



March Audio P801  
monobloc power amplifiers

# Steal a March

Simple looking black boxes they may be, but March Audio's P801 power amps can deliver 1400W each into 2 ohms — which makes them a steal at the price.

Power amplifiers can suffer an image crisis in the hi-fi world. Among the shinier and busier components of a hi-fi stack, power amps like these from March Audio can seem featureless black boxes: look at them — one light each, and no knobs! Once they're plugged into your system, chances are you'll barely think about them again. You'll interact with the preamplifier, stream to the streamer, put discs into your player, and sit there in front of your speakers. The power amps just sit quietly in the dark, making the signal bigger.

Boring! Such is an outsider's view of power amplifiers. But this is mistaken perception.

## Design & build

March Audio's power amps are certainly black, and they are also bigger than we'd imagined from seeing the pictures: each has a footprint of about 26 x 35cm and is some 85mm high, so that we could only just squeeze them both side by side on one shelf, between the pillars of a Quadraspire hi-fi rack (above). The frontages are all black and blank save for a power button on the right side which illuminates with a red ring when the power is on.

They're substantial, too, the cases milled from solid aluminium with a tough anodised matte finish. The P801s are hand-built and individually tested in Western Australia, and come with a five-year warranty.

Round the back the two speaker binding posts are solidly fixed, so that even our largest cables caused no droop; these are March Audio's preferred ETI Research Kryo binding posts: stylish and compact, manufactured from an alloy of copper and tellurium with silver plating for conductivity and durability.

The only other connections to the rear are the power socket and the single input, a Neutrik XLR socket: the P801 has only this balanced connection and is optimised for its higher-level (4V) signals. Whether this is inconvenient depends on what you plug in. If your preamp has balanced XLR outputs, no problem. If you have only RCA unbalanced outputs available, you can use adapter cables (as did we), and press a two-position button on the back to deliver an extra boost of 6dB.

## The power

What's going on inside? How much power do they bring? As you peruse amplifiers from

March Audio, it helps to realise that their model numbers have been chosen according to a fairly easy formula relating to their power into four ohms — it's another sign of the engineer in proprietor and designer Alan March. So the P422, for example, means 42-2, i.e. two channels of 425W into 4 ohms. Then the P501 is 50-1, so one channel of 500W into 4 ohms.

By which we can surmise that the P801 is apparently quite a beast: one channel of 800W into four ohms. But what detail lies behind this headline figure?

The P801s manage to combine expertise from three countries. Firstly Australia, of course, where March Audio is based and the products built; the company is in Western Australia, originally out of Albany but now based near Gingin, "about an hour north-east of the centre of Perth, or about 40 minutes from the top north outskirts of Perth," says Alan March. "It's a rural area and it's very sunny and nice. Lovely."

This is a Brit enjoying the Australian sun. His expertise comes from an engineering career at Rolls-Royce in the UK, much of it in aircraft engine test sites, first collecting data on

temperatures, pressures, vibration, stress and strain in jet engines, then developing digital recording systems to do it better. So what's that got to do with audio?

"Well a lot of the things that we were recording were audio frequency signals, very low signal levels, like a vibration transducer," Alan explained to us. "So I've been analysing and acquiring and recording audio-frequency signals for decades, basically like a recording engineer — just not with music."

When he and his family decamped to Australia he first moved his expertise to mining (hence WA), but after four years travelling up to the Pilbara doing engineering work he decided to become his own boss, founding March Audio in 2018. In the years since then, his amplifiers and speakers have gained multiple awards, including our own.

The final country in the March Audio equation is Denmark: home to Purifi, the company which makes the modules at the heart of these amplifiers. Purifi's Eigentakt (German for 'self-clocking') is Bruno Putzeys' latest advance in Class-D amplification (his previous was Hypex Ncore), developed in collaboration with Lars Risbo, another digital audio pioneer of switching PCM-PWM audio amplifiers. The module in each P801 is one of Purifi's latest 1ET9040BA modules.

"This is what Purifi calls the second generation of Eigentakt," says Alan March. "They've done two things that have improved its performance. This particular module is a bridged amplifier. If you look at the circuits, it looks like two of their other amplifiers side by side, and that's essentially what it is. The bridge is to develop a much higher power output at

lower power supply voltage levels, so it's got massive power output, like 1400 watts into 2 ohms at 0.1% distortion. That will hopefully drive any speaker on the market to within an inch of its life.

"And the other thing is they've updated the design of the pulse width modulator, the bit that makes it really work. So that's vastly decreased the noise and distortion levels; we're almost approaching basically dark levels of noise and distortion. It's incredible."

## Pre and power

March is not the only company making use of Eigentakt amplification: Marantz has just adopted it for the flagship Model 10, NAD was quick to adopt it for some amplifiers, and other smaller brands are using the modules.

March Audio, though, was one of the first, and confidently claims its implementation of the new model as exceeding all others.

And that's because these aren't simply modules you put in a box and wire to inputs and outputs, says March; they still require an input buffer, and great attention to their power supplies. "Those are the two factors that are critical to the performance of the amplifier," says Alan. "So these modules don't really work on their own. They need an upfront pre-amplifier, shall we say, inside the amplifier to bring the signal voltages up to a high enough level, and to be able to drive the Purifi module, which is actually very low input impedance so you need a circuit that can drive some current into that.

"And the performance of this latest generation of modules is so good — so low noise, and so low distortion — that it's

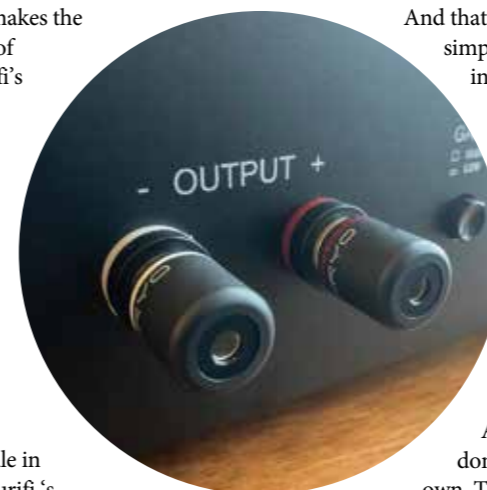
**"An amp should be simply a wire with gain. Hence there might be little to describe sonically, other than to say 'it works'. Well, the P801 works."**

become incredibly difficult to make a buffer amplifier that is good enough to do the job and actually allow the module to perform to its highest ability. It took us a few attempts and a few designs to really bottom it out and get it to that level. I'm quite confident in saying our input buffer [March calls it the 'Ultra Buffer'] is more transparent, lower noise and lower distortion than any of our competitors.

"And the other thing is that all of our competitors use the off-the shelf Hypex power supply for these, and they just aren't good enough for the job. They're higher noise, they have less current capability. So you will probably find that our amps are the only ones that actually deliver the full Purifi power output, because our power supplies are the correct voltage and provide enough power and current to allow the module to work. To get the full 1400W at 0.1%, that's all down to the power supply being man enough for the job, basically."

And those power figures for the P801 are, as quoted by March with 0.1% THD, 375W into 8 ohms, rising to 750W into 4 ohms, and 1400W into 2 ohms. When delivering 100W into 4 ohms the THD+N is just 0.0008% (20Hz-20kHz). The amps are, say March Audio, "fully stable with loads right down to zero ohms, a massive 40-amp current and power output capability ensuring tremendous grip and drive even with the most insensitive and challenging of speaker loads."

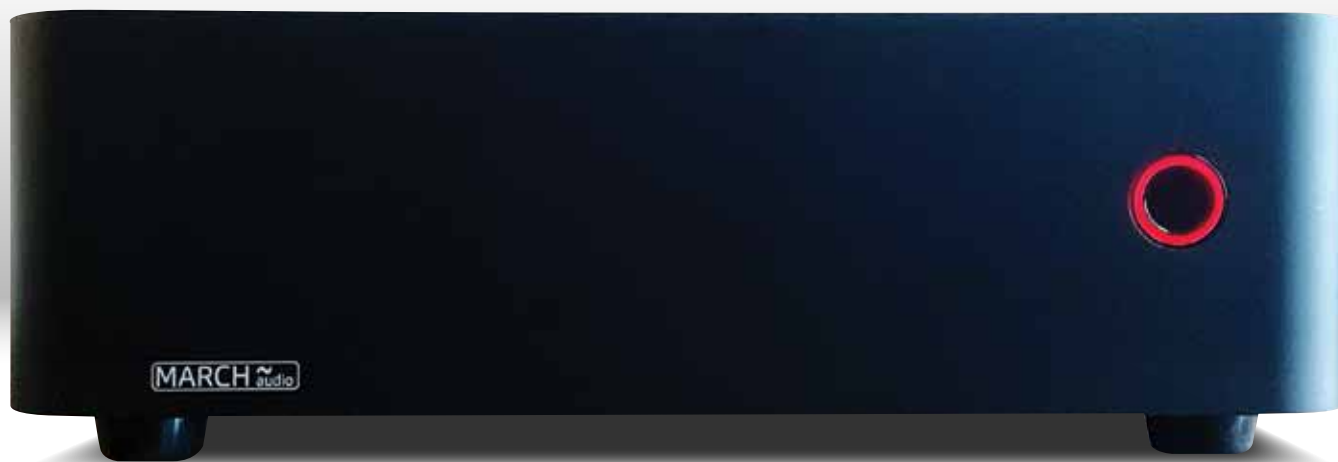
Some impressive numbers, then. But then how do they sound?



## SUMMARY

**March Audio P801 power amp**  
Price: \$3500 each

- + Massive power...
- + In a relatively compact box
- + Unimpeachable delivery
- Nothing



## Listening sessions

Yes, how do they sound? We noted a comment on one audio forum where someone had asked the generalised question ‘What is Purifi’s sound signature?’ The first reply was “There is no sound signature. Purifi amps are wires with gain.”

This refers to the classic description of an amplifier which is attributed to either Stewart Hegeman of Harman Kardon Citation fame, or Peter Walker of Quad. An amp should not change the input, simply make it bigger: a wire with gain. Hence there might be little to describe sonically, other than to say “it works”.

Well, the P801 works.

We started with some high-intensity fusion: Al Di Meola’s *Broken Heart* from ‘Opus’. This serves a centre stage of increasing complexity flanked by wide-panned fingerpicking guitars, a combination all too easily confused by small hi-fi, but there was no muddling here: every element was presented bright and clear, and remained so throughout the ebb and flow of this track.

Also notable was the sharp edging to guitar notes: tight and rapid, all click, no softening, no overhang, thereby indicating amps that are fast as well as powerful.

Joan Armatrading’s latest album ‘How Did This Happen And What Does it Now Mean’ was made in her home studio, potentially more of a challenge for clarity, but these amps kept even the interwoven contrapuntal vocals on the opener *25 Kisses* clear, separate, and with each element in their place, individual vocal treatments perfectly audible, while

**“...substantial, too, the cases milled from solid aluminium with a tough anodised matte finish. The P801s are hand-built and individually tested...”**

we’d even guess, if possibly wrongly, that the bell-like sounds were played on a Yamaha DX keyboard, so characteristic of FM synthesis were those metallic sounds revealed to be by the clarity of the P801s’ window onto sound.

Some vintage hi-fi testers: how was the detail and soundstaging on *Single Gun Theory’s Fall*? Scintillating and deeply presented, while the rhythm held full weight and constant tone in the centre. How was Kylie’s vocal cut-through on *Where The Wild Roses Grow*, often tricky for bright systems to hold from getting spitty? Bright enough to hear the aspiration but never a spit to be suffered, while the bass was utterly real and solid, and the strings woven left and right: we cranked this one, and what a performance it was, leaving us firmly focused on the music, not the amplifier, as it should be, of course.

We did notice that even when we left the P801 amps powered up overnight and returned to them in the morning, they were still pretty warm to the touch despite not playing for hours. These are not Class-D amps that don’t get hot at all, then?

“That is a bit of a myth, that they don’t get warm at all,” says Alan March. “What you’re feeling there is what they call idle losses. So when they’re at higher power levels, they’ll be in the region of 95% efficient — you might be pumping out a kilowatt, but you’ll only be wasting 50 watts in here. So at high power levels they really are very efficient, and won’t be too much hotter than when they’re on idle, just sitting there. The closer you get to zero power, the less efficient an amplifier is, and when you get to zero power, of course, it’s got essentially zero efficiency. When idle, it’s probably sitting there consuming and wasting about 15 watts. It’s gonna go somewhere, and it comes out as heat. But not much, which means we can use small cases, a shoe box; we don’t need massive heatsinks everywhere to get rid of that.”

We asked whether there was any sonic penalty for keeping the amps powered on or turning them off between sessions. Is this less of an issue with Class-D?

“Definitely,” he says. “So there are amps out there which are not what I would call thermally stable. As they warm up, they change their performance. But with our Purifi amplifiers, we’ve done lots of tests on this, they don’t. If anything their performance will very slightly reduce with increasing temperature, so it’s not like some old AB amplifiers which don’t have effective bias settings which creep over time or with temperature. Basically they don’t change. Switch them on, 10 minutes, it’ll be as good as it gets.”

## Verdict

Instantly ready to play at their best, then, and a best seemingly lacking any characteristics other than effortless power, clear dynamic speed, and absolute silence, so far as we could hear, in terms of noise floor. In this, March Audio’s P801 power amps offer the performance you might expect from vastly larger heatsink-loaded beasts, yet you can fit two of these, just, on one shelf on an equipment rack. Where you can then forget them, boring black power amps tucked away, as they get on with doing their remarkable job. —

## SPECS

**March Audio P801** \$3500 each

**Input:** Neutrik XLR balanced (RCA connection requires adaptor cables)

**Outputs:** ETI Research Kryo binding posts

**Power output (0.1% THD):** 375W into 8 ohms, 750W into 4 ohms, 1400W into 2 ohms

**Current output:** 40 amps

**THD+N:** 0.00007% (-125dB) @ 100W, 4 ohms, 20Hz-20kHz; 0.00015% (-116dB) @ 5W, 4 ohms, 20Hz-20kHz

**Signal to noise ratio:** 140dB(A)

**Quoted frequency response:** 2Hz-20kHz -0.05dB; 2Hz-82kHz -3dB

**Dimensions (wdh):** 255 x 345 x 85mm

**Weight:** 4.0kg each

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