

**Test Results**

Power output from the JA-2 was 1.3dB better than specification, with the amplifier returning exactly 138-watts continuous into an 8-ohm test load no matter whether tested at with a 20Hz, 1kHz or 20kHz test signal. Solid performance indeed. Reducing the load resistance to 4-ohms didn't see the expected doubling of power output, but the JA-100 came very close, delivering 248-watts average power into the dummy loads, again measuring exactly the same at the three different test frequencies.

Frequency response is graphed both into a resistive load and a simulated loudspeaker load that's designed to represent the type of load a typical loudspeaker would present to the amplifier. As you can see, into the resistive load the Jungson's response was exceptionally flat, *Australian HI-FI Test Laboratories* measured it as being just 0.4dB down at 20kHz, so 'normalising' this into the industry-standard  $\pm$  format means the response is 20Hz-20kHz  $\pm$ 0.2dB. Response is just 1dB down at 50kHz, so it's a perfect candidate for matching with super-audio format sources, such as DVD-A or SACD. Driven into the simulated loudspeaker load, the response was not as 'flat, and rolled off rather more quickly at the top end, but the Jungson still performed very well, with the 'normalised' response coming in as 20Hz-20kHz  $\pm$ 0.4dB. In measured terms, response is just 0.8dB down at 20kHz and 1dB down at 30kHz.

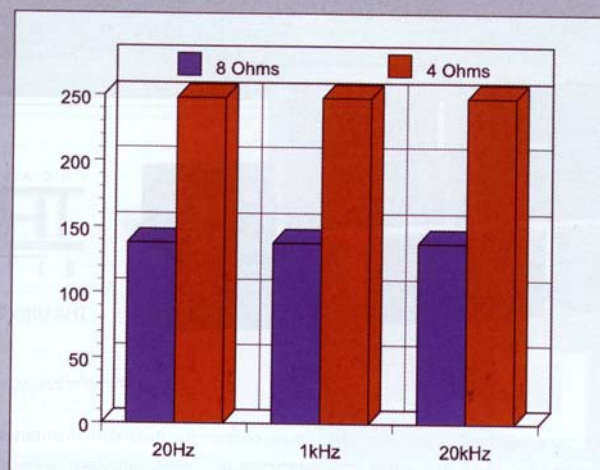
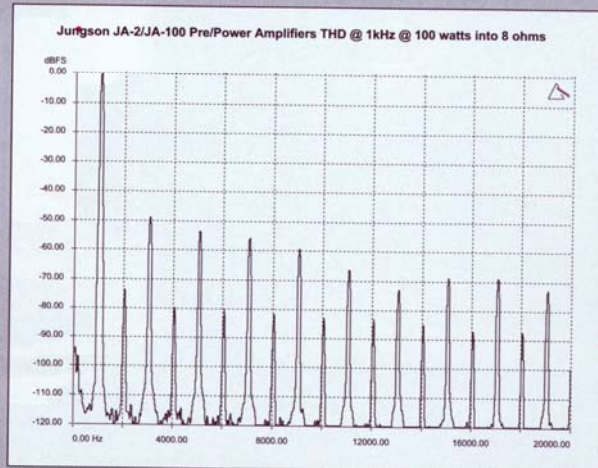
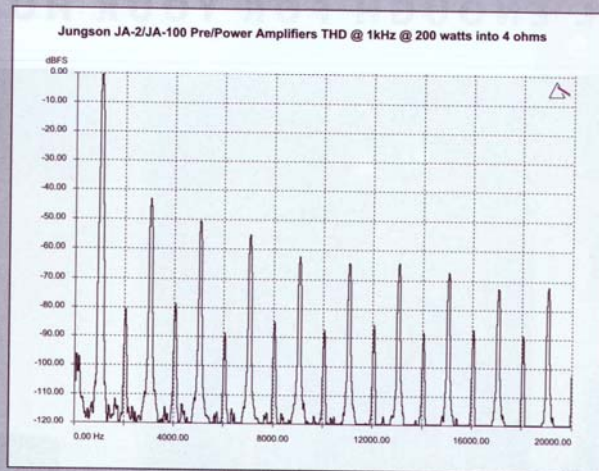


Driven by a 1kHz signal into an 8-ohm resistive load, distortion at 1-watt was low, with the spectrum analysis of the result showing the distortion comprised of a second-harmonic component at  $-70\text{dB}$  (0.03%) and a third harmonic at  $-82\text{dB}$  (0.007%). The noise floor at this level is for the most part below  $-110\text{dB}$  (linear). Under the same test conditions, but with a 4-ohm load, the Jungson performed equally well, with approximately the same level of overall THD, but this time the second harmonic was slightly reduced in level, to  $-72\text{dB}$  (0.025%) and the third slightly increased, to  $-80\text{dB}$  (0.01%). The measured overall THD+N figure at one-watt was 0.006%.

The picture wasn't so rosy at rated output, with the Jungson returning high levels of both odd- and even-order harmonic distortion components, as you can see from the graphs. Into 8-ohm loads, the first four odd-order harmonic distortion components (3rd, 5th, 7th and 9th) were arrayed between  $-50\text{dB}$  (0.3%) and  $-60\text{dB}$  (0.1%). The first four even-order harmonics were at much lower levels (around  $-80\text{dB}$ , or 0.01%). Into 4-ohm loads, the odd-order distortion components increased in level again, with  $\text{HDL}_3$  at  $-45\text{dB}$ , or 0.56%,  $\text{HDL}_5$  at  $-50\text{dB}$  and  $\text{HDL}_7$  at  $-55\text{dB}$ . Again, even-order components were relatively low at around  $-80\text{dB}$ . It would appear from these results that Jungson is using relatively low levels of negative feedback—presumably in order to improve transient intermodulation distortion. Overall THD+N at rated output was measured at 0.02%.

Australian HI-FI Test Laboratories measured signal-to-noise ratios with both the Jungson JA-2 and the JA-100 in circuit, so the results cannot be compared with Jungson's own specifications, which quote signal-to-noise ratios separately for each component. Measured this way, the S/N ratio at one watt was  $87\text{dB}$  (A-weighted), improving to  $101\text{dB}$  (A-weighted) referred to rated output. **AHF**

Steve Holding



Information contained in this magazine, whether in editorial matter or in feature articles or in advertisements or otherwise, including in particular, but not limited to, technical information, is not published on the basis that the publisher or distributors assume or accept any responsibility or liability in respect of its correctness. Neither the Proprietor nor the Editor nor any member of the staff of this magazine or its distribution agents accept or assume liability or responsibility for any loss or damage resulting from the incorrectness of such information. The submission of product or material for editorial inclusion in this publication signifies acceptance of the above-mentioned conditions.

**Editorial Contributions.** The publisher assumes no responsibility for return or safety of manuscripts, artwork, photographs, goods or any other matter supplied to this magazine. The design and contents of Australian HI-FI are copyright and must not be reproduced in whole or in part without prior permission, in writing, from the publisher.

Horwitz Publications Pty Ltd does not carry insurance cover on goods or other material supplied to it for editorial review, advertising or any other purpose, and does not accept liability for such goods. We request therefore that equipment or material supplied to this company be covered by an extension of your own insurance policy for the period the item/s may be in transit to us, in our possession, and in transit back to your warehouse. Horwitz Publications has an excellent record of maintaining equipment security and ensuring safe return of equipment and other material in good condition and will continue to ensure that all necessary steps are taken to avoid accidental damage or loss or theft of goods or other material but we advise that the onus of insurance rests with the equipment's owner and supplier.

**Equipment Reviews** are based on laboratory measurements and controlled listening tests. The choice of equipment to be tested rests with the Editor of Australian HI-FI. Manufacturers and distributors are not permitted to read reviews in advance of publication and no review or portion thereof, no matter how small, may be reproduced for any purpose or in any form without written permission from the publisher. All equipment reviews should be construed as applying to the specific samples tested—neither Australian HI-FI nor its technical consultants assume responsibility for product performance, quality or applicability. Neither the editor, the publisher, nor any of its employees or agents accepts responsibility for the opinions expressed by contributors.

**Readers** are reminded that commercially available recordings (cassettes, CDs etc) and radio/TV broadcasts are usually subject to copyright. Whilst articles and advertisements concerned with recording and recording techniques may appear in Australian HI-FI Magazine, readers should not construe this as authorising or inciting them to make recordings of copyright material. In all cases we suggest you contact the manufacturer and/or supplier of the recording to request permission to record the material.

## SUBSCRIBER SERVICES

Australian HI-FI is now available for subscription online at [www.isubscribe.com.au](http://www.isubscribe.com.au)

Otherwise, phone: (02) 9901 6111, Sydney

Elsewhere — Freecall: 1800 227 236

(Mon–Fri 9am to 5pm EST) OR Fax: (02) 9901 6110

# contents



24

## 24 Jungson JA-2 Preamplifier/ JA-100 Power Amplifiers

China has a flourishing high-end hi-fi industry, with hundreds of small and large manufacturers producing equipment that's never been seen in the West. This Jungson Pre/Power combo, from one of China's largest and best-known (at least in China!) manufacturers shows that famous well-known high-end marques in the US and the UK, and even here in Australia, will need to keep on their toes.

## 34 Pioneer DV-655A Universal Player

Is there anything Pioneer's new DVD, DVD-A, SACD, CD, MP3 player can't do? Intrepid reviewer Bryce Swan made it his mission to find out, and what he discovered amazed even him!

## 42 Sonique 7.5 SE MkII Loudspeakers

At a time when most loudspeaker manufacturers are cutting costs by buying their drivers 'off the shelf' from unknown companies in South-East Asia, India and China, Sonique is still using drivers built by SEAS in Norway, a tiny company that is completely owned and run by its employees, who take no shortcuts whatsoever with time or materials, building what are amongst world's most expensive drivers, mostly by hand.

## 78 Sonken M31 MP3 player/ FM radio/Voice recorder

Sonken's new M31 is a super-portable triple-function unit that plays MP3 files, FM radio and also records voice using a built-in microphone to its own internal memory and/or optional SmartMedia cards. It's very small and, despite a few wrinkles, its design and operation are very well thought out. Reviewer Stephen Dawson thinks the majors might have to look to their laurels...

## 8 Audio News

Rega's newest P9 turntable is so good it's being hailed as an LP12-beater, Pioneer says its new lifestyle system is the first in the world with a 'universal' DVD drive and OEL display screen, Sony announces two new MD products, OEL display screen, Sony announces two new MD products, Dali takes over DK1, Jamo releases its first A/V receiver, and SME is once again available in Australia.

## 48 The Wheel Deal

Why is it that owners of expensive in-car audio systems are so completely, totally different from owners of expensive home hi-fi systems? Rod Easdown has a few theories that he's more than prepared to air...

## 50 Digital Restoration: Turning LPs into CDs

After 20 years of CD, many audiophiles have tried to dub their vinyl LPs to CD only to discover that it's not as easy as it seems. In this article, Walter Steensby distills his many years of experience into an easy-to-follow guide that will tell you everything you need to know to make the process easy.

## 70 Happy Birthday Marantz

Saul Marantz may no longer be with us, but many of his designs live on, having been re-engineered by the company that still bears his name. This year, Marantz turns 50, and it seemed like an appropriate time to chronicle its many achievements and guess at the future directions the company might take...

## 74 Killer CDs!

We investigate widespread news reports that CDs and DVDs can tear themselves apart whilst spinning around, flicking off shards of polycarbonate sharp enough to piece the player chassis and possibly inflict grievous wounds on anyone unlucky enough to be standing close by!

## 6 Editor's Lead-In

This month, the editor waxes lyrical about meeting a bunch of Aksa enthusiasts and having a great old time. And here we were thinking we'd got rid of him forever, only to have him return to the office waving a soldering iron, a few old valves and his copy of *How to Design and Build Audio Amplifiers*. Next time, we'll send the office junior...

## 82 Rock On

Fans of Machine Gun Fellatio should not read Kate Haycock's review of Triple J's latest Hottest 100 album (Volume 100, no less!), but grown-ups who like to dance might like her review of Moloko's latest, *Statues*. Also reviewed this issue are Gelbison's *1704*, The White Stripes's *Elephant*, The Return of Funk Phenomena, and Teenage Fanclub's latest.

## 84 Super-Fi

This month, Dean looks at three disparate classics, now available on DVD-A for the first time. Fleetwood Mac's fantastic Platinum (18 x I) album *Rumours*, Alanis Morissette's very recent *Under a Rug Swept*, and the Doobie Bros' long-lost album, *The Captain and Me*, one of the first four-channel releases in the world!

A u s t r a l i a n

\$6.50\*  
N.Z. \$7.00\*  
(Prices include GST)

# hi-fi

June/July 2003

and home theatre



## Jungson JA-100 Power Amps China's answer to Krell?



## Turning LPs into CDs How to do it...

## Killer CDs! Can CDs really explode?

PRINT POST APPROVED PP229104/00003



## Marantz: 50 Years On