

Integrated amplifier. Rated at 110W/8ohm
Made by: Exposure Electronics Ltd, Lancing, UK
Supplied by: Exposure Electronics Ltd
Telephone: 01273 423877
Web: www.exposurehifi.com
Price: £2250

AUDIO
FILE

INTEGRATED AMPLIFIER

Exposure 3510

Exposure returns to its roots with a full-width integrated inspired by the improved circuit design of the recent 5010 monoblock power amps. Does 'old school' still cut it?

Review: **Ken Kessler Lab: Paul Miller**

Nostalgia doesn't come any better than this: an integrated amplifier that looks like it escaped from the 1980s, all minimalist and line-level and 440mm wide. But Exposure has been around for close to 50 years [see PM's boxout, p57], so this isn't some exercise in retro from an arriviste brand with cod heritage. Rather, the 3510 is a device for reminding people like me of (hi-fi) life in simpler times.

Even its realistic price of £2250 equates to around £440 in 1980, typical of a quality British integrated amplifier of a politically correct nature. It's part of a range, with all models available in black or titanium and sharing the same casework, which will ultimately comprise the 3510 Stereo Power Amplifier (£1590), 3510 Mono Power Amplifier (£2990 per pair), 3510 Preamplifier (£1590), and a range of optional plug-in modules.

BOLD STEP

There are three forthcoming plug-ins – a USB/DSD64-compatible DAC (£410) and an MM phono or an MC phono board (£300 each), but the 3510 can only house one. Both phono modules will offer two sensitivity/gain settings combined with 47kohm loading for MM and 100, 110, 130, 160, 210, 310 and 470ohm for the MC board. In the spirit of the price category, I reviewed our line-only 3510 with an external sub-£500 phono stage.

Specs-wise, too, the 3510 integrated amplifier could have been plucked from the pages of the *1980 Hi-Fi Yearbook* although key areas of the preamp circuit design, and even the choice of power transistors, have witnessed a process of evolution and improvement over the decades. Otherwise Exposure operates under the very sensible 'if it isn't broken, don't fix it' school of engineering. The conservative factory

RIGHT: Evolved from the 3010 series, the 3510 features two pairs of Toshiba power transistors per side [on internal heatsink, centre] and fed from a beefy linear PSU [near left]. Phono module is missing here [fitted top right]

power rating is 110W/8ohm [see PM's Lab Report, p59] and it provides line inputs labelled Aux/Phono, CD, Aux 2, AV with fixed gain for switchable home theatre bypass, a tape in/out loop and two preamp outs, the latter useful for feeding subs or for connecting other power amplifiers.

All of these are single-ended RCA connections, accompanied by two sets of loudspeaker outputs for which Exposure took a bold step – instead of multi-way binding posts, the 3510 accepts banana plugs only. And, in case you're wondering why an amplifier would offer two sets of speaker outputs, but no A/B speaker selector switch (as was once the fashion), their role here is to simplify bi-wiring.

Its uncluttered front panel contains, from left to right, a push button for power on/off, rotary source selector, a row of LEDs to indicate the chosen source, a sensor for the remote control and a ¼in headphone socket. The supplied remote [see p59] is a

new system commander with buttons for other Exposure components, but here deals with source, volume up/down and mute.

HOT TOPIC

The installation is self-explanatory for anyone who has ever set up a basic system, which adds to the delicious blast-from-the-

past ambience. The lack of phono or DAC modules in our sample made my life even easier, and I immediately set it up with feeds from an SACD player, a CD player, an open-reel deck and a turntable-via-phono-amp. Speakers were

all stand-mounted two-way systems, but I couldn't resist a burst of the Wilson Sasha DAWs [HFN Mar '19] to sate my curiosity.

Despite the closed nature of all integrated amplifiers, the 3510 does encourage growth over the years, as its doubled-up pre-out and speaker outputs suggest, while a detachable mains cable also begs for experimentation. These, too,

'I heard snap and transient attack, braced by rich bass'



recall the mind-set, zeitgeist and status quo of the early days of Exposure, when cables, bi-wiring and other tweaks were hot topics, and even audiophiles on a tight budget expected an element of flexibility. If I remember correctly, even the market-dominating, £79 NAD 3020 [HFN Jan '80 and Nov '12] offered a preamp output.

SILKY THRILLS

Switch-on is accompanied by a brief muted period, after which three red LEDs illuminate and tell you the system is operational: one for power on, one for the source indication and the last is on the motorised volume control so you can see its position from the listening seat. When you hit mute, the source and level LEDs are extinguished. As for the headphone output, this mutes the speakers when you insert a ¼in jack, and I'm happy to report that I couldn't find a pair of cans it wouldn't drive with anything less than distinction.

Of late, I have been rediscovering SACD, staggered by the way it narrows the gap between CD and LP, but baffled by its cult

status. What Exposure's 3510 delivered with the kind of impact I would expect of a £25k high-end import weighing 50kg was Nilsson's *Schmilsson* [Mobile Fidelity UDSACD 2219], in its tougher moments. Of course, the aching ballad 'Without You' demanded finesse, which the 3510 exhibits by the bushel, but it was the bass run that opens 'Jump Into The Fire' that made me realise this wasn't 'just another integrated'.

For this track, the bass guitar is the lead instrument with Herbie Flowers in virtuoso mode, dominating the number while the rest of the album is piano-biased. The 3510 reaches down deep, but it pulls off a deft trick: instead of the bass overshadowing all else, the guitars at the extreme ends of the soundstage hover around it, while Nilsson's slightly nasal vocals nestle on top of the big, fat, bottom end.

All the while, there's a coherence and openness that reminded me more of the vinyl offering than CD, while the drum solo towards the track's finish had the kind of atmosphere I expect of a pristine Kodo recording. Then the bass comes in again,

ABOVE: Available in solid black or titanium casework for a lighter look, the 3510 offers an updated industrial design with logic-controlled rotary input selection and motorised volume

and even my diminutive LS3/5As seemed more comfortable with the surfeit of lower octave material than one might imagine. Why is simple, for the 3510 exhibits speaker control like a Sgt Major.

As I wasn't in the mood to wallow solely in wooferland, I cued back to 'Without You', a song so excruciatingly poignant that even Maria Carey's histrionic delivery couldn't butcher it. Nilsson treats it with a tenderness that recalls the great romantics such as Johnny Mathis, the stage set with the most delicate piano trills, along with utterly gorgeous strings and horns.

What the 3510 did to surprise me was to present them with a silkiness I associate more with tubes like EL34s or even 300Bs. The 3510 was emerging as a solid-state amp for those who want but cannot cope with valves. Better still was the sense of majesty that this love song warrants, because it is one of the all-time heartbreakers, up there with the likes of 'In My Life' and 'Waterloo Sunset'.

INTO AFRICA

I was starting to think that, at least in digital terms, using SACD was a cheat because it is so inherently superior to any other pre-recorded digital format I have experienced. Turning next to conventional CDs, I slipped in a disc from a package I detest, 80 vile tracks from *Now Yearbook 1983* [Sony/EMI 94398 73352]. It made me thank the heavens that I wasn't a teenager when the charts were dominated by the likes of Spandau Ballet, Wham, Spandau Ballet, Duran Duran, or the tedious Spandau Ballet. Desperate to find even one track that wouldn't render me suicidal, I settled on Toto's 'Africa'.

Why, you might ask, would I even bother with this set if I hate 75% of the content? Simple: if a system is magical, you will ☺

EARLY EXPOSURE

Founded in 1974 by John Farlowe, Exposure set out to make 'real world hi-fi at real world prices', shoe-horning audiophile circuit design into basic but sturdy matt-black casework. In practice, the fledgling brand took flight with the Exposure I speaker, followed by the II shortly after [HFN Jul '77]. The first amplifiers were a solid-state pre/power combination dubbed the III and IV [HFN Oct '78] that went head-to-head with competing black boxes from that other estimable Brit brand of the same era, Naim Audio, in Salisbury.

By the mid-'80s, the X integrated amp had proved itself popular, followed much later by the XV [HFN May '95], XX and XXV derivatives. The digital revolution had rather passed Exposure by for the first 15 years until it finally launched its first CD player [HFN Mar '99]. Subsequently there was a veritable flurry of silver disc spinners including the 2010 CD [HFN Jun '02] and premium XXII CD player [HFN Nov '03]. Early products were designed by Farlowe, and later by his successor Tony Brady who has held the chair from 2000 to the present day. Tony masterminded the 2010 series [HFN Feb '01] and, very soon after, the long-running 3010 series, only now superseded by the new 3510 amplifier featured here. Finally, although still describing itself as 'a British company...', with its design and manufacturing base remaining in Lancing, West Sussex, Exposure Electronics Ltd has been in Malaysian ownership for the last 20 years. **PM**

INTEGRATED AMPLIFIER



ABOVE: The 3510 offers five line inputs (one for an MM/MC phono option), a tape loop and two preamp outs. Dual 4mm speaker cable sockets support bi-wiring but are for banana plugs only – no bare wire or spade lugs here!

listen to anything, as I found myself sitting through open-reel tapes from Mantovani, Percy Faith, and even the soundtrack to *Zorba The Greek*. If the 3510 could render any of those tracks tolerable, from a period when everything was synthesiser-driven, reeking of artifice and so bright and edgy that one's teeth ached, then it was a champion indeed.

THUMBS UP

Back to Toto, which I actually admire because they are peerless musicians and 'Africa' is a gorgeous, elegiac work. (It was that, or Public Image Ltd, or New Order...) Bang! Straight off I was hearing snap and transient attack, supported by rich bass. I have no idea what instruments are on this track because it is, like the dreck that shares disc space with it, a mix of the real and the electronic.

Regardless, the sound drew me in, a scaled-down facsimile of what was possible from an SACD via £100,000's worth of high-end kit. And it was enough to sell me on the 3510's sheer listenability, its competence having already been demonstrated with the Nilsson SACD. One other track on *Now Yearbook 1983*, though, couldn't be skipped as it's been a while since I revelled in genuine *a cappella*.

Five voices in perfect harmony: The Flying Pickets' magnificent 'Only You' was a fave demo track back 40 years ago and it still

LEFT: Exposure's new full system remote caters for the 3510's input selection, volume, mute and power on/off



sends chills up and down my spine. Here the challenge was to see how Exposure's 3510 separated the voices, though I have no idea if this was multi-tracked, tweaked in the studio or otherwise manipulated electronically. Whatever its origins, the performance was opened up sufficiently for me to home in on each voice with remarkable facility, and yet it was always cohesive.

It was the new 45rpm issue of Jeff Beck's immortal *Truth* [Mobile Fidelity MFSL 2-502] that stamped a solid thumbs-up on this integrated amp. Take my word for it, if you love this album as I do, this is as good as it gets. The 3510 handled every element with skill, from the textures of a then-young Rod Stewart's vocals to the roiling bass courtesy of Ronnie Wood, all the while respecting the thunderous percussion of Micky Waller.

But the star here is Beck, and his specialty is wrenching myriad textures and sounds from his guitars: wah-wah, fuzz, even a lush interpretation of 'Greensleeves'. So a tip for Exposure dealers: demo the 3510 amp with this album, and you'll sell one every time. ☺

HI-FI NEWS VERDICT

In addition to providing a much-needed and refreshing wander down Memory Lane, Exposure's 3510 integrated reminded me how much fun an uncomplicated system of source/amp/speakers can be. It worked faultlessly, drove hungry speakers with ease (inc. Wilson's Sasha DAW) and established a case for simplicity – not something every part of the audio biz wants to hear. You want painless hi-fi? You got it.

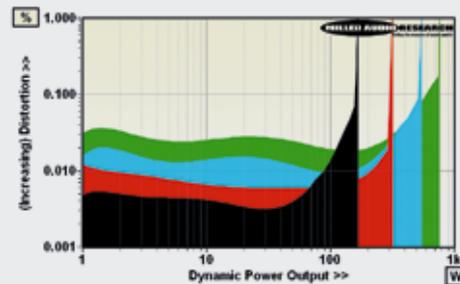
Sound Quality: 87%



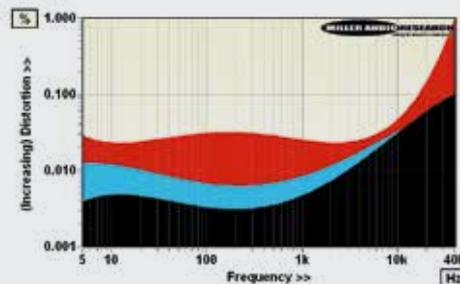
EXPOSURE 3510

While there is some trickledown from the 5010 monoblocks [HFN Nov '18] there is still a clear connection between the design of the new 3510 and the earlier 3010S2 integrated [tested for HFC Jul '13]. The overall +41.1dB gain and slightly below-average 80.2dB A-wtd S/N ratio are unchanged, but this is a white noise rather than invasive hum, so any subjective impact is likely to be benign. The power output of the new 3510 is also identical to the 3010S2's at 2x135W/ 8ohm and 2x220W/4ohm, both illustrating the very strict PSU regulation that is a feature of all Exposure amps. The figures are also comfortably ahead of their 110W specification, but the 3510 wins out courtesy of its much improved ability to drive low impedance loads. The 3010S2 offered 175W, 330W, 555W and a (protected) 335W into 8, 4, 2 and 1ohm loads under dynamic conditions while the 3510 powers on to totals of 166W, 318W, 546W and 762W [see Graph 1]. This 27.6A maximum current delivery (<1% THD/10msec) is very impressive for a 'mere' 100-watter.

The ~0.01ohm output impedance and HF response shaping observed from the 3510 is, again, almost identical to that measured with the 3010S2, both amplifiers offering a -3dB response reaching from 4Hz-40kHz (-1.0dB/20kHz). Distortion is also closer in level to that achieved by the 3010S2 than the 5010 at 0.006-0.051% (3510) vs. 0.0006-0.005% (5010), all for 20Hz-20kHz/10W. At two-thirds output, distortion increases to 0.025-0.18% [see red trace, Graph 2, below] which is not unreasonable given the stress on an output stage configured with only modest levels of feedback. In a nutshell, the 3510 is a proven, fine-sounding design, now with added 'grunt'! PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 27.6A



ABOVE: Distortion vs. frequency at 1W/8ohm (black, 5Hz-40kHz), 10W (blue) and 70W (red, 20Hz-20kHz)

HI-FI NEWS SPECIFICATIONS

Continuous power (<1% THD, 8/4ohm)	135W / 220W
Dynamic power (<1% THD, 8/4/2/1ohm)	166W / 318W / 546W / 762W
Output impedance (20Hz-20kHz)	0.010-0.022ohm
Freq. resp. (20Hz-20kHz/100kHz)	-0.19dB to -1.0dB / -15.8dB
Input sensitivity (for 0dBW/110W)	25mV / 265mV
A-wtd S/N ratio (re. 0dBW/110W)	80.2dB / 100.6dB
Distortion (20Hz-20kHz, 1W/10W)	0.003-0.058% / 0.006-0.051%
Power consumption (idle/rated o/p)	25W / 370W (1W standby)
Dimensions (WHD) / Weight	440x115x300mm / 12kg