

hi-fi

NOVEMBER 2005 UK £3.40

WORLD

COMPETITION
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One mini monitors
worth £1,200!

FIRE POWER

Eastern Electric M520 tube integrated vs.
Sugden A21a, Marantz PM-15SI and
Lyngdorf SDA1 2175

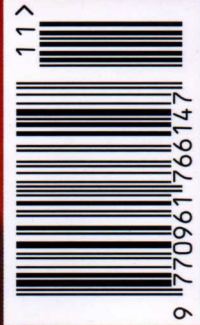


Eastern Electric
M520
Vacuum Tube Stereo Integrated Amplifier

POWER SPECIAL

- USHER R1.5 - CLASS A POWER
- ARCAM FMJ C31/ PI PRE-POWER
- DENSEN B-250/ B-330 PRE-POWER
- MUSICAL FIDELITY kW750 PRE-POWER
- SONIC IMPACT T-AMP TWEAKING SECRETS
- AMPLIFIER-SPEAKER MATCHING EXPLAINED
- VALVE POWER STATION: T+A V10 INTEGRATED
- THE POWER GAME: CLASSES A, AB AND D FACE OFF
- ELAC FS 607 X-JET FLOORSTANDING LOUDSPEAKERS

NOVEMBER 2005

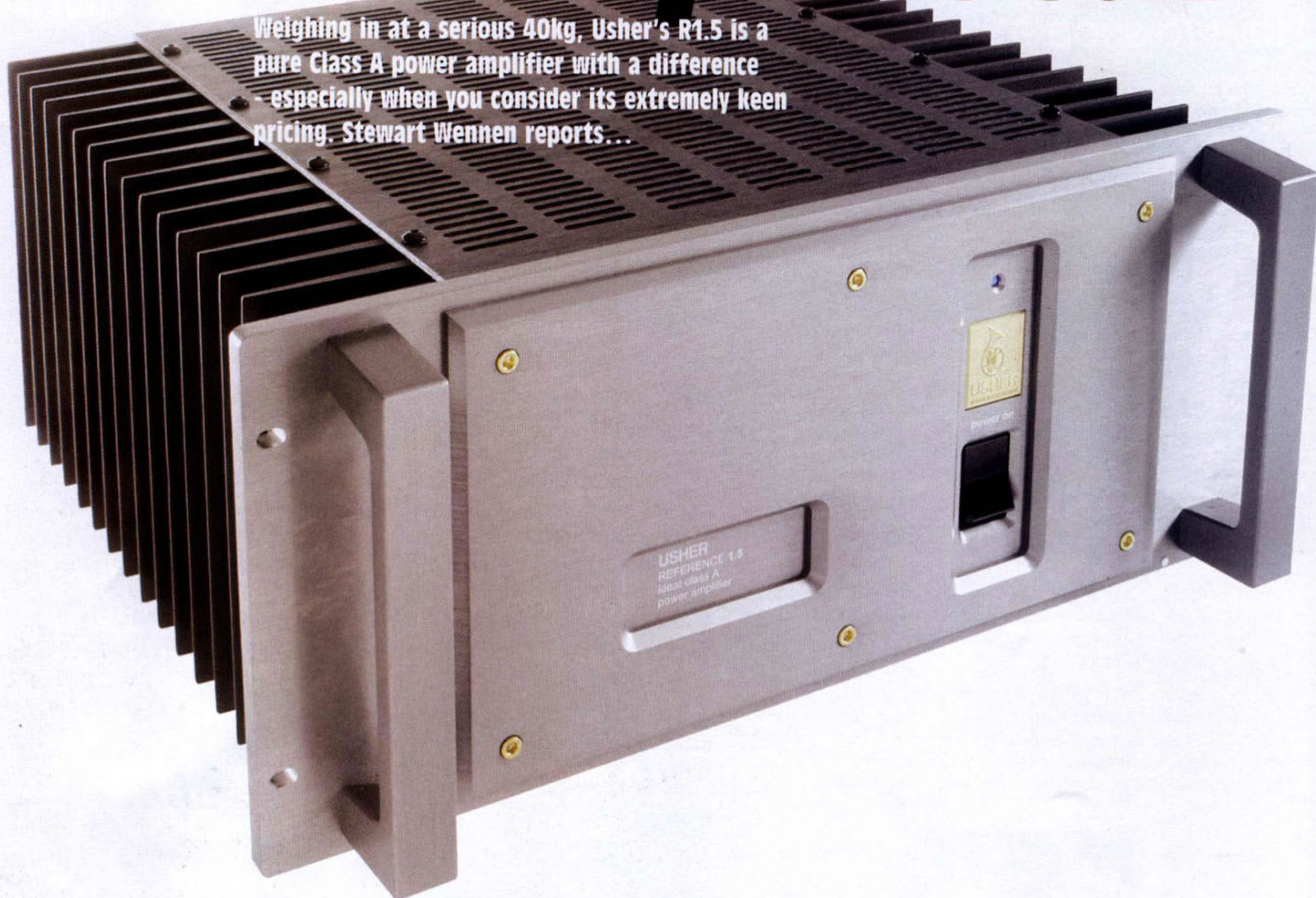


SIMPLY STAX
SUBSCRIPTION
PROMO
see p71

10 PAGES OF HI-FI Q&A * CLASSIFIED ADS

Heavy Metal

Weighing in at a serious 40kg, Usher's R1.5 is a pure Class A power amplifier with a difference - especially when you consider its extremely keen pricing. Stewart Wennen reports...



This magazine makes no secret of its love for pure Class A operation; there's no doubt it brings something to the party that conventional Class AB amplifiers cannot. The lack of switching distortion makes for an unusually clean and open sound - or to be more precise, the switching distortion of Class AB biased designs pollutes and sullies the original sound (which is, of course, naturally clean and open).

Trouble is, the trade-off with Class A is that power output comes right down - and to get it up to Class AB levels the amplifier needs to be seriously beefed up to dissipate the tremendous heat generated by those output transistors running at full tilt. Of course, this makes things very expensive, with the result that almost all Class A amplifiers command a price premium. Those that don't, such as the lovely Sugden A21a (see p16), simply don't have much power.

Well, Usher seems to be trying

to square the circle, so to speak, with its Chinese built high end stereo power amplifier, offering a claimed 125W RMS per channel (and 40kg's worth of heatsinking to cope with it all) for a more £1,500. Too good to be true?

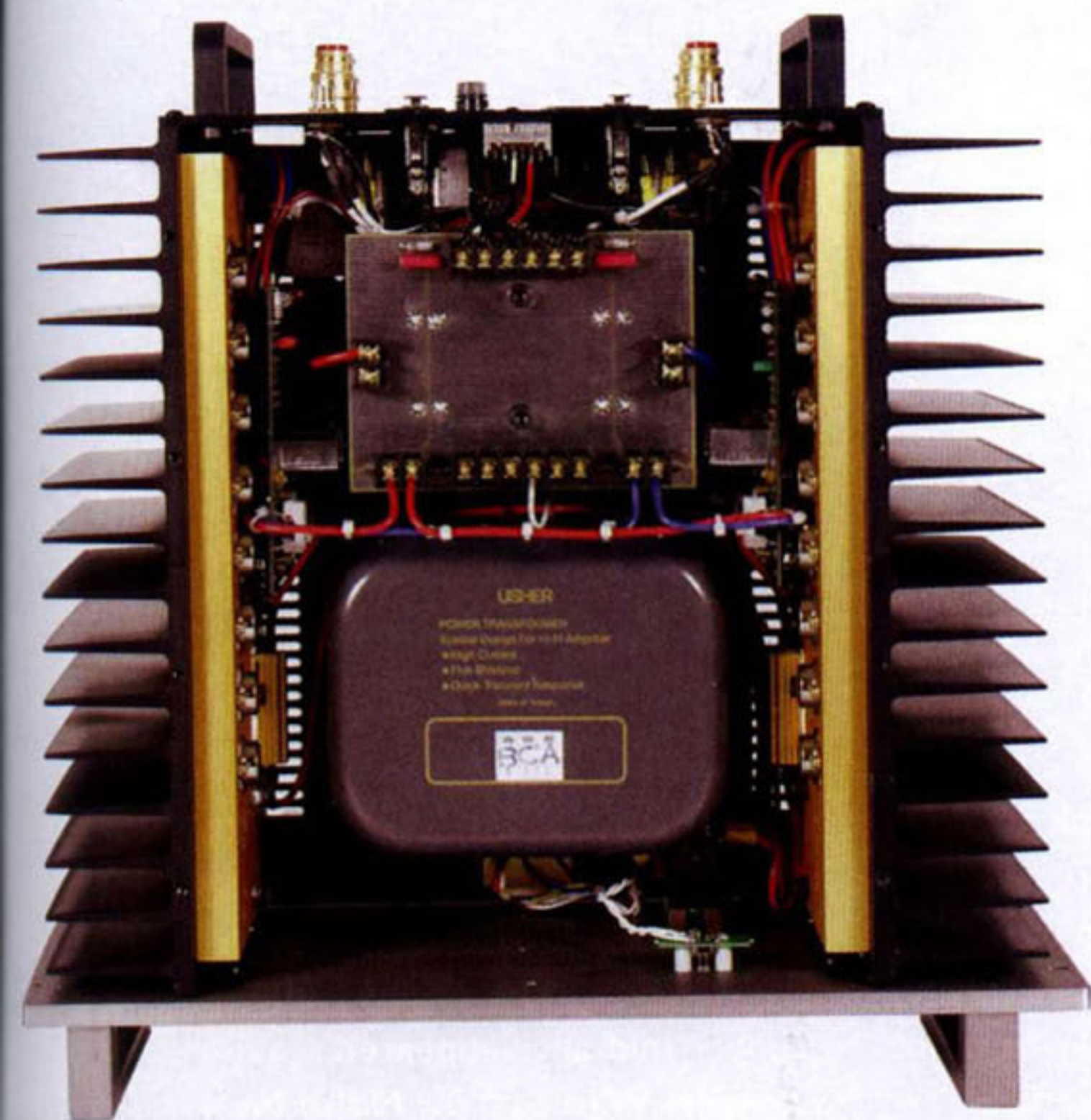
It's an understatement to say this is a visually imposing product, the 480x480x225mm R1.5 being instantly recognisable due to its vast, chunky brushed aluminium fascia panel, with its huge contoured grab handles and large rocker switch with power indication via a blue light emitting diode. Truly massive heatsinks stretch down both sides of the unit. Inside, the power supply smoothing capacitors are configured as two pairs of 10,000-microfarad units. The output stage uses multiple pairs of Motorola MJ15024/025 heavy-duty output transistors. With a massive thermal capacity, this unit utilises a thermal trip which switches the amplifier off in case of a fault condition. The amplifier also has a soft start circuit to allow the current surge to be better regulated on

power up. Surprisingly perhaps, there is no loudspeaker protection on this model.

Fit and finish, as with all Usher products, is rather good. At the rear, there are two pairs of the best binding posts I have ever seen. They allow for the use of 4mm loudspeaker terminations whilst at the same time the use of heavy spade terminals. These binding posts lock the 4mm plugs into the post thus negating the possibility of accidentally pulling the cables out of the sockets. Signal input termination is taken care of with a pair of high quality phono sockets and also a pair of XLR balanced inputs, although balanced operation is a £100 option. Mains electrical power is supplied via an IEC socket.

SOUND QUALITY

The Usher R1.5 got off to a promising start with BBC Radio Four on FM, where voices sounded unusually delicate yet weighty. Indeed, its midband instantly impressed with a full, rich tone. Moving to vinyl, and



REFERENCE SYSTEM:

Origin Live Aurora Gold/ Conqueror/ Sumiko Blackbird
Acoustic Solid Small Royal/ Hadcock GH242 cryo/ Music Maker Three
Graham Slee Jazz Club phonostage
Custom built passive preamplifier
ATC SC35M loudspeakers

Led Zep for many years and have seen them quite a few times in their heyday, but I have never heard them come with so much verve and drive before in my own front room. The space around the musicians was 'inky black'. Some classic reggae from UB40 ('Present Arms') once again came over with a vast soundstage, the musicians seemingly laid out in an arc. Background noise so low that there was an almost ethereal feel. With lightning transients, the

James Brown presented a beautifully wide and deep stereo image, with stage depth to die for and correct placement of the musicians. Again, the bass proved satisfyingly vivid.

Usher proved a joy to listen to.

A change of pace was due, so the next disc on the turntable was from Beethoven. As the string section murmured the introduction to his

"this is affordable Class A without tears..."

An early 1960s John Williams mono flamenco guitar recording done at Abbey Road, with its legendary warm sound, didn't disappoint either. The Usher successfully captured the warm rich sound of the instruments and correctly transcribed the decay of the notes in the studio. All these audio clues issued forth in abundance, to make the listening experience all the more profound.

Moving to some old school rock and roll in the shape of Led Zeppelin ('2'), and the hard driving rhythm machine filled my listening room with huge bass transients, the kick drum accenting the structure of the music. The Usher certainly takes no prisoners; I have been listening to

Piano Symphony No. 3, I was able to fully appreciate the delicacy and sheer power of the music played by a great orchestra. This Deutsche Gramophone recording has been lauded as possibly the finest transcription ever made of this piece, and I could see why. Likewise, solo female vocals from Carol Kidd (Linn Records) sounded almost magical, the Usher's ability to transport the listener to the room where the performance is taking place proving uncanny.

DP SAYS:

This was an interesting one. Costing £500 more than Sugden's A21a but offering some 105W RMS per side extra, plus amazing (perceived) build and Krell-like styling, the Usher R1.5 would seem to be too good to be true, so I'd expected to be disappointed upon audition. Well, I don't think it's as good as the A21a in some respects; it lacks the Sugden's liquid, effortless, flowing musicality. This isn't in itself a criticism, as so does virtually every other amplifier I've heard too. However, the other side of the coin is that it boasts massive reserves of power (by Class A standards), real depth and space and a sense of tidiness and proportion that the Sugden lacks. This makes for a brilliant package; no matter what you play through the Usher, it comes out in a tremendously authoritative way, with superb fine detail, excellent textural and an excellent resolution of the recorded acoustic. Even if it came packaged in a biscuit tin, to do this for £1,500 would be major feat – so it's outstanding considering how well the amplifier is built. In absolute terms, the R1.5 lacks the liquid musicality of some rival amps (Musical Fidelity's A5cr is a case in point), or the finesse or Lyngdorf's SDA2175 (another outstanding product, and this at under £800), but it's still right up there in value for money terms. For many, myself included I dare say, the fact that it looks like an £8,000 Krell might just seal the deal.

VERDICT ●●●●● £

Excellent sonics allied to serious power output makes this an outstanding mid-price product.

USHER R1.5 £1,500
HiAudio
☎ +44 (0)1443 231458/9
www.hiaudio.co.uk

MEASURED PERFORMANCE

The Usher has vast thermal capacity, with huge heatsinks and a massive thermal sink under the multiple output devices. It produces 150W into 8ohms and 200W into 4ohms – not enormous by today's standards – so the amp is sized to run flat out for long periods I presume, without thermal protection kicking in.

Distortion levels were low into an 8ohm load, just 0.003% second harmonic showing in the midband. However, at higher frequencies this rose to 0.02%. Into 4ohms however, there was quite a marked increase in distortion, second and third harmonics appearing in equal quantity. Level measured around 0.03%, rising to 0.1% toward full output at high frequencies. This is still a good performance, but the substantial change in distortion pattern at higher currents is a concern.

Input sensitivity was low at 1.5V; the Usher needs a preamp with x5 gain or more if it is to match old 300mV tuners, cassette decks and such like.

Frequency response was normal enough at 4Hz-42kHz (-1dB).

The Usher Reference 1.5 is rather large for domestic use, considering its power output. It looks better suited to arduous professional use. Measured performance was good, if not exceptional. NK

Power	150watts
Frequency response	4Hz-42kHz
Separation	88dB
Noise (IEC A)	-116dB
Distortion	0.02%
Sensitivity	1.5V

