

# ATC P2

ATC expands its power amplifier range with the introduction of the P2 model. Boasting twice the power output of its smaller P1 sibling, is its sound doubly captivating?

Review: Adam Smith Lab: Paul Miller

If you're currently considering one of the many heavy-hitting power amps on the market then this new arrival from a company perhaps better known for its active loudspeakers could be just the ticket. The manufacturer in question is ATC and the unit is the £3125 P2.

The British company's first standalone power amp was the SPA2-150, a dual mono design which it released in 1997. The P2 is also a dual mono model and only ATC's third power amplifier to date. Its arrival neatly plugs a gap in pricing between the SPA2-150, which now retails for over £5000, and its smaller, more affordable sibling, the £2100 P1 [HFN Mar '10].

## DOUBLE GRUNT

Given that the P2 costs around 50% more than the P1, the fact that it is said to offer a doubling in power would appear – on paper at least – to make it excellent value for money. And in some ways, the P2 might well be considered a doubled-up P1 under the bonnet, although this is not obvious from its appearance. After all, it may be a little wider and taller than the P1 but it is also slightly shallower. Go to pick it up, however, and the extra 7kg in weight over the P1 does rather give away that major differences lie within.

Both amps share a similar circuit topology, the P1's dual mono construction seeing each channel deriving power from its own custom-made 400VA transformer [see inside picture, right]. Three pairs of output MOSFETs give a claimed (and conservative) peak current delivery of up to 15A per channel, so the P2 should be able to persuade even the most unruly of loudspeakers to behave themselves [see PM's Lab Report, p63].

Usefully, the circuit gain of the P2 is said to be the same as that of the P1, so combinations of both models can be used

in a multi-way active set-up, if required, without fear of any consequent level matching issues.

The amplifier's front panel is decidedly minimalist and carries just four LEDs, but this is the first power amplifier I have encountered that has a remote control handset tucked away in the packaging! While, naturally, this will control ATC's other electronics, the handset may also be needed for the amplifier's operation, depending upon which mode you select via the rear panel's 'IR disable' switch.

With it set to 'On', the remote control is not used and the amplifier activates as soon as the main power switch is operated – the front panel standby/on LED lights green in this case. With the button set to 'Off', the unit powers-up in standby mode, with the front panel LED glowing red.

In this case, the remote control is used to activate the amplifier, and return it to standby as required. This is a handy feature, even if you have no other ATC electronics in your system, since the main power switch

is tucked away on the back panel where it may be difficult to reach.

The remaining fascia LEDs are used for monitoring the amplifier's status in operation, and its protection circuits will respond to a clipping of the signal, overload or DC offset in the output stage. The 'Clip' LED will flicker if the amplifier overloads briefly but if the events become too severe or regular, then one or both channels will shut down. Associated 'Error Left' and 'Error Right' LEDs will then illuminate to show which of the amp's channels is getting upset.

## REAR CONNECTIONS

On the rear panel, as well as its control switches, the P2 has an array of connections. Loudspeaker outputs are provided via 4mm binding posts and both balanced and unbalanced inputs are offered through the usual XLR and phono sockets, respectively. Each channel also offers an unbalanced 'Link Out' connection to carry its signal to another power



**RIGHT:** Not one but two 400VA toroidal mains transformers feed separate left/right PSUs. Separate MOSFET power amp channels, with thermal trips, ensure ATC's P2 is genuinely 'dual mono' in design from input to output



amplifier, if desired. Unusually, however, both channels' input sockets are colour-coded red and both Link Out sockets white, which breaks ranks with traditional left/right colour coding. As a result, a little care is needed when connecting ancillaries, although the sockets are, fortunately, grouped together in an obvious manner.

The amplifier has a well-designed case featuring a 12.7mm-thick brushed aluminium front plate and has been given a sparkle-effect paint finish, which is very pleasing to the eye. A peek inside shows the layout to be neat and largely PCB-based with a minimum of cabling.

Heatsinks are provided on each side of the unit and only a few sharp edges on these give a clue to the fact that the P2's design may have underlying studio leanings, where such issues are inconsequential. Indeed, the P2 was developed alongside an alternative professional version – the P2 Pro. The Pro version is largely the same as the

P2 but offers a front panel 'Output Off' switch and a rather stylish pair of rack mounting handles – in metallic blue no less! Regardless, the review P2 certainly felt both well made and sturdy, and was a pleasure to install and use.

### QUIETLY DOES IT

Cycling the amplifier on and off over the review period showed that it is quite

easy-going with respect to warm-up time and comes on song quickly. ATC says that its main goal is to 'provide neutral fidelity products that are true to the original source' and I would say they have

largely nailed it with the P2. This amp is one of those products that offers no sonic fireworks unless appropriate, has no standout musical character and shows no favouritism for any particular material.

Rather, the P2 is one of those subtle components that quietly works its magic on you, until you suddenly realise that it

*'You realise it is doing everything brilliantly but without any fuss'*


**ABOVE:** The P2's front panel is simple, as even the power switch is to be found at the rear. Four central LEDs convey information about its operational status and warn of fault conditions

is doing everything brilliantly but without any fuss or melodrama. Put simply, it just sounds 'right'. In fact, this became a difficult review in some ways as I spent so much time enjoying the music that I kept forgetting I was supposed to be assessing the product. Still, when a component makes you concentrate on the music to the exclusion of all else, it must be a good one.

With my Naim Supernait connected up and providing preamplifier duties, the P2 went about its business in a relaxed and effortless manner. The power on tap meant that it never seemed unsettled or close to struggling, even when I chose to explore the upper limits of its power output.

It maintained an uncanny sense of composure and solidity, right up to quite anti-social listening levels. Don't think I am implying it's perhaps a little lacklustre or even pedestrian in its presentation, as this could not be further from the truth. If the P2 ever sounded dull, it was because it was merely reflecting the music being played.

In terms of spatiality, the P2 made my loudspeakers simply disappear. There was no sense of things being stretched artificially in width across the soundstage or depth vanishing off into the distance. Nor did the amplifier try to project things unduly, or seem to be throwing out random detail as if in an attempt to impress. Instead, it just took the material and pulled absolutely everything it needed to from it. As a result, the P2 made everything a truly compelling listen.

I know Diana Krall's 'Popsicle Toes' from her *When I Look In Your Eyes* CD [Verve 050 304-2] inside out and the P2 didn't reveal much that I had not heard before. Yet neither did it subtract anything. Rather, 

## A FOOT IN BOTH CAMPS

Arguably most famous for its loudspeakers, ATC has also been manufacturing electronics since the 1980s, when the company needed a suitable amplifier module for its first active monitors. Rather than turn to a third party supplier, it chose to design its own. Since then, as ATC's Technical Sales Manager Ben Lilly puts it, 'it was a simple and natural evolution for us to move into the design and manufacture of standalone audio electronics'. The first units were the SCA2 preamplifier and SPA2-150 power amplifier, followed by the SIA2-150 integrated. The company still makes these, as part of a range that includes more amplifiers, plus CD/preamplifier and CD/integrated amplifier combination units.

The output stages of both the P1 and P2 were developed from those used in the company's flagship professional and domestic active loudspeakers. The rugged 'grounded source' MOSFET modules claim a wide bandwidth and low distortion with only moderate levels of feedback, and are supported by oversized PSU transformers whose high-grade steel core and copper windings are vacuum-impregnated with a resin that sets to minimise mechanical hum and noise.

## POWER AMPLIFIER



**ABOVE:** Single-ended (RCA) and balanced (XLR) inputs are joined by single-ended loop-through outputs and a single set of unswitched 4mm speaker binding posts

the amp simply presented the track in a way that really made me want to sit and listen intently.

There was an intimacy to Miss Krall's vocals and she was placed perfectly centre-stage. Her voice had real form and every subtle intonation and intake of breath sounded just that little bit more lifelike. In this respect, the P2 seemed less a hi-fi component and more a direct conduit for the music.

### DUB BE GOOD TO ME

At the bottom end, the P2 digs deeply and in a very well controlled manner. Yet again, it managed to pull that little bit more from everything. The latest single from The Blossoms' eponymous CD [Virgin CDV 3156], 'Blown Rose', actually has quite an intricate bass line hidden away in its depths but the rather thin recording can make this difficult to detect. Through the P2, the slightly anaemic character of the overall production was still intact, but that bass line was suddenly more to the fore. While not altering the manner of the song in any way, the P2 effortlessly made it subtly better and more compelling a listen.

Feed it a more robust bass line, though, and the P2 rises to the challenge with ease. Acoustic basses were fruity and tinged with just the right level of woody resonance, while electric basses were both tuneful and taut. Even better, the rumbling low-end on King Tubby's *The Roots Of Dub* LP [Jamaican Recordings JRLP035] thundered deliciously through my listening room without a hint of boom or flab. The bass notes were incredibly deep and never outstayed their welcome.

In terms of detail, the P2 struck gold once again. Instruments were lifelike and beautifully atmospheric, no matter whether a recording featured a soft solo acoustic

ensemble or a grand orchestral bombardment.

In such case, the amplifier seemed more able than most to separate out the instruments to make everything easy to follow, but only if I chose to do so. I could concentrate on a particular violin or trombone if I wanted to, yet the overall cohesion of each performance was stunning. Even during the most dynamic of crescendos, which the P2 would expand with gusto, there was no hint of muddle or compression.

This sense of insight was present and correct even with processed electronic material. Obviously, here the P2 wasn't reproducing the innate sonic character of an instrument, but it picked up beautifully on the form of each sound nevertheless.

As a result, the synthesisers on The League Unlimited Orchestra's *Love And Dancing* LP [Virgin OVED 6] had a warmth and 'roundness' – as indeed they should, being proper analogue ones! Each note stopped and started on the proverbial sixpence and the rhythms were as tight as could be wished for. ☺

### HI-FI NEWS VERDICT

If you hadn't gathered by now, I really liked the ATC P2. It's not an amp that aims to impress the listener with a barrage of detail but one that simply allows the music to shine through, irrespective of generation or genre. It boasts a svelte hand with both acoustic instruments and vocals yet manages to keep a firm grip on the most thunderous of bass lines. I'm going to really miss this amp when it's gone.

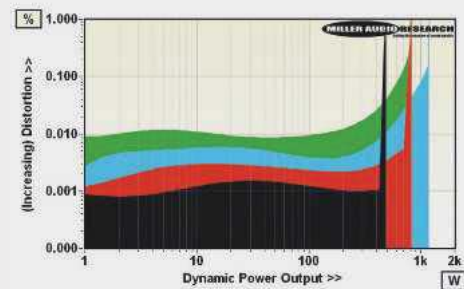
Sound Quality: 84%



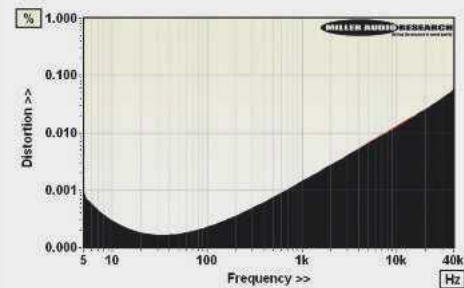
### ATC P2

Regular readers searching for an amp to compare with ATC's P2 need look no further than Bryston's 4B<sup>3</sup> [HFN Jun '16] – another big-hitting solid-state power amp that's also rated at 300W/8ohm. In practice the £5300 Bryston is more powerful (and more load tolerant) than the £3125 ATC P2, the former offering 2x360W/8ohm and 2x575W/4ohm, the latter 2x315W/8ohm and 2x450W/4ohm with the 4B<sup>3</sup> surging to 2.1kW/1ohm (or 45.7A) while the P2 drops back to 800W/1ohm (28.3A) under dynamic conditions [see Graph 1, below]. The 4B<sup>3</sup> is also slightly quieter and certainly offers lower distortion at HF. ATC claims 'ultra-low distortion' but while this is true through bass and midrange frequencies where 0.0002-0.0012% is achieved over a full 1-300W dynamic range, THD increases quite markedly above a few kHz to 0.025%/20kHz and 0.06%/40kHz [see Graph 2, below].

We've seen this trend before in ATC's original P1 [HFN Mar '10], forerunner of the P2 and pioneering the same Class A/B MOSFET-based output stage. The P2 offers twice the output but with about 1dB less overall gain (+24.7dB versus +25.7dB for the P1) and so requires a 2.92V balanced input to raise 300W/8ohm while the P1 needed just 1.83V to develop 150W/8ohm. Both are within the compass of any modern preamp. The 92dB A-wtd S/N ratio (re. 0dBW) is generous and unchanged as is the amp's output impedance – 0.043ohm (20Hz-10kHz), rising to 0.07ohm/20kHz and 0.44ohm/100kHz. The wide frequency response is also retained, stretching out to -0.03dB/20kHz and -0.7dB/100kHz/8ohm but with a declining treble of -0.4dB/20kHz and -2.4dB/100kHz into a tough 1ohm. The P2 really does behave like a P1 with twice the grunt! PM



**ABOVE:** Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) loads. Maximum current is 28.3A



**ABOVE:** Distortion versus extended frequency from 5Hz-40kHz at 10W/8ohm (left, black; right, red)

### HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	315W / 450W
Dynamic power (<1% THD, 8/4/2/1ohm)	485W / 825W / 1175W / 800W
Output impedance (20Hz-20kHz)	0.043-0.072ohm
Frequency response (20Hz-100kHz)	+0.0dB to -0.7dB
Input sensitivity (for 0dBW/300W)	165mV / 2920mV (balanced)
A-wtd S/N ratio (re. 0dBW/300W)	92.1dB / 116.9dB
Distortion (20Hz-20kHz, 10W/8ohm)	0.00017-0.025%
Power consumption (Idle/Rated o/p)	58W / 1.02kW (1W standby)
Dimensions (WHD) / Weight	448x141x337mm / 30kg