



Avalon Eidolon Diamond Loudspeaker

by Roy Gregory

There's an old adage in hi-fi; it's the mid-range that counts. After all, that's where 90% of the musically important information resides. But, look at just about every state-of-the-art contender in the loudspeaker stakes and the emphasis seems to be on ever increasing bandwidth, personified at the (il)logical extreme by monster, four cabinet systems such as the Wilson WAMM and original Infinity IRS, with their separate woofer towers. Indeed, if money and space present no barriers then pursuing bandwidth ceases to be a problem. But bandwidth in and of itself is of no great value. In the same way that a badly adjusted sub-woofer does more harm than good, extending the frequency extremes of any speaker is only any use if the benefits are tied to and reflected in the mid-band.

On the surface, Neil Patel of Avalon broke all the rules with the Eidolon Diamond; marketing rules that is. For a full-range speaker, intended to tackle the best of the competition (the company does produce a true flagship in the shape of the Sentinel, although it's a rare beast) the Diamond is too small, too cheap and visually indistinguishable from its cheaper sibling of the same name. And this from a company whose speakers are already smaller, more discrete (and rather more elegant) than the opposition. Indeed, a cursory glance might well suggest that the only difference between the Eidolon and the Eidolon Diamond is the latter's inclusion of a diamond diaphragm tweeter – for which virtue, a £10000 difference in cost seems like a high price to pay. However, as soon as you

think about the implications of the change you'll realise that it's far from a straight swap. The 25mm inverted ceramic dome tweeter used in the standard Eidolon extends out to a –1.5dB point at 34kHz, well beyond the supposed limits of audibility. But the new 19mm solid diamond diaphragm extends that upper limit to 100kHz. As recent experience with sub-woofers and super-tweeters has shown, extension at one end of the audio spectrum must be balanced at the other.

With this in mind, consider what happens when you insert the diamond tweeter into an existing design. Suddenly, it loses its balance and musical coherence, which is exactly what happened when Avalon first played with these drive-units. And it's not just a question of extension either. There's the issue of quality to consider: speed, resolution, distortion and dynamic range all come into play. The end result demanded a total redesign, with only the ceramic mid-range driver surviving unscathed. A new, far more powerful motor was developed for the 280mm Nomex/Kevlar bass unit, delivering increased speed and resolution, as well as an extra 2dBof extension. The cabinet, although outwardly identical had to be redesigned with new internal bracing to accommodate the changes in low-frequency output. The cross-over had to be completely reconsidered and the internal wiring has now been optimized for each specific bandwidth.

The Eidolon Diamond retains the downward firing position for its reflex port, venting into the carefully sculpted plinth, where you'll also find a single pair of screw terminals to accept speaker cables. The grille is intended to be left in place for listening, and to that end is lined with carefully contoured acoustic felt. The badge carries a small faux



(Swarowski?)
“diamond”, tweeter

aside, the only outward distinction between the two Eidolon models.

All of which makes a simple upgrade from the Eidolon to the Diamond impossible. They really are two quite distinct designs. However, the visual continuity of the Avalon speakers is an important clue to the family continuity that carries over into their sound. Listen to the Diamonds and you're listening to a perfect extension of the performance

► envelope defined by the Ascendant: But not, maybe, in the way that you might think. Indeed, your first reaction might well be that the Diamond delivers less! In fact, the big speaker possesses the same astonishingly natural tonality and understated, almost self-effacing modesty in its musical presentation. Just more so – no, make that much, much more so.

The majority of high-end, high-priced speakers wear their achievements very much upon their sleeves.

“Look at my bass



extension – feel my power. Look at my tweeter – marvel at my focus and precision!” In their case, extending the envelope is all about extension at the top and bottom, an approach that tends to rather overshadow the mid-band and undermine musical coherence. The

Diamond is a fish of an entirely different flavour. It starts from the premise that to improve the breed you must first improve the mid-range, which as we know means extending the frequency extremes. But in this instance the extension is all about continuity. Listening to the Diamond it’s hard not to conclude that it uses a single full range driver. Far from being obvious or explicit, the effects of the extra bandwidth are heard not just in the superior resolving power in the mid, but in the way that all the extra detail is integrated into a single, coherent whole. If continuity is the byword, then it’s coherence that’s the key.

So, listen to music on the Diamonds and what should you expect? Well, first, don’t be surprised if you’re initially rather underwhelmed. But play something familiar and you’ll soon realise that you’re not actually hearing the system – not even the recording. What you’re hearing is the performance. What’s more, while it’s the whole that counts, listen into the music and you’ll find familiar detail in abundance, just more so. The difference is, as deep as the speakers allow you to look. They never, ever dismantle the recording into its constituent parts, and never make it less than it is. You can play anything on these speakers, regardless of age, quality or condition, and still expect to get every last ounce of music off the disc.

There are a number of elements at work here, but they are all built on the Diamond’s astonishing ability to resolve tiny shifts in dynamic level within and between signals.

This micro-vibrational definition allows the simplest possible separation of musical instruments and strands. So precisely are the harmonic identities and

The System and Set-Up

At a lowly 87dB efficiency, 4 ohm impedance and with a 24Hz –1.5dB low-frequency contour, the 100 or so Watts available from my usual Hovland RADIA was always going to struggle. Fortunately I had on hand the conrad-johnson Premier 350, reviewed elsewhere in this issue – delivering 350 Watts a side of c-j’s best ever power. To this the importer added the exceptional new conrad-johnson ACT II line-stage to go with the Kuzma and Wadia front-ends. In a fit of even greater generosity, he also provided, for a frustratingly short period of time, his own preferred match, the Karan Acoustics KAM 1200 mono-blocks. Frustrating for the exceptional performance delivered as well as the exceptional effort involved in relocating them. After the delivery trip I was rather hoping that the return journey might prove sufficiently daunting to inhibit their early removal. I sadly misjudged the situation – and the symptoms of withdrawal. Branko duly appeared at the door on the due date, but the effort was worthwhile, the memories that remained, haunting in their presence and reality.

The Diamonds themselves are smaller, visually speaking, than their dimensions suggest, even in the pale finish of the beautifully hand cut, curly maple veneer on the review pair. At a substantial 68kg each, they’re a two-man lift, but the careful faceting of the sloping front baffle minimises their domestic impact, and whilst they need space behind them they’re less demanding in this respect than you might expect. I listened with them closer together than I usually place speakers, and with minimal toe-in. The bottom-mounted terminals make for especially neat cable routing, while the combination of the smooth plinth and Avalon’s extremely pointed cones make fine positioning and secure floor coupling an absolute doddle.

structures of instruments reproduced that their position and contribution is never in doubt. So the peculiarly wistful quality of the trombonium/ ►

► flugelhorn combination that provides the brass backing to Janis Ian's 'At Seventeen' is not just instrumentally identifiable, but the purpose behind the off-beat choice makes perfect sense. The beautifully phrased and skillfully muted lines integrate seamlessly into the song,



underpinning the vocal, accentuating the feel and mood of the plaintive lament, yet at the same time enhancing the fragile beauty of the music itself. It's a telling performance.

Likewise, the shipyard soundscape that opens Jackie Leven's 'Defending Ancient Springs' is a single cohesive whole rather than a patch-work of spot-lit sounds. The fizz of the welding torch and the striking of rivets are instantly identifiable, as are the ships horns and the rolling swell and crash of the waves. But it's the remarkable inner detail of these sounds that brings them so naturally and convincingly to life. The curling tumble of the breaking wave, the metal on metal strike of hammer on rivet head, the echoing vastness of the giant shed. Yes, it's a collage, and in reality there are electronics and speakers that will dismantle and pull it apart for you, defining each and every individual element. Yet the Diamonds have an uncanny ability to weld the elements together, making sense of them as they do so. There's no shortage of musical detail – indeed, quite the opposite, and I've heard no other speaker that makes such convincing use of the detail it passes, or passes as much as the Diamonds. It's almost as if they have a sixth sense that

separates out the musical notes along with their intent.

Alongside that resolution comes vanishingly low distortion. A precursor for any speaker that has ambitions regarding musically natural presentation, the Diamond excels in this regard. The effect is to make the speaker far less critical of volume: So much so that you'll find yourself listening much quieter than normal. The Avalons will happily go as loud as you are ever likely to want and do it gracefully too, especially with the Karans doing the driving, but you simply don't feel the need. You no longer find yourself seeking that perfect balance between dynamic range and edgy distortion. Instead, the relationships within the music stay constant, pretty much regardless of level, while headroom benefits accordingly.

By now it should come as no surprise that the Diamonds are as near sonic invisibility as you're going to get. Regardless of the recording (even classic, left/right Impulse jazz records) it's impossible to locate the speakers with your eyes closed. The soundstage is as wide, deep and tall as the electronics allow, while good orchestral recordings are spectacular. The Ricci *Carmen Fantasie* on Decca SXL2197 not only made the most of the soloist's passion and energy, it wrapped him in a huge and beautifully defined soundscape, that extended way beyond the boundaries of the room. Scale and perspective were exceptionally natural, images within the soundstage stable and beautifully proportioned. With the Karan amps in particular, the sense of a tangible, enclosed volume of energized, almost electrified air, transported me effortlessly to the performance, recreating the venue and the tension and atmosphere of a live event.

Now I can't comment on the acoustic accuracy of the experience as I have no idea where it was recorded (Watford seems like a fair guess from the sonic and circumstantial evidence) and it certainly wasn't a live event. But what this experience reflects is the extent to which the Diamonds retain the frisson and creative tension within a performance. They extract the same levels of drama and compulsion from studio recordings that you

normally only achieve with the best, one-take live performances. In many respects this is the most telling difference between what the



Eidolon Diamond delivers and the competition leave out.

So far I haven't really talked ►

▶ about treble and bass or the breadth of dynamic range. Frankly, I don't intend to, as to do so dissects and fundamentally misunderstands what this speaker is all about. I'm tempted to describe them as sufficient, but rather than the stellar praise that's intended, I suspect many a reader will interpret that as a backhanded compliment. So, a few examples should suffice. Bass, whether electronic a la Jackie Leven, acoustic in an orchestral context or upright and plucked, is perfectly defined in pitch and pace. It's transparency, texture and the way in which it can breathe and pulse, floating on an acoustic cushion rather than wobbling along the floor, means that it integrates seamlessly and exactly as it should. And just like reality, it's there when it should be rather than a constant, rumbling presence. But perhaps the best indicator of its depth and transparency is the convincing character and scale of the soundstage. You simply don't get that impression of an enclosed volume unless you have deep, deep bass: You don't get the air and tension within the acoustic unless that bass is transparent.

Likewise the treble is unobtrusive, its quality apparent in the ease with which it can separate tambourine rattles and bead cymbal work (a detail I'd never heard before on Dolly Varden's *The Dumbest Magnets*) without shouting about it or making it obvious. The Diamonds never highlight or exaggerate detail – it's simply there if you look for it, subconsciously convincing if you don't.

The widest dynamic range is



scaled with grace, even the excessive, explosive demands of the Milanov/Bloerling *Tosca* on RCA failing to phase the effortless presentation of the speakers or disturb the stability of the soundstage. At this extreme, the

Diamonds can't match or even really approach reality – and those speakers that can pay a heavy price in other regards. Instead they are content to keep everything perfectly proportioned, preserving the illusion and thus your enjoyment. All of which tells us what the Eidolon Diamond can do, but not how it does it. I can't talk about the minutiae of design (and

Avalon are understandably reluctant to do so) but I can talk about the mechanics of reproduction. Let's use the Yepes/Argenta *Concierto De Aranjuez* (Alhambra SCLL 14000) as an example. The opening of the Second movement normally wows listeners as it unfolds a vast and beautifully captured acoustic. Well, the Diamonds do it a little differently. The space is there and so is the sense of anticipation, but what pierces you is the poise and perfection of Yepes' first notes. So many systems simply give you a series of strummed chords as a precursor to the haunting melody that we're all anticipating. That's the danger with works that are so familiar. But the Diamonds, by placing each note within the strum, precisely against the next and against the

orchestra laid out beyond, establish a sense and root to the repeated notes, making the transition to the melody both a natural step and an artistic release. The shape and spacing of the notes that follow is precisely rendered, the artistry in Yepes' playing coaxing the poignant air to dramatic life. Once again your attention is drawn to the superb playing rather than the spectacular recording.

The secret lies in the degree of resolution delivered by the Diamond. Notes expand from a black background of zero energy, their exact character and shape defined against the silent backdrop, each one complete with the complex energy patterns that create its harmonic identity and texture. That background serves as the zero axis for each



and every note, regardless of level. It's why every instrument can retain its individuality no matter how many are playing, even when it's quiet and they're ▶

► loud. So even in full cry, the orchestra never swamps or blurs Yepes' playing. Likewise, the subtle percussion work that embellishes tracks becomes exactly that, neither lost nor exaggerated. The ability to precisely define distinct energy levels, right across the soundstage, is what brings magic to the musical performance, coherence to the event. You can, and should, point a finger at the partnering electronics, but that misses the point. The Diamond is capable of resolving the information they pass, and I suspect, more of the same. In that, it's unique in my experience. The Ascendants pulled the same trick, their sound less tonally influential than their partnering electronics. The Eidolon Diamond elevates that ability to whole new levels, staying ahead of some of

I've heard it sound startling with amps as (comparatively) prosaic as the Ayre Acoustics designs. Balance is what matters, and an even top-to-toe performance – just like the speakers. That way you can be sure of getting everything on offer without upsetting the apple cart.

Which brings me to a final point. The musical insight, the drama, the communication that flows so effortlessly from the Diamond makes your life so easy that

listening becomes devoid of any fatigue. You can hear so

much so easily, you can play at lower levels, you don't have to tolerate or filter out incipient distortion, that you can simply enjoy performance after performance. Comparing different readings of the same work takes on a new fascination as the speaker reveals the subtleties of inflexion and technique. It provides a window into the artistic soul of the music.

As I said at the start, Avalon's Eidolon Diamond breaks all the rules. Along the way it banishes the sonic bombast and macho aesthetics that have dominated high-end loudspeaker design for the last two decades. It is domestically discrete yet squeezes every last ounce of bandwidth and musical performance out of its three-way format. It's finished to a standard that has to be seen and felt to really be appreciated. It disappears musically, leaving no mark on the

performance. If you want a speaker that's both musically convincing and natural, so much

so that you can't hear it trying, then look no further: Transducer?

It's a time and space machine. There might be a speaker out there that can bring more music into your home, and sit you closer to the performers, but if there is I haven't heard it. Diamonds are supposed to be forever – this could be the last speaker you ever need to buy. ➤+



the best amplification out there. As such it places a heavy burden on partnering equipment, yet

TECHNICAL SPECIFICATIONS

Type:	Three-way reflex
Drive Units –	
High-frequency:	19mm concave diamond diaphragm tweeter
Mid-range:	90mm concave ceramic midrange
Low-frequency:	280mm Nomex-Kevlar bass unit
Bandwidth:	24Hz-100kHz ±1.5dB
Efficiency:	87dB
Impedance:	4 Ohms nominal (3.6 Ohms minimum)
Dimensions (WxHxD):	300x1088x425mm
Weight:	68kg each
Prices:	£3300

UK Distributor:
Audiofreaks
Tel. (44)(0)20 8948 4153
E-mail. info1@audiofreaks.co.uk

Manufacturer:
Avalon Acoustics
Net. www.avalonacoustics.com