

German Physiks Emperor integrated amplifier

by Alan Sircom

Although best known as a loudspeaker maker of some note, German Physiks has long since taken steps to make sure its core products get the best possible performance. This is not a new thing; many companies best known for one branch of audio have produced other components in the chain. Often this moves from 'showcasing' the core product in its best light to creating an outstanding product line in its own right; such is the case with the Emperor amplifier range from the company.

Emperor is a range of five audio electronics components; an integrated amp, a preamplifier, a crossover network, a stereo power amplifier and a pair of mono power amplifiers. The size and heft of each is almost relevant to the class above; the integrated amplifier has the sort of size and weight one might expect from a large stereo amplifier; there are few standard equipment tables that can house an amplifier that's almost half a metre wide and deep, a quarter of a metre high and weighs in at a healthy 60kg (that's 132.28lbs or nine and a half stone in old money). The whole range was first shown about three years ago, but has years of prior development.

The Emperor integrated amplifier is in a category that – until recently – didn't exist; the super high-end integrated amplifier. Granted there were always one or two super-high-end integrated amps (such as the ASR Emitter and Audio Note Ongaku) but with CH Precision, Constellation Audio, darTZeel, Mark Levinson, Jeff Rowland and Vitus all making integrated amplifiers costing in excess of £25,000, you could almost dismiss the Emperor as just following the trend.

Almost.

The Emperor integrated amplifier combines the electronics from the Emperor preamplifier and Emperor stereo power amplifier in one chassis. All the components are mounted onto a heavy-duty internal steel chassis. An outer chassis is attached to this and is made from 15mm thick machined aluminium. The sides, top and rear are made as one assembly attached to a steel frame, allowing them to be removed for easy access when servicing. This assembly on its own weighs 17kg.

There is extensive heatsinking but it is primarily housed inside the unit. This gives a cleaner look and hides a lot of potentially sharp edges and corners. The heatsinks are large enough to ensure that the unit runs cool, even when running at high power levels. Running at a lower temperature extends the life of the components. Generally speaking, every 10°C increase of a component's operating temperature reduces that component's lifetime by half.

The hot air from the heatsinks vents out through openings around the edge of the chassis top plate. Beneath this, covering the electronics, is a ventilation control plate which has an array of strategically placed holes. This controls airflow through the unit, so that all the components operate at an even temperature. This ensures optimal operation of the balanced circuitry; if some parts of the circuit are at different temperatures, the balance of the two halves of the circuit is disturbed. This ventilation control plate is made of steel; not just to give it an impressive heft... steel acts as an electromagnetic screen. Both the precision of that balanced circuit temperature control and the steel used in the ventilation control plate are said to reduce the noise floor of the Emperor's amplifier circuit. This sophisticated passive cooling system is not the sort of feature that comes from either electronics engineers or industrial designers; it comes from working with an engineer who specialises in designing cooling systems for electronics.

Perhaps unsurprisingly, the Class A/B power amplifier sits beneath the ventilation control plate. The power amp is constructed as two mono power amplifier sections. Each channel's output stage uses 12 bi-polar devices, chosen for their performance and reliability. These are flanked by the reservoir capacitors for the output stage power supply rails. These are located as close as possible to the output devices to minimise losses caused by wiring resistance, and that means high peak currents can be delivered when required. The heatsinks and power amplifier boards are constructed as one assembly and this can be easily removed for access to the preamplifier section. Neutrik RCA and XLR terminals, and WBT Nextgen loudspeaker terminals are used throughout.



The preamp section is located on a second level under the power amplifier boards. As with the power section, this is constructed as two mono channels and is fully balanced, with a relay-switched resistor network volume control. This is more complex than a single-ended potentiometer volume control, but has the advantage that the input and output impedances remain constant, regardless of the setting. Naturally given the uncompromising nature of the Emperor amplifier, close tolerance resistors are used in this network, so that the two channels track very accurately. All signal switching is done by relays to keep signal paths as short as possible and minimise noise pick-up.

Like many super-high-end designs, the Emperor integrated amplifier includes both balanced and single-ended inputs (three of each, in fact). Unlike many such models, however, there is no provision for built-in phono stages, DACs or streamers. These are conscious decisions, rather than 'rookie errors' on German Physiks part. When it comes to phono stages, it was felt that those who have a high-end turntable system tend to have already invested heavily in the complete front-end in this respect, and few on-board phono stages are sonically superior to the best high-end standalone designs. When it comes to DACs and streamers, German Physiks plays a long game with the Emperor; the state-of- ▶

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- ▶ the-art DAC or streamer today will look like it ‘came out of the Ark’ five or ten years hence, so rather than include an input that will be redundant in a few years, the smart money is on standalone DAC or streamer options.

Yes, you could make the D/A converter or streamer as a plug-in option (and in the process allow future upgrades), but this would require a significant amount of circuit-board real estate and keeping the noise that they would generate out of the rest of the circuit would require the sort of additional internal chambering that would increase both the price and weight of the Emperor.

In operational terms, the 300W per channel Emperor is more ‘benign ruler’ than ‘dictator’. I mean, the power up cycle could have gone a bit *Dirty Harry* here: “I know what you’re thinking... did I blow the mains fuse, or only the circuit breaker in the fuse box? But seeing how this is a 2.5kVA transformer with an inrush current that can blow your drive units clean off, you gotta ask yourself... do I feel lucky?” Fortunately, a four-stage 20 second soft-start is better than my scriptwriting skills.

Finally, it’s the little things that make the difference. For example the Emperor’s logic board spends most of its time in sleep mode (although in an amp this size, you have to think Chuck Norris; it doesn’t ‘sleep’... it ‘waits’), only waking on receipt of a command from the remote handset, acting on that

command, then staying out of the way of the sound. Lifting a 60kg amplifier onto an equipment stand (and finding an equipment stand that can handle a 60kg load) are the nearest the Emperor gets to ‘audio tyrant’.

Mentioning Clint Eastwood and Chuck Norris in almost the same breath is probably a good way of opening the description of how the Emperor actually performs. There’s a sense of absolute unburstability here; possibly thanks to a stiff power supply that doubles its power from eight-ohms to four and once again into two-ohms. Short of rocking up with a pair of old Apogee Scintillas, there is no loudspeaker that will challenge the Emperor. It exudes a sense of quiet confidence, physical control and presence because nothing fazes the Emperor amp.

The degree of control it holds over loudspeakers, and the system in general, is a heady wine. Play something you know well – like ‘Celestial Echo’ from Malia and Boris Blank’s *Convergence* album [Boutique] – and you tend to have a preconceived notion about the recording based on prior listening. The Emperor helps get past those preconceptions; on this album, there’s a tendency to dismiss it as electronica with a breathy female vocal up front, but here there’s a sense of instrumentalists at work. Not only is this clear with more coherent and articulate vocals, but Emperor digs deeper into ▶

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- ▶ the mix than usual. Backing and lead vocals in particular are easily delineated and defined.

However, all this precision, dynamic range and detailing doesn’t come at the expense of the musical energy of a recording. Granted the Emperor’s ability to present a vibrant, visceral three-dimensional musical space in front of you – with full-range instruments living in a solid soundstage – does make you reach for the more ‘majestic’ end of the musical spectrum. Classical and well-recorded jazz takes on that ‘majestic’ property, and early listening sessions are so taken up with the full-thickness detail being presented, your brain takes some time to process all that information. But we adapt fast and the Emperor’s top-to-bottom precision makes you turn to something altogether faster and nastier. You know... for fun.

Out comes Infected Mushroom [‘Vicious Delicious’ from the album of the same name, Reincarnate]. It gets cranked to eye-squeezing levels. It’s a stand-off between the amp, the drive units, any panes of glass and your cortex. The Emperor wins; it’s fast-paced, informative and those chord progressions are handled with effortless ease, even within this maelstrom.

Emperor has a velvet glove atop its mailed fist. The amplifier might be all about precision and control, but it’s also a rich and inviting sound. It’s an amplifier of great poise, whether it’s playing something large scale [Haydn’s ‘Nelson Mass’, Wilcocks, Kings College Choir, Decca] or small, quiet jazz [the gentle bossa nova of ‘C’est Magnifique’, Melody Gardot, *Sunset In The Blue*, Universal]. The Emperor ‘scales’ beautifully and keeps time like a stopwatch, too. In fact, whatever you played, it simply made it sound ‘better’.

There is also a profound sense of stereo staging, a fully three-dimensional experience rooted in a sense of solidity and presence that makes the sound emanating from any loudspeaker – not simply a German Physiks design – sound centred, precise and extremely communicative. This isn’t by a small margin; the amplifier makes smaller loudspeakers sound bigger, bigger loudspeakers sound more powerful, and more powerful loudspeakers sound a little bit awesome.

Even if most audio enthusiasts were born in the 20th, we are deep enough into the 21st Century to have adopted a modern mindset, and as such it’s hard not to think of the term ‘Emperor’ without summoning up a degree of bombast; yes, you might envisage Jacques-Louis David’s triumphant

TECHNICAL SPECIFICATIONS

Type: integrated amplifier

Line Inputs: 3× RCA single-ended stereo, 3× XLR balanced stereo

Line Outputs: 2× RCA single-ended stereo, 2× XLR balanced stereo

Preamp Outputs: 1× RCA single-ended stereo, 1× XLR balanced stereo

Amplifier outputs: WBT next-gen speaker terminals

Power output: 300W per channel into 8Ω, 600W per channel into 4Ω

Frequency Response: 0.5Hz–80kHz (-3dB, at 1W, 8Ω)

THD+N: 0.01% (22Hz–22kHz, 1W, 8Ω)

S/N: -91dBA (A-weighted, at 1W, 8Ω, balanced operation)

Dimensions (W×H×D): 47.4× 24 × 47.4cm

Weight: 60kg

Price: £33,500

Manufacturer: DDD-Manufactur-GmbH

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‘Napoleon Crossing the Alps’ painting, but the term today also summons up images of moustache-twirling dictators. However, the Emperor lives up to its name in that it treats the audio system as its empire to rule over, and it rules with a benevolent, yet authoritative, hand. OK, so those who look to an amplifier to be some kind of musical warmth-creator will look elsewhere: Rich – yes. Rose-tinted – no. Otherwise, I’m kind of wondering what – if anything – would fluster the Emperor. Maybe high-resolution, dynamically uncompressed recordings of thunderclaps played at real-world levels.

If there were any justice in the world, there would be a small army of audiophiles, storming the barricades of mediocre sound, shouting cries of ‘For the Emperor!’ at the top of their lungs. Of course, an army of audiophiles would probably take quite a while to storm those barricades, might well get embroiled in a long-winded discussion about the correct tools required for barricade storming, conclude that the old tools were better and would be wearing ear-protection to counter all that shouting... but it’s the thought that counts. The Emperor by German Physiks is big, heavy, expensive and outrageously good. That alone makes it worth a spot of Empire-building. +