and source components. At this point a hand full of the finest c.d. transport manufactures are starting to apply effort on stopping this effect on there transport with limited results, though have been achieved by mechanical over engineering methods though not the most scientific and a very convoluted way of a far more basic problem.

We offer a modification service for CdDplayers where we apply some of our membranes to the various parts -resulting in a far more prices and distortion free sound.

Cost tends to be about £500+shipping from the factory direct.

I have managed to give comparisons to show our mains cable doing as much to a c.d. player to the extent a great 5k dac would do with the Resonance mains and the Wow Resonance mains. Aim of the cable is to not have any presence just move our signal onwards without change and paramount distortion.

A lot of my findings to date are that cable offered actually only part address's basics. That being its electrical and physical construction properties.

Another whole half a world exists above this. So audio acoustics is doubtful to produce a sub £200 piece of cable as anyone with

half a understanding of soldering 4 joints can run along to there radio spares shop and buy a £5-40 a meter of OFC to Silver Bullion at best and produce a ok cable comparable to the so called specialist. Over marketed wire-hence the wrap that cable has got by some people and laughed at buy us engineer and looked with at with complete perplex.

What we offer is that the electron flow from the signals view point across the full relevant frequency bandwidth are addressed i.e. obvious basic's done already in terms of starting with the finest diamond drawn out silver litzs strand-age of the highest purest quality than Teflon coating and utilizing star earth 4 nines silver plugs with high temperature pure silver brazing all very basic as a staring point for the raw material's part.

Than we apply by hand various types of resonance controlling membranes in a particulate format that I have to be vague about to remove the cable system from being interfered with by any inception of resonances.

A good analogy that works for all our products is if one imagines the signal flowing from source component to loudspeaker and its being incited by resonance's on its journey (imagine a artist painting and that" resonance's" is someone jarring him repeatedly) this add a lot of distortion by the time it get to the end. While most people are concentrating on getting even more signal generated (finding a better artist who can paint better)- a futile and inefficient thought I am more preoccupied in letting the system actually start functioning better by removing the problem and letting everything work fundamentally far more productively; leaving us with a phenomenal amount more to start with already! (Stop the guy who is pushing the artist! - he's probably a pretty ok painter already!)

### A bit about Audio Acoustics

Well I am a perfectionist and manic extremist, I will work on a problem or a designs with obsession and irrelevant of how long it takes -were talking years sometimes that's how pig headed I am or I wont bother at all. If something is worth doing than I do it to the absolute nth degree and reproduction of music is right up there.

I am proud to meet my product owners - knowing that I created a concept to fruition personally and with pride and passion .It giving someone joy, well after the novelty factor has worn off. I apply this to most things. Sad I know but its me.

With a mechanical engineering background I could always work in parallel with electrical and mechanical ideals. Solving and utilizing from both view point's -overlooked in other designs.

I am a purist first and format and have a basic fundamental belief. One that always un complicates design, to replace with perfected basic's; be it however difficult to achieve and the repeated need to go back to the beginning and re-deign removing the need to make something work! Things should not be made to work! Half the time they don't need to be there.

The simplest designs like the wheel etc are the hardest to produce yet once established are taken for granted yet are the most effective and productive. Just Correct.

Possibly a decade from now people will take a few of my finding as basic loudspeaker & cable construction as basics. Just as over 12 years ago we were advocating the use of sapphire and diamond diaphragm & basic pure piston drive units. Alas marketing does not always let the credit go to the people who form the basis of most advancements -these tend to be credited to non independent commercial companies.

Audio Acoustics was set up 1982 in West Ealing London from a humble small flat. It was a small retail outlet offering radical cutting edge product, orientated to supplying back than, the finest service and products of true value.

In those days the though of offering someone a 7 watt SET was most astounding to people alas here we are and it only took 30 or so years for people to appreciate a well executed SET amp; again I reiterate the words well executed.

With over 30 years of experience as a High-end dealer in the 70's and early eights. I was a staunch supporter of the linearity of the single ended silver triode coupled with the dynamic horn and compression driver parameter possibilities.

This was followed as a distributor in the search for better performance verses value product. Finally dismayed with So-called high end perceived product with very little but the high end price tags only, the logical step forward was in the need to start manufacturing purist specialist audio for the last 18 years with a combination of high end amplification and loudspeaker typology.

**Culminating in producing a whole new radical approach, to a subject executed the same way for many a decade.**

**What do we have planned for the future?**

Well as you can see, that if what I can demonstrate in black and white affects the chain to this vast effect. Then naturally if we can transform a transducer that is at the end of the audio chain and the cable systems are affected to this degree well imagine how much information we have already lost in the ancillary chain! Hence the introduction of the Nano Pucks to improve on what people already have in their system is a small step in the right direction but not an answer to producing a resonance distortion free ancillary. To follow there is the NAN ON a Support Sub-frame system, isolated within an energy transfer unit price £3499 per modular stackable shelf.

Then my frightening work transducer system the Orb Weaver Diamond is to launch at CES2009 or early spring-this is a absolute speaker to show how much we have stood still and just repeatedly reinvented the loudspeaker for the past 100 years. Price is estimated at £398'000 it will be a land mark in all respects and the temporary flag ship for 3 years until the reference Diamond Oracle Statement is launched in 2010. All its development work to date is now implemented into the smaller models.

Price on the Statement will be around £600k. Before everyone runs for the hills! On a opposing note next year we launch a baby £6'950 model called "Zahrah" a superb system for the true audiophile on a budget built to a higher standard than any 50k! Plus loudspeaker at an unbelievable budget price.

### Is my reference the same as yours?

For me its the Queens royal band's just up the road or the sally army brass band in the high street on a Saturday afternoon and not forgetting my daughter as she insists away on her piano is always a delight; at least most of the time! Did I mention the fender and where would we be without her drums! Finally now and than when i get a opportunity for a evening in the Albert hall listening to a great symphony played well or even a bad one, is and should be what we pay a ludicrous amount of money to reproduce, especially out of a pile of numbers on a shinny disc or a great early decca sxl 2000 or 6000 fist generation pressed recording. These were produced with a limited amount of interfering, just a couple of great microphones and a great orchestra lead by a great conductor and no engineer with his or her perception on how everyone should sound; has to be for me a thing that bring a smile to my face.

Equipment wise its just as easy there are countless great pieces of hi if but for the true music lover we are indeed limited to nigh on less than the fingers on my hand in what I class as a component that has Nil character of its own and just expresses the music without adding, subtracting, exaggerating, coloring or replacing something with its perception on the recording.

In this small group lies the audio acoustics product 's that when in similar company bring "nothing"" and that same smile I mentioned earlier comes to my face but more so knowing we are recreating musical realism from what was once a piece of dead information stored.

If this sounds like what you are looking for do have a listen I promise no disappointment and enlightenment at worst.

*Shabir Bhatti-*  
*Designer and Manic Obsessive Perfectionist*