**PRESS RELEASE**

**Introduction Ferrum WANDLA HP DAC/PREAMP with Headphone AMPLIFIER**

**A real Head-Turner**

***​​WANDLA FAMILY WELCOMES WANDLA HP***

The original WANDLA, Ferrum’s flagship DA Converter/Preamp stems from 2023, the same year it was awarded Best DAC by the Expert Imaging and Sound Association, better known as EISA. It followed our flagship Headphone Amplifier OOR, which was awarded by EISA the year before. Our goal of creating a new breed of high-end audio components has been set in motion. Early 2024 our team put the money where their mouths were when they came up with the idea for WANDLA HP. Three guesses what the letters HP stand for…

***HP stands for Headphone***

In our quest to integrate the best possible headphone amplifier right into WANDLA, we created a balanced stereo headphone amplifier small enough to fit WANDLA’s housing and still able to output 3.5 Watts into 50 Ω. On the front of WANDLA HP the 4.4 mm balanced headphone socket is the only output visible, keeping it looks smart. To cater single ended headphones, we provide a 4.4 mm jack to 6.35 mm jack adapter in the box. WANDLA HP is perfect for music lovers who listen to speakers *and* headphones and are looking for single box solution containing a flagship quality headphone amplifier, preamplifier and D/A converter.

***And you also get WANDLA***

With WANDLA HP you get all the benefits and features of the latest version of our beloved WANDLA. This means you get to use our Dynamic Digital Filtering (DDF) options with filters prepared specially for WANDLA by famous digital filter maker Signalyst’s Jussi Laako, the best configuration of the ESS Sabre ES9038PRO DAC-chip, the latest version of WANDLA’s firmware and all of its innovations making WANDLA one of the best DAC’s available today.

***Two amps in one housing***

In addition to being a top-notch DA converter, WANDLA HP now doubles as a premium preamplifier *and* headphone amplifier. You’ll find two digitally controlled attenuators for volume control: selectable analogue or digital. WANDLA kept its truly balanced topology, with fully balanced, composite IC headphone amplifier design, fine tuned for WANDLA

and fine power section designs. In addition to the six digital inputs (USB-C, coax, optical, AES, ARC, and I2S), there is one unbalanced analogue input. This input bypasses all digital processing to remain faithful to the highest-quality analog sources. Both balanced (XLR) and unbalanced (RCA) outputs and a configurable trigger are provided. As one would expect from Ferrum, there are two DC power inputs (FPL and 5,5 x 2,5mm DC pin) to connect WANDLA to the supplied power supply or our HYPSOS.

***Under the hood***

WANDLA HP has at its heart our proprietary ARM-based platform, SERCE. Running Ferrum's software, SERCE processes all incoming digital data streams. Our ARM processor singlehandedly performs the tasks of five chips and creates the shortest possible signal path for the audio-optimized USB, ARC, I2S, coaxial S/PDIF, and optical S/PDIF ports. Behind the conversion stage, our engineering team implemented an advanced current-to-voltage converter and an output stage that benefited from their experience developing the acclaimed OOR. Based on HYPSOS' revolutionary hybrid design, multiple internal supplies power both analog and digital sections to minimize interference and noise and maximize channel separation.

***A beauty to behold, a breeze to operate***

The WANDLA HP internal design must speak for itself to impress music lovers and Ferrum users alike. We stuck to the supercharged visuals with the hi-res touchscreen display with a super easy user interface (UI). You'll find any setting with a mix of touch, turn, and press within seconds.

***Made for HYPSOS***

Of course, WANDLA HP plays beautifully right out of the box, using the power supply we carefully crafted to feed its unique electrical topology. But its musicality can be even higher when paired with our HYPSOS power system. Using our proprietary FPL cable, HYPSOS can perform its magic deeper into WANDLA HP circuitry than any other power supply on the market today.

***And made to turn heads***

WANDLA HP essentially is WANDLA with a great sounding headphone amplifier. It will satisfy those who are seeking more than ERCO has to offer but are not ready for WANDLA in combination with OOR, being the super flagship option. Incorporating all great options and specifications from WANDLA, Ferrum’s engineers integrated a powerful, and fully balanced headphone amplifier at the quality levels that come very close to those of OOR. As with all of Ferrum’s gear, you can reach for the stars by combining WANDLA HP with HYPSOS. It has the looks, it’s all about the music, it’s a guaranteed head-turner.

Want to know more about Ferrum, WANDLA HP, or digital filtering? Please surf to www.ferrum.audio at your convenience or interact with us via phone, e-mail, or our social channels.

***WANDLA HP specific key features***

**Fully Balanced -** WANDLA HP offers a fully balanced, composite IC headphone amplifier design, fine tuned for WANDLA.

**Powerful -** WANDLA HP’s headphone amplifier can output a hefty 3.5 Watts at 50 Ω (balanced).

**Dynamic -** WANDLA HP’ headphone amplifier has an impressive dynamic range of 122 dB.

**Tomorrow's High-End Audio Today** – WANDLA HP leads the way for tomorrow's high-end, offering flagship audio quality at an unprecedented price level.

**Finely tuned DA conversion** – WANDLA HP is the latest exemple of Ferrum's digital know-how and our in-house-developed analogue audio and electrical technology. The ESS Sabre ES9038PRO combined with Ferrum's advanced new current-to-voltage (I/V) converter compares to units many times its price.

**SERCE** - Digital audio system module - Our optimized ARM chip offers the shortest signal path possible, making 5 chips redundant. Includes MQA decoder/renderer and digital filter selection.

**Dynamic Digital Filtering** - WANDLA has a selection of digital filters specially prepared for Ferrum by renowned filter-maker HQ Player. More will follow with future updates after interaction with WANDLA users

**Optimized Digital inputs** - Specially programmed USB, and tuned coaxial and optical S/PDIF, ARC and I2S ports, optimized for audio.

**Proprietary amplification** - Fully balanced modified IC pre-amplifier, fine-tuned for WANDLA HP.

**Truly Balanced** - The signal path stays truly balanced using the XLR inputs and becomes truly balanced using the RCA inputs.

**Ease of use** - Newly developed hi-res touch screen with intuitive UX that is a dream to operate, including remote control.

**Enhanced transparency** - The whole design is focused on a balanced and very transparent sound signature, making listening fatigue a thing of the past.

**Made for HYPSOS** – WANDLA HP performs beautifully right out of the box, but you can take its performance above and beyond when pairing it with HYPSOS. Using the proprietary Ferrum Power Link (FPL) connection with 4T voltage sensing, both components will perform to their absolute maximum, unleashing unheard-of musicality.

**Specifications Ferrum WANDLA HP flagship DAC/PREAMP/HEADPHONE AMPLIFIER**

**Headphone Section**

THD balanced: 0.00016 % / -116 dB, 10 mW into 50 Ω;

0.00020 % / -114 dB, 100 mW into 50 Ω

THD unbalanced: 0.00022 % / -113 dB, 10 mW into 50 Ω;

0.00022 % / -113 dB, 100 mW into 50 Ω

Output Power Single Ended: 1 W into 50 Ω

Output Power Balanced: 3.5 W into 50 Ω

Dyn. Range: 122 dB

HP Output impedance: 0.5 Ω unbalanced

HP Output impedance: 1 Ω balanced

**Other**

Operation: Fully balanced, proprietary IC power amp

DAC chip: ESS Sabre ES9038PRO

DAC resolution:  768k/32bit, DSD 512

Digital inputs: - AES/EBU (up to 196kHz/24bit, DoP 64)

- Optical S/PDIF (up to 96kHz/24bit)

- Coaxial S/PDIF (up to 192kHz/24bit, DoP 64)

- USB-C (up to 768kHz/32bit, DSD 512, DoP 256)

- ARC (up to 192kHz/24bit), TV input with CEC

- I2S (up to 768kHz/32bit, DSD 512, DoP 256), PS Audio® compatible

MQA: decoder and renderer (on all digital inputs)

Analog inputs: RCA

Analog input Vmax: 9,5V RMS (2 – 3.5V RMS recommended)

Analogue input imp: 47kΩ

Line outputs: balanced XLR; unbalanced RCA

Volume control: analogue with bypass option / digital for DAC operation only

Line Output level: @0 dBFS, 1kHz sine 10 V RMS balanced, 5 V RMS unbalanced

Line Output level (RED): @0 dBFS, 1kHz sine 4 V RMS balanced, 2 V RMS unbalanced

Frequency response

on analog inputs: 10Hz - 200kHz +/- 0.1 dB

DAC THD: -121 dB (0,00009 %); THD+N: -115dB (unweighted)

Analog input THD: -123 dB @ 2V RMS output level

Dyn. range analog: 127 dB (A-weighted)

Dyn. range digital: 122 dB (A-weighted)

DAC Output Crosstalk: -120 dB for 1kHz, better than -100 dB for 20Hz - 20kHz

Line Output impedance: 22 Ω unbalanced

Line Output impedance: 44 Ω balanced

Power consumption: 13 W idle (with amp powered off)

18 W idle (with amp powered on)

35 W max

Power inputs: 5.5/2.5 mm DC connector center positive

proprietary FPL 4-pin DC connector (FPL)

22-30 VDC

Power adapter: 100-240 VAC to 24 VDC

Dimensions: 21.7 x 20.6 x 5 cm / 8.6 x 8.1 x 2.0 inch

(WxDxH)

Remote control: included

Weight: 1.90 kg / 4.19 lbs

Price (EUR/USD): 3.295

More information on www.ferrum.audio

***About HEM:***

*Founded more than 20 years ago in Warsaw, Poland by Marcin Hamerla, HEM set out to operate at the forefront of audio technology. Having done several projects for the Polish government, HEM’s focus shifted to industry leading digital technology. Having an in-house Research & Development and Software Programming Division, HEM manufactured the finest consumer electronics as OEM and ODM manufacturer. In 2020 HEM introduced a new and completely in-house developed brand of hifi products under the name Ferrum.*

***About Ferrum:***

*Looking at the competencies of HEM and the rich local history of quality craftsmanship in the Warsaw region of Poland inspired the idea of creating a new brand of high quality hifi products. The Ferrum brand was created in early 2020 and set out to combine sustainability, durability, and quality into compact yet attractive packages, focused on one thing only: delivering the best possible audio experience at a challenging price level. When Ferrum created HYPSOS, it redefined power supply designs. When Ferrum created headphone amp OOR, it raised the bar for intimate, analog listening through your favourite headphones. With headphone DAC/AMP ERCO, Ferrum set out to create a high-end audio DAC at entry level change. With our flagship DAC/PREAMP WANDLA we have made tomorrow’s high-end DAC available to a larger group of music lovers today and created yet another addition to our ecosystem of high quality hifi equipment at a more interesting price point. With the introduction of WANDLA HP (WANDLA with headphone amplifier) we now offer three distinct levels of personal audio listening. Entry: ERCO Gen 2 - Mid: WANDLA HP - Top: WANDLA + OOR, where each level has an upgrade path together with HYPSOS. Researching both ERCO and WANDLA DACs led to the development of SERCE, a proprietary digital audio system module that has found a specific place in HEM’s OEM portfolio. Exciting future Ferrum products will follow suit in unique, thrilling, and new ways.*

***Editorial note:***

*For more information or photographic material in high resolution contact Magdalena Konarska at media@ferrum.audio*