

# Mark Levinson No5805 Integrated Amp/DAC

Review: [Andrew Everard](#), [Lab: Paul Miller](#) | Oct 24, 2019



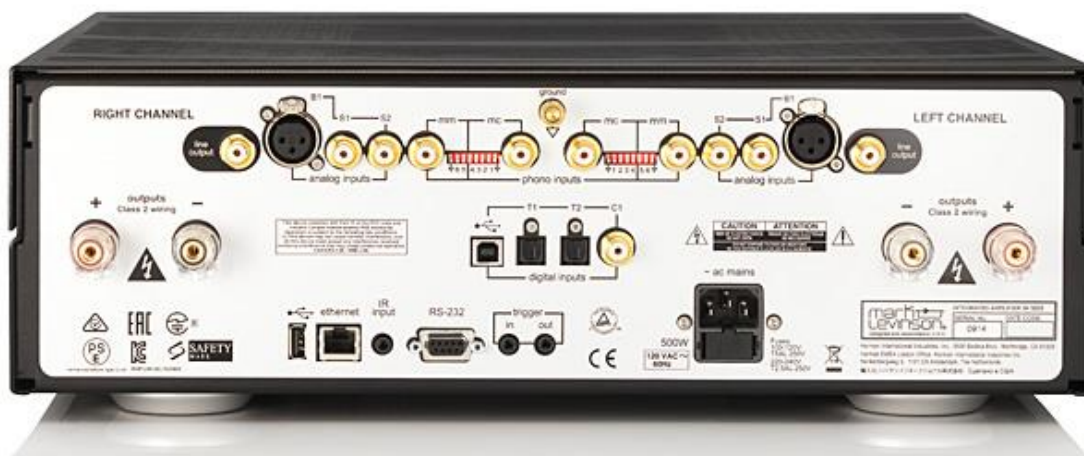
*This latest integrated amp from a stalwart of the US high-end may be stereotypically big and bold, but it's also both extremely flexible and surprisingly affordable*

Although many aspire to grabbing themselves a chunk of American high-end audio, there's all too often a problem – price. It's very tempting to look at the price-tags back home in the States and shake one's head at the UK ticket. But most of us can guess at the differences between the US and UK markets, the import taxes and costs involved in shipping and distributing small samples of heavyweight equipment.

In this instance, however, it's still a pleasant surprise to see parent company Harman Luxury Audio playing with a very straight bat – the price of Mark Levinson's No5805 is £7999, in the company's usual black livery with silver metal accents and red display/control illumination. True, that's still hardly pocket money, but it does equate well with the US price of \$9520.

## One Of A Pair

In fact there are two versions of this new Mark Levinson integrated: the No5805 we have here and the No5802 at £6999. The latter is an all-digital (input) affair with six digital ins including asynchronous USB for hi-res content – up to 384kHz/32-bit and DSD128/11.2MHz – from a computer, plus MQA decoding in the XMOS USB processor, and Bluetooth with aptX-HD.



In the No5805 the digital inputs are reduced to four, but a quartet of analogue inputs is added – one on balanced XLRs, two on RCAs, and an MM/MC phono stage. This newly designed phono section is configurable for gain and infrasonic filtering from the menu, with rear-panel switching for capacitive and resistive loading.

That approach is at odds with what we're used to elsewhere in the amplifier market, where usually it's the analogue-only version of such designs selling for the lower price, with the fitment of a digital section commanding a premium, but in the modern hi-fi landscape the approach of the Mark Levinson designers seems a logical one. After all, it's likely most users' audio sources will be digital these days, whether using a network player or following the 'Mac and DAC' route, wherein a PC acts as the 'transport' for files and/or streaming services. So the No5802 will suit such users perfectly, while the No5805 will serve those who also have legacy analogue sources, such as LPs. OK, OK, you can stop hitting me now.

The amp also has a unity-gain home cinema pass-through facility and, in addition to one set of speaker outputs, preouts on RCAs. But before you get all excited about the presence of an Ethernet port and start thinking of onboard streaming capability, it's there merely as part of an array of control options. Alongside a new metal-cased remote, the No5805 also offers browser-based set-up, configuration import/export and software updated via the RJ45 port, plus RS-232, 12V trigger in/out and a socket for an external infrared sensor.



The No5802 and No5805 are based around a common platform, as one might expect, the company saying that they have been 'created to deliver all of the performance and quality expected from Mark Levinson while implementing state-of-the-art features and efficiencies gained from decades of superlative audio engineering'. The 5000-series industrial design is new, and serves to set these 'four-digit'

products apart from the more upmarket two- and three-digit models. The No5805, quite apart from being more compact than the other integrated in the lineup, the No585.5 [we tested the No585 in *HFN* Apr '15], looks rather simpler and more contemporary in its styling, while still maintaining the Mark Levinson corporate identity.

That extends to a 25mm-thick bead-blasted and black-anodised aluminium front panel, curved out to the edges and with an inset glass display section mounted in a clear-anodised bezel, while the machined buttons and 'iconic hourglass knobs' are similarly finished, as are the feet.

### **Magnificent Seven**

Under the hood, which has 'debossed' vents, the main building blocks are designed to give as direct as possible a signal path through the amplifier, at the heart of which is the company's 'PurePath' fully discrete, direct-coupled dual mono preamp circuitry. This employs a single gain stage and a digitally-governed volume control, not to mention individual relay switching for each analogue input. The dual mono design extends to the layout of the rear panel, with the inputs for each channel, right down to the two sets of MM/MC sockets, physically separated.

On the digital side, the Mark Levinson No5805 uses the company's ESS Sabre-based 'PrecisionLink II' converter, which boasts comprehensive jitter suppression and a discrete post-DAC current-to-voltage stage. There's also a choice of seven (!) digital filter settings, a wide or normal PLL lock range (the former used for 'slack' digital sources) and the option of upsampling incoming digital signals before conversion. When this is selected, 44.1kHz/88.2kHz/176.4kHz streams are upsampled to 352.8kHz and 48kHz/96kHz/192kHz inputs to 384kHz.

Power comes from Class AB mono amplifier sections, separated back to individual PSU windings for each channel on the hefty toroidal transformer. The topology of the voltage gain stage is derived from that of the No534 amplifier [*HFN* Jun '18], while the output stage uses two high-speed Class A drivers and six 15A output devices with 'ThermalTrak' technology keeping output bias stable against load or temperature.

The company claims 'a conservative 125W/8ohm per channel, 250W/4ohm per channel, and stable operation down to 2ohm'. Finally, headphone users are served by a dedicated Class A preamp stage that's designed to drive headphones directly – it's based on the headphone amp found in the costlier 500 series products.





## American Dream

If you're the sort who skips to the end of a whodunit to find out the identity of the murderer, you'll probably have already checked out **PM's** Lab Report, and know that the No5805's output is indeed conservatively stated, and that distortion remains consistent across the quoted power range. That, in essence, is how the amplifier sounds in use. It's one of those typical big American powerhouses that appears to be almost unburstable in use, delivering effortless dynamics and speed even when run at ambitious listening levels.

What's more, detail resolution is impressive with everything from simple 'audiophile' recordings or dense rock and classical works, even though the No5805 sounds just a shade on the soft and lush side when compared to the more forthright solid-stage amps frequenting the sub-£10k high-end scene.

The sound is consistent across its digital and analogue inputs, although it's possible to 'tune' the latter by skipping through all those digital filters until you settle on a sweet spot. As the manual says, there's no right or wrong in the use of these; instead it's just a matter of personal taste. Having spent more time than I should experimenting with them, I have to agree. In fact, I'd go further, for I found my preference for the various settings varied according to the type of music I tried, and even between specific recordings, to the point where I gave up and opted for the No5805's 'hybrid' compromise setting.

However, were I to own the amplifier, I'm sure I'd succumb to the temptation to fiddle, softening this track with one filter, sharpening another with a different one. All of this compounds my view that, while these options are interesting from a review perspective, I think I'm with those designers who make the decision for me, and 'lock' their digital equipment to the filter they think sounds right, saving me all that faffing. I've no such qualms with the upsampling option:

having heard what it could do in terms of making everything from CDs to 192kHz/24-bit recordings sound more substantial and finer-detailed, it remained on for the rest of the listening.

### **Major Scale**

With so much flexibility and so listenable a sound, plus dimensions on the sensible side of normal – at just under 44cm wide and a mere 14.5cm tall, it's hardly huge – the No5805 is an easy amp with which to live.

I spent a good deal of time with it – not all fiddling with digital filters! – and among the standout memorable moments was the time spent playing the excellent Budapest Festival Orchestra/Iván Fischer Mahler 7 [Channel Classics CCS SA 38019; DSD256]. Here the Mark Levinson amplifier was as impressive with the scale and power of the orchestra as it was with the atmospheric call and response at the beginning of the second movement, before unleashing all its weight and speed when required.



True, I've heard this recording delivered with an even greater sense of ambience reflecting the concert hall acoustic, but the sins of omission here are well covered by the infectious way this amplifier,

whether fed from a computer, playing LPs or used via its line analogue inputs, paints the room with the music. One never feels any less than entirely involved in what a recording is trying to convey, not least because the No5805's rich, generous bass provides a firm foundation for the sound, both exploiting the qualities of fine speakers and flattering those a bit shy in the lower frequencies.

### **Surging Guitar**

At one point I had the amp driving a pair of little Monitor Audio Gold 100 bookshelf speakers – a seemingly hilarious combination, but actually a rather effective one, especially given that this example of 'old school' system synergy also had £20k's worth of network player on the front end. Oh, and then a £200 secondhand Mac mini!

Given its sonic qualities, it's no surprise that the No5805 can drive music hard when required, as was clear with Hiroshi Fukamizu's Everything For Drums set [Una Max Jazz UNAHQ-1008; MQA 192kHz/24-bit]. The amp punched out the ultra-precise drumming with real impact, allowing the speakers to shift plenty of air, and had the pace and definition to make even the most fevered sticksmanship sound fast and clearly defined.

Switching to the lush production of Santana's 1978 album Inner Secrets [Columbia CK 35600; Qobuz 96kHz/24-bit], the twin attributes of an easygoing sound and plenty of power were all too apparent once more in the crisp percussion and Carlos Santana's surging guitar. This was especially notable in the opening track and when it came to the dense mix of the cover of Buddy Holly's 'Well All Right'.

Coming bang up to date – well, in a manner of speaking – I decided to spin up Sting's new retrospective album My Songs [A&M/Cherrytree/Universal 00602577587207; 44.1kHz/24-bit], which is packed with opinion-dividing reworks of his back catalogue. What's



beyond a doubt is that the production values are high here – and whether or not you think we needed a somewhat Police-less version of the song 'Can't Stand Losing You', there's no arguing with the vivacity with which this sound springs from the speakers with the No5805 at the helm.

### **Hi-Fi News Verdict**

The No5805 is almost original in the high-end market: a big US integrated amplifier that's neither too big nor saddled with joke pricing. Those attributes, plus its enormous flexibility – including a very fine phono stage – play a major part in its appeal, while the generous balance means it's more or less built to flatter any good system. Add in the tank-like build and superb finish, and this is an entry-level amp in name only.

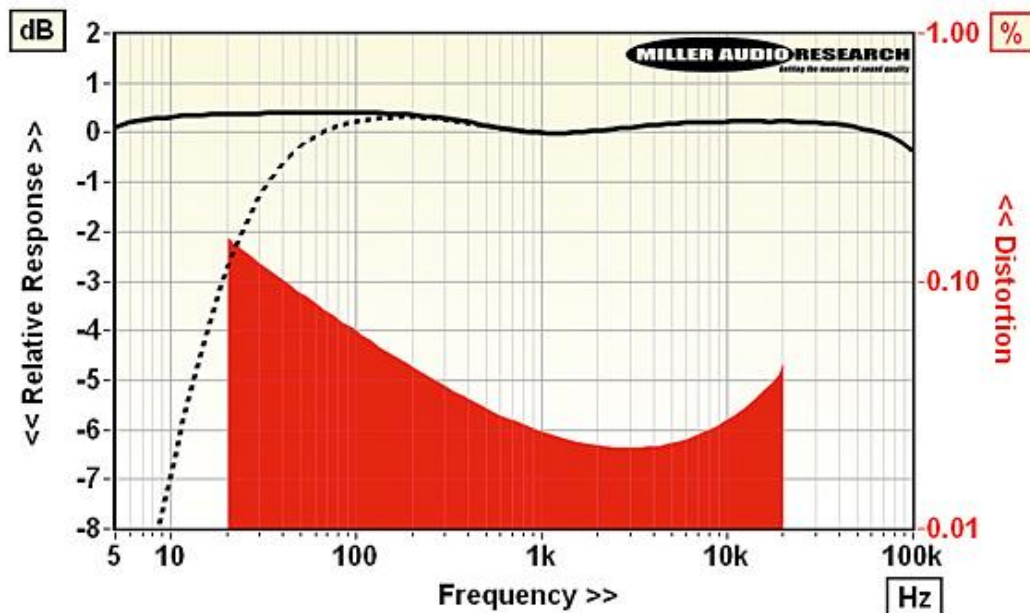


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# Mark Levinson No5805 Integrated Amp DAC Phono With Flair

## Phono With Flair

The intentionally 'shaped' RIAA response of the No5805's phono stage, with its shelved-up bass (+0.4dB) and presence/treble (+0.2dB) [black trace, inset Graph], is very similar to that observed with the No526 preamp [*HFN* Dec '16]. However, its feature set and performance is otherwise simplified in this new integrated model. For example there are only two gain options offered here – the +39dB and +69dB MM/MC settings turning out closer to +48dB and +77.5dB in practice. While these settings look better suited to medium output MMs and lower output MCs (the sensitivities are 3.93mV and 133 $\mu$ V, respectively), the revised phono stage offers an impressively wide 80dB A-wtd S/N ratio and generous input overload margins.



With a massive +32dB headroom available via MM (re. 1kHz/5cm/sec), the No5805 will easily accommodate the highest output pick-ups tracking the most heavily modulated grooves. Distortion is highest at low frequencies [red trace, above, 0.02-0.15%, 20Hz-20kHz/1000mV] but as a trend increases smoothly with (preamp) output level from 0.01%/500mV to 0.1%/1800mV and 1%/5000mV. **PM**



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# Mark Levinson No5805 Integrated Amp/DAC

## Todd Eichenbaum

### **Todd Eichenbaum**

The director of engineering for Harman's Luxury Audio unit explains that the No5000 series is very much designed as an entry-level for the Mark Levinson brand: 'Although these products are by no means inexpensive, they offer uncompromised performance and quality at only about half the price of their No500 series counterparts. We believe this will open up the Mark Levinson brand to a much wider audience, including modern listeners who "consume" their music in many different ways'.



Talking about how the company achieved lower price-points for the new models, he explains that 'We held a two-day "summit" with our US-based manufacturing partner to work together on making these products simpler (and therefore less expensive) to build and test. We started with a clean sheet of paper: we didn't just recycle existing designs and remove things'.

The clearly modular design of the No5802/5805 was primarily to achieve efficiencies in build, testing and servicing: 'We don't currently have plans to offer upgraded hardware, nor to offer the option to convert a No5802 to a No5805'.

So what's next for the range? 'We previewed our No5101 streaming CD/SACD player at the Munich High End Show. This will play both types of discs, as well as content from a USB drive, your home network, or, when used with a smartphone/tablet app, online streaming services. And we have several other No5000 series components currently in development, so stay tuned!'



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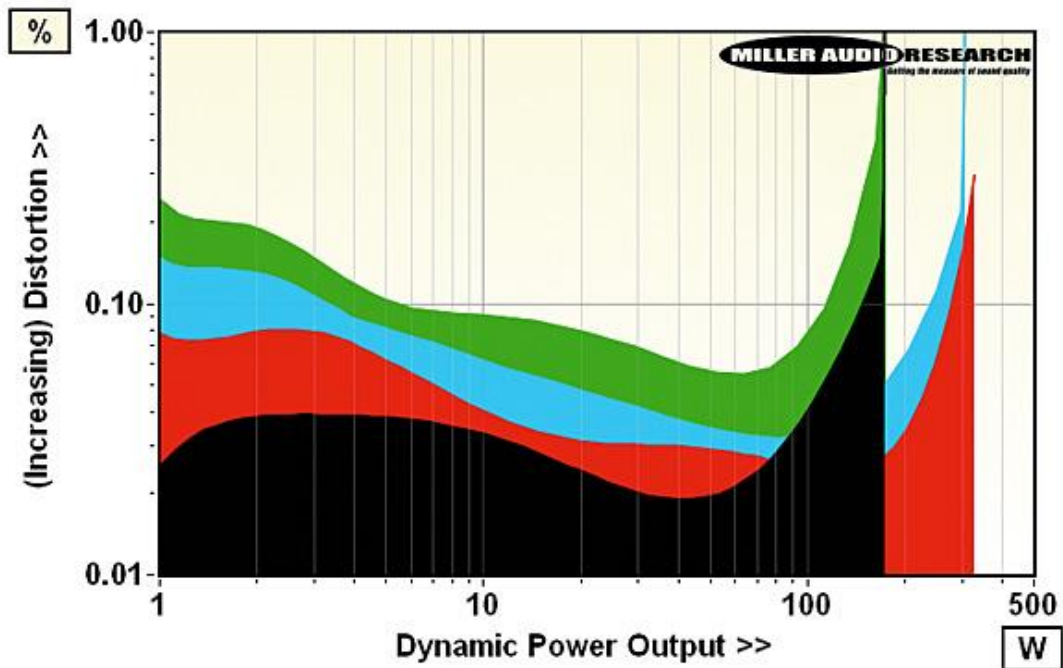
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## Lab Report

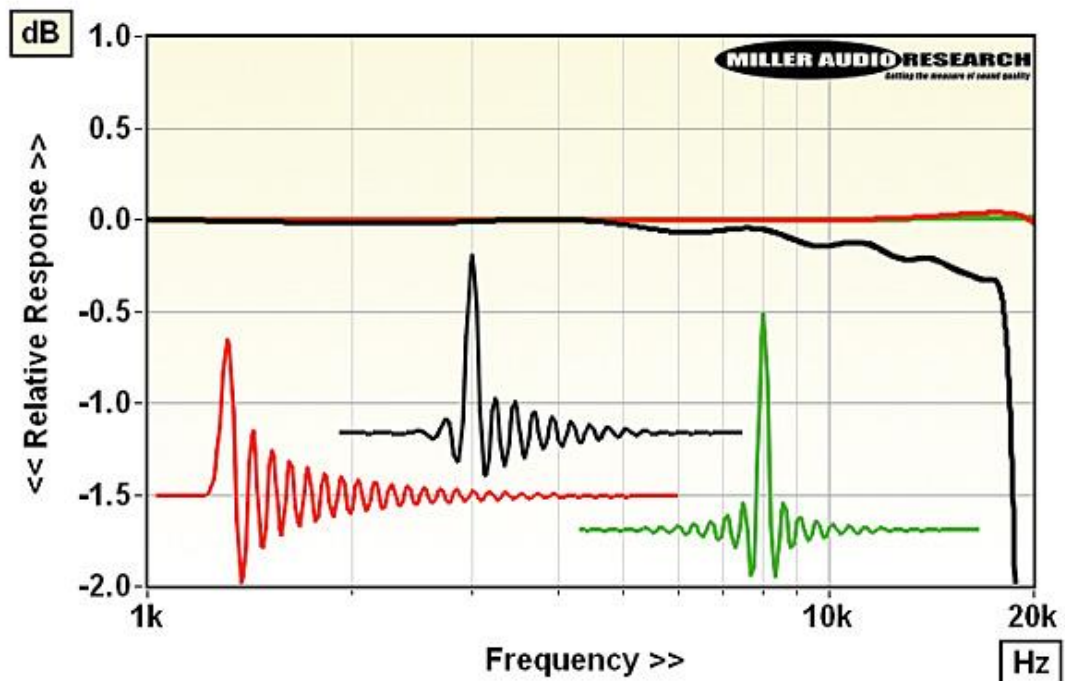
### Lab Report

Rated at 125W/8ohm but delivering 2x148W and 2x245W into 8/4ohm loads, respectively, the No5805 has sufficient headroom to accommodate bursts of 174W and 328W into 8/4ohm loads under dynamic conditions (10msec, <1% THD). This is limited to 305W and 172W into lower 2/1ohm loads [see Graph 1, below]. Distortion increases slightly with frequency from 0.014-0.038% (20Hz-20kHz) but remains very consistent with power output over the rated 125W range. The response is very extended with -1dB points at 1Hz-49kHz (-3.5dB/100kHz) but noise – even if this is an innocuous 'white noise' – is a little below average, leading to an A-wtd S/N ratio of 78dB (re. 0dBW).

ML's 'Precision-Link II' DAC stage confers a near-total suppression of correlated jitter (<5psec across all sample rates), a low 0.0003-0.0014% distortion (20Hz-20kHz re. 0dBFS) but modest 101dB A-wtd S/N (re. 2V preamp output). Three of the seven digital filters are steep roll-off linear phase types (with pre and post-event ripples) including Brickwall, Fast Linear [green traces, Graph 2] and Apodising, offering stopband rejections of 99dB, 83dB and 92dB, and very flat responses (typ.  $\pm 0.02$ dB/40kHz with 96kHz files). 'Slow Linear' shows only two pre/post ripples at the expense of a poorer 14dB stopband rejection and gentler treble (-3.4dB/20kHz with 48kHz files). The two minimum phase filters – Fast [red traces, Graph 2] and Slow – offer greater and lesser post-event ringing, respectively. A hybrid filter blends both characteristics: reduced time domain distortion and excellent 99dB stopband rejection at the expense of a 0.1dB ripple in the passband [black traces, Graph 2]. **PM**



Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads. Max. current is 13.1A



Magnitude/frequency (1kHz-20kHz) and impulse responses for Fast Linear (green), Fast Minimum (red) and Hybrid (black) digital filter options

<b>Continuous power</b> (<1% THD, 8/4ohm)	148W 245W
<b>Dynamic power</b> (<1% THD, 8/4/2/1ohm)	174W / 328W 305W / 172W
<b>Output imp.</b> (20Hz–20kHz, Pre/Amp)	50ohm 0.010-0.011ohm
<b>Freq. resp.</b> (20Hz-20kHz/100kHz)	+0.0 to –0.22dB –3.48dB
<b>Input sensitivity</b> (MM/MC, re. 0dBV)	3.93mV 133μV
<b>A-wtd S/N ratio</b> (Dig/Amp/MM)	101.0dB / 78.3dB 80.5dB
<b>Distortion</b> (20Hz-20kHz, Digital/Amp)	0.0003-0.0014% 0.014-0.038%
<b>Power consumption</b> (idle/rated o/p)	123W 520W (67W standby)
<b>Dimensions (WHD)</b> <b>Weight</b>	438x145x507mm 28.1kg



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