

# HIFICRITIC

AUDIO REVIEW MAGAZINE

£15 Vol6/No4 OCT - DEC 2012

## USB CABLES COMPARED

We discover some quite obvious differences between some fifteen types of USB cables

## GATHERING MOMENTUM

Dan D'Agostino's striking new stereo Momentum amplifier

## BEAUTIFUL BODNAR?

A high value, high sensitivity single-driver speaker from Poland

## A FINE IDEA

This compact floorstander provides a new entry level to Avalon's range

## ULTIMATE VINYL?

CB finds that the Thrax Orpheus phono stage sets a new benchmark for vinyl replay

## DAB MYTHS

Under the shadow of an FM switch-off, the DAB steamroller lurches on

## MUSIC & MUCH MORE

### REVIEWED THIS ISSUE

D'AGOSTINO  
MOMENTUM STEREO

SP ACOUSTICS  
SP1 SIGNATURE

NAIM SUPERLINE/  
SUPERCAP DR

BODNAR SANDGLASS  
FANTASY

NAIMUNITY 2

THRAX ORPHEUS

ORTOFON ANNA

AUDIO RESEARCH REF DAC  
DIGITAL MEDIA BRIDGE

METRUM HEX

CAD DAC 1543

CAMBRIDGE AUDIO  
DACMAGIC PLUS

BULLY SOUND BSC-100M

AVALON IDEA

NEAT IOTA

USB CABLES FROM AUDIOQUEST,  
CARDAS, CHORD, FURUTECH,  
KIMBER, QED, SUPRA and WIREWORLD





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Printed in the UK by  
Premier Print, London

HIFICRITIC is a printed publication available by subscription only.

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**A**s a journalist interested in news stories, I guess I should be grateful for the whole DAB saga and the threats of FM radio switch off, as the topic has kept me in stories since at least 1998, and still shows no sign of reaching any sort of conclusion. Some idea of the political chicanery surrounding the whole mess is found in Robert Sinden's feature starting on page 11, but the implications for us, as the PB consumers, are equally exasperating.

A decade or so back I bought myself an FM-only Magnum Dynalab tuner. I half expected it would become redundant within five or so years, as the DAB steamroller was well under way, but part of me couldn't really believe that any government would be stupid or vainglorious enough to switch off the FM network. Ten years on I can look back with a degree of smug satisfaction, that the purchase has been thoroughly worthwhile, and could well continue giving fine service for another decade.

I love radio, but only ever really listen regularly to the BBC's Radios 3 and 4. DAB does occasionally come in handy for excursions into 5 Live, but the various TV platforms and the internet cover the same ground these days, and actually do a rather better job.

DAB was always on a losing streak, because it got locked in to a very early form of digital compression, with no way of changing to keep up with the march of progress, which as anyone who uses a computer these days will know has been rapid and inexorable.

At the same time, FM radio still has a great deal on its side from so many points of view, it seems quite ridiculous to contemplate switching it off. And although I don't have the stats to prove it, I reckon far more FM than DAB radios are actually currently being made in one form or another. I daresay that very few actual hi-fi FM tuners are sold these days, but nearly all cars and mobile phones come complete with built-in FM tuners. And of course there's a vast population of existing tuners, table radios, clock radios and so on that continue to work perfectly well, many years after they were originally made.

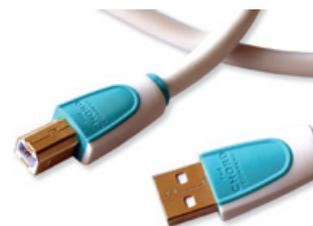
Indeed, sitting beside my bed is a Hacker *Sovereign* that must be at least fifty years old, yet it still provides excellent service and rather impressive sound quality, and is used nearly every day. The crucial factor that those who decided we all wanted digital radio overlooked was that, unlike TV sets, cassette decks, CD players and (especially) computers, old radios simply don't die or even become obsolescent. They have no moving parts and simply carry on more or less forever. Let's just hope that they're allowed to.

*Paul Messenger*

**Editor**

# Contents

- 4 STAN'S SAFARI No20**  
Start-up companies represent the lifeblood of the hi-fi industry, but they face many difficulties today
- 6 CLASSIC REVIVALIST**  
The SP Acoustics SP1 takes a classic-nostalgic design concept and applies the very latest component technologies
- 8 LETTER FROM SHENZHEN**  
Peter Comeau reports on the changing working conditions and the increasing wealth of Chinese consumers
- 10 DAB MYTHS – THE STEAMROLLER LURCHES ON**  
Roger Sinden examines the disaster that is DAB digital radio, and the authorities' attempts to deny the fact
- 14 GATHERING MOMENTUM**  
Dan D'Agostino's new power amps prove that there's life beyond Krell
- 18 DISCRETE REGULATION**  
Upgrading a Naim SuperCap to DR spec can transform the SuperLine phono stage
- 20 BEAUTIFUL BODNAR?**  
This single-driver speaker might not look pretty, but it's remarkable value for money
- 22 AND ONE FOR ALL**  
The latest electronics developments have enabled Naim to create the 'one box does all' NaimUniti 2
- 25 RIPPING YARNS**  
Jason Kennedy discovers networks can sound better than computers
- 26 ULTIMATE VINYL**  
Thrax creates the remarkable Orpheus phono stage with triodes and exotic inductors
- 28 ANNA**  
Ortofon's latest high end cartridge is named after operatic soprano Anna Netrebko
- 30 THE TONY FAULKNER INTERVIEW**  
Tony Faulkner talks about making his huge back-catalogue available as hi-res downloads
- 33 USB CABLES COMPARED**  
Martin Colloms tries some fifteen USB cables, and discovers some quite obvious differences
- 36 DAC WITH TUBES**  
Audio Research comes up with an artful chip'n'valve combination for its REF DAC Digital Media Bridge
- 38 TRUMPING THE OCTAVE**  
Metrum acoustics' Hex represents a one-box upgrade over the successful Octave
- 40 ULTIMATE COMPUTER AUDIO?**  
CAD's USB-only DAC is designed to get the very best audio quality from a computer
- 42 DOUBLE MAGIC**  
Cambridge's DacMagic adds a Plus, so Martin Colloms and Paul Messenger see if the upgrade is worthwhile
- 44 BULLY FOR YOU!**  
Bret D'Agostino's new US operation plans to make affordable high end products
- 46 A FINE IDEA**  
Avalon's smallest floorstander provides a new entry point to this high end specialist's range
- 49 EXTRA-NEAT NEAT**  
A tiny loudspeaker for a tiny room, for music-while-you-work on a desktop
- 50 HIFICRITIC AWARDS**  
A selection of superior hi-fi equipment culled from our history and experience
- 52 JAZZ PICKS**  
A selection of recent (and not so recent) jazz releases
- 55 THE BEST OF CLASSICAL**  
Colin Anderson's classical selection
- 58 ROCK, POP AND OTHER NICE MUSIC**  
Recent highlights from the pop and rock canon
- 60 SUBJECTIVE SOUNDS**  
A toe in the room treatment water



*USB cables compared on page 33*



*Beautiful Bodnar? Page 20*



# A Fine Idea

AVALON'S SMALLEST FLOORSTANDER MIGHT STILL CARRY A HEFTY PRICETAG, BUT IT DOES PROVIDE A NEW ENTRY POINT TO THIS HIGH END SPECIALIST'S RANGE

The last Avalon I reviewed was an *Eidolon Diamond*. I subsequently purchased it as a reference loudspeaker, and it lasted through a house move and almost a decade of regular use, which is quite an achievement for the reviewer exposed to a constant stream of new products. These Denver-built speakers have a common thread of design consistency which seems to assure production longevity. (Indeed, the *Eidolon* is still made, though likely to be supplanted by a similarly priced but rather different *Compas* which is currently in pre-production.)

Though undoubtedly still costly, this £8,000/pair *Idea* is a rather less expensive proposition. It's a neat, well proportioned, slim floorstander, very much in the Avalon idiom, and might not prove particularly tempting in terms of presentation or outright power. The specification describes a two-way design with a pair of 180mm (7in) bass/mid units operating in parallel and crossing over to tweeter with a 25mm (1in) 'ceramic' composite dome (believed to be magnesium oxide on magnesium), a custom version of the Eton *HD28-1*. The lower frequency Eton drivers' sandwich cones have Kevlar skins on a Nomex honeycomb core, topped out by a small aluminium dust cap, and with nicely open die-cast frames and well engineered motor systems. The tweeter has a die-cast faceplate, a cast cavity for rear absorption, and a neodymium magnet. The dome diaphragm is protected by a vestigial wire grille, and the unit is well buried in a felted absorptive recess. The crossover is at a lower than usual 1.7kHz. Impedance is a nominal 4ohms and the specified sensitivity is a little above average at 88dB/W, notwithstanding the lower impedance.

The *Idea* stands 90cm high, plus a trio of non-locking exponentially tapered stainless steel spikes. Somewhat depending on how the measurements are made, it's a trim 21.5cm wide, but its canted front and rear tilt make it a quite deep 36cm. A 50 – 300W power range is suggested, and I wouldn't use less than 50W myself. I bashed it around a bit with the D'Agostino *Momentum's* 250W and found it held on really well at high power, delivering fine stereo on large scale. Though quite compact, it's built solidly enough from multilayer MDF, and weighs 28kg (60lb). The spikes elevate the speaker an inch or so, allowing the low frequency vent in the underside to drive the floor boundary correctly.

A heroic degree of cross-bracing plus the complex slant geometry ensures that the speaker has a low coloration signature with minimal resonance. Acoustic damping fills the internal voids, leading to a desirably over-damped yet extended low frequency alignment and also the suppression of standing

MARTIN COLLOMS

waves. Electrical connection is by a single pair of shielded clamping Cardas terminals, wire and spades only; no bi-wire experiments are therefore possible, or indeed desirable. The quite excellent veneer is well figured top cabinet grade.

The *Idea* works best with its custom grille left in place and its assets hidden. It's designed so that the music emanates from the general region rather than being visually associated with working parts. If a grille is a well designed and integral part of the acoustic concept, it does help the speaker portray a more convincing soundstage, thanks to less visual distraction. As previously found with this class of Avalon, removing the grille can be a disaster, as numerous aspects of the sound deteriorate: one quickly learns that the grille is an integral acoustic component. It's actually quite instructive to remove the grille here, as the subtle tonal balance and very well focused perspectives are thrown into disarray; the soundstage appears jumbled up and the natural timbres of musical instruments are severely warped. It certainly sounds louder with the grilles removed, but don't be fooled into thinking that louder is necessarily better. Here the acoustically absorptive grille helps control diffraction and shape the power response, the former associated with image depth and focus, and the latter with natural timbre in the room setting.

### Sound Quality.

It took me a few moments to re-acclimatise to the Avalon sound, which some may find sounds less airy and expressive in the room acoustic, due to the specific enclosure diffraction countermeasures. At first I was surprised that it could play so loud and operate so deep into the bass, until I remembered that the pair of bass drivers were equivalent to a 9-10inch unit, and I subsequently also confirmed a usefully higher than average sensitivity.

Focus was simply excellent, pin-point, with great stability for different sounds and showing very fine coherence in the overall output. Image depth was also remarkably good for this price range. Timing was well above average and it drove a bass beat with both clout and depth. The upper bass sounded a little forward in my room, but low frequencies were correctly tapered and continued evenly to below 30Hz, which was most impressive. Rock replay was well above average, while classical material was quite excellent, with crisp dynamic definition and with very good expression.

I found it very easy to settle back and allow this mellifluous loudspeaker to take the strain, enjoying the musical flow alongside the engaging illusion that this wasn't machinery at work. It was highly



informative yet detail was not thrown at the listener, and it really does convey a high proportion of the audiophile Avalon sound.

### Lab Report

The dense enclosure showed very little sign of resonant coloration, and the enclosure was almost silent when playing music. The on-axis frequency response was notable smooth, if slightly down-tilted towards higher frequencies – an Avalon characteristic set in context of the overall power response in order to aid natural perspectives.

Measured sensitivity was quite high, 88.5dB/W (a fraction above the claimed 88dB), and the speaker gave a notably even  $\pm 2$ dB on-axis frequency response from 50Hz to 22kHz. Low frequencies extend to 45Hz (-3dB) and 38Hz (-6dB), intentionally tapered to match low frequency room gain more evenly. (Note that correct bass tuning is only achieved when the speaker is placed on its spiked bases as this sets the acoustics of the down-firing port. The latter also had negligible higher frequency leakage coloration.)

Specified as a 4ohm speaker, in reality it's a 5ohm load. While not too taxing for solid state amps, it does dip to 3.5 ohms at 150Hz, and also in a broad region around 6kHz. The 1.7kHz crossover between the drivers is nicely symmetrical for the two vertical axes, so the in-phase target response between the drivers is well aligned towards the seated listener, despite that wide spacing.

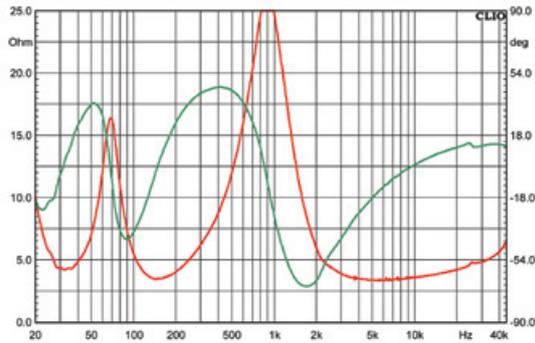
Comparison was made with both the tweeter felt and the grille detached. The resulting response measured and sounded awful, very bright and highly coloured. Those absorption components are an integral part of the loudspeaker design. The lateral off-axis output decremented smoothly, albeit showing some small underlying features such as a

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AUDIO EXCELLENCE

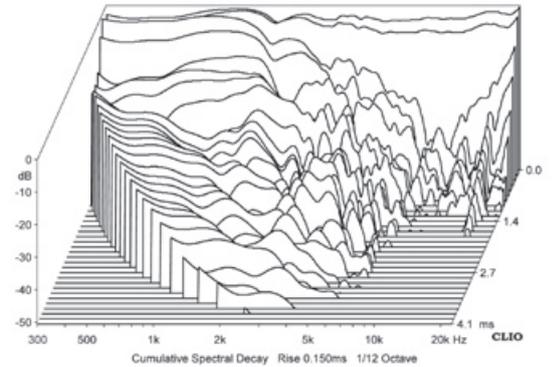
### The System

Krell *Evolution 402E* and D'Agostino *Momentum* power amps; Audio Research *REF5 SE* control unit; MSB *Platinum Signature*, Metrum *Octave* and *Hex* DACs; Naim *UnitiServe* network (S/PDIF); Audio Research *REF2 Phono*; Wilson Audio *Sophia 3*, Quad *ESL63* speakers; Finite Elemente *Pagode* racks; Cardas *Golden Reference* and Transparent *XLmm2* cables.

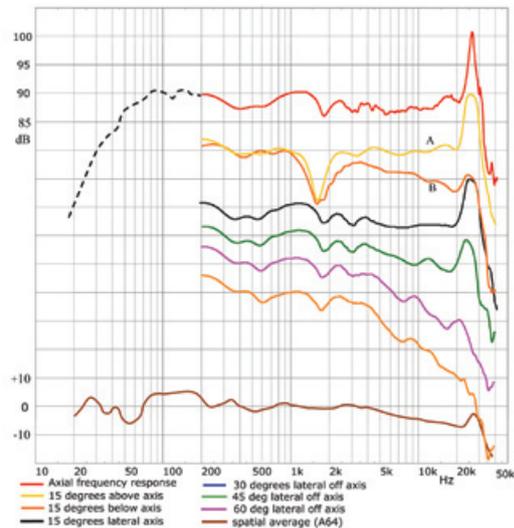
Frequency Response of Impedance and Phase (green)



Waterfall display of energy decay with frequency



Avalon Idea Frequency Responses



mild prominence around 1.5kHz, which is faintly audible, and some ripple up to 4kHz .

The averaged room responses showed good low frequency integration; if mildly strong around 100Hz, output continued down to 25Hz. The important 200Hz to 5kHz range is excellently uniform, while the smooth taper to higher frequencies is well controlled by the low diffraction design. (That final 27kHz peak is inaudible.) The excellent stereo depth and transparency can partly be seen in the very fine waterfall decay response which is near minimum phase, has very little diffraction ringing and excellent decay rates. High in-room sound levels of 108dBA are possible from a pair.

**Conclusions**

This is a smaller and much less costly Avalon than the *Eidolon Diamond* with which I'm more familiar, yet it has some innate and initially recognisable characteristics which are a function of the design strategy. It has the recognisable Avalon character and while this is delivered on a somewhat smaller scale, that character provides a very high degree of coherent imaging, very fine perspectives, and an overall musical believability which is rare at the price, and redolent of much more costly designs. You do not hear drivers or cabinet or bass tuning at work, just a mellifluous coherent whole. It sounds particularly good on both middle-of-the-road and classical material.

It doesn't sound too loud or artificially exciting, and doesn't have obvious bass or spot-lit dynamics, but its sound is all of a piece, and delivered involving performances with all kinds of music. It's by no means second best, and simply works on smaller scale for smaller rooms – and not that small: in truth, it drove my 25x35 foot room pretty well.

Compact but perfectly formed, the Avalon *Idea* is imbued with a deep thread of natural timbre and musical performance, and teaches us just how good stereo sound reproduction can be. Highly recommended.

**HIFICRITIC Loudspeaker Results**

Make	Avalon Acoustics
Model	Idea: moving-coil floorstanding, damped floor port loading
Price per pair	From £8,000
Finishes	Hand laid veneer, quilted cherry, curly maple or figured walnut
Size (HxWxD)	90x30x36.5cm
Weight	27.2kg
Type	Two-way, 2x175mm bass/mid, 25mm HF, quasi-line loading
Sensitivity for 2.83V	88.5dB/W measured (per 8ohm Watt)
Amplifier loading	5 ohms typical, 3.5ohm min: average loading
Frequency response, axial	50Hz to 22kHz ±2dB (listener axis) (see text)
Frequency response off- axis	Good plus, see graphs and in-room response
Bass extension	38Hz for -6dB (27Hz in-room)
Max Loudness, in room	108dBA for stereo pair
Power rating (max, min)	300W, 25W
Placement	Floorstanding, custom tripod of stainless steel spikes; for near free space location



Manufacturer:  
Avalon Acoustics  
www.avalonacoustics.com  
UK Distribution:  
Kog Audio  
Tel: 0247 722 0650  
www.kogaudio.com

# Subjective Sounds

PAUL MESSENGER

## HIFICRITIC

AUDIO AND MUSIC JOURNAL

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*Martin Colloms, Publisher*

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My limited experiences with room treatment techniques have hitherto been rather disappointing. I do use some melamine foam panels between a couple of beams on the ceiling, and across a large bow window behind my main listening zone, in order to minimise midband coloration and improve stereo imaging, but more dramatic attempts to modify the behaviour of the room have not been too successful thus far.

The whole issue of room treatment is controversial. Some reckon that less is more, and that one shouldn't remove any energy from the system. Others point to the fact that recording and broadcast studios use all manner of treatments to cope with the idiosyncrasies of their rooms.

Irrespective of one's views, there's no denying that the room has a significant role in the sound of a system, and my personal scepticism was well and truly tested when a friendly Dane named Ole Lund Christensen dropped off some of his large Mumax (musicus maximus!) *AMA2* panels for me to try. At £999 for two Air Motion Absorber panels they're not exactly cheap, but then neither are high quality hi-fi cables these days.

The panels are by no means universally applicable, but they do seem effective at countering the effects of unwanted room modes. They're not unattractive to look at, but because they're 195cm tall and 66cm wide (effectively doubling the latter, as they're normally sold as freestanding hinged pairs) they're unavoidably intrusive, especially as they're intended to be sited well clear of a wall – a key disadvantage, especially as the speakers themselves must naturally be still further out into the room.

It's all to do with interfering with the velocity components of the sound energy, and as I understand it the panels need to be well out from a wall in order to affect the low frequency sound waves. Furthermore, the materials used have been carefully selected: one crucial element is a special paint that reduces the absorption at mid and high frequencies, so that the panels operate evenly right across the frequency band.

Although there's no denying their intrusiveness, these panels do really work, quite dramatically so in fact. To assess them I first brought in a pair of Spendor *BCI*s, a free space design with a magical midband but a known mid-bass excess. To my surprise, putting two (or three) *AMM2*s behind the speakers totally changed both the balance and the stereo imaging of the speakers. In this case it wasn't necessarily an improvement, but that's not relevant: what's much more significant is that the change was far more dramatic than, for example, changing cables or support furniture.

The previous and significant 50Hz peak was reduced by a hefty 5dB, which is clearly a good thing, though the somewhat smaller 100Hz peak was increased by around 4dB. In effect, the room mode interaction of the speakers was changed considerably (though it's difficult to say whether this represented a net improvement on the *BCI*'s already good behaviour). Although not susceptible to measurement analysis, the change in imaging was no less dramatic, as the addition of the panels considerably enhanced soundstage precision and instrumental focus. Broadly similar effects were also found using a pair of Nightingale dipole speakers, which certainly seemed improved by the panels.

There's clearly scope for much more work on these Mumax panels, as I want to investigate different speakers and *AMA2* positioning. Pro tem I'll merely say that they do work, and are one of the most interesting hi-fi 'components' I've come across recently. Check out [www.actem.de](http://www.actem.de) for more info (assuming Christensen gets around to updating his website soon).