MM/MC phono preamplifier
Made by: Grimm Audio BV, The Netherlands
Supplied by: Sound Design Distribution Ltd, Cardiff, UK
Telephone: (0)800 009 6213
Web: www.grimmaudio.com; www.sounddesigndistribution.co.uk
Price: £4695

Grimm Audio PW1

Co-founder of the Grimm Audio marque makes his own mark with the 'Phono Wizard' – a solid-state phono preamp inspired by a tube design. Does it have the bottle?
Review: **Ken Kessler** Lab: **Paul Miller**

Although long ago settled by the declaration 'We agree to disagree', the tubes-vs-transistors (or if you prefer 'valves-vs-solid-state') debate continues to keep us busy. Grown-ups use both, the deliberately argumentative choose sides, and there are ample products to support or counter either stance. Grimm Audio, though a maker of not just solid-state gear but with a reputation for digital hardware, has given us in the PW1 'Phono Wizard' (£4695) a chameleon of a product that will both delight and confound music lovers who are still fascinated by hi-fi's greatest dichotomy.

ANALOGUE MAGIC

As a valve-biased (pun intended) listener, I pitted the PW1 against both like-priced and much-less-costly phono stages, three all-valve and two solid-state. Exploiting this in assessing the PW1 was a given, because Grimm Audio all but proposed the shoot-out when explaining why a company known for a streamer is suddenly addressing the Vinyl Revival. In order for this to help you to understand the PW1's *raison d'être*, I will quote co-founder Peter van Willenswaard's stated rationale:

'Even in these days of high-performance digital audio playback systems it is hard to imagine a future without LPs. There's just something magical to it.' Note the word 'magical', calling to mind the works of a certain pair of famous brothers who share the company's name. The brand continues, 'Grimm Audio has spent a lifetime designing and improving phono preamps, both in solid state and with tubes'. Grimm's *casus belli*? 'For the PW1 "Phono Wizard", Peter managed to develop a solid-state phono preamplifier that matches his best tube-based designs.'

Before deciding whether or not Grimm Audio has found the ideal device to settle the dispute between the two technologies, it deserves kudos for producing a phono stage that's simply so sensible. Firstly, it's designed to sit next to one's record deck, the dimensions of 100x100x250mm (whd) enabling it to look at home next to almost any turntable with a rectangular plinth.

> 'I heard textures and richness in keeping with 1950s tube gear'

Next, Grimm came up with a neat solution for providing access to the gain and loading settings. These are via banks of DIP switches on the underside [see p71], protected by a sliding cover held in place by two knurled screws that are opened and closed by hand. Grimm supplies a little black plastic 'toothpick' to flip the DIP switches, switching between +37dB gain for moving-magnet and another +20dB/+30dB for moving-coil, with an optional further +10dB to be added at the output. MCs are offered 33ohm-1kohm loading while the high treble response of MMs (at 47kohm) are 'tweakable' with 47-220pF of parallel capacitance.

TWO'S COMPANY

The PW1 is also able to accept two turntables or a deck with two arms via its RCA phono sockets, selectable by one of the aforementioned switches. One input is specifically for MM and the other for MC, so you can't really run MCs into both unless one is high output [see PM's boxout, p69], but the genuinely comprehensive bank of switches can set pretty much any gain and loading value your cartridge requires.

Using two completely different turntables, I tried both MM and MC cartridges of low-to-medium output (including London Deccas with their slightly odd behaviour) and was delighted to hear how the PW1 absolutely lapped up Ortofon's new MC X40 [see p80]. Matching the various cartridges resulted in fine-tuning almost as authoritative and precise as with MoFi's MasterPhono [*HFN* Dec '23]

RIGHT: Inside the PW1 showing its internal copper screening with PSU transformer [top right], PSU regulation [top PCB turned side on here] and RIAA, gain and loading PCB [bottom]

RIGHT: **The two-piece alloy case is styled to sit alongside a turntable while also providing added screening for the sensitive electronics within**

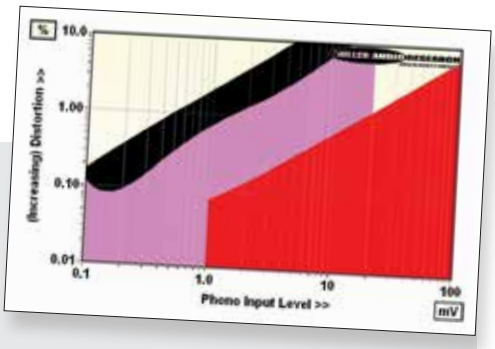
– arguably the champion for this and a strong rival for the PW1.

Setup was therefore a breeze, abetted by a choice of either single-ended RCA or balanced XLR outputs. As with the debate which fuels this device, of tube sound versus solid-state, the balanced/single-ended *contretemps* will also forever rage, and so the PW1 allows the sceptical to try both.

A PROPER FAIRY TALE

Like all sensibly designed hi-fi (PM succinctly calling the Grimm Audio PW1 'the first phono preamplifier designed for "hi-fi realists"') this will be making music in minutes, cartridge adjustments notwithstanding. The manufacturer is categorically of the long burning-in school, and recommends leaving the phono stage on for 24 hours before settling in with a stack of LPs to savour. But while I did hear improvements in focus and bottom-end control and extension, it wasn't of such a magnitude that you can't enjoy the PW1 while exploiting the running-in time – and this period affords the user the opportunity to tweak the adjustments. Again, so conveniently sized and shaped is the PW1 that you simply turn it on its side, or upside down, to access the settings. Precise MM/MC matching rewards the fastidious listener with far greater improvement than any extended running-in period.

The sound of the PW1 is so inviting – instantly exhibiting more in common with valves than transistors to these ears – that I found myself experiencing the ultimate in hi-fi litmus tests: realising I had been listening for four hours or more without a pause. Even my desire for a 'comfort break' couldn't wrest me away from the PW1!



WARM WELCOME

It started with three mono LPs, which showed the PW1 to deliver a rock-solid central image but with incredible front-to-back depth. They comprised the *Miles Davis 55* [Craft CR00691] box set which contains the Prestige recordings from June through November of 1955, leading up to the debut of the Quintet. Here was peak Miles accompanied by a variety of sidemen – if you can call them that, each a giant in his own right – including Ray Bryant, 'Philly Joe' Jones, Red Garland, Milt Jackson and no less than John Coltrane. Not having to worry about soundstage, stage width, imaging, *etc*, allowed me to really focus just on the instruments.

Miles' flurries of notes during the more hyperactive moments, doing to his trumpet what decades later the fastest axemen would to a guitar, provided me with a taste of the PW1's attack and speed. His slower, bluesier moods showcased the dynamic contrasts, and this phono stage has the range to go from near-silent to jump-from-your-seat bursts without any constraints.

What threw me off-balance, however, were the warmth and 'bloom' to the overall sound. Here my prejudice was exposed – I was expecting solid-state hygiene, but instead I heard sonic textures and richness in keeping with the all-valve 1950s equipment in the recording studio. ⇨

PETER'S PROGRESS

We're already very familiar with the cutting-edge technical design of Grimm Audio's digital products [*HFN* Dec '20 and Apr '25] which push at the boundaries of both subjective and measured performance.

However, those of us expecting the PW1 to be cut from the same 'vanishingly low distortion' cloth should think again, for designer Peter van Willenswaard's 'Phono Wizard' is borne of, shall we say, more Zen-like principles. You can read Peter's thoughts on his blog (*https://www.grimmaudio.com/blogs/designing-the-pw1-phono-preamplifier*) which is a powerful advocate for minimalism.

In the PW1, MCs are treated to either +20dB or +30dB gain before the signal joins the MM path where two FET gain stages sandwich a passive RIAA network. There follows an op-amp output buffer that's switchable between unity (0dB) and +10dB extra gain. I discuss the MM/MC gain options in my Lab Report [p71] and while these are accurately specified by Grimm, so too is its candid admission of a relatively high 0.56% THD (re. 5mV/MM input). This represents a 358mV balanced *output* from the PW1 where, in practice, THD is a little lower at 0.3% – a figure that increases to 0.65% with a 10mV input, 1.35% with a 20mV input and a full 3.5% with a 50mV input [Graph: MM, red; MC 20dB, pink; MC 30dB, black].

The latter represents a realistic output from a 5mV-rated MM when tracing a groove modulated at +20dB (re. 1kHz/5cm/sec). The '24dB overload margin' cited by Grimm would realise ~5.4% THD at 1kHz and a whopping 20%+ at 20kHz. While these are massive figures when judged by current standards [see *HFN* Aug '25], it should be appreciated that the PW1 is a solid-state emulation of Peter's personal, low-feedback tube phono preamp. In both designs, passive RIAA eq soaks up a lot of gain while overall circuit linearity is viewed through the lens of typical MM/MC pick-up distortion which, as we know from *HFN*'s own exclusive tests [see p83], rapidly increases at treble frequencies. So the PW1 is, arguably, the first phono preamplifier designed for 'hi-fi realists'! PM

ABOVE: DIP switches are hidden under an 'unlock to slide' screening plate on the PW1's base. Selections include MM or MC, +10dB output gain, MM cap loading and MC impedance/cap loading, plus +20dB or +30dB additional MC input gain

If anything, I would have guessed that there were no transistors in this phono preamp, a consequence (perhaps!) of Grimm pursuing the virtues of valves in a solid-state design. I was convinced of a low-level whoosh, which vanished once the music began, also heard via my EAT E-Glo 2 [*HFN* Feb '25], despite both models enjoying similarly wide S/N ratios [see PM's Lab Report, opposite]. I hasten to add that it neither mattered nor detracted from the listening experience, because I recognised it was simply part of the 'recipe' which made this sound more like tubes than trannies.

SETTING THE STAGE

As for the second irresistible set, Santana's *Lotus* [Mobile Fidelity MFSL 3-540], it too contained three LPs. Recorded live in Japan, the concert covers a multitude of the band's styles, but fans know that two instruments in particular define Santana: slithery electric guitar and Latin-flavoured percussion.

It was a solo of the latter, on the track 'Kyoto', which reasserted the solid-state side of the PW1. Within a cavernous soundstage, the drums filling it from left-to-right, each instrument had its own space, and the 'feel', if that's the right word, changed from the warm 'n' fuzzy nature of the Davis recordings to something more detailed and visceral. I was beginning to wonder if the PW1 was deliberately designed to be schizophrenic, or more sonically versatile than adhering to one technology or the other?

While not keeping score, it looked like the sound was proving to be more valve-like than solid-state, despite no glassware within. I will never forget Bob Carver telling me over 30 years ago that he could make any solid-state amp sound like tubes, while EAR's Tim de Paravicini proved it with his first-ever Yoshino amplifiers. And yet hearing it from the PW1 was still unsettling.

What tipped it over to the tube side for me was Donovan's *The Hurdy Gurdy Man* [Impex IMP6055], which I had played days before with the Ortofon MC X40 and through other phono stages. It was all about that distinctive voice, in some ways sharing the same with John Coltrane's playing in the *Miles Davis 55* performances – not musically, that is, but for hearing so many subtleties. Irrespective of the cartridges, Grimm Audio's debut phono amplifier is magnificent.

ABOVE: Gold-plated RCA inputs for MM and MCs, with earth post, sit below single-ended (RCA) and balanced (XLR) equalised outputs

HI-FI NEWS VERDICT

Grimm by name, not by nature! For those running two cartridges or decks, the PW1's flexibility is invaluable, but that's not its main virtue... that'll be the more-ish way it reminds some of us why we prefer LPs to everything else. This is a fantastic phono stage, both transistor-quiet and valve-warm without sacrificing the virtues of either. Circa £4k is a hotly contested sector, but the PW1 will prove tough to beat.

Sound Quality: 88%

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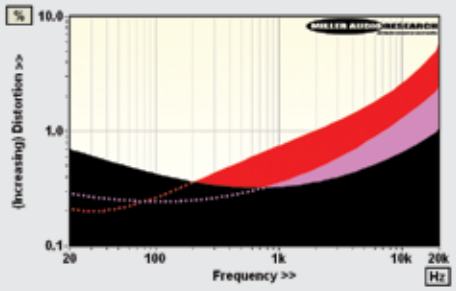
LAB REPORT

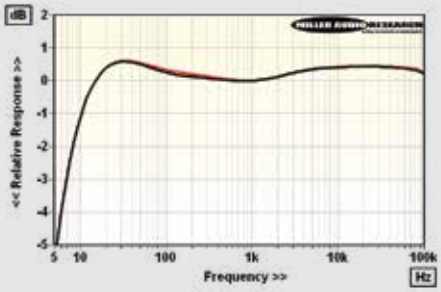
GRIMM AUDIO PW1

The PW1's default (MM) gain is just +37.1dB, requiring a pick-up output of 13.95mV (re. 1kHz/5cm/sec) to raise 0dBV (1V) from the balanced XLR outputs. In practice, adding the +10dB output gain will be advantageous for most MM users because there is no significant penalty in noise or S/N ratio – 86.2dB versus 87.3dB (re. 5mV input) – and no practical difference in input overload margin where a 5mV input realises ~0.35% distortion and a 30mV input produces ~2% distortion in both settings. This steady increase in distortion from 0.06% at 50mV output, 0.35%/500mV, 0.75%/1V, 2%/2.1V and 13.4% at the maximum 12V balanced output certainly favours *lower* output MMs used with the +10dB output buffer [see boxout, p69]. Distortion also increases with frequency from, for example, 0.75%/1kHz to 5.75%/20kHz [re. 0dBV out; red trace, Graph 1]. These are very high figures but not too different from the THD measured from the MM/MC pickups tested every month in *HFN* [see p82].

Hawk-eyed readers might already have seen that two of the PW1's MC settings yield the same overall gain of +67.5dB – that is +20dB input gain with +10dB output boost and +30dB input gain with no final boost. However, the latter is by far the preferable option. Why? Because while the 430µV sensitivity is unaffected and the 10dB input headroom (re. 3% THD) is unchanged, the +30dB setting realises a superior 80.8dB A-wtd S/N ratio (re. 500µV input), or some 3dB in advance of the +20dB/+10dB mode. Grimm specifies an RIAA eq accuracy of ±0.5dB which is broadly matched from 20Hz-20Hz, though there is a +0.6dB 'bump' at 30-40Hz before a subsonic roll-off of –3dB/7Hz and –9dB/4Hz [see Graph 2, below]. **PM**



ABOVE: Distortion versus frequency (20Hz-20kHz) via the MM input (250mV output, black; 500mV output, pink; 1000mV output, red)



ABOVE: Extended frequency response (5Hz-100kHz) with 5mV MM input (eq. to 358mV balanced output)

HI-FI NEWS SPECIFICATIONS

Input loading (MM/MC)	47kohm (47-220pF) / 33ohm-47kohm
Input sensitivity (re. 0dBV)	14mV / 1.31mV (20dB) / 434µV (30dB)
Input overload (re. 1% THD)	15.5mV / 1.5mV (20dB) / 0.5mV (30dB)
Max. output (re. clipping) / **Imp.**	12.5V / 95ohm
A-wtd S/N ratio (re. 0dBV)	87.3dB / 77.5dB (20dB) / 80.8dB (30dB)
Freq. resp. (20Hz-20kHz/100kHz)	–0.2dB to +0.6dB / +0.2dB
Distortion (20Hz-20kHz, re. 0dBV)	0.2-5.75%
Power consumption	6W
Dimensions (WHD) / **Weight**	100x100x250mm / 3.3kg