

Audia Flight Strumento N°1 mk2/N°4 mk2

Very much hi-fi on the grand scale, this Italian-made pre/power amplifier combination is a sweet-sounding heavyweight with more than sufficient output to match its size
 Review: **Andrew Everard** Lab: **Paul Miller**

For a while, the amplifier combo you see here was almost literally the elephant in the editor's listening room. Delivered for review just at the end of 2018, its sheer mass – 28kg for the £12,500 Strumento N°1 mk2 preamp alone, plus a further 95kg for the N°4 mk2 power amp, which sells for £16,250 – defied almost all efforts to move it into PM's lab for test work before I could listen. It finally inspired our esteemed editor to relent and buy himself a trolley – and so, at last, the review literally began to roll...

Though the Strumento pair may be as eye-catching as it is back-breaking, within we have a relatively conventional pre and power amp – well, almost. The looks, meanwhile, will be a matter of taste, being either flamboyantly stylish or a little overcooked. For example, the preamp's display is recessed into a cutout within the thick metal fascia, making it a little hard to see, and all the functionality isn't immediately apparent. Nevertheless, what we have here is a preamp with generous input provision, partnered with a stereo power amp that's able to drive almost any chosen speaker with total confidence.

FUTURE PROOF

Oh, and if you want more, you could replace the N°4 with a brace of Audia Flight's N°8 monoblocks, delivering twice the stereo amp's nominal 250W/8ohm, and selling for £18,750 each. Not that you'll find the N°4 exactly lacking power, as we'll discover [see PM's Lab Report, p45]. All of this comes in cast aluminium casework machined and hand-polished as part of the assembly process undertaken in Italy, with additional shot-blasting and anodising

RIGHT: The Strumento N°1 mk2's gain stage is a Class A current-feedback design, potted in resin and screened in L/R boxes [black, centre]. It is fed by four independent, low ESR PSUs [capacitor bank, lower right; transformers, left]

completing a high-grade finish to match the meticulous layout within.

The N°1 mk2 preamp offers sufficient inputs and outputs to suit most needs, with five line-ins on balanced XLRs (two of which are duplicated on unbalanced RCAs), and two sets of balanced XLR outputs plus a single set on RCAs. But that's not quite the whole story here. As suggested by the pair of blanking plates on the rear panel [see p45], and the large bay inside the preamp [top right of our picture, below], there's the option of extra modules and extra inputs.

These bring to the N°1 mk2 facilities including further balanced and RCA connections, MM/MC phono provision,

and S/PDIF and USB digital inputs handling datastreams at up to 192kHz/24-bit. This modular approach gives the potential buyer the confidence that the preamp will be able to grow with future system needs.

HEART OF IRON

And that weight? Well, apart from the exceptionally solid casework, the power supply provision takes its toll – there are no fewer than four small toroidals in there, with two 75VA devices for the main stages, one 25VA for the control boards and a separate 15VA for the logic board. These are all enclosed within substantial shielding and encapsulated in resin. Scale the same





thinking up to the 3000VA iron-cored transformer potted inside the N°4 power amp, plus two 150VA toroidals for the voltage gain stage, and you have the major part of 60kg of its 95kg accounted for.

Both the pre and power amp come with a manual in the form of a leather-effect mini ringbinder. While most preamps are entirely self-explanatory, the few minutes spent reading the manual are worthwhile, as they will enable the user to get 'under the skin' of the device and make the most of it. For example you'll discover the AU-Link with other Audia Flight products, this using an RJ45-terminated cable. Input switching, adjustable input gain, setting one input to 'Direct' (otherwise known as unity gain, for use with an AV processor) are all covered off too.

It's also possible to rename inputs in order to suit your needs, and to customise

'Some 60kg is accounted for by its power supply alone!'

the preamp's standby mode by choosing whether or not the circuitry remains powered for instant use, or goes to sleep. The partnering remote control handset, which is a compact metal-cased device [see p45], duplicates the major functions, including having a 'Set' button to access

the menus, and adds a display dimmer.

However, just for once the remote wouldn't be my chosen means of operating the Strumento amps, simply because the subtle clicking of the resistor-ladder volume control on the preamp itself is so tactile it's rather addictive!

By contrast with the preamp, the power amp is pretty simple in its operation, as is the case with such things. The dual mono construction is made clear by the rear layout, which stacks the RCA and XLR inputs for each channel above the relevant speaker outputs in two blocks either side

ABOVE: Sumptuous alloy case and sweeping fascia are Audia Flight hallmarks. Build quality is excellent but the display, with its menu options, can be tricky to read behind that thick faceplate

of the panel. On the front, things are hardly less complex, at least once you get the hang of the amplifier. The deep V-shaped cut-out to the top of the massive front panel fascia contains the on/standby switch and the status indicator, which not only indicates operation but also shows if the internal protection has been triggered.

The manual explains that 'For his own safety and that of pregnant Strumento,' the N°4 mk2 will trigger its protection in case of excessive temperature... or 'failure in food'. But hey, Audia Flight's English is a lot better than my Italian...

REAL BUZZ

Connected up between PM's Melco N1ZS20/2 [HFN Jun '17] and dCS Vivaldi One [HFN Feb '18] front-end and our reference Bowers & Wilkins 800D3 speakers [HFN Oct '16], this amplifier pairing proved entirely fuss-free in operation, the absence of fire-up drama entirely in keeping with the cool sophistication of its styling.

The Count Basie Orchestra's *Live At The Sands (Before Frank)* [MFSL UDSACD 2113] gives an instant impression of the sound of these amps. In an instant, the big, rich and free-flowing sound is revealed, even if it lacks a little of the dynamic slam and extension of some other, and probably costlier, high-end power designs.

It's warm and lovely in an ever-slightly retro manner, bringing out the buzz of conversation in the audience and the smooth sheen of the brass instruments, if a little congested with the high brass.

Mind you, switching to a different perspective on brass with Britten's *Serenade For Tenor, Horn And Strings* [Linn Records CKD 478; 192kHz/24-bit], the

ELEGANT COMPLEXITY

The Strumento N°1 mk2 preamp includes a very precise stepped attenuator offering, for this most costly method of volume adjustment, an almost unprecedented 100dB working range. The switched resistor network provides adjustment in fine $\pm 0.5\text{dB}$ steps over the top 40dB of its range (+10dB to -30dB), with an accuracy of $\pm 0.03\text{dB}$, and $\pm 1.0\text{dB}$ steps from -30dB to -50dB with a precision of $\pm 0.1\text{dB}$. Below this the steps in attenuation increase in coarseness to $\pm 2.0\text{dB}$, the accuracy (or error) slipping to $\pm 0.5\text{dB}$ from -50dB to -60dB, $\pm 1.5\text{dB}$ from -60dB to -70dB, +3dB from -70dB to -80dB and +6dB from -80dB to -90dB. To derive the full benefit from this stepped volume control, when used with the partnering N°4 power amplifier, I would recommend using the lowest of the N°1's selectable gain options [see Lab Report, p45].

As our inside shot illustrates, the N°4 is no less complex in design. It is a fully balanced amplifier with six pairs of bipolar transistors handling the positive-going signals and six pairs for the negative in a bridged configuration (per channel). Each power amp module has no fewer than seven 10,000 μF reservoir capacitors per side, amounting to 140,000 μF per channel, supplied by an iron-cored 3000VA PSU transformer. Audia Flight uses no fuses in its designs and so all protection – for both power supply and power amplifier stages – is achieved by active current monitoring via the top-facing 'control board' [see p43]. PM



MASSIMILIANO MARZI

Co-founder (with Andrea Nardini) of Audia Flight back in 1996, Massimiliano Marzi explains that the pair of them had spent a couple of years researching signal purity, concluding that traditional voltage feedback circuit design introduced inaccuracies. So they built their circuits around *current* feedback, discovering that 'our new approach would allow for both higher speed responses [risetime and bandwidth] and better load control, and thus produce a more accurate signal'.

The company is based in the port of Civitavecchia, some 70km northwest of Rome, so we were bound to ask how the 'Flight' in its name was inspired. Marzi explains that, 'The original name was Audia, but we wanted to add a second word – a friend of ours suggested "Flight" simply because the company, just born, needed to fly!' At first the company targeted the Asian market, before moving into Europe and America.

Manzi says that, yes, while the amplifiers are very heavy, not least due to all those big transformers, they also contain a 'secret'. 'In the power amp we have an exclusive system to reduce any vibrations caused by the transformers – they're on an independent chassis that's decoupled from the audio circuit PCB, and thus any physical noise has a separate route to ground.'

So what's next for Audia Flight? 'Currently we're working on sources, including SACD/CD playback. After that we'll be looking at streaming, but as a separate unit ready to accept optional cards.'



ABOVE: Press the blue 'shield' to power on and off. Inside the Strumento N°4's CNC-machined chassis [below] is a cylinder [centre left] containing the PSU transformers for the voltage gain stages and control board [centre right]. The massive 3000VA transformer is in a screened box, beneath

Strumento amps give an impressive view of the Snape Maltings acoustic, and the way the performances interact with it. This is a remarkable recording, and the sweet sound of this Italian pre/power duo is especially well suited to it, delivering fine focus right across the soundstage while developing a suitably otherworldly feel.

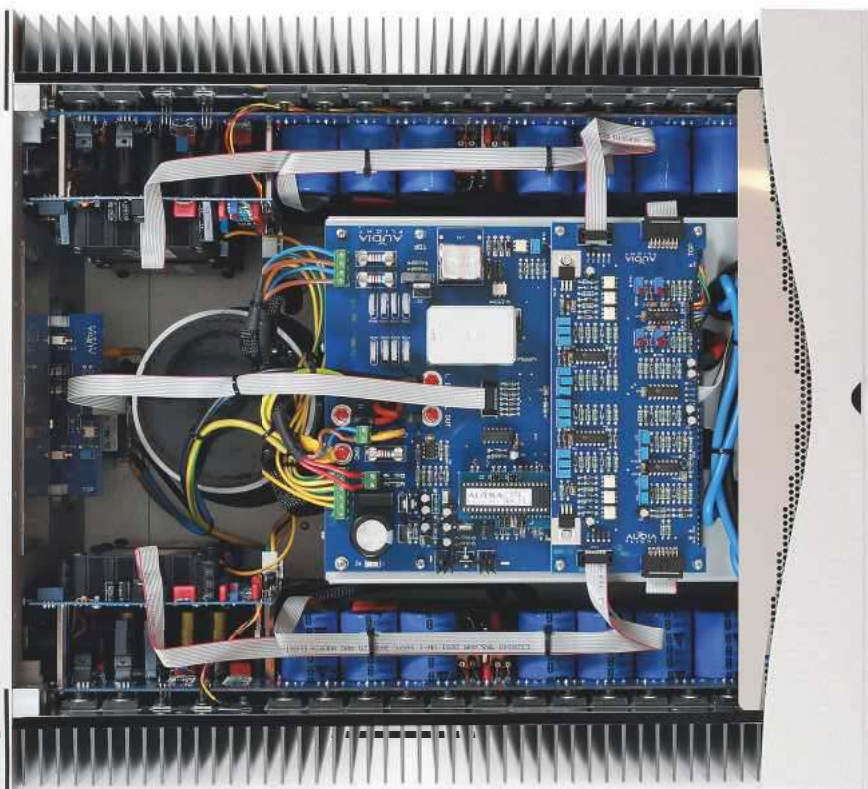
AMAZING GRACE

Change to more mainstream content, in the form of The Beach Boys' *Pet Sounds* album [MFSL UDSACD 2065], and 'God Only Knows' shows how well the amps handle the bass, and the obvious left/right mix with the percussion in the right channel, while the voices sound smooth and lush

in the generously weighted sound. Every element is clearly apparent, and yet the whole is exceptionally easy to enjoy.

And the same goes for another period piece, 'Do We See The Light Of Day?' from Dave Stewart and Barbara Gaskin's 1986 album *Up From The Dark* [Rykodisc RCD 10011]. Here the broad, deep, warm sound picture created by these amps and the 800 D3 speakers gives this a much more contemporary feel, keeping the synth percussion and multiple layers in order and showing a decent turn of rhythmic speed, even with the deep, deep synth bass toward the end of the track.

I've heard this album sounding faster and more dynamic in other systems, but ➔



AUDIA FLIGHT STRUMENTO N°1/N°4



ABOVE: The preamp [top] offers five line inputs (two on XLR and RCA), two balanced outputs, one single-ended and one tape out. The power amp [bottom] has balanced (XLR) and single-ended (RCA) inputs with fully floating (ungrounded) 4mm speaker outputs

then there was always the risk of it tipping over into brittle and synthetic. Not so here as the N°1/N°4 amps tread this precarious path with some nimbleness and grace.

BOMBAST AND POMP

What's more, the clarity and directness of this pairing, plus the evident clout of the power section, means the sound doesn't change even when one pushes things hard. The B&W 800 D3 loudspeakers are pretty demanding when it comes to amplifier quality, but the Strumento N°1/N°4 is more than capable of driving them hard to 'exciting levels' while still managing to retain a rich but clean sonic character.

That's much in evidence with the Living Stereo SACD of Dvořák's 'New World' Symphony [BMG Classics 82876-66376-2], with the Chicago Symphony Orchestra under Fritz Reiner. This recording dates back to 1957, and is hardly the most subtle, with seemingly enormous musical forces and a real sense of bombast

LEFT: Audia Flight's handset offers control over input, volume, mute and the preamp's configuration menu



about it. Add to that an SACD mastered very 'hot' – in other words damn loud – and you have a test disc that majors on attack rather than subtlety. The Strumento N°1/N°4 amplifiers deliver this set in all its full-blooded pomp, and while the sound is necessarily vintage, there's no denying it's loud, proud and intriguingly odd.

By contrast a much more recent recording, of Mozart's Serenade in B flat, K361, seems to hit the Italian amplifiers' sweet spot. This Gran Partita set, by the Royal Academy of Music Soloists Ensemble conducted by Trevor Pinnock [Linn CKD 5 16; 192kHz/24-bit], sounds gorgeously rich and fluid, while instrumental tones are glorious. Or as someone once described this recording to me, 'It's a lovely noise'. ☺

HI-FI NEWS VERDICT

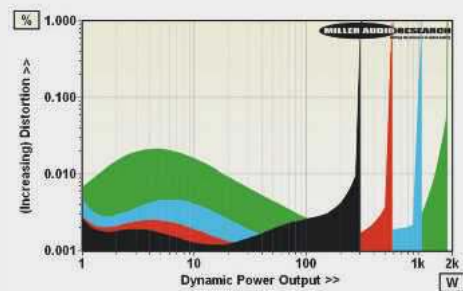
The sound may be characterful, but the Strumentos make a wide range of music exceptionally easy to enjoy. There's nothing wrong with going for a euphonious balance, albeit at some expense to detail and openness, if the result is as smooth, lush and harmonious as this Audia Flight pairing delivers. But ensure your dealer has three Shredded Wheat for breakfast: these amps must be installed, not click and collected!

Sound Quality: 84%

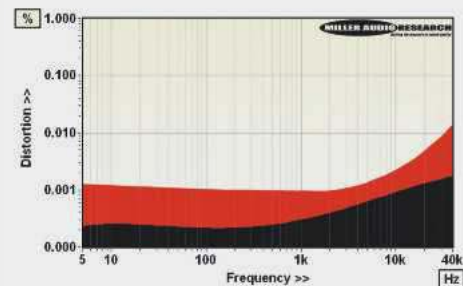


With its volume control set to 0dB, the Strumento N°1 mk2 preamp offers a default +6dB gain but this can be adjusted in ±1dB steps from 0dB to +10dB (or a gain range of +12dB to +22dB at the maximum +10dB volume setting). Input overload margins notwithstanding (8.1V), the Strumento N°1 mk2's maximum output level is an astonishing 68V (balanced outputs) from a usefully low 50hm source impedance. So the latest N°1 will drive, and prove relatively agnostic towards, long lengths of almost any interconnect cable. Furthermore, from 0.5V-30V output, distortion is as low as 0.00013% through the midrange and 0.0013% at 20kHz [black trace, Graph 2] while the A-wtd S/N is a fine 93.7dB (re. 0dBV). Channel separation is >100dB from 20Hz-20kHz while the response is flat to within -0.00/+0.07dB from 1Hz all the way up to 100kHz!

So the N°1 mk2 will drive the N°4 mk2 with absolute ease, the latter's 30.6dB gain suggesting the former's lowest line gain be selected to derive the very best from its stepped volume control. Power output is rated at 250W/500W into 8/4ohm but this was readily exceeded on test to the tune of 2x296W/546W into 8/4ohm loads with a further boost to 309W, 588W, 1070W and 1815W under dynamic conditions (10msec at <1% THD) into 8, 4, 2 and 1ohm loads [see Graph 1, below]. The maximum 43A current delivery is electronically governed and, despite the huge scale of the PSU, its screening is sufficient to reduce hum to -95dBV (unweighted). In fact, there is more 'white noise' from the amplifier, yielding an A-wtd S/N ratio of 87.4dB (re. 0dBV). Distortion is very low at 0.0009-0.005% from 20Hz-20kHz [red trace, Graph 2] and the response flat to -0.2dB/100kHz. PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 42.6A



ABOVE: THD vs. extended freq for Strumento N°1 pre (1V out, black trace) vs. N°4 power (10W/8ohm, red)

HI-FI NEWS SPECIFICATIONS

Continuous power (<1% THD, 8/4ohm)	296W / 546W (68V, preamp)
Dynamic power (<1% THD, 8/4/2/1ohm)	309W / 588W / 1070W / 1815W
Output imp. (20Hz-20kHz, pre/power)	5.1ohm / 0.004-0.009ohm
Freq. resp. (20Hz-100kHz, pre/power)	-0.0 to +0.07dB / +0.0 to -0.2dB
Input sensitivity (for 0dBV/0dBW)	158mV (pre) / 84mV (power)
A-wtd S/N ratio (re. 0dBV/0dBW)	93.7dB (pre) / 87.4dB (power)
Distortion (20Hz-20kHz, 1V/10W)	0.00015-0.0015%/0.0009-0.005%
Power consump. (pre/idle/rated o/p)	66W / 260W/780W
Dimensions (WHD, Pre/Power)	450x120x450/450x280x500mm