

Simaudio MOON 740P/860A v2

In one swipe, the long-awaited 860A v2 replaces Simaudio's 860A, 870A and 880A power amplifiers and promises 870A performance. We pair it with the 740P preamp
 Review: **Andrew Everard** Lab: **Paul Miller**

There's something very 'old school' about Simaudio's latest MOON pre/power combination: both units certainly look the part in their combination of black fascias and exposed metalwork, though you can also have them in all-silver or all-black, where they have an air about them of being stripped for action. The £7800 740P preamp, for example, eschews the current trend for digital inputs and network streaming capability, and is a simple, direct, all-analogue line-only affair.

It sits in the middle of the Canadian company's range, straddled by the £4950 390 – which is one of those all-in-one network preamps, and even has a phono stage – and the flagship two-box 850P, yours for £28,500. Meanwhile the £16,750 860A v2 is a hefty – 40kg shipped – if not enormous power amp claiming a 225W output into 8ohm, and does its bit for simplification by replacing three earlier models in the company's lineup – the original 860A, and the 870A and 880A.

SPRING CLEANING

In fact, Simaudio has done some serious rationalisation of its power amp range, which now kicks off with the 330A at £3700, and taps out with the truly massive MOON 888 monoblocks, selling for £120k a pair and, as the designation suggests, are rated at 888W apiece. Or 1.2hp, as the company helpfully points out, placing it comfortably ahead of those other monoblocks at the same kind of price claiming a mere one horsepower output [see *HFN* Jun '15].

A choice of three preamps and five power amps – three stereo and two monoblock – should offer enough flexibility

RIGHT: The 740P preamp features 'M-LoVo' (MOON Low Voltage) DC-regulated PSUs [far left] and separate inductive filters for all 24 IC op-amp stages. The main audio board [right] is dual-mono in layout, albeit on a single PCB

to suit most needs, but then the entire 'MOON by Simaudio' range is almost bafflingly comprehensive, including seven streaming/DAC products, a handful of integrated amps, four phono preamps – the list goes on...

With all that buzzing around, it's quite a relief to come back to the 740P, an established part of the company's lineup, supplied as a review partner for the new 860A v2 power amp. In an age where you need a flight manual – and often an app or two – just to fire up a hi-fi component and get it playing music, there's something reassuring about this

preamp: you can take one look at it, and instantly understand how to use it.

That's not to say that the 740P isn't flexible. It has three inputs on RCAs, and

two more on balanced XLRs, plus three output options – two on RCAs and one balanced. It also has the option of being used with an external power supply and offers the usual range of custom install-friendly control

connections, including 12V triggers, IR and RS232 socketry (also used for firmware updates when required), along with its branded SimLink remote control system.

'Products like the 740P pre are inherently reassuring'





LEFT: Pictured here without Simaudio's optional elastomer-filled 'bridges' (feet), the 740P preamp [top] is dominated by a red, eight-character LED display that carries input, volume and configuration data. The 860A v2 shares the same purposeful but elegant chassis and two-tone fascia design

Behind that large, clear red-on-black dot-matrix display, which is almost retro, and the slightly fussy front panel with a total of nine buttons plus a volume control to navigate, there's rather more going on than you might suspect.

ALL IN A SPIN

Though lacking the visual clues given by those components ostentatiously dividing their rear panels into 'left' and 'right' sectors, the 740P is dual mono in construction right back to a transformer, capacitor bank and choke filtering for each channel [see picture p42].

There are convenience features, too. The inputs can be re-labelled electronically, their gain adjusted by ± 10 dB to bring all

the user's sources in-line, and the maximum volume locked for each input, while it's also possible to fix the level of any of the inputs, for integration with AV equipment, by bypassing the volume control.


On the subject of the volume control, this uses Simaudio's 'M-eVol2' circuit, designed to alter the level without affecting the sound. It offers 530 steps, down to increments of 0.1dB: turn the volume control slowly and you get those tiny steps, spin it a little faster and it switches to 1dB steps. The volume control also doubles as a selector during set-up and operation, for example also offering balance adjustments, while a comprehensive remote handset is also provided [pictured p47].

The 860A v2 power amp, powered by twin 1.2kVA transformers with a total of 240,000 μ F of capacitance, and again entirely dual-mono, is designed to double its 225W input into a 4ohm load [see PM's Lab Report, p47], and can also be bridged into a 750W mono amp. It offers single-ended and balanced inputs, and while it's a DC-coupled design with servo control, it can be switched into AC-coupled working.

The DC setting should be fine for most preamps but, as Simaudio puts it, 'The AC setting is recommended for many older preamplifiers including many tube preamps. If the 860A v2 shuts down with 2 or 3 sequential blinks of the front panel LED, select the AC setting'. That LED also indicates other fault conditions, including the triggering of thermal or DC protection, with separate flash patterns for each channel, or six flashes for the ominous 'Unknown Problem'.

SUPER SIZE ME

Operating in Class A for the first 5W of its output, the amplifier is said to be designed for stability, transparency and – thanks to its high damping factor – precise control of the speakers with which it's used. It employs Simaudio's 'Lynx' technology to eliminate global feedback, and is fully balanced all the way to the output stage. The latter uses precision-matched MOON output devices said to deliver 'unprecedented gain linearity resulting in improved bass response and even more accurate sonic reproduction'.

It's powered by a proprietary toroidal transformer built for lower losses – in electrical, thermal and magnetic terms – in 

THE MOON AND BACK

Simaudio is coming up on its 40th anniversary in 2020, having been founded as Sima Electronique in 1980 in St Hubert, Quebec, where the company is still based. Named after founder Victor Sima, it had a simple goal: 'high-performance music reproduction without the frills, bells & whistles'. Its initial products were mainly aimed at pro users, and stood out for their value for money, leading to their rapid acceptance for home audio. Within a decade the company was already moving towards the striking styling we see today, and had renamed itself Simaudio Ltd., as well as developing the circuit designs at the heart of its current products. The Moon i-5 amp heralded a new reference series line when it arrived in 1997, and the company diversified into AV products in the 2000s, notably with the massive Titan multichannel power amp.

Not long after the company's 2010 30th anniversary, then owner Jean Poulin – who took over in 1995, and built it up to a production facility some 15 times larger than where things had started – sold it on to a new team including time-served management and Thierry Dufour, at that time chief engineer of almost 20 years' standing. Poulin stayed on as both consultant and ambassador for what was by then a company with products sold in some 50 countries – and still made in Canada. For more, turn to our interview boxout on p45.



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JOHN CARROLL

As Simaudio approaches its 40th anniversary, it is not only the products but also the reach of the brand itself that is witnessing great change. John Carroll of distributor Renaissance Audio picks up the story. 'As I have been the UK supplier of MOON products for over two decades, it's timely that we now formally integrate with the brand. We have formed a new division of the company, a premium global distribution network called MOON International, and my new role will be as Brand Director.'

Clearly, John has been assisting in the development cycle of MOON products for some time, so what prompted the big shake-up behind the 860A v2? 'This is not just a replacement for the outgoing 860A,' says John, 'but also a replacement for the much pricier 870A and, used as a pair, also a replacement for the 880M mono amplifiers. We simply learned so much from the development of the £120k MOON 888 amplifiers that we could move the 860A on to an entirely new level relatively easily.'

'In part this is down to bespoke components like our in-house capacitors and output transistors but also to a few small but significant tweaks in circuit design. Much of the 860A v2's sound is driven by the DC-coupled servos, for example, which give amazing transparency. Like all MOON products the 860A v2 also conforms to our high standard of construction and, as always, fits into any of our network or remote-controlled systems for ease of use.'



ABOVE: Constructed as a dual-mono (and bridgeable) amplifier, much of the 860A v2's 40kg weight is accounted for by the two huge toroidal mains transformers [bottom] feeding 2x120,000µF of reservoir capacitance [blue]. The output devices are mounted on concealed heatsinks [left and right]

the quest for better speed and dynamics, feeding an oversized power supply. (Incidentally, why do hi-fi manufacturers always talk about 'oversized' power supplies? Surely the best design practice is to design one that's correct for the job?)

It also has the same remote connections as the preamplifier but, whereas the 740P disconnects its input circuitry and switches off the display when in standby mode, keeping all the other circuitry powered up, the 860A v2 is designed to be left powered up at all times, switching into standby when instructed to by a remote signal from the preamplifier. Finally, just like the preamp, the power amp sits on four cone feet, which can be screwed in or out in the event that you need to level it on an uneven surface.

SLAM DUNK

Slotted into editor PM's reference system, with the Melco/dCS Vivaldi One combination [*HFN* Feb '18] operating at 'line level' into the 740P, and the 860A v2 driving a variety of speakers, the 'MOON by Simaudio' duo gave a good account of itself, even it couldn't quite challenge the mighty Constellation Centaur II 500 it supplanted [*HFN* Dec '19]. That's hardly surprising, however, given that this power amp sells for far more than twice the price of the MOON pre/power combination.

Not that the 740P/860A v2 was in any way overshadowed. In fact it immediately impressed with the freshness and vitality of its sound, allied to fine low-end weight and an overarching sense of 'don't panic – we've got this one covered'.

There's excellent control and grip, even with relaxed-sounding speakers such as the Sonus faber Olympica Nova V [reviewed next month] and while the MOON amps can't quite overcome the strong sonic

'There's a sense of each note landing squarely and on target'

signature of these big Italian speakers, they do make a fine fist of trying to get them moving, injecting a good dose of rhythmic pep. Partnered with a truly insightful monitor like the resident B&W 800 D3s [*HFN*

Oct '16] and, given the size and output specifications of the 860A v2, it delivers a big-boned, muscular sound, playing loud without effort and delivering the dynamics of music in a highly convincing fashion.

The bass is perhaps a little dry at times, but what it lacks in warmth it more than makes up for in its ability to slam hard. Bernstein conducting the New York Philharmonic in his 'Symphonic Dances from *West Side Story*' [from *Bernstein conducts Bernstein*; Sony Classics SRGR 755; DSD64] is treated to subtlety in the more lyrical parts, but real fire and speed in the 'Rumble' section, which sounds thrillingly *molto allegro*. ↻

The background of the advertisement features a close-up, high-angle view of the HIFIMAN Arya headphones. The focus is on the intricate details of the earcups, including the perforated mesh grilles and the leather-like padding. The HIFIMAN logo is visible on the top of the headband. A central orange circular badge contains the text 'hi-finews OUTSTANDING PRODUCT'. A white-bordered box in the lower right corner lists technical specifications: Frequency Response: 8Hz-65kHz, Impedance: 35Ω, Sensitivity: 90dB, and Weight: 404g. At the bottom, there is a headline 'Truly unrivalled sound quality' followed by a paragraph of text and a list of contact information for Signature Audio Systems.

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SIMAUDIO MOON 740P/860A V2



ABOVE: The preamp [top] offers five line ins (3x RCAs, 2x XLRs), three line outs (2x RCAs and 1x XLR). Outboard PSU inputs are also included. The power amp [below] has balanced (XLR) and single-ended (RCA) ins, AC/DC coupling and bridged modes

The sound here is highly detailed, never straying into brashness, and soundstaging is both crisply focused and three-dimensional. And the pairing is also highly appealing when playing simpler recordings such as Chip Taylor and Carrie Rodriguez's 'Him Who Saved Me' from their *Let's Leave This Town* album [Texas Music Group/Lone Star TMGLS 4009], focusing on the harmonies, including Taylor's husky voice, but doing so to highly musical effect.

PICTURE PERFECT

The same goes for Elton John's 'Take Me To The Pilot', from his self-titled album [Mercury UIGY-9071; DSD64], which the amps treat to a delicious sense of the musical forces as they build, while keeping a close eye



on the individual musicians – with the drums especially toothsome in a typically careful Gus Dudgeon mix.

So the sound is illuminating as well as sympathetic, the 740P/860A v2 showing there's more to dynamic ability than just great crashes in the way it plays Paul Lewis's recording of Mussorgsky's

LEFT: The MOON FRM-3 system remote covers off input selection, volume, mute and power/standby for the 740P

Pictures At An Exhibition [Harmonia Mundi HMC 902096; 96kHz/24-bit]. Yes, the piano sounds a shade lightweight, and the Teldex Studio acoustic lacks a little warmth, but this duo manages to convey the spirit of the music, at turns ominous and then fast and exuberant – there's a strong sense of every note landing squarely and on target.

Even with the dense mish-mash that is Pink Floyd's *The Endless River* [Columbia, 96kHz/24-bit], that compilation of mislaid files and studio floor sweepings that at times sounds like it should have been called 'The Endless Album', the amps open up the mixes to allow the listener to zone in on the various instruments in what is occasionally a big, unruly wash of sound.

Mind you, not even their precision, soundstaging and drive can do much with 'Talkin' Hawkin'. It was novel the first time around, chaps, but now... ☺

HI-FI NEWS VERDICT

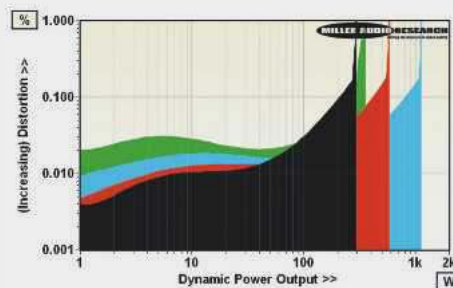
Often the simple approach works best, so what this MOON pairing lacks in digital and streaming accoutrements it more than makes up for in the clarity and clout of its sound. Soundstages are focused and naturally scaled, instruments are real and unforced, and the dynamics are never in question. Perhaps they're a little tight and light in the bass, but only a little, and better that than bloat or looseness any day.

Sound Quality: 86%

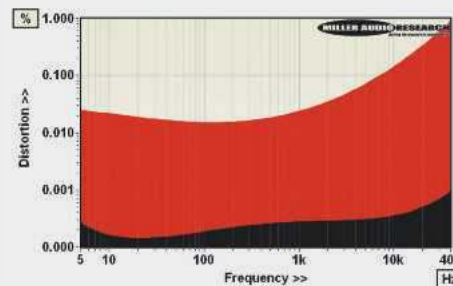


An established part of the Simaudio stable, the MOON 740P preamp is also the 'squeaky clean' half of this amplifier duo. With the offset at 0dB, overall gain is +6dB (or x2, balanced in/out) and the A-wtd S/N ratio a fabulously wide 100dB (re. 0dBV). Maximum output is a full 20V from a standard 73ohm source impedance while the response is exceptionally flat and extended – within ±0.04dB from 1Hz-100kHz. Distortion is also very low indeed at just 0.001-0.0003% (20Hz-20kHz, re. 0dBV) – some two orders of magnitude lower than that of the partnering 860A v2 power amp [black vs. red traces, Graph 2 below].

Talking of which... the MOON 860A v2 power amp bested its 225W/8ohm rating with ease at 2x289W/8ohm and although its 4ohm output heads north of 530W it is impossible to measure a *continuous* <1% THD maximum output without popping the 5A/250V line fuse. Dynamic measurements are safer, revealing a capacity of 297W, 585W and 1.13kW into 8, 4 and 2ohm loads but show a limit of 360W/1ohm [see Graph 1, below]. Distortion increases gently with level from 0.003%/1W, 0.005%/10W and 0.025%/100W up to 0.06% at the rated 225W (all at 1kHz), and at low and high frequencies [red trace, Graph 2] to the tune of 0.008%/20Hz and 0.015%/20kHz (all 10W/8ohm). While this and the mild treble roll-off (-0.6dB/20kHz to -6.9dB/100kHz) suggests some slight 'character' on the 860A v2's part, the fabulous low 0.005ohm output impedance (20Hz-3kHz) suggests great control while the huge 96dB A-wtd S/N ratio (re. 0dBV) promises super-silent backgrounds. Finally, the DC-coupled output option gives a +0.9dB boost at 1Hz (!) while the AC-coupled mode rolls away to -1dB/10Hz to -3dB/5Hz. PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 23.8A



ABOVE: THD vs. extended frequency for 740P preamp (1V out, black trace) versus 860A v2 (10W/8ohm, red)

HI-FI NEWS SPECIFICATIONS

Continuous power (<1% THD, 8/4ohm)	289W / 530W* (see Lab Report)
Dynamic power (<1% THD, 8/4/2/1ohm)	297W / 585W / 1.13kW / 360W
Output imp. (20Hz-20kHz, pre/power)	73ohm / 0.005-0.025ohm
Freq. resp. (20Hz-100kHz, pre/power)	+0.0 to -0.0dB / +0.0 to -6.9dB
Input sensitivity (for 0dBV/0dBW)	490mV (pre) / 75mV (power)
A-wtd S/N ratio (re. 0dBV/0dBW)	99.9dB (pre) / 95.8dB (power)
Distortion (20Hz-20kHz, 1V/10W)	0.0001-0.0003%/0.004-0.015%
Power consumption (Idle/Rated o/p)	84W/780W (8W, Preamp)
Dimensions (WHD, Pre/Power)	476x102x419/476x192x445mm

Manley Absolute

High-end headphone amps for connoisseurs of cans require total adjustability – has Manley Laboratories delivered the goods with the Absolute Headphone Amplifier? Review: **Ken Kessler** Lab: **Paul Miller**

Veteran makers of headphone amplifiers for studios, Manley Laboratories is taking on the extreme high-end of the domestic genre with a £4500 unit – the Absolute – that marries audiophiles’ sonic requirements with the total control demanded of professionals. Company CEO Eveanna Manley says, bluntly, ‘Our goal was simply to produce the most awesome-sounding and sonically flexible vacuum tube headphone amplifier!’.

To address consumer usage, the thing looks cool and is designed to stand proudly on a desk, nightstand or anywhere else one’s headphone amp might be sited. Unlike Manley’s lab-look stuff for studios, the Absolute is made with a sculpted-from-solid chassis in three colours – black, copper or silver. Hand-rubbed walnut burl veneer covers the headphone rest areas, the Absolute doubling as a stand.

Manley eschewed fitting a DAC, Eveanna explaining, ‘We already have a ton of features crammed into this unit. Besides, a better DAC can be designed into a larger chassis, with a dedicated power supply to be its own full-featured thing. We never set out to cram a DAC into this form factor, nor to fit a Bluetooth receiver’. As for wireless, she added, laughing, ‘We have provided an awesome RF wireless remote control!’.

SET ‘N’ MATCH

DAC notwithstanding, this is certainly the best-equipped headphone amp I’ve come across. I cannot, off-hand, name one that does *everything* of which the Absolute is capable, though AudioValve’s Solaris comes close. As is the norm at this level, the Absolute accommodates balanced via XLRs and regular headphones with ¼in jacks, and can be used as a preamp thanks to RCA line-level outputs and two pairs of RCA inputs for line sources. So far, so normal.

RIGHT: A pair of 6AQ5s (EL90 tetrodes) and single 12AX7 per channel are configurable in push-pull or SE modes. Rotaries for bass/treble/balance and feedback [boxout, p49] are joined by mono, bypass and ‘phone impedance buttons

Manley says the device provides ‘fifteen independent controls,’ and I tried all of ‘em. With the exception of balanced headphones requiring two XLRs or two ¼in jacks, the intention is to be able to match this to any headphone on the market. The volume control on the fascia is a horizontal thumbwheel to bring tears to the eyes of those who remember vintage Marantz FM tuners. To the right is the mute button, to its left a button to choose between push-pull or single-ended tube modes.

This unit, better than any other I have tried, enables you to experience without doubts the differences between the two topologies, while teaching a valuable lesson: they are not mutually exclusive,

so absolutists should put a sock in it. You will find yourself ‘learning’ which suits which headphones, music types or, when used as a preamp, which power amps. The variances are subtle but decisive, and do much to help you optimise headphone performance.

Volume is indicated by a row of 16 white LEDs above the thumbwheel, with 127x0.5dB steps. Next come five buttons and four knobs on the top of the front section. The buttons control (left to right) headphone load, set via custom output transformers hand-wound in-house, with settings of Low (L) for 12-50ohm, Medium (M) for 50-200ohm and High (H) for 200-600ohm and above [see PM’s Lab Report, p51].

‘This might sound like a recipe to drive you crazy’

INTO THE VALLEY

Balanced (XLR) and single-ended (¼in jack socket) headphone outputs are selected together with the RCA preamp output. The middle button selects either of the two line inputs, the next toggles stereo/mono, and the last button is the EQ control which activates or bypasses the tone controls. Again, white LEDs indicate all choices.

Above these buttons are four tall, slim rotaries. From left to right are a ‘Feedback Control’ [see PM’s boxout, p49] its usage affecting the levels of refinement. The two rotaries in the middle are bass and treble controls, activated or bypassed by the EQ button. Lastly the balance control provides a claimed 72dB swing each way, with a centre detent taking it out of circuit.

Next come two 12AX7 input tubes and four 6AQ5 output tubes, wired as triodes, housed in the valley formed by the metal sides. At the back, alongside the RCAs, is a tiny rotary for ‘Headphone Protection Control’. Inactive when turned completely counter-clockwise, it can be used to set a threshold to protect expensive headphones (or one’s hearing) from overload, by monitoring the output level and automatically decreasing the volume when the user-threshold is exceeded.

