

hi-fi news

THE HOME OF REAL HI-FI

& Record Review

Exclusive

SIZZLING STEREO

Ming Da's mighty tube amp

Heavenly speakers

Technics SB-R1 & Sonus faber Olympica I

The Round Table

Knight of vinyl on a budget



Simaudio 430HA

Premier headphone amp

T+A PDP 3000 HV

Flagship SACD player/DAC



INVESTIGATION

Horn of plenty
'Rebuilding the UK's largest horns' p24

Benchmark AHB2

First THX 'AAA' amp - a new breed of cool



• **PLUS 18** pages of music reviews & features • **VINYL RE-RELEASE MGMT's** *Oracular Spectacular*
• **OPINION** 11 pages of letters and comment • **VINTAGE REVIEW** Meridian's component preamp
• **SHOW BLOG** We report from CES 2015 in Las Vegas • **READERS' CLASSIFIEDS** Hi-fi bargains galore

UK £4.50 US \$12.99 Aus \$10.99
9 771472 256233 03

POWER AMPLIFIER

Ming Da Dynasty Cantabile-Grandé MC998-A

Continuing the trend for monster vacuum tube power amps is this Chinese designed and built behemoth, using the rare yet surprisingly inexpensive FU80 RF power triode
Review: Nick Tate Lab: Paul Miller

Things can only get *bigger...* there's a gilded sector of high-end hi-fi that lives in its own rarefied bubble, appealing to a select, monied and style-conscious clientele, hungry for ever larger and more outlandish products. Certain manufacturers have produced vast 'statement' designs for many years now, and valve amplifiers are no exception. For example, the beautiful Audio Research Galileo series [HFN Jan '15] shows that there is no shortage of demand for ever more mammoth flagships.

But we're now witnessing the birth of a fascinating new sub-species of valve amplifier – the high-end audio equivalent of a monster truck. From the NAT Se1 MkII [HFN Aug '10] to the Kronzilla SXI [HFN Aug '13], extremely expensive products based on massive and ultra-niche tubes are now appearing. These are quite distinct from conventional high-end valve amps, which use the usual complement of four or so sizeable but not huge power valves, such as 300Bs, EL34s or 845s. To this select new club, we must now add the gigantic, two-box £34,950 Ming Da Dynasty Cantabile-Grandé MC998-A monoblocks.

It's hard to get a real sense of its positively Brobdingnagian proportions without regarding it in the metal, so to speak. Photographs do not convey its

cathedral-like scale, while crude metric measurements cannot evoke its sheer sense of physical drama.

ALMOST TOO IMPOSING

Indeed, in both size and appearance it doesn't look recognisably 'hi-fi' at all. More steampunk than stereo, it looks like the sort of contraption Alan Turing would have used in his cryptology laboratory, rather than an instrument with which to play music. If we're honest, the mighty Ming Da precludes itself from most high-end audio buyers' shopping lists by virtue of this sheer physical bulk – a typical D'Agostino customer would surely find it too imposing and impractical.

Each monoblock amplifier comprises two boxes that together weigh some 70kg, split to make transportation and setting-up more practical. The lower box is the power supply, and the upper one the amplifier itself, where you will see the massive FU80 tube punching into the air like a Shanghai skyscraper. A single JJ ECC83 and Tung Sol 6L6 ride shotgun. Personally I would not call it beautiful, but it's never less than visually arresting. Paradoxically though,

as we shall see, in sonic terms it is one of the least intrusive valve amplifiers I have yet encountered...

Ming Da's founder (and the amplifier's designer) Jigui Xiao says the two-box design is necessary because of the huge power output. 'The output is 80W in Class A – this is a powerful pentode that requires a strong and reliable power supply.'

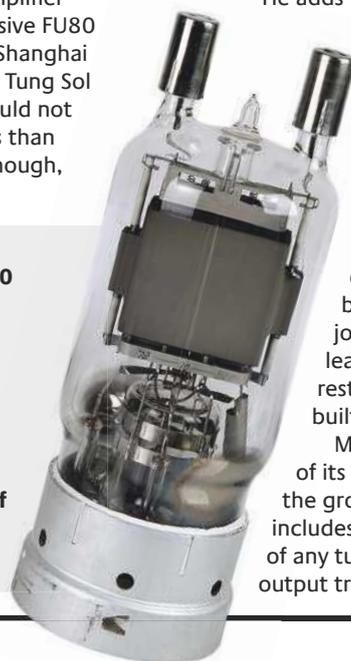
The juice for the plate/grid negative voltage and the filament voltage comes from separate power transformers, and that's why a two-chassis per channel model was used. With

'It's like the sort of contraption Alan Turing would have used in his lab'

450W of anode dissipation, there's no underestimating how serious this is. While the amplifiers are also split to minimise hum and noise generated by the power supply 'there's also the consideration of weight and ease of installation to take into account,' Jigui Xiao says.

He adds that the FU80 RF Pentode has a power output that few other valves can match, especially when considering price and reliability [see boxout]. It may not be the most beautiful glass bottle ever to have glowed, but it does a great job inexpensively, and leaves budget for the rest of the amplifier to be built better.

Ming Da makes all of its products from the ground up, and that includes the key components of any tube amplifier – the output transformers. These



FU80 RF PENTODE

Very similar to the Russian GU81 transmitter valve, the huge Chinese FU80 power triode is in surprisingly plentiful supply in China, costing a mere £50 or so in its domestic market. It was originally intended for military telecommunications purposes, but subsequently began to appear in medical equipment too. It was designed and produced in the People's Republic of China in the 1950s and '60s, with the help of Russian experts and with reliability a key consideration, and it benefits from that to this day, particularly when run in relatively unstressed applications such as the Cantabile-Grandé. Ming Da's Jigui Xiao says it should give a lifespan of over 5000 hours in this power amplifier, adding that: 'run as a pentode it has a full, rich, fast sound with excellent dynamic headroom.'



LEFT: Looking more like a contraption from a steampunk novel than a piece of domestic hi-fi, this sturdy two-box (mono) amplifier is well finished and crowned by its striking FU80 tube

past one rather than being assaulted by it. The slightly grey midband often heard with solid-state amplifiers is also notable for its absence, and this further heightens the sense of occasion.

However, valve amplifiers don't just bring good things to the party. And even the decent ones have problems in the bass. Feed them powerful rock music and you begin to hear the sound of an amplifier struggling. The output transformers can saturate all too easily. In the early stages, this is a subtle sensation, as the music feels slightly squashed, but it will soon have you lowering the volume as the amp descends into harshness. This is something you simply do *not* hear with this Ming Da.

MUSIC WITHOUT COMPROMISES

The Cantabile-Grandé is accommodating for a valve amp in its ability to play pretty much any kind of music you choose – at almost any reasonable volume, through (I'd guess) practically any loudspeaker – with no apparent ill effects. Most tube amplifier fans enjoy valve amps despite their obvious limitations, yet in normal domestic use the Ming Da appears to have none. Instead this amplifier makes sweet music without obvious compromise, certainly by archetypal tube amp standards.

You get no sense of it struggling to drive the loudspeaker it is hooked up to, no feeling that the internal limitations of the amplifier are adversely interfering with the music. It's an uncanny and liberating sensation – a tube amplifier without tears.

Confirmation comes when you cue up some classic rock music such as Dire Straits' 'Money For Nothing' [from *Brothers In Arms*, Vertigo 824499-2]. This quintessentially 1980s track isn't the sort of thing you would automatically expect any valve amplifier to do well with, however the Ming Da didn't so much as break into a sweat, serving up a punchy and powerful groove.

This recording was mixed at the Power Station in New York, and is instantly identifiable as such, with snare drums tight and well damped, bass guitar taut and tuneful, and lead guitar raw and cutting. This monster amp shared all this with the listener, throwing out a wide and powerful soundstage with real depth too. Tonally the recording came over as dry and lean, just as it should be. Such fine clarity was underlined by Sting's backing vocals, ➔

are bespoke and wound on-site in the factory so the company can keep control of such an important part of the product; they're said to use 'the best Japanese steel laminations available, along with the best oxygen-free copper wire we can find'.

Careful consideration is paid to the inter-winding capacitance, inductance and the correct air gap within the core to eliminate transformer saturation at high currents. Each transformer is dried in a vacuum oven and then encapsulated in resin to avoid moisture and improve long-term reliability. Care has also been

paid to the passive componentry, which is specifically selected. Jensen and Sic Saffo capacitors are used, along with Mills Audio, AMRG and Takman Rex resistors. Jensen pure silver wire and high quality bronze rhodium-coated input RCA connectors and output binding posts are fitted to the amp.

BREAKING THE MOULD

The normal experience of listening to a valve amplifier involves hearing a number of things, some good and some bad. Most listeners generally enjoy the pleasing tone – that smooth, silky sense of music wafting



ABOVE: Ming Da's hard-wired input and driver stages are visible inside an illuminated bay – Jensen electrolytics and Jinvina resistors partnering an ECC83 double-triode and Tung-Sol 6L6 tetrode

which remained unusually intelligible throughout the course of the track.

One quickly realises that this is a valve amp for which the usual excuses are not needed, nor indeed are they offered. Instead, you find yourself listening to the music in a wonderfully matter-of-fact way, perfectly able to focus on what is going on in the performance. George Benson's loving cover of 'Rainy Night In Georgia' [*Songs And Stories*, Concord MMU 79032 RPL-10 107433] was a case in point.

This recording sounded wonderfully exuberant, powerfully atmospheric and yet tonally silky-smooth. The Ming Da doesn't sandpaper down the music's rough edges in any obvious way – if they're there then it will communicate them – but on a superlatively sweet and slick recording such as this, it proved fully able to convey the brilliance of the sound that was achieved in the studio. And it was delivered with a confidence and authority the like of which you practically never hear from tubes.

SO WHO IS BOSS?

Moving on to some iconic electronic music in the shape of Jean Michel Jarre's 'Oxygene 4' [from *Essentials And Rarities*, Sony Music SB227], I was immediately struck by the epic size of the soundstage. The Cantabile-Grandé appeared to be toying with the B&W 802D reference loudspeakers we used in the Ed's media room – normally these will swiftly remind any valve amplifier being asked to drive them who is boss.

Completely unfazed by the huge scale of the recording, it took the speakers by the scruff of the neck and commanded them to punch out an almighty, Phil

Spector-like 'wall of sound'. Within this, there was a wonderful sense of proportion, with excellent image placement and uncannily realistic depth perspective.

The Ming Da gave a breathtakingly three-dimensional sound, separating out all the respective layers of the instruments within the mix with nonchalant ease, and locating them in space with total authority. The result was a magnificent performance of a track I've heard hundreds of times, but never quite like this.

EFFORTLESS POWER RESERVES

Bass is strong but not overpowering; like a large-engined luxury car, the power is there if you want it, but it isn't flaunted. Many valve amplifiers appear to have great grunt, but this can often be put down to their output transformers losing control and slurring things, giving a sense

'It gives a taut and propulsive sound, with no slurred rhythms'

of artificial weight to the bottom end. The Cantabile-Grandé certainly does not suffer from this phenomenon, as it appears to have effortless reserves of low end power, delivered in a way that doesn't swamp the music. If there is a strong bassline present, then this amp will play it, if not, it generally leaves well alone.

For this reason it's able to give a taut and propulsive sound, with no slurring of rhythms. This extends right up to the treble, where hi-hat cymbals present in a wonderfully smooth and spacious way, yet they still have a lovely floaty, natural quality that powers the song along like a metronome. In short, this amplifier provides a brilliantly cohesive sound that works on so many levels, not least because it commits so few sins. ➔

MR JIGUI XIAO

Mei Xing is the company behind the Ming Da brand name. Located in a historic village on Qi Ao Island, on the outskirts of Zhuhai city in Guangdong Province, southern China, the factory sits on the banks of the Pearl Delta – about an hour away from Hong Kong by ferry.

Now in its 23rd year, it sells to over 30 countries, including North America, Europe, and South East Asia. Founder and chief designer Jigui Xiao tells me that it has always specialised in valve amplifiers, making integrateds, preamplifiers, monoblock power amps, headphone amplifiers, phono stages and even home theatre amplifiers.

Previously a teacher and then a local government employee, Mr Xiao has had a love of valve amplifiers since he was a schoolboy, which has led him to what he now does. He believes that his company should cover a good cross-section of the market, which is why there is such a multiplicity of Ming Da products, although he says he has reduced it 'quite considerably over the past couple of years', to bring a greater cohesion to the range.

'We are now primarily concentrating on the aluminium chassis-based products [Dynasty in the UK, and Anniversary in China]. Even our smaller and less costly amplifiers are built with the same care and attention as the Cantabile series, offering great value for money with quality.'

He's proud that Ming Da UK can now offer a three-year warranty on its complete range of amplifiers.



LAB REPORT

MING DA DYNASTY CANTABILE

As is typically the case with exotic big-tubed amplifiers, power output rather depends on what level of distortion you consider acceptable and, in the case of manually-biased designs like the Cantabile-Grandé, the anode current. Biased at a conservative 140mA, these huge monoblocks achieved 1W/80hm at 0.17% THD, 10W at 0.6% and then 24W/1%, 48W/2%, 59W/3% and 66W/4%. The rated 80W/8ohm was achieved at 6.1% THD although a lower distortion might well be anticipated at the highest specified 155mA bias current. The profile of distortion versus power output into 8ohm (via the 8ohm tap) and 4, 2 and 1ohm loads (via the 4ohm tap) is almost identical under continuous or dynamic conditions [see Graph 1, below].

Distortion necessarily increases at the frequency extremes, reaching 2.8% at 20kHz at 1W/8ohm and 10% at 10W/8ohm [see Graph 2]. The Cantabile-Grandé's response is also tailored at the frequency extremes while its output impedance – max'ing at 3.05ohm/23Hz down to 0.77ohm/17kHz – brings about a further modification in response 'shape' according to swings in the attached speaker's impedance trend. Into a flat 8ohm load, and via the 8ohm taps, the response has a +9dB boost at a worryingly low 10Hz (beware LP-playing systems) before flattening out by 60Hz (+0.1dB) and rolling away at HF (-1.5dB/20kHz). This treble rollout is more pronounced into lower impedances, falling to -1.9dB/20kHz into 4ohm and -3dB/20kHz into 2ohm. Noise is low but not exceptionally so – the A-wtd S/N is 81dB (re. 0dBW). Readers may view a comprehensive QC Suite test report for Ming Da's Dynasty Cantabile-Grandé MC998-A by navigating to www.hifinews.co.uk and clicking on the red 'download' button. PM

LEFT: HT and LT supplies are routed via the lower enclosure to the amplifier via umbilicals. The amp also offers bias and hum adjust points, plus single-ended and balanced ins with 4mm speaker outputs via 8ohm and 4ohm taps



Indeed, many traditional tube amplifiers can often sound lovely with some types of music but fall flat on their faces when asked to reproduce orchestral music convincingly. Mozart's March, K189, played by the Scottish Chamber Orchestra [Linn Records AKP305] showed just how inherently open and neutral this amplifier is.

Again, it served up a fantastic sense of scale, from front to back and left to right. Image placement was excellent, and the recorded acoustic was conveyed brilliantly. More than this however, it caught the natural jauntiness of the orchestra – strings soared and brass stabbed, giving a great sense of the music's dynamic direction.

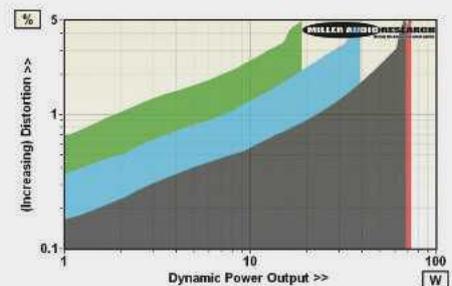
There was also a gorgeous tone to the strings: raw, lustrous and slightly screechy even, but never grating, grey or opaque – so this product reminds one how a really good tube amplifier can preserve the texture of a recording, when so

many solid-state designs seem to let it fall by the wayside. Overall, where bad valve amplifiers are often most challenged – playing classical music at concert hall volumes – the Ming Da actually shone the brightest, while also proving to be a consummate performer on rock. ☺

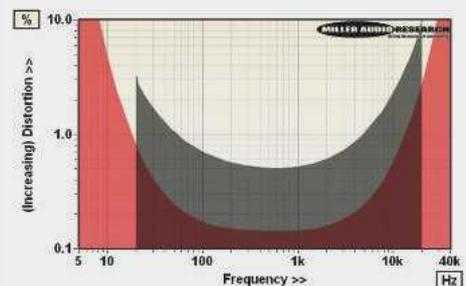
HI-FI NEWS VERDICT

This seminal power amplifier sounds excellent across all types of music, appears less intimidated by loudspeakers than many an esoteric valve amp, and needs absolutely no excuses made for its bass performance. However, along with the price, its vast physical bulk will deter many prospective purchasers. Overall then, this unique, exotic design warrants serious consideration if you think big is beautiful.

Sound Quality: 86%



ABOVE: Dynamic power versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (cyan) and 1ohm (green) speaker loads up to 5% THD



ABOVE: Distortion versus frequency at 10W/8ohm (20Hz-20kHz, black) and 1W/8ohm (5Hz-40kHz, red)

HI-FI NEWS SPECIFICATIONS

Power output (<4% THD, 8/4ohm)	66W / 71W
Dynamic power (<5% THD, 8/4/2/1ohm)	70W / 75W / 40W / 19W
Output impedance (20Hz-20kHz)	3.05-0.77ohm
Freq. response (20Hz-20kHz/100kHz)	+1.6dB to -1.5dB/-11.0dB
Input sensitivity (for 0dBW/80W)	222mV / 2145mV (balanced)
A-wtd S/N ratio (re. 0dBW/80W)	80.9dB / 99.9dB
Distortion (20Hz-20kHz re. 10W/8ohm)	0.50-10.2%
Power consumption (Idle/Rated o/p)	475W/460W
Dimensions (WHD) / Weight	440x860x455mm / 65kg