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# Micromega PA-20/PW-400 (£3288)

Now under new ownership, the Micromega brand boasts a new livery and embraces the most progressive of amplifier technologies as this Class D design illustrates  
Review: Ken Kessler Lab: Paul Miller

**T**ime to disregard all the French felonies that form my antipathy towards our neighbour across the Channel: the revived

Micromega has returned to the market with a family of new products offering build quality, style, functionality and, above all, prices belying manufacture in Europe. The brand will be a cat among UK pigeons, despite arriving when the economy suggests that this is not the time to launch, or re-launch a brand. Perhaps new owner Didier Hamdi knows something we don't. Maybe tough times are just made for bargains.

An hour with Hamdi tells you that the Micromega of yore is merely the spiritual precedent of the relaunched company. The original focused on advanced digital products, at a time when there were too many CD players and DACs on the market to create any 'hero' brands. Yet, Micromega was, along with Theta, Wadia and a few others, among few stand-outs during the crowded 'CD era'.

As computers, DVD and other 5in disc formats cheapened nearly all digital hardware down to low-end ubiquity, Micromega withered, again like the rest, in a world of £16.95 CD players from supermarkets. CD was devalued to insignificance, while Micromega was primarily a manufacturer of digital hardware, and the prices were of the upper sector. Hamdi, though, is an audiophile from the 'grown-up' business of industrial electrics, and his plans for the brand include a heavy dose of reality, not least in the approach to pricing. He finds the margins and prices for high-end equipment to be both offensive and imaginary: anathema to the man whose company illuminates the Eiffel Tower. His intention is to turn audio pricing upside-down. As he's got the stones to be a

championship motorcycle rider, I'd take the threat seriously.

## SLEEK PACKAGING

While the new Micromega can offer you 13 models including a tuner, four integrated amps, three CD players, a streamer plus the turntable developed by Epure, we're looking here at the lone preamplifier and the more powerful of two stereo power amps at the top of the range. Despite their lofty position, together they cost only £3288. I can name a dozen different 1m interconnects that sell for more than that; and while £3288 is still a fair chunk of change during these straitened times, in context it's cheap as frites.

Wisely, Micromega saved a bundle by using the same housing for all the models, differing only in faceplates – and even those have been reduced to a minimum, eg, the preamp and all of the integrations are the same. It has opted for a sleek 430x300x70mm (WDH), with rounded edges, clearly legible, blue-lit

displays 130x26mm on the right-hand halves of the panel, to the right of the stepped volume rotary, with six smoothly-operating buttons below.

For the PA-20, the buttons operate (L-R) input select down, input select up, monitor, mute, headphone and standby. Also found on the front are 3.5mm sockets for headphones, driven with its own 2W amp, and direct input from an iPod. I tried the latter with the analogue output of HRT's superb MusicStreamer USB DAC via phono-to-3.5mm plug, to access the BBC's iPlayer from my PC, and it worked perfectly. The back offers inputs for tape, four analogue sources as well as a 47kohm MM phono input, and connections for a subwoofer, processor, pre-main-out and interfaces for multi-room installations. Best of all? Balanced main outputs via XLR to exploit the PW-400 at its best.

Fitted with superlative multi-way binding posts and both phono and XLR inputs at the back, and rated by Micromega at 400W/ch into 4ohm



**RIGHT:** The PA-20 preamp's volume control offers independent line/headphone output and adjusts in larger or finer steps according to how fast you spin the dial. Volume, input selection, tape monitor and mute are also on the remote





and half that into 8ohm, the PW-400 uses the efficiency of Class D [see boxout, below] to squeeze a seriously powerful amplifier into a tiny chassis. There was no better evidence of this than at a private session I enjoyed with Micromega at the recent Paris hi-fi show, prior to its doors opening for the public. Used with massive Avantgarde horns – admittedly a sensitive load – the bi-amped speakers delivered the sort of plump, rich bass they usually deny.

Level was never going to be an issue, which I confirmed with a selection ranging from LS3/5As to Wilson Sophia IIs, with Tannoy Mini Autographs and Quad 10Ls in between. Sources included the Pro-ject Xtension with its own arm, an Ortofon 2M Blue MM cartridge, the Marantz CD-12/DA-12 CD player, the Denon DVD-2900 universal player and the aforementioned HRT MusicStreamer fed by Radio 4 from my PC. All wires were courtesy of Yter.

### SALACIOUS SEDUCTION

Because I had that blast in Paris prior to listening to the system at home, I was primed for two things: an absence of compression and utter neutrality. The former is the result of seemingly limitless

power; the latter appears to be a priority with the new Micromega, a desire to present a chain that amplifies but does not modify. To demonstrate this in Paris, they played the most lean, uncluttered selection of minimalist recordings you could muster, from bass-led jazz in a three-piece, to solo acoustic blues. Not being too suspicious, but being aware that a dearth of complexity makes it easier to deliver an impressive sound in show conditions, I turned the other way back at home.

For modern, studio-borne pop, I slipped in an old fave, the Lightning Seeds' *Cloudcuckooland*, named in honour of my favourite play by Aristophanes, *The Birds*. Although the vocals are delicate enough to play into the sparse-is-good theory that motivates hi-fi companies to demonstrate with ultra-lean recordings, the mixes included enough weird synthetic instruments and snappy percussion to challenge the Micromegas in ways that the show pieces didn't. The coherence was impeccable, with nothing amiss suggesting disproportionate emphasis in any areas. In other words, that unexpectedly rich bass from the

horns was all theirs, not an effect created by the amp.

What will impress fans of anything even remotely technoid – dig out your old Kraftwerk vinyl for this – is the crispness and speed of upper frequency transients. Someone spent a lot of time voicing this pair because it consistently avoided anything that you'd call sibilant. With Julie London's close-mic'd vocals on *In Person At The Americana*, it was possible to hear all of the characteristics that made her voice so salaciously seductive, yet no hisses marred the experience. Benefiting even more from the silky top was the brass ensemble that backed her, and the audience applause that welcomed her.

Nuances? She possessed a voice of multiple textures, often adding a slight

'Coherence was impeccable, with nothing amiss suggesting disproportionate emphasis'

warble to her always smoky delivery. If she didn't puff on the occasional Lucky Strike (and as she reached her 70s, she probably kept the fags under control), then we must thank her DNA for the vocals: respected on every level by the Micromegas. Framing the brass section – a cool drummer to the far right, smooth and apt backing vocalists of the sort you can't find anymore, and a slick guitarist stage left, with Julie dead-centre – was a vast, wide and deep sound stage, probably inspired by Place Vendome: large, yet elegant.

You leave the recording wishing you were there that night, the deal-maker being a downright sexy version of 'My Baby Just Cares For Me', balancing a sleazy rhythm section and sleazier horns with a voice that makes Jessica Rabbit sound like Hilda Ogden. It is somehow appropriate that this sizzling session was

### GREEN AMPLIFICATION

There's a good reason why Micromega's PW-400 combines high power output (close to 2x200W/8ohm) with such cool-running efficiency (drawing just 460W) from within a modestly-proportioned chassis. The answer lies in its choice of UcD Class D amplifier modules, originally developed by Bruno Putzeys during his time at Philips Applied Technologies. Also known under the 'Hypex' brand these fully-discrete, self-oscillating amplifiers are arguably the most elegant of the current Class D breed. Unlike most competing solutions they are single-ended rather than balanced in design and offer a superior load tolerance, suffering less variation in response, distortion or noise with different choices of speaker.

End-users, in this case Micromega, have to design and implement a power supply to support the UcD module. Micromega's solution is 'ACTS', a linear rather than switchmode supply where the transformer's secondary winding is tuned to 4x the mains frequency, helping to suppress rectifier switching noise. The quieter the supply, the greater the amplifier's dynamic range. PM



## PRE/POWER AMP



**ABOVE:** The PA-20 preamp offers five line, one MM phono and one tape input with 'Pro' (processor bypass) and sub loop-through connections. Balanced outputs link to balanced inputs on the PW-400 which offers two sets of stereo speaker binding posts

rendered utterly incendiary by a French replay system. By the time you get to 'Cry Me A River', you'll need a cold shower. Even the schmaltzy 'The Trolley Song' can cool the ardour.

As a cold shower, I then turned to TEAC Esoteric's fabulous SACD of Falla's *The Three-Cornered Hat*, a new issue of the Suisse Romande/Ansermet Decca classic recorded in 1961. The opening timpani, the massed chorale, the castanets – I was reminded (and I say this with abject humility) of the sound of the SME Music Room's system with AR-A at the controls. The soundstage was of epic proportion, the dynamics unfettered and the tones neutral.

Then I realised what it was that makes so many want to compare these products to much dearer rivals: the detail, too, recalled something else beyond my own system. I was reminded of Esoteric's best source components, with an abundance of information that's almost distracting, because one wants, instinctively, to be able to focus on every single element all at once. It's why movie lovers enjoy repeated viewings of the chariot sequence in *Ben-Hur*, the epic battles in everything from *Lord Of The Rings* to *Star Wars* to *300*: each repeated listening reveals something more that you might have been too preoccupied elsewhere to appreciate.

### IMPECCABLE BEHAVIOUR

Leaving the sound for another major consideration, it's worth mentioning that the Micromega pairing behaved impeccably from the first moment they were fed some AC. Absolutely Nothing

Went Wrong. The controls were a delight to use. I didn't even bother exploiting all the hidden features (like being able to rename the inputs); I fell in love with the PA-20 straight out of the box.

Because one interfaces with a preamplifier, but leaves a power amp to its own devices, it's perhaps easier to warm to the former. And in this case, the PA-20 may turn out to be the more popular of the two units, given that it worked so well with other amps – such as Quad's 909. It could emerge as a sleeper, a killer of a bargain preamp, a hot whisper on the audiophile gossip circuit. But that would be to ignore the PW-400's beguiling mix of sheer force and Gallic sophistication. Considering that the exemplars of this – the best Burgundies or Valrhona chocolate, for example – are hardly inexpensive, and as Paris rivals London for limitless avarice, the amp, at below two grand, ticks all of the same boxes as its sibling. ☺

### HI-FI NEWS VERDICT

To everyone's surprise, Micromega 'Mk II' is an altogether better proposition than its quirky forebear. This sublime combination shows how the firm has managed to blend Bauhaus elegance, up-to-the-minute ergonomics, total usability, truly sweet sound and blessedly sane prices, yet still manufacture in Europe rather than Asia. Considering the total tariff, this could be the start of a new Anglo-French contretemps.

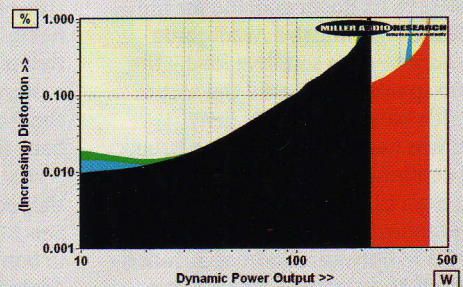
Sound Quality: 83%



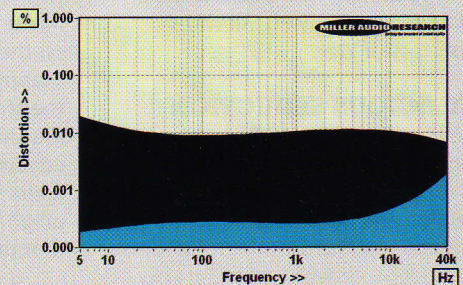
## MICROMEGA PA-20/PW-400 (£3288)

Micromega offers a limited specification for this combination, the 200W/400W 8/4ohm power rating based on the rated potential for UcD's Class D modules [see boxout, p55]. In practice it was possible to achieve a substantial 190W/340W into 8/4ohm at 1% THD which increased to 220W/411W under dynamic conditions [Graph 1, below]. The 20mohm rated output impedance actually ranges from 14 to 39mohm (0.014-0.039ohm) across the audio range but is usefully low for a Class D architecture and promises a consistent performance with different loudspeakers. The 600ohm source impedance suggested for the PA-20 preamp is, in reality, far better at 24ohm allowing the use of long (balanced) pre/power interconnects. The PA-20's response is also ruler flat (+0.1dB at 100kHz) while the PW-400 shows a controlled treble roll-off amounting to -0.5dB/-0.6dB at 20kHz into 8/4ohm loads, falling away to -8dB/100kHz.

Distortion is extremely well managed through the PA-20 preamp at <0.0008% from 20Hz-20kHz and higher but admirably consistent at ~0.01% through the PW-400 power amp [Graph 2, below]. Distortion does increase with output from the PW-400 however, from 0.003% at 1W to 0.01%/10W, 0.15%/100W and 2% at 200W/8ohm. The PA-20 is also the quieter of the pair, its 97.5dB A-wtd S/N (re. 0dBV) besting the 82.6dB (re. 0dBV) achieved by the PW-400 (even accounting for the 9dB difference in level). Readers are invited to view comprehensive QC Suite test reports for the Micromega PA-20 preamp and PW-400 power amp by navigating to [www.hifinews.co.uk](http://www.hifinews.co.uk) and clicking on the red 'download' button. PM



**ABOVE:** Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads



**ABOVE:** Distortion versus frequency from 5Hz-40kHz (10W/8ohm, power amp – black trace; 1V/47kohm, preamp – blue trace)

### HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	190W / 340W
Dynamic power (<1% THD, 8/4/2/1ohm)	220W / 411W / 343W / 196W
Output impedance (20Hz-20kHz)	0.014-0.039ohm (PA-20; 24ohm)
Frequency response (20Hz-100kHz)	-0.0 to +0.13dB/-0.1 to -7.8dB
Input sensitivity (for 0dBV/200W)	270mV / 3890mV (balanced in)
A-wtd S/N ratio (pre/power)	97.5dB (0dBV) / 82.6dB (0dBV)
Distortion (20Hz-20kHz, pre/power)	0.0002-0.0007%/0.009-0.01%
Power consumption (Idle/Rated o/p)	28W/460W (PA-20; 9W)
Dimensions (WHD, pre/power)	430x70x300/430x70x300mm