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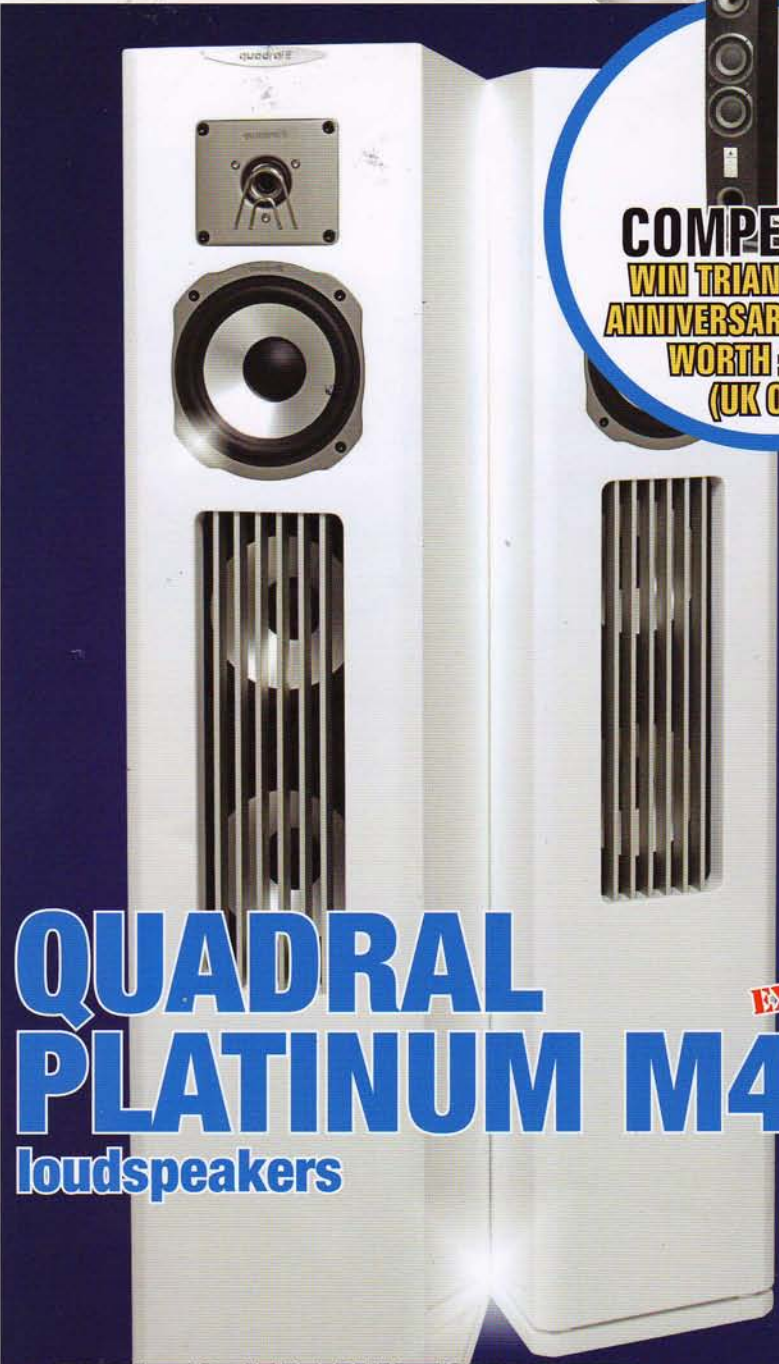


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integrated amplifier**

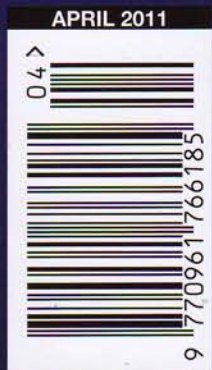


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**10 PAGES OF LETTERS - THE BEST WINS A PAIR OF
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Hi, Definition

David Price welcomes the first of the new generation of Audio Research 'Definition' series solid-state amplifiers, the DSi200 integrated...

Anyone familiar with the Audio Research brand won't have to think too hard about its defining characteristic – valves, or 'tubes' as they call them Stateside. I'm a fan of the marque, and I particularly like the way their tube amps are voiced so you get much of the oomph and verve of a decent solid-state design, allied to some valve sweetness and space...

Well, in the Definition series they've attempted to take this facet of their sound and run with it; their new range of amplifiers aspire to give the best of both worlds through modern Class D solid-state engineering. The DSi200 is described as having a discrete analogue switching-MOSFET output stage "for highly efficient power conversion and low power consumption". The analogue power supply and all-discrete MOSFET output stage are said to be pure Audio Research engineering and "do not rely on

prepackaged modules or other OEM solutions common to amplifiers from other manufacturers", the company says. This new amplifier is said not to be a typical Class D amplifier with a switching power supply, yet Audio Research claim many of its benefits including low current consumption (it's earned an Energy Star rating) and high output power; 200W into 8 ohms continuous with four times that peak into 4 ohms [see MEASURED PERFORMANCE].

Despite ostensibly being a Class D design, there's none of the compactness or light weight you see in many other such aspirated machines; vital statistics of 480x133x362mm and 16.9kg put the DSi200 well into the 'US heavy metal' territory, as you'll soon find when you try to lift it out of the box. We're not talking beautifully compact, featherweight NuForce type stuff here! The unit is supplied with chunky, front panel rack mounting handles and these

proved most helpful in depositing the Audio Research into my equipment rack. Placed on top of my big, bulky reference Musical Fidelity AMS35i, the latter virtually disappeared from view!

Like any self respecting 'super integrated', the DSi200 is a fully balanced input design offering two sets of balanced inputs and three sets of single-ended inputs. One set of single-ended inputs can be used as a normal line-level input or it can be converted into a home-theatre pass-through. This is important because the preamplifier section of the DSi200 is passive, and its preamplifier and amplifier sections cannot be separated. On the front panel, volume and input selectors flank a large, bright vacuum-fluorescent display, the brightness of which can be adjusted to one of six levels. There are four small, round centrally mounted aluminium buttons under the display for Power, Mono, Invert, and Mute, and these are duplicated on the





supplied remote control, plus a Left-Right balance control, and Display Up and Display Down controls. Cosmetically, the amp comes in a choice of all black, or black chassis plus silver fascia.

SOUND QUALITY

There's an Audio Research sound, one that seems to carry across the generations and even now across amplifier platforms. It's very American, don't you know; the hi-fi equivalent of a big block Yank V8 sportster that, whilst perhaps lacking the nimbleness and delicacy of 'foreign' machinery, makes up for it with sheer thumping attitude and fun. That's the reason I loved the VSi55 (and its successor, the '60) so much; these were tube amps that had solid-state musculature, and there was no need to make excuses for them with sensitive speakers...

Despite apparently being Class D solid-state, the company has carried this character over to the new Definition series, and we now have a transistor amplifier that packs enough power to pull out tree stumps and flatten garden sheds. If you think Audio Research have tried to do a tube-amp-by-proxy, attempting to voice their transistor amp as close to a thermionic one as possible, then you're wrong. Rather, the designers have grabbed the nettle and come up with a swingeing firebreather of an amp that seems to have 'r*o*c*k' tattooed through its very centre, like the candy sticks you buy at the

"the Audio Research loves big production numbers, with kicking rhythm sections and a job of work to be done..."

seaside.

This distinctive presentation was deployed to great effect on Simple Minds' 'Somebody Up There Likes You'; whenever there's a snare drum to be hit, a bass drum pedal to be stamped on, or a hi hat to be struck, the DSi200 is there with all guns blazing, eager to capture every last ounce of energy. It doesn't so much carry dynamic contrasts as write them up in lights, giving them their own special part of the night sky. On this track, which is moody swirling synths, gently arpeggiated guitars and some lovely thumping drum kit work, this amp absolutely shone. Give it a complex mix to cut through, plus lots of banging, booming and crashing to convey, and it's in there like a rugby player in a scrum...

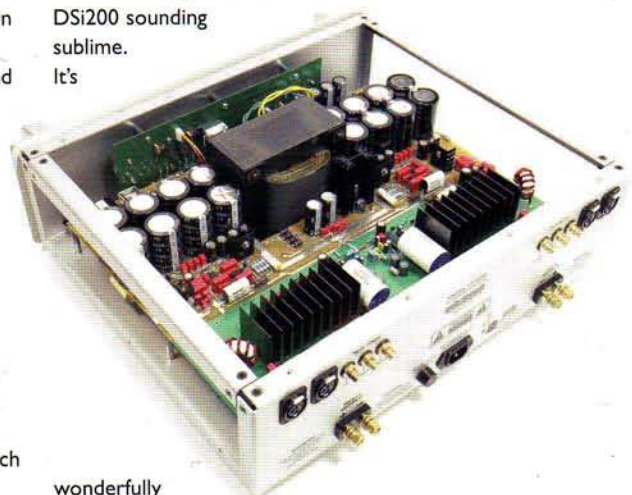
However, this has a downside. Along with that brilliant grip and excellent dynamic shading, is a light, bright tonality that simply doesn't flatter forward recordings; there's a sense of the Audio Research forcing some of the harder upper midband sounds at you, in a way that those with brighter and/or less euphonic speakers will find hard work at times. The next Simple

Minds track 'New Gold Dream' via SACD saw the right hand synth parts sounding just a little grainy through my revealing Yamaha NS1000Ms.

I suspect this won't be an issue through more genteel loudspeakers, but it's something to bear in mind when system building all the same.

In fairness, moving to Al Jareau's immaculately recorded 'You Don't See Me', all silky and chocolatey in its sound balance, saw the DSi200 sounding sublime.

It's



wonderfully tight, the bass coming over taut and sinewy; this amplifier has amazing transient attack across the whole spectrum,

making percussive jazz fusion like this sound like an absolute seat-of-the-pants experience. Again, it seemed to relish snares and bass drums like few amps I've heard; by contrast the Musical Fidelity AMS35i sounded just a little soft and uncommitted in the lower registers and a tad more pedestrian rhythmically. The Audio Research couldn't match my the AMS35i's clarity across the midband however, lacking its 'hear through' detailing and purity of tone; by comparison the DSi200 sounded just a touch more monochromatic.

Kate Bush's 'King of the Mountain' was enormous fun, the Audio Research grabbing hold of my loudspeakers' twelve inch bass units like they were mere icing on the cake. So many amplifiers I've heard have come away feeling a little bruised when asked to drive these speakers up to truly high levels, but the DSi200 didn't bat an eyelid. It set up a wide recorded acoustic, powerful central vocal and then jumped into the swing of things as soon as the drum kit kicked in. Its excellent sense of timing once again came to the fore with that four-four rock drum kit, the hi hat cymbal floating beautifully around the beat that the snare picked out so crisply. Interestingly, on this smooth recording, Kate's voice was carried very nicely, with none of the hardness I'd heard on the Simple Minds track. Rather, the amp turned in an open, spacious and powerful performance that suited the 'Aerial' album.

Massive Attack's 'Safe From Harm' showed that, if ever the world ran out of rock music, the DSi200 would do very well with dance. The sinewy bass line of this classic early nineties track, which is counterpointed with some pretty cutting drum machine work and set into a sea of swirling synthesiser noise, was carried as if this amplifier had been designed so to do. I've heard deeper and fuller baselines admittedly, but what it lacked in sheer weight it made up for in grip and articulation; when the music got louder and denser, there was no sense of the bassline running out of steam. Indeed the amplifier seemed to be an absolute rock, as far as supplying steady power was concerned; never breathless or phased, it just kept on pumping. At really high listening levels, I've heard some similarly priced transistor amplifiers simply fall to pieces trying to keep this track together; I won't bother to mention how many tube amps it's vanquished.

Indeed, the Audio Research seems to love big production numbers, with a kicking rhythm

section and a job of work to be done. Art of Noise's live recording of 'Moments In Love' via SACD was breathtaking in its power and force. The electronic percussion was tight and crisp, chiming out of the soft, lilting background.

The lead synth sound was just a little too opaque for my taste however, not dripping with texture as with the Musical Fidelity AMS35i. Then again, it seemed locked into a groove all of its own, one that the Musical Fidelity just couldn't quite find inside the recording. As the song shifted time signatures, and modulated from one segment to the next, the transition seemed utterly natural on the DSi200, where the slightly looser and less in control AMS35i could sometimes make it sound like a bad edit in post-production. This was the DSi200 at its very best, using its combination of power and speed to great effect.

Moving over to classical, and the beautiful new Linn recording of Bach, Sonatas and Partitas for Solo Violin (Pavlo Beznosiuk) on SACD was as intimate and lyrical as I'd expected, with immense energy and definition across the midband, allied to a strong sense of space in the concert hall. However, I found the timbre of the violins just a touch too scratchy to my ears, in my system. Wonderfully expressive they may have been, but they were both a touch out of focus and a little brittle sounding compared to the Musical Fidelity, which warmed them up and smoothed them up a bit; it's important to note that the MF isn't exactly a sugar coated champion of euphony, with its somewhat brilliant white full Class A sound...

A strong performance from the DSi200, but I think your choice of partnering speakers would make or break it, tonally.

CONCLUSION

If you're on the lookout for a neutral, self-effacing, shrinking violet of an amplifier then the



Audio Research DSi200 is not for you. It's a big thumper of an amplifier that makes a direct line to the heart of the rhythm; this done it pulls you in and satisfies you with its scale, dynamics and transients. However, it can sound just a little hard across the upper midband for the catholic British ear, especially one attuned to classical programme material. But rockers will love it, dance music fans enjoy it, and it also has a great time with slick jazz funk too; if these are your musical staples you'd be well advised to go for an audition.

REFERENCE SYSTEM

- Luxman D-05 SACD player
- Marantz CD73 CD player
- Musical Fidelity AMS35i amplifier
- Yamaha NS1000M loudspeakers

VERDICT

Its tight, taut and engaging sound makes it great for rock or dance, but classical fans seeking smoothness will look elsewhere.

AUDIO RESEARCH

DSi200 £5,498
 Absolute Sounds
 +44 (0)20 89 71 39 09
 www.absolutesounds.com

FOR

- dynamic articulation
- power reserves
- grippy, rhythmic nature
- build, features, styling

AGAINST

- restricted tonal palette
- hard upper midband

MEASURED PERFORMANCE

The output stage of this amplifier is Class D, a Pulse Width Modulation (PWM) switching amplifier, sometimes termed 'digital'. These amplifiers are very efficient, delivering enormous power with no heat. The DSi200 delivered 190 Watts into 8 Ohms and 360 Watts into 4 Ohms – whew!

The snag with many Class D amplifiers is they produce distortion, often lots of it of an unusual pattern in terms of variation with frequency and amplitude – and that was the case with the DSi200. At bass frequencies the DSi200 produced no less than 10% distortion at a few watts into 4 Ohms, common running conditions – see our spectrum analysis. Distortion fell as frequency rose, then rose again at high frequencies. The harmonic structure also changed dramatically with level. Summarising, under test the DSi200 produced high distortion of sufficient amplitude and modulation patterning to be aurally detectable. This sort of distortion usually adds at least a 'glassy' patina to the sound.

In Class D amplifier fashion, frequency response varied with load. There was a +2.5dB peak in output at 30kHz when feeding an 8 Ohm load, above which gain rolled down. This produced a little lift at 20kHz, enough to ensure a bright sound. However, into 4 Ohms the '200 was flat to 26kHz (-1dB) and gain rolled down smoothly above this frequency. An absence of peaking will change the perceived balance to a normal one. The output inductors that

cause this also result in a low damping factor of 8.

Input sensitivity was low, full output needing no less than 900mV in. Voltage gain was low too, 200mV in producing 8V out for example, or 8 Watts, where most amplifiers give you full output from 200mV. Gain was identical via unbalanced and balanced (XLR) inputs. Low gain helped toward low noise of -103dB.

The DSi200 will have a distinctive sound, likely typical of 'typical' Class D operation. There are Class Ds, from NuForce, Hypex, Rotel and Lyngdorf that measure much better. NK

Power	190 Watts
CD/tuner/aux.	
Frequency response	2Hz-26kHz
Separation	85dB
Noise	-103dB
Distortion	10%
Sensitivity	900mV
Damping factor	8

FREQUENCY RESPONSE

