Review sample provided by Grimm Audio

Retail price including VAT: €4.999

The PW1 MM/MC phono preamplifier is Grimm Audio's latest product, released in January this year. The PW1 is an ideal companion for a Grimm Audio MU2 server/DAC/preamp or a Grimm Audio LS1 active loudspeaker system. Naturally, it also functions perfectly standalone in the context of any other audio system, and that is how I will review it.

Description

At 100mm x 100mm x 250mm (W x H x D), the PW1 is small enough to be placed anywhere, but with its sleek yet visually interesting industrial design by Michiel Uylings, you may not want to hide it from plain sight.

Grimm Audio's co-founder Peter van Willenswaard spent a lifetime designing and improving phono preamps, both in solid-state and with tubes. Of all stages of audio amplification, phono preamplifiers pose the greatest challenges for a designer. With moving coil cartridges, deep bass signals of a mere 50 nV require no less than 90 dB amplification! Following many iterations, Peter managed to develop a solid-state phono preamplifier that challenges his best tube-based designs.

https://landing.grimmaudio.com/hfa_mu2https://www.grimmaudio.com/sales-points/hifi-sales/

Technical

Grimm Audio chose a design that minimizes components in the signal path, following the 'KISS' (Keep It Simple Stupid) and 'Less Is More' mottos: "What's not in it cannot mess up the sound." After all, an audio circuit aims to let as much music through while interfering minimally with the original recording. The more complex you make the circuitry, even if this is done to eliminate the circuit's harmonic distortion, the greater the risk that you will hear the electronics involved.

For the PW1, this means there is only one active component to bring the low voltage of an MC cartridge to the MM level. Then, there is only one active element to amplify the vulnerable input signal sufficiently so that the RIAA correction can perform its job flawlessly. After the RIAA correction, there is again only one active component to convey the RIAA-corrected signal flawlessly. Finally, there is a single, specially selected Op-Amp, the most musical specimen Peter could find, to serve as a buffer between the sensitive phono circuit and the load of cables and downstream equipment, offering a low output impedance among other benefits. Seemingly simple, but deceptively so.

As Peter van Willenswaard further explains in the White Paper:

"When taking the path of simplicity, you'll have to go with the flow. You'll have to accept the item you use, whether a FET, a Transistor, or an Op-Amp, for what it is. Because once you start to try and correct its peculiarities, you'll be applying force and complicating things, which may, and probably will, lead you away from your goal. For example, I found it necessary to make one exception to the KISS rule: I let one bipolar transistor slip in! Why? To eliminate two unwanted properties of FETs that would harm the sound quality, because, as nice as FETs are, they are far from ideal. However, the correction is not done through force; the bipolar is used here in Cascode, an almost passive function with no signal gain, and as such, this does not compromise signal quality".

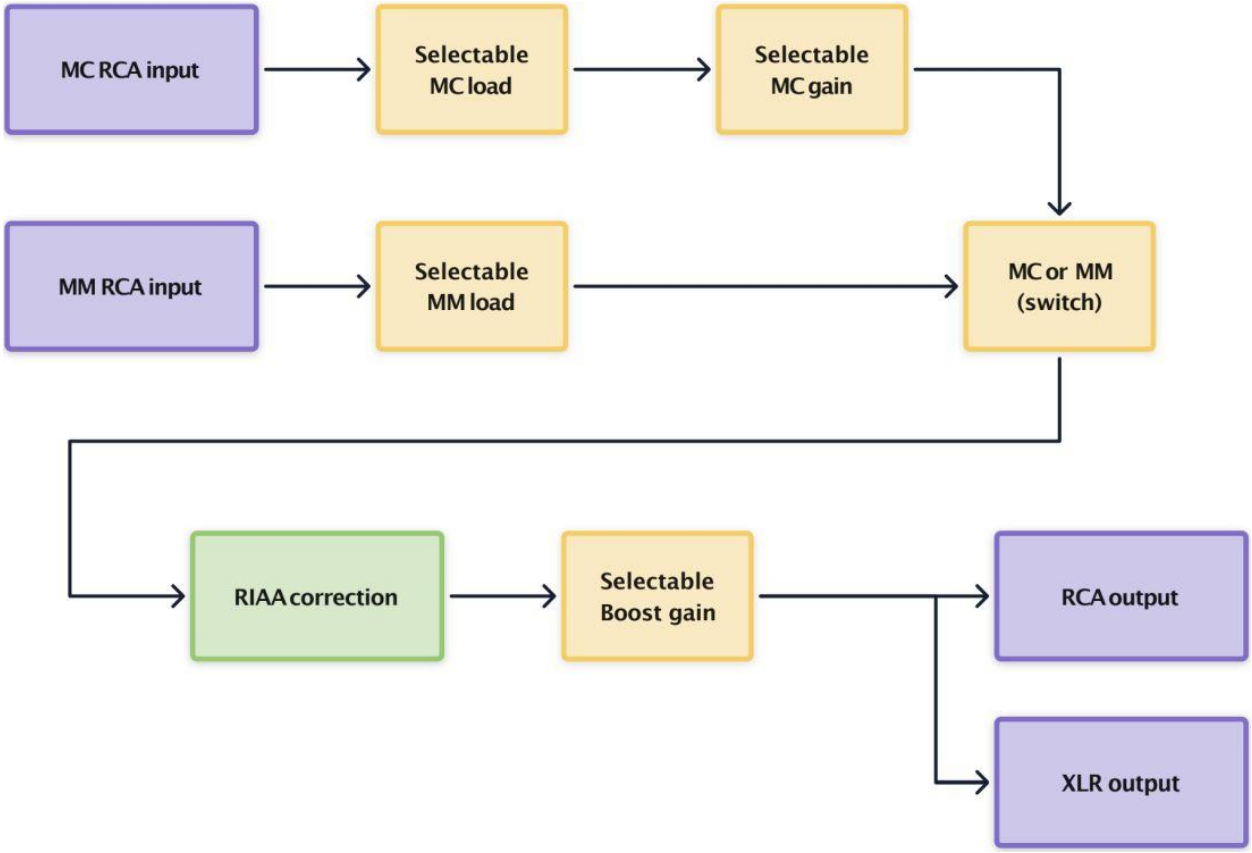
One might ask: why don't all manufacturers apply the same logic when simpler equals better? This is because it requires significant effort to design such a minimalist design properly. Due to the minimal amount of feedback, it is impossible to correct deviations, so this requires careful selection and extensive testing of both passive and active components. Furthermore, each amplifier stage needs a perfectly matched power supply, which must also be fine-tuned by ear.

Choosing the three active components before the Op-Amp buffer is essential. Grimm selected FETs (Field-Effect Transistors) for their high input impedance and favorable amplification characteristics compared to standard bipolar transistors. They are available with various amplification factors, reducing the need for further adjustments. For the moving coil (MC) input, the team utilized a FET with a low noise level of 0.7 nV/√Hz, resulting in a signal-to-noise ratio of 80 dB or higher. However, each FET must be individually measured and matched by channel, which requires specialized equipment and extensive testing during production to ensure product quality.

Using a passive RIAA network prevents distortion in the moving magnet (MM) stage and enables genuine dynamics. Significant care has been taken in the PCB layout and component placement. Such attention to detail may seem unnecessary, but Peter knows firsthand that poor design can have an adverse effect on sound.

While many designers aim for lower distortion, striving for figures around 0.001% can diminish sound quality, especially in phono stages. Although Grimm Audio typically prioritizes distortion figures, the inherent distortion of vinyl records means that low harmonic distortion in phono stages is far less critical. Grimm could therefore focus on minimizing the number of active components in the circuit, which has a substantial impact on the musical representation. Moreover, most of the distortion from the FET circuitry is an inaudible second-harmonic type. The single FET amplification stage and the absence of

feedback correction explain why the PW1 has a relatively higher harmonic distortion figure compared to some competitors.



A key feature of the PW1 is that it doesn't require a separate external power supply box, reducing the risk of hum and interference on the MC and MM inputs. In collaboration with Amplimo, the Grimm Audio team developed an extremely low-magnetic-field power supply transformer, designed by Guido Tent. It's so well shielded that it can be placed directly above the MC input without adverse effects! Nevertheless, the transformer is positioned internally at a generous 20cm distance, ensuring the absence of noise. The cabinet is made from non-magnetic materials, using aluminum for the enclosure and a copper sub-chassis for enhanced shielding of the mains input and power supply.

Connections

The PW1's back panel is fully packed. The RCA connectors are very solid and well-spaced. The phono signal ground terminal is located in a tricky spot, making it somewhat difficult to access when the unit is fully connected, though it remains just within reach.

However, the XLR outputs' sideways placement makes the Right channel connector's release tab unreachable with my fingers. The solution is to disconnect the Left channel connector near the power inlet first. This orientation likely has sonic reasons stemming from the PCB layout, but it is not ideal for people who like to change cables now and then.

The RCA and XLR outputs are wired in parallel, incorporating a ground-compensating resistor on XLR pin 3. As a result, the XLR outputs are not truly balanced or differential, but this connection method is considered the purest, as it avoids the use of an extra

operational amplifier (Op-Amp). Consequently, both outputs maintain the same signal level.

Next: Settings, Review Context, and Listening

Extensive setting options

The PW1 features separate MM and MC inputs and provides versatile settings for various cartridges. All load settings can be accessed via a sliding panel at the bottom. To access them, the unit can be turned upside down during experimentation. For those who prefer not to experiment, the manual provides a table with recommended settings for MC (moving coil), high-output MC, and MM (moving magnet) cartridges. Experimenters will appreciate the extensive options available.

To fine-tune cartridge behavior, the PW1 offers three MM capacitance-loading settings, four MC resistance settings, and two capacitance-loading settings. MC gain is adjustable to 0, +20, or +30 dB, and an additional selectable +10 dB output gain is also available. With maximum gain activated, the PW1 can achieve 77 dB, or over 7,000 times amplification, making it suitable for ultra-low output cartridges with outputs as low as 0.05 mV. This setup yields minimal noise, as the MC section's inherent noise level is exceptionally low.

MM cartridges can use capacitances of 47 pF, 100 pF, or 220 pF. Some manufacturers offer even higher values, but Grimm feels that this is unnecessary. Higher values, such as 1000 pF, can create unwanted peaks in the frequency curve.

MC cartridges, which are less sensitive to capacitance, can use 330 pF or 680 pF as needed. At the same time, the primary load setting for MCs is resistive, typically requiring 5 to 10 times their internal resistance.

After making the required adjustments, the bottom panel can be slid back to cover all the DIP switches, and the unit can then be positioned upright again. Eternal tweakers, such as myself, may leave it upside-down permanently, with no adverse effects.

Review Context

The PW1 was tested in the main system, where it was compared to the Manunta EVO Phono 3, M2Tech Nash, and Lejonklou Entity 1.2 phono preamplifiers, using the following turntables:

Thorens TD1601 with TP92 tonearm and Thorens TAS1500 MicroLinear MC cartridge
Thorens TD1601 with TP160 tonearm Goldring Ethos MC cartridge
Technics SL1200G with Audio Technica AT-VM750SH Shibata MM cartridge

The rest of the system consisted of the CH Precision L1 preamplifier, CH Precision A1.5 power amplifier, LAiV GAnM power amplifiers, Magico S1 MkII, Apogee Duetta Signature, and Apogee Centaur loudspeakers.

The PW1 I received had already been used and required no further running in. Nevertheless, to be sure, I allowed it more than a week to acclimatize.

As interlinks between the PW1 phono and the L1 preamp, I used the RCA (Single-Ended) Driade Flow Link Reference 808.

Listening

For the PW1, Grimm focused first and foremost on conveying the emotion and nuances of voices and instruments. The designers kept a keen eye on harmonic distortion, specifically its character (avoiding uneven harmonics), rather than striving for an extremely low percentage. As Peter van Willenswaard explains in the White Paper (downloadable from the Grimm website):

"The seductive tone of a violin, the air around voices and instruments, and the width and depth of the stereo image all take precedence over the lowest distortion figures."

These are all important goals for an audio component. However, as I have found with certain products, an overt focus on these aspects can lead to a skewed performance that favors "musicality" over neutrality and transparency, and this somewhat primed my expectations.

With this in mind, I fully expected the PW1 to sound lush, harmonically rich, smooth, and organic; however, based on earlier experiences with audio components that shared similar

descriptions, I feared it might also be overly warm and round, and potentially possess reduced articulation, pacing, and expression.

Within the first minute of playing the first record, it was clear that I need not have worried. Indeed, the PW1 has a remarkably lush, organic, and natural sound, but without any of the undesirable traits I had anticipated.

The PW1 possesses the hard-to-come-by quality of pulling one into the music and not letting go. There is something so beguiling about the sound that is hard to describe, which comes down to what the designers have poured their hearts and souls into: attaining a deeply engaging performance without an electronic signature, free of artifice. This is not simple to achieve, especially if the goal is also to attain reference-grade resolution, maintain superb neutrality, and satisfy even the most discerning audiophiles.

Uniquely, the PW1 offers stunning resolution and precision combined with beguilingly natural liquidity. Precisely as advertised, the performance is tonally rich, deeply emotional, and wholly unforced, yet crisp, articulate, and lively. I admit: this phono preamp delivers everything that it is advertised to do. Meanwhile, it also avoids the potential pitfalls that can come with a product that excels at conveying warmth and richness. The PW1 is also nimble

and upbeat, with no lack of speed and urgency, or diminished dynamic expression, as I sometimes hear with no-feedback designs.

Just as the designers intended, the PW1 conveys the warmth and emotional intent of human voices and acoustic instruments more convincingly than some other, more neutral products. Additionally, it possesses a decidedly sunny, positive vibe, yet the PW1 is simultaneously exceptionally well-balanced and neutral. The difference is in the unforced, un-electronic naturalness with which the preamp operates.

George Benson and Luther Vandross, for instance, never sounded more involving, heartbreaking, and convincing. But even though the preamp can be ever so lush and seductive, it avoids overlaying everything with a specific character, whether warmth, thickness, or coloration. This is when Peter van Willenswaard's statements in the aforementioned White Paper fully resonate, particularly when he discusses the audibility of electrical components and the benefits of using as few as possible.

While listening to music via the PW1, it feels like the music pours out of the speakers effortlessly, washing over you gently yet persuasively. The soundstage is expansive, but the phono stage does not project the sound like a static bubble. Instead, its presentation is fluid, breathing, free-flowing, and entirely free from the speakers. The soundstage scales

along with the recording, whether intimate, small, and close, or wide and deep, and that is what the PW1 will portray.

When I started listening with the Thorens TD1601, equipped with a TP92 tonearm and a Goldring Ethos MC cartridge, the richly saturated and organic delivery was immediately captivating. When switching to the Thorens TD1601 with TP160 tonearm and TAS1500 MC cartridge, the balance shifted, revealing the distinct tonearm and cartridge presentations, such as enhanced precision and delicacy, while retaining all the aforementioned qualities.

The same happened when switching to the Technics SL1200G with the AT-VM750SH MM cartridge, which provided nimbler and tighter bass, still with a previously unheard level of involvement and musicality. Somehow, the PW1 takes whatever it is fed and relays all the qualities of the source and stylus model, regardless of whether it is MC or MM.

Next: Comparisons and Conclusion

Comparisons

Alas, I no longer have the CH Precision P1 phono preamp, but especially when using the P1's Current Mode inputs, the Grimm PW1 reminds me of it. Both provide superb resolution along with a natural, fluid, and effortless delivery. As expected from a Swiss Reference product, the P1 is even more precise and revealing, and it also offers more features and convenience. Nevertheless, if the PW1 comes close in various sonic aspects, that is still a significant achievement given the considerable price difference.

The relatively affordable Lejonklou Entity impressed me deeply when I reviewed it, thanks to its combination of resolution and unforced flow. Indeed, precisely the not-often-found combination of sonic traits in which the PW1 excels. Although I replaced my Entity with the M2Tech Nash, I still have both, allowing me to perform a direct comparison. While the Entity offers a broadly similar balance of qualities to the Grimm PW1, the PW1 is

incomparably better in almost all sonic aspects. The only areas in which the Entity performs on the same level are fluidity, flow, and refinement. Otherwise, and especially in terms of bass control, midrange expression, and overall dynamics, the PW1 outperforms it by an impressive margin.

As mentioned, the M2Tech Nash replaced the Lejonklou Entity as my main phono preamp. The Nash is not quite as fluid and refined as the Lejonklou Entity, but with its robust, full-blooded, powerful, and dynamic nature, the Nash makes for exciting listening. To provide some perspective, the Nash costs a few hundred euros less than the Entity, yet it reminds me in many ways of the Pass Labs X-Ono I once owned, as well as the XP17 that I later reviewed. I'd say that is quite something, given the Pass Labs heritage and more than double the price point.

Nevertheless, when comparing the Grimm PW1 to the Nash, the Grimm is so effortlessly liquid and refined that it makes the Nash sound comparatively rough and bombastic. Such is life for an audiophile. On the one hand, I should know that improvement is always possible, but on the other, I am occasionally still surprised by the scale of the available improvement.

I wouldn't say the Grimm outperforms the Nash on all fronts, though. For example, the Nash offers even more powerful, robust bass, along with greater drive and propulsion. This creates a more substantial dynamic impact and makes it particularly engaging on a visceral level, which works exceptionally well for music that relies primarily on impact, such as certain R&B and electronic genres. However, bass *impact* is one thing. The PW1's bass is purer and, interestingly, seems to reach deeper, frequently surprising me with very satisfying cellar-deep notes that I overlooked with the Nash.

Finally, there is one other candidate, also from the Netherlands, that I have auditioned but not officially reviewed: the Mola Mola Lupe. At €7.990, it is more expensive than the PW1. In turn, it provides superlative operational comfort that reminds me of the CH P1, with all of its settings adjustable from a tablet. Sonically, the Lupe matches the PW1's level of refinement and fluidity, but with a more mellow, laid-back nature that makes it seductive, albeit less exciting. The PW1 may be operationally relatively more utilitarian, but I prefer its more propulsive, upbeat, and dynamic behavior.

Conclusion

The PW1 impressively combines stunning resolution, openness, and precision with natural fluidity. It is rich in tone, lush, delicate, emotional, and lively while avoiding excessive warmth. The sound convincingly captures the full harmonic richness of human voices and instruments while remaining neutral, free from added character, and without imposing any electronic signature.

Overall, the PW1 effectively conveys the qualities of any source—whether MC or MM—while maintaining a strong focus on the music's emotional aspect. No matter what you play, the overwhelming feeling is of being sucked deeply into the music. The PW1 invites the listener to put on just one more record, and another, and another.

I have used phono stages across all price ranges, from the entry-level €129 Schiit Mani to the €33.000 CH Precision P1. At €4,999, one might expect the PW1 to fall between these two extremes, likely closer to the more affordable side. However, while it does not match the P1's ultimate reference-grade performance across all areas, it comes much closer than one might expect. In fact, this is one of the very best phono stages I have heard. The PW1 is highly recommended. Moreover, I decided to buy the review sample, which makes it an HFA Favorite!

Associated Equipment

External Links

Manufacturer: Grimm Audio
Distributor for the Benelux: Terrason Audio