

*Technology, style
and sound aside,
Musical Fidelity's new
integrated A1001 and the
intriguing Sirius
power amp have one
thing in common: sheer
driving power!*

by **PETER J COMEAU**

If you are still convinced that the phrase 'high fidelity' means a realistic reproduction of the original sound, then you must be aiming for accurate tonality in conjunction with wide dynamic range. As I pointed out in the review of the Kelly KT3 speakers [group test *HFN/RR*, Nov, following KK's first review in October], to achieve a good dynamic range you either need ultra-efficient speakers or ultra-high-power amplifiers. And if you want to reproduce the real dynamics of the live performance you need both.

Given, then, that there is no substitute for power, just where do you find the sort of high-power, high-current output which ensures that the amplifier is not going to run out of breath, just as you are experiencing that frisson of excitement before the final orchestral climax?

High-power amplifiers often take a critical drubbing when it comes to accuracy of tonality and 'musical' behaviour, simply because it is so difficult to maintain the desirable linearity of performance when moving from a whisper to a thunderclap. But this review looks at two contenders in the high-power category that don't, quite, cost a

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fortune, but both promise to deliver massive power and current without compromising audio quality.

In the value-for-money stakes Musical Fidelity's A1001 has everything — output that exceeds 200 watts into 8 ohms, and doubles into 4 ohm loads, coupled to a peak current in excess of 50A, the A1001 combines an integrated pre-amplifier and power amplifier in one box yet maintains a double mono internal layout.

Also adopting the double mono trend, but this time as a power amplifier only, is the Sirius D200. Again delivering 200W into 8 ohms and 400W into 4 ohms with 45A peak current capability, the Sirius is unusual in only using one pair of output devices per channel.

SIRIUS D200 POWER AMPLIFIER

Sirius products derive from a Danish company specialising in both professional and consumer electronics and speakers, the D200 owing its inheritance to design work undertaken for custom-made active speakers for recording studios.

The D200 only betrays its professional origins by its use of XLR input connectors — the finish is a high-class satin black, the appearance domestically stylish. Below the power switch is a gold-

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MUSCLE

CD98.161], was rendered with considerable authority by the Sirius, with a splendid portrayal of both harpsichord and voices. These are quite closely recorded, compared to the orchestral accompaniment, yet the Sirius maintains the relationship between the performers faultlessly.

The Sirius inspects detail with microscopic intensity so that in the Shostakovich String Quartet No. 3 [Naim cd016] it reflected the brutality and starkness of the third movement, and you were left in no doubt of the barbaric nature of the march-like scherzo. On jazz, the Sirius shows that it can swing with the best of them. With the Sirius, Hopgood, Torff and Wertico get every part of your body moving in Milt Jackson's 'Late, Late Blues' [Union, Naim cd015], remarkable for the rhythmic cohesion of the bass line and drumming.

Rock selections boogied in much the same manner, though the control here seemed a tad overdone, and held back on the final dynamic contrasts. Here, too, you began to sense the current limiting of the Sirius — push it to its boundaries and there is no increase in distortion. At its full power capability it generates frighteningly loud sound pressure levels with no apparent audible effects of clipping, but exceed the maximum and you will notice some compression.

When the Sirius reaches its limit, it just stops dead in the water — no overt noises, no nasty high-frequency intermodulation, just a clamp on the dynamic swings that lets you know it ain't going to go no further. Through all types of music the Sirius shows spectacular three-dimensional layering of the stereo soundstage, letting the performance escape freely from the speakers wherever the recording allows. With the Sirius passive controller, the depth is marginally limited, tending to push the sound towards the speakers. Add an active control, however, and the power amp shows its true colours with excellent retrieval of ambience and an accurate rendering of the space around instruments.

The Sirius is fairly fussy about partnering equipment and cables. A hunt through the cable box showed nothing that did the job half as well as Sirius's own interconnects, especially from CD player to pre-amp. You also need an active pre-amp that is as clean as a whistle — any high frequency 'turbulence' shows up as a nasty edginess through the Sirius. I found the Meridian 502 managed to do a splendid job here when using its

balanced outputs, the balanced connection being almost a necessity with this power amplifier.

MUSICAL FIDELITY A1001

Successor to the A1000 integrated, itself an upmarket, high-powered, development of the classic A1, the Musical Fidelity A1001 has a long and well-respected pedigree. Some continuity there may be in terms of character, though hardly in circuit topology.

Discarding the outboard power supply box of the A1000, this new high-powered integrated from Musical Fidelity is built on a single massive chassis and uses a completely new circuit. Most of the A1001's not inconsiderable bulk arises from its pair of massive 700VA toroidal transformers, one for each power amplifier channel, along with a third 100VA toroid for the pre-amplifier section.

Uncompromising in size as well as in its prodigious output, the A1001 has been nicknamed 'The Beast' by its manufacturer. Like the Sirius D200, the A1001 integrated offers a true double-mono power amplifier, with 20,000µF of reservoir capacitance per channel and a separate power supply for each pre-amplifier channel. The circuit for the latter consists of discrete op-amp buffer circuits with small levels of gain either side of the volume control. This leads, via pre-out/power-in sockets on the rear panel, to the power amplifier boards. Here the driver circuit is a long-tailed pair, with complementary current mirrors driving five pairs of complementary bi-polar power transistors per channel.

Below the large, central volume control lie two recesses, housing banks of touch switches which encompass power, mute and selection for six inputs. At the end of the row is a headphone socket. The rear panel carries audiophile-quality gold-plated phono sockets for five line inputs, plus tape in and out, pre-out and pre-amp out and power-amp in. Two pairs of unswitched speaker sockets allow easy bi-wiring. A remote handset is provided which adjusts volume and selects the input as well as actioning the mute function.

SOUND QUALITY

Switch on the A1001 and you immediately feel at home. This amplifier is not so much a piece of hi-fi equipment as a music maker, indeed a peace-maker in a hi-fi world full of trouble and strife. I challenge you to put any disc, any CD player, any speaker on this amplifier, and not enjoy the result:

MUSICAL FIDELITY A1001

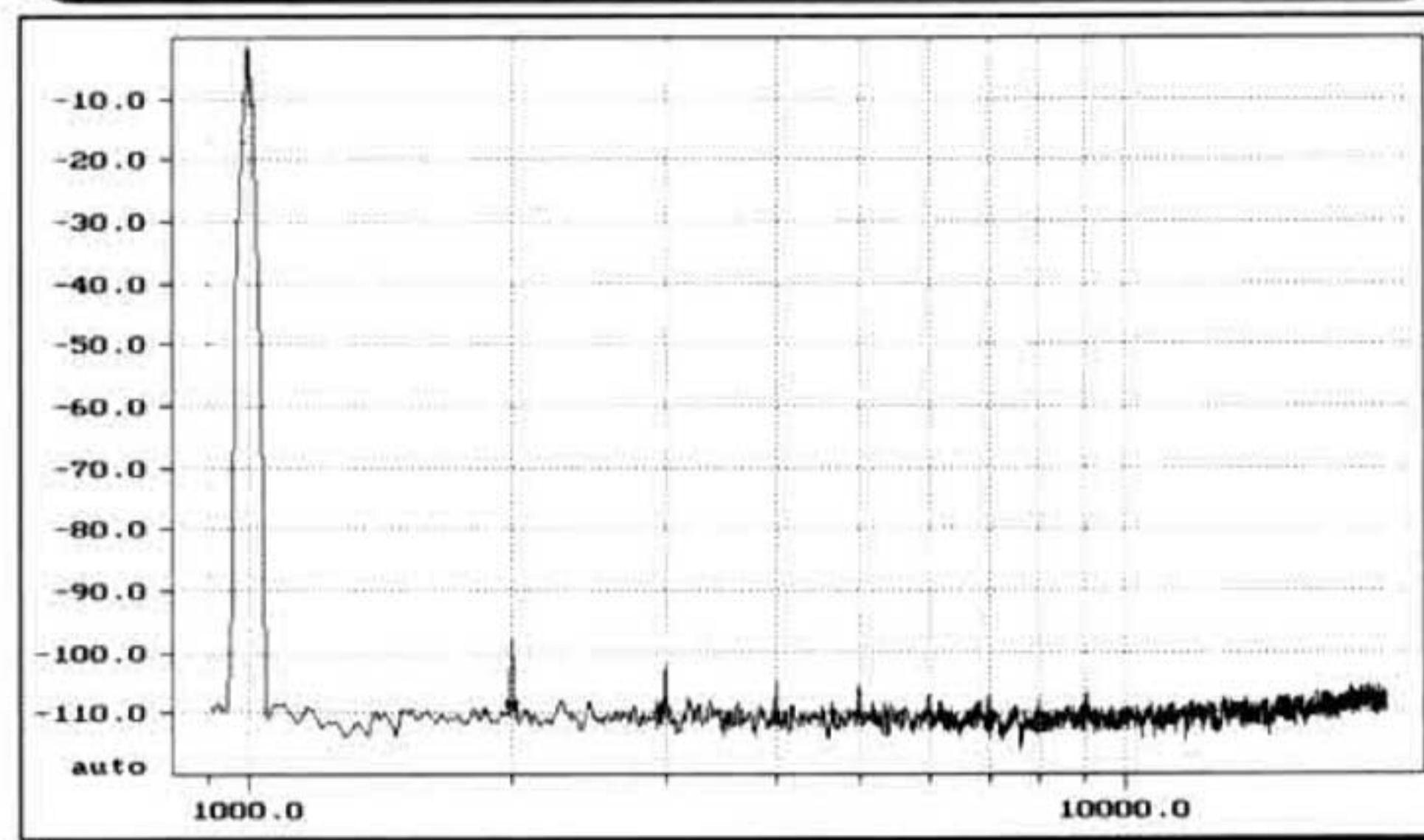


Fig 1a. Musical Fidelity A1001: distortion spectrum, 1kHz tone, at full rated power output

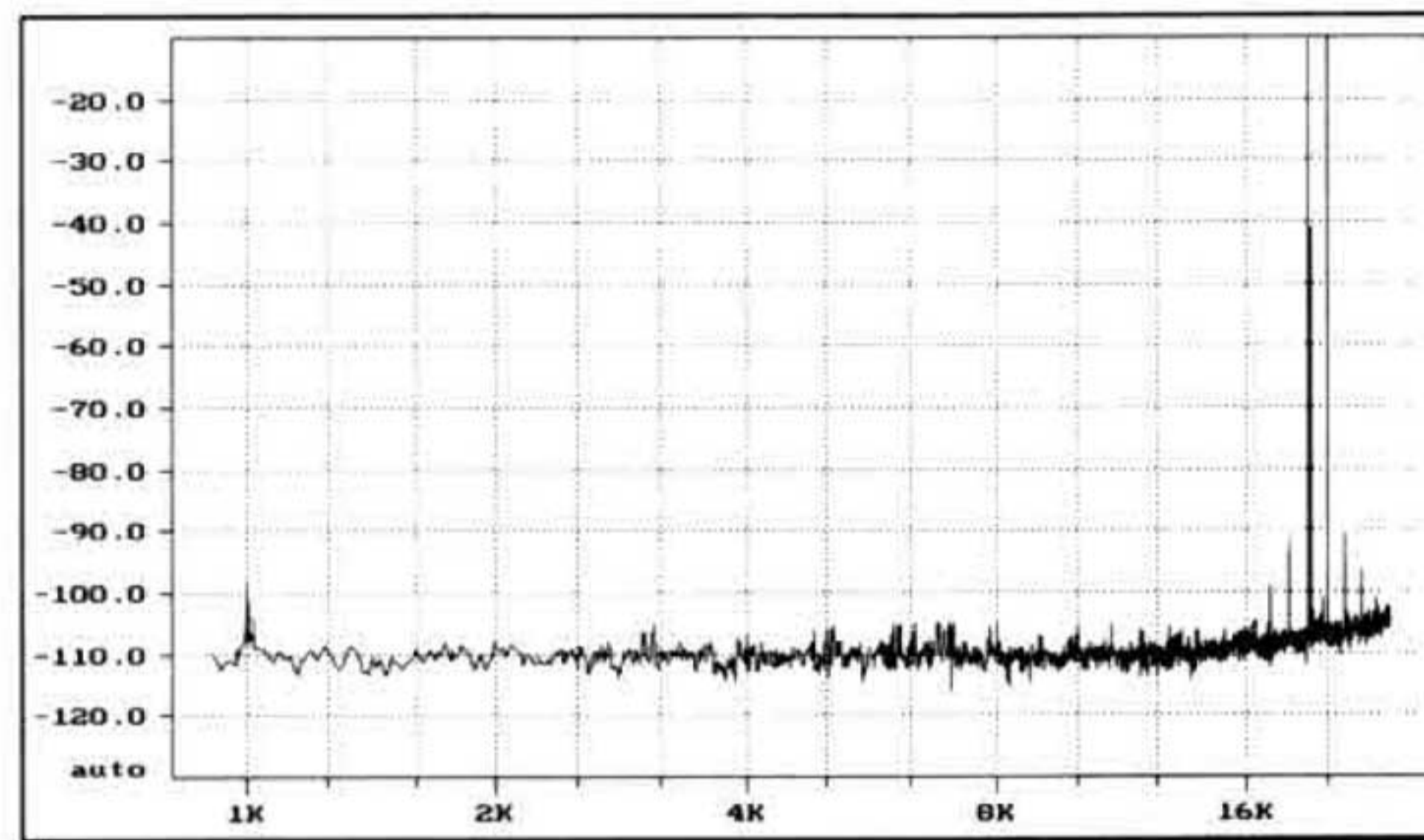


Fig 1b. Musical Fidelity A1001: intermodulation distortion, 19kHz/20kHz tones, at full rated power output

LAB REPORT

A conservatively-set rated power output of 200W into 8 ohms was actually easily beaten on test, to give 240W before distortion levels rose too high. Keeping to the manufacturer's figures, the output doubled in classic fashion to more than 400W into 4 ohms, thus maintaining the dBW levels. As impedance decreased, so the amplifier began to run out of breath, but there was still enough current to drive a nominal 4 ohm loudspeaker comfortably.

Peak current measured around 50A before we gave up pushing the amplifier too hard, the protracted testing levels raising the internal heat uncomfortably with still no sign of the protection circuits cutting in. For normal

dynamic music signals, the A1001 runs much cooler, though we noticed that on the review sample the biasing levels were much higher on one channel than the other, making one side of the casing warm to the touch.

The A1001 is biased fairly strongly into Class A for its lower power output, giving a gradation of harmonics from the dominant second harmonic downwards. While the distortion figure is not at the fanatically low percentage levels,

this harmonic signature is almost in the classic valve tradition, and may explain the 'creamy' sound of some amplifiers with this characteristic.

Pre-amplifier input sensitivity is set at 300mV for all six line inputs, as a compromise between the level needed for tuner and tape and the higher output of CD players. The volume control was able to manage the disparity of levels well. A separate phono stage is necessary if you want to use an LP source.

Test results		Musical Fidelity A1001	
Power output			
Rated power 8 ohms (makers spec) 200W 23dBW			
Both channels 8 ohms (dBW)		1kHz	
Both channels 4 ohms		23.8	
One channel, 2.2 ohms		23.1	
Instantaneous peak current (A)		21.8	
		±50A	
Distortion (dB)			
THD, rated power, aux		-96	
Frequency response (-0.5dB)		12Hz - 21kHz	
Frequency response (-3dB)		5Hz - 36kHz	
Noise (dB)			
Aux/CD (IHF, CCIR weighted)		-95	
DC output offset L/R (mV)		0.3/0.3	
Inputs socket type sensitivity loading			
Aux	phono	300mV	5k ohms
Dimensions (whd) 475 x 164 x 540mm			
Typical price (inc VAT) £2500			

SIRIUS D200

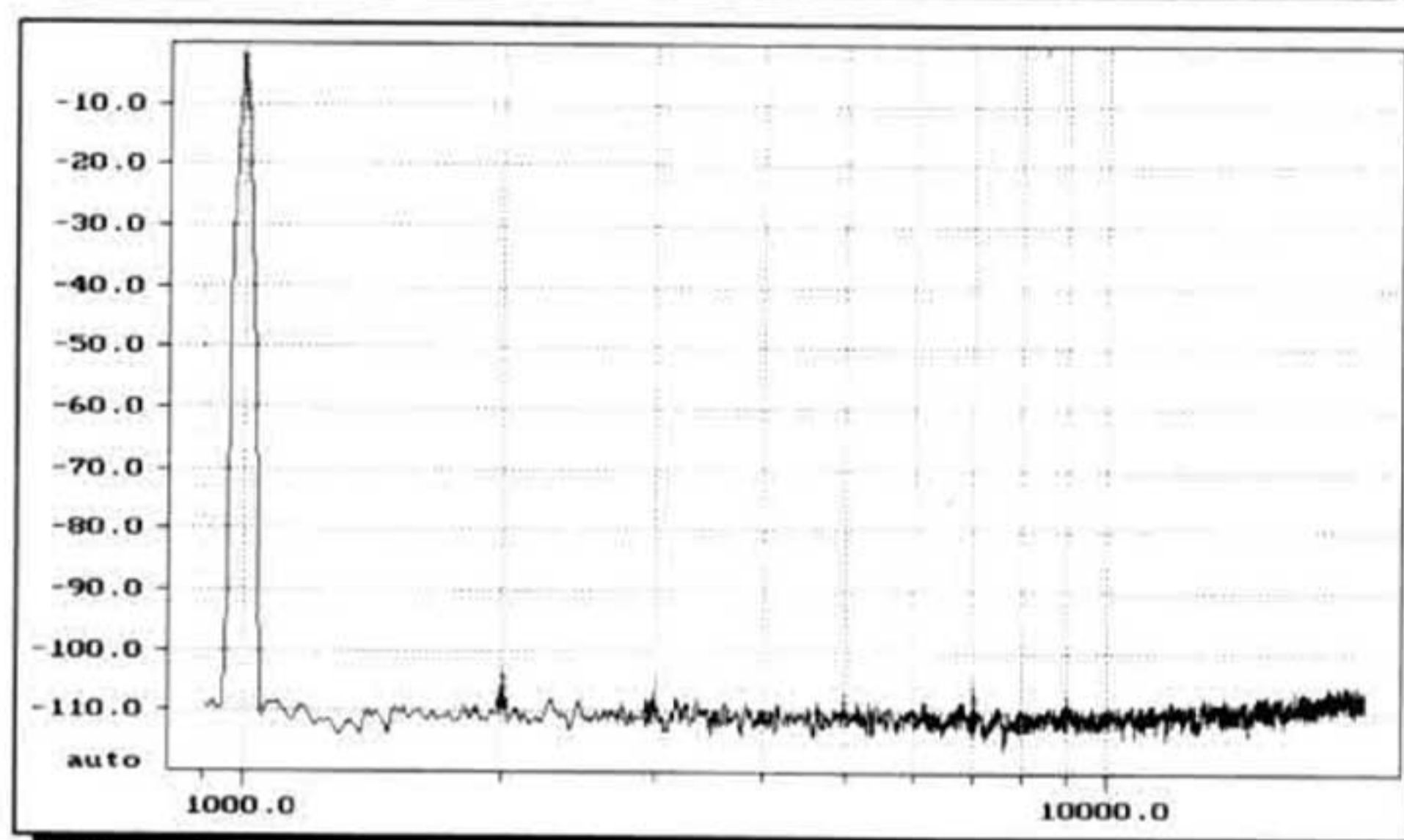


Fig 2a. Sirius D200: distortion spectrum, 1kHz tone, at full rated power output

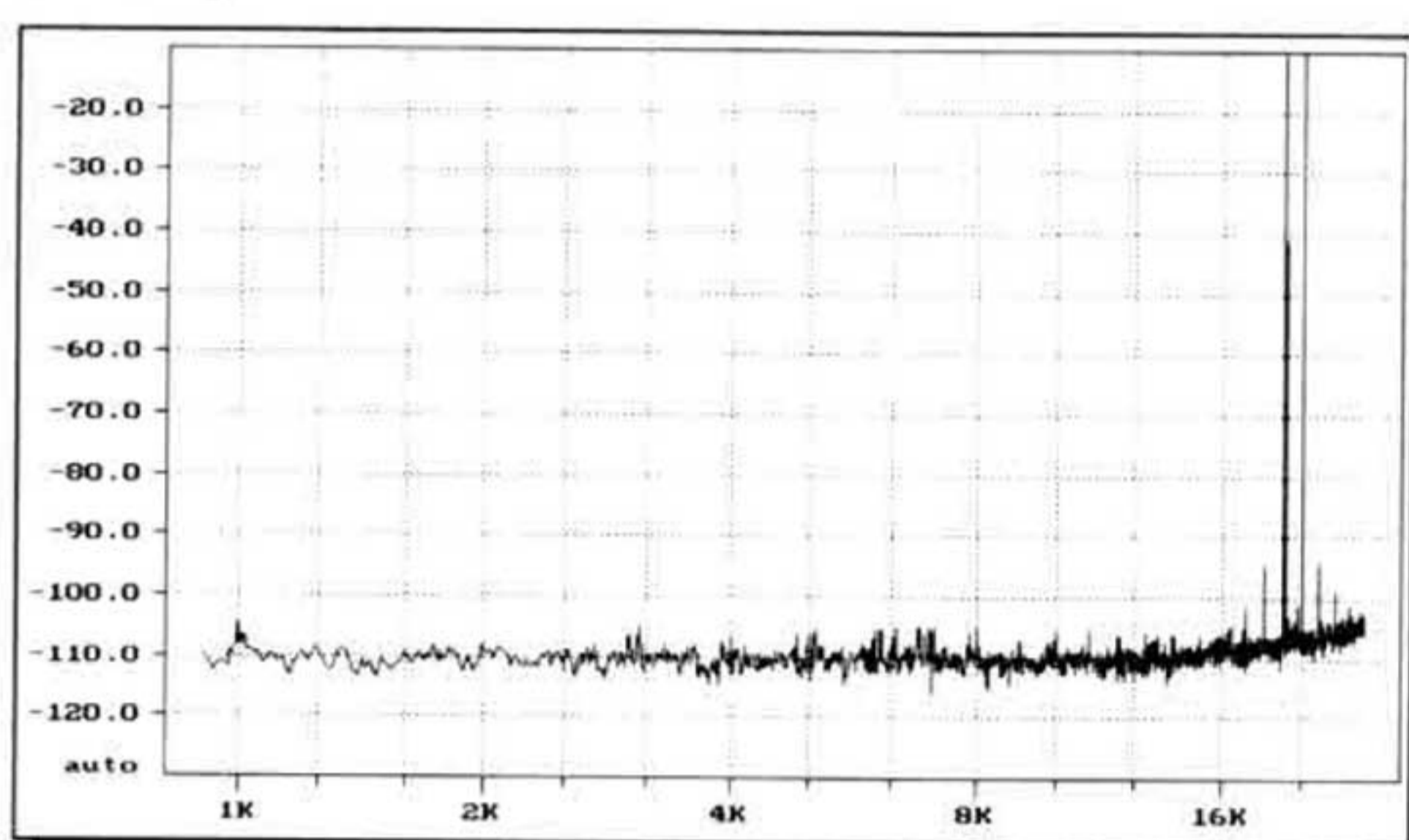


Fig 2b. Sirius D200: intermodulation distortion, 19kHz/20kHz tones, at full rated power output

LAB REPORT

Prodigious power and low distortion are evident from the table of output wattage and from the graphs. The latter show predominant second harmonic distortion, with a scattering of higher order components at reduced level. Power doubles into a 4 ohm load to maintain the dBW level in 'perfect' power delivery manner, but, not surprisingly, is not scaled so well into

2 ohms. Even so, the standard of output is dramatic enough to do justice to nominal 4 ohm speakers whose impedance dips down to the 2 ohm level.

The protection circuit cut in limiting the peak current drive to 45A into a reactive load under pulse testing. We understand that this specification can be relaxed if the purchaser wishes to place a special order, enabling panel speakers rated down to the 1.5 ohm limit to be

driven. As the designer points out 'somewhere we have to draw a line between what is a speaker load and what is a short circuit'!

Similarly the high input sensitivity of 770mV, established for the use of passive pre-amp controllers, can be modified by the dealer to 1.55, 3.1 or 3.9V if you are using an active pre-amplifier.

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Test results	Sirius D200
Power output	
Rated power 8 ohms (makers spec)	200W 23dBW
	1kHz
Both channels 8 ohms (dBW)	23.1
Both channels 4 ohms	22.9
One channel, 2.2 ohms	21.6
Instantaneous peak current (A)	±45
Distortion (dB)	
THD, rated power, aux	-98
Frequency response (-0.5dB)	7Hz - 22kHz
Frequency response (-3dB)	2Hz - 32kHz
Noise (dB)	
Aux/CD (IHF, CCIR weighted)	-99
DC output offset L/R (mV)	0/0.1
Inputs socket type sensitivity loading	
Power	XLR 770mV 10k ohms
Dimensions (whd)	430 x 155 x 446mm
Typical price (inc VAT)	£2995
	(matching passive control unit, £995)

this is, in fact, an amplifier which manages that almost impossible feat — to be all things to all men.

The A1001 does not shirk when it comes to bass power and extension. There is plenty of bottom-end oomph, perfectly coupled to a richness in the upper bass and lower mid. It is this that lends the scale to the musical performance. It is as though everything builds on the bass foundation upwards, the MF providing largesse to discs that sound thin on other systems.

If you are a brightness-and-detail aesthete and care nothing for the drama of low-frequency power delivered in uncompromising fashion, it is just possible you might regard the MF as deserving its 'Beast' nickname, and go off muttering deprecations along the lines of missing transparency. But don't let the scale of the A1001's bottom end deceive you. Monster amplifiers do all too often betray a wallowing behaviour on string instruments whose fundamentals stray below 100Hz: but not the A1001. Both bass guitar and double bass are tightly defined, the listener has no trouble following scales played on either and there is no unevenness of behaviour as notes ascend or descend the scale.

The Panufnik percussion concertino recording displayed this well. The A1001 drives the speakers in dramatic style, pounding out the percussion with no hint of compression, yet keeping things tight and under control. The soundstaging is 'closer' than with the Sirius, with not such great depth of layering, but more immediacy, giving greater body and presence, for example, to the Shostakovich quartet recording.

What you lose in the finer points of detail and ambient retrieval you gain in musicality. Musical enthusiasm is the A1001's forte... no matter what the style of music. You will find yourself tapping your foot as much in the classical repertoire as with rock. Of tingles down the spine there are plenty — the sound is rich in harmonic structure, which lends a real vibrancy to each and every instrument. Voices, too, are rendered in an incredibly lifelike manner, and the coherence across the tonal range of soprano to bass is extraordinarily good. The Bach

'Coffee' Cantata CD showed off the richness of the Musical Fidelity character. You feel drawn into the music through its intimacy and directness, emotionally entangled in the performance.

The MF manages the tough recordings with ease, controlling the high frequency excesses of Jann Arden's 'Spatializer'-equalised voice to bring out the most heart-touching portrayal of 'Could I Be Your Girl', and handling the power in the frequency extremes of Chris Rea's *Daytona* magnificently.

It is worth stating again. You can't upset this amplifier with a tough speaker load; you cannot annoy it with nasty CD players; and it will not put a foot wrong with 'difficult' recordings. Throw at it what you like, the A1001 is as bomb-proof as an amplifier is likely to get, and it comes up smiling every time.

CONCLUSION

What a brace of power servers these two amplifiers are. Those wishing to squeeze every ounce of detail out of a recording as well as realise its full dynamic range will find the Sirius D200 hits the target. Only its pernickiness with regard to partnering equipment is a minus point, but to be fair what piece of esoteric hi-fi design doesn't share this characteristic?

In direct comparison, the Musical Fidelity A1001 loses out on the ultimate transparency but more than makes up for this in its exciting and enthusiastic music making. The A1001 is indeed a worthy descendant of the A1, developing much of the same character but issuing the sort of power that is necessary to make the best of modern speakers and recordings. Luvverly. ✦

