

# Gato Audio PWR-222

Compact, commanding but not Class D – Gato Audio’s flagship monoblocks turn to the switching MOSFETs used in electric cars to deliver huge power with exceptional grace  
 Review: **Ken Kessler** Lab: **Paul Miller**

Relative values being what they are, circa £11k for a pair of exquisitely-attired, 250W monoblocks is pretty much the norm in the 2010s. But to appreciate *why* Gato Audio’s PWR-222s – or any amps, for that matter – are worth as much as a Skoda Fabia, you have to deal with not just the performance but the perceived value, too.

Nowadays, it’s no longer enough for a hi-fi component simply to sound wonderful. It has to deliver bushels of perceived value because high-end audio has to compete with luxury kitchens, home cinema and other stuff that didn’t exist in the early days. In the post-yuppie/hipster era, everyone expects aesthetic and constructional excellence as well as commensurate performance, and Gato Audio clearly has taken note of the luxury sector that consists of £500 pens, £10,000 wristwatches and £1000 sunglasses.

## DANISH DELIGHTS

These amplifiers exude quality, and have styling far removed from the other extreme of high-end design: the studio/lab look of Audio Research, McIntosh or Nagra. That also includes GamuT, which shares some engineering heritage with Gato, although it’s less utilitarian than a typical valve amp. While pro-gear styling is equally appealing, such looks alone cannot seduce anyone other than a pure audiophile.

If those units’ *raison d’être* remains the sound, they compensate for their lab looks with superlative build quality. But when the Venn diagram is drawn to show how audio moved on from the strictly utilitarian (eg, first-generation Croft) to these Danish delights, Gato will rest in the quadrant with D’Agostino, dCS and MSB.

As with the other models made by Gato Audio, there is a choice of top-plate inserts, including gloss black, gloss white or gloss walnut. The review samples used the

latter, and it added a nice warm touch to the hardware. But as some might hate my dealing with such non-sonic aspects, let me finish up with a criticism of the PWR-222s.

While everything external is a delight, the holes underneath and the rear edges of the heatsinks have not been polished. They’re as sharp as razor blades so be careful when you lift them up, as I got a finger caught in one of the holes and it drew blood. This lack of polishing is inexcusable in a product of otherwise flawless presence.

Because of their beautifully-proportioned form, the amps seem smaller than they are, and each was dwarfed by the Audio Research REF 6 preamp [HFN May ’16] used for the review. The front panel is ultra-clean, with only the meter and the two press buttons for standby and meter options disturbing it.

*‘The PWR-222s delivered some of the silkiest sounds I’ve heard’*

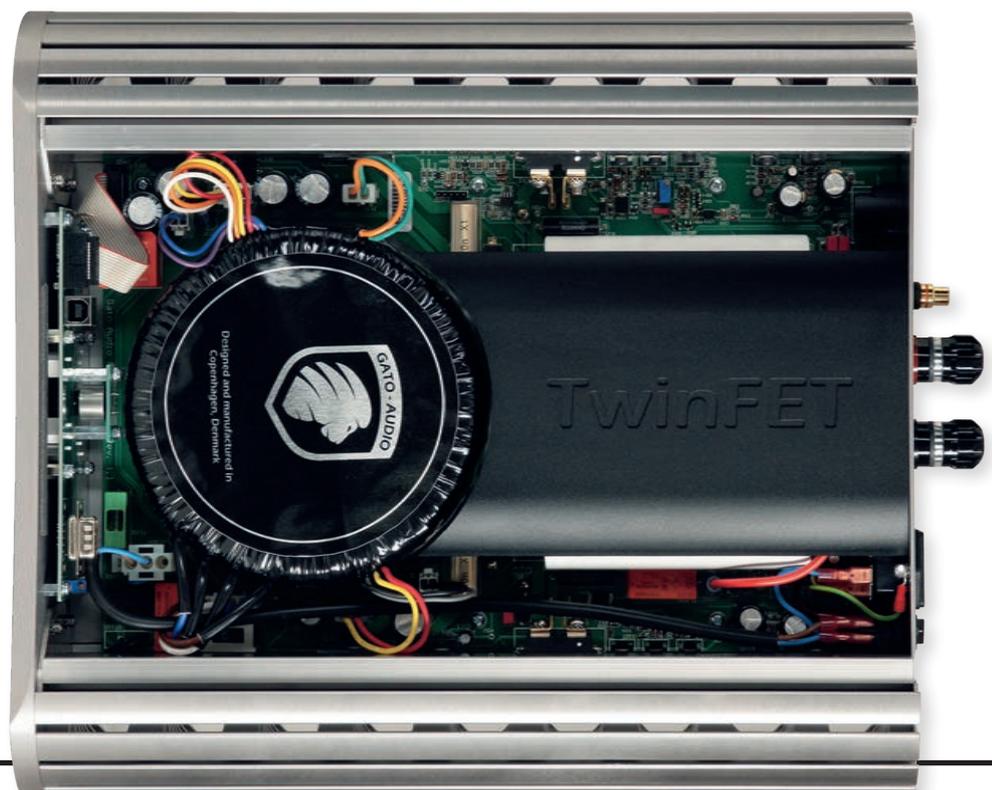
That meter is actually a dual-function device, for it shows power in one mode and temperature in another. The display button scrolls between the two, as well as a dimming setting leaving only a tiny pilot light, which also alerts you for short-circuits, temperature and clipping. After I’d been running them for 18 hours, the temperature on both stayed rock-solid at the 12 o’clock point. The needle ‘wakes up’ when you take the unit out

of standby mode (main power on is at the back) and is scaled to provide a lot of travel in VU mode for low volumes.

## BAUHAUS SIMPLICITY

At the back, it’s Scandinavian minimalism once more, and I find that increasingly more refreshing than the worst-case scenario of a Japanese multinational AV

**RIGHT:** Gato’s ‘TwinFET’ output stage (a single pair of MOSFET output devices under the black cover) are married to a bipolar input stage and powered via a substantial linear PSU





**LEFT:** With looks that are impossible to fault, the curves and wooden inserts impart an organic feel – rare in the cold world of tech. Meters draw the eye, but can be dimmed. Why would you?

integrated amplifier's back panel. Forget 82 sockets. This exercise in Bauhaus purposefulness is so well-conceived that you don't even need to look at the manual once you've figured out the fascia meters.

I had them up-and-running in three minutes flat once out of their boxes. I simply slipped the ARC REF in between them, using Crystal cables with XLR terminations, and feeding Wilson Audio Alexias [HFN Mar '13], Spendor LS3/5As and KEF LS50 loudspeakers [HFN Jul '12]. Source was the Marantz DV8300 SACD player.

As our photos show, the back of the '222 contains an IEC mains socket, balanced Neutrik XLRs and single-ended inputs with a mini-toggle switch to select between them, so only a moron could mess it up. All that remains are an on/off rocker switch and superb WBT NextGen multi-way

binding posts. After 15-20 minutes the amps settled down with no further changes in the sound over eight-hour sessions. Well-behaved? You better believe it.

### **DELICIOUSLY TUBE-LIKE**

It seemed appropriate that I would open up with my cherished Lou Rawls album, as I have been eyeing up Gato's amplifiers for a few years, seeing them at hi-fi shows around the world and ever wondering if they sounded as good as they looked. I needn't have worried.

The title track from *At Last* [Blue Note CDP 7 91937 2] oozed with warmth, and the space around Rawls and Dianne Reeves was deliciously tube-like. Make of that what you will, for either the Gato PWR-222s have been voiced to sound that way, or I was hearing the signature sound of the

all-valve preamp that was feeding them in untrammelled form. What I recall of the GamuT M250i [HFN May '15] suggests that the resemblance is certainly genetic, but the Gato amps are a trace less clinical. Which is fine by me.

In some ways, though, *At Last* flatters systems, so I turned to the raunch of Led Zeppelin's *Celebration Day* [Swan Song 8 122-797 10-2] and was rewarded with what I had hoped for: something grandiose. I was worried that the PWR-222s were so refined – every nuance of 'At Last' had been revealed, especially the vocal textures – that they may not be able to convey the majestic.

Regardless of speaker (and sounding like a marauding army is difficult through small two-ways), the Gato PWR-222s were up to the task. The sheer power of the younger Bonham's drumming wonderfully exercised the Wilsons' bass capabilities, for the PWR-222s delivered mass, extension and slam, the latter balancing perfectly between controlled and over-damped. At the very worst, there were insignificantly tiny moments of constraint, but they were only audible if you went looking for them.

That in itself indicates that the overall coherence of the PWR-222s is such that you're never tempted to tear apart the performances, looking for problems. And the scale is so impressive that turning to 60-year-old mono sessions proved more rewarding than I had hoped. Then again, I'd rather listen to T-Bone Walker than just about any other blues guitarist in history.

*T-Bone Blues* [Atlantic 8 122-79696-7] is one of those seminal releases that you 

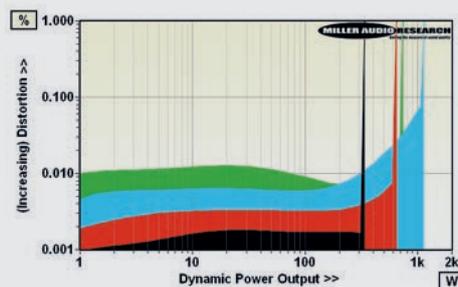
## HYBRID CARS TO HI-FI

Mighty slim but also mighty powerful, Gato's flagship amplifier does not use a Class D architecture to achieve this performance – unlike its DIA-250 and DIA-400S models [HFN Oct '16]. Instead, and in common with the AMP-150 [HFN Oct '13], the PWR-222 combines a linear PSU with a single pair of massive, industrial-specification MOSFETs. These new FETs – designed for high-current switching in electric automobiles – are vastly over-specified in terms of the current and voltage handling required for speaker-driving applications, and so, according to Gato, offer a far more elegant solution than the multiple, paralleled pairs of transistors used by most other high power amplifiers. Of course, employing just one N-type and one P-type MOSFET per channel would necessitate extraordinary component matching if the positive and negative-going portions of the audio waveform were not to be asymmetric, and distorted. Gato ensures precise matching by using two identical N-type MOSFETs per channel and inverting the signal to one in the preceding (bipolar) input stage. Distortion is very low and almost purely 2nd/3rd harmonic in nature [see Lab Report, p53]. PM

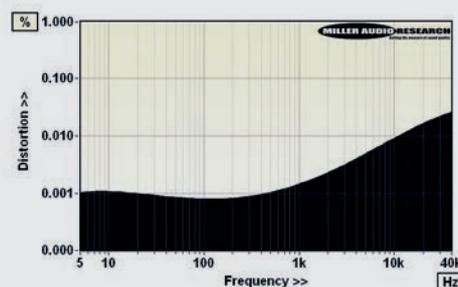
## GATO AUDIO PWR-222

Look closely at our main shot of this amplifier [p51] and you'll see a red marker on its 'VU' display. When the illuminated needles reaches this point the PWR-222 will be delivering exactly 25W/8ohm or 10% of its rated output (not the -6dB Gato suggests). In practice, this beefy little monoblock will sustain closer to 275W/8ohm and 490W/4ohm with 335W, 645W and 1.14kW possible under dynamic conditions into 8, 4 and 2ohm with a current-limited (26.9A!) 725W into 1ohm, all at <1% THD [see Graph 1, below]. Distortion is very low through bass and midrange frequencies at ~0.0007% (0dBW), increasing with power output to ~0.001% at 10W and to just ~0.015% from 20W to its rated 250W.

Versus frequency [see Graph 2, below], distortion increases from 0.0015%/1kHz to 0.0095%/10kHz and 0.016%/20kHz (10W/8ohm) which is significantly lower than that measured for the AMP-150 [HFN Oct '13] and for the Gamut M250i [HFN May '15], which employs a similar two-FET output stage with a similar power specification. CCIR intermodulation distortion is also very low at just 0.00045% (19kHz/20kHz, re. 10W). But where the PWR-222 really scores is with its fabulously low noise floor that ensures a record-breaking 103.4dB A-wtd S/N ratio (re 0dBW) and 127.4dB (re. rated output). This is not far shy of 20dB above average and 10dB above the performance of the 'quietest' integrated models. The low +20.9dB gain (balanced in) helps here, of course, but the PWR-222 also benefits from a very flat and extended response (20Hz-20kHz ±0.02dB and 1Hz-100kHz +0.0/-0.5dB) and from a moderately low but very flat output impedance (0.011-0.014ohm, 20Hz-20kHz). Warm-up time for consistent performance is ~20 minutes. PM



ABOVE: Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) loads. Maximum current is 26.9A



ABOVE: Distortion versus extended frequency (5Hz-40kHz) at 10W/8ohm

## HI-FI NEWS SPECIFICATIONS

Power output (<1% THD, 8/4ohm)	275W / 490W
Dynamic power (<1% THD, 8/4/2/1ohm)	335W / 645W / 1.14kW / 725W
Output impedance (20Hz-20kHz)	0.011-0.015ohm
Freq. response (20Hz-20kHz/100kHz)	+0.0dB to -0.02dB/-0.5dB
Input sensitivity (for 0dBW/250W)	259mV / 4008mV (balanced in)
A-wtd S/N ratio (re. 0dBW/250W)	103.4dB / 127.4dB
Distortion (20Hz-20kHz re. 10W/8ohm)	0.0008-0.016%
Power consumption (Idle/Rated. o/p)	70W / 415W (3W standby)
Dimensions (WHD) / Weight	325x105x400 mm / 16kg



ABOVE: Simplicity itself – single-ended (RCA) and balanced (XLR) inputs are selected by a small toggle switch while WBT NextGen 4mm terminals serve speaker outputs

rather expect it to be an experience. Ain't many albums that can boast Barney Kessel as *second* guitar! What you can use this for, if the music hasn't swept you away with its warmth and fluidity to the point where hi-fi matters don't, er, matter, is for detail, speed and liquidity. Walker's guitar playing, which inspired B B King, Chuck Berry and Jimi Hendrix, is so good that even my cynic of a son went slack-jawed upon first hearing.

### KODO WALLOP

Nothing about the PWR-222s deprived the sound of either the period feel – as analogue-sounding as CD gets – or of the attack of each note. 'Attack' may be a misleading word for an album that is, for the most part, so laid-back, but the speed of Walker's playing is best described as cramming in more notes than seems humanly possible. He doesn't kick out here so much as play the guitar with absolute mastery and restraint. It's not a 'loud' album. Each note matters, and the PWR-222s know it.

This is in direct contrast to the Led Zeppelin recording, in which the music comes in like a tidal wave. Amusingly, most of the Walker sessions involved a four-piece, just like Led Zep. The difference was all about decibels. The '222s dealt with both with total equanimity. So how about something in between?

Kodo's *Heartbeat: Drummers Of Japan* [Sheffield Lab CD-KODO] is minimalist in that one is listening to a player or two. It is not intended to sound Spectorian by virtue of the scale of the orchestra. Here, it's the scale of the instrument, and the percussive wallop of Kodo drumming that demands effortless power from an amplifier, as well as leading transient speed and control and smooth decay.

For the Gato PWR-222s, it was business as usual. As before, the scale of the soundstage in all

dimensions was impressive and convincing. The reproduction of air – and with Kodo, that means a workout for your woofers – was seamless and, yes, spectacular. It was a seductive sound, and I had no trouble listening for hours on end.

Which should tell you that this amplifier is also vice-free when it comes to sibilance or other annoyances that have you turning to the paracetamol. I would never hazard to suggest that solid-state amps are inherently hissy, while knowing that this is a clever MOSFET design – see PM's tech boxout on p51 – doesn't always mean one will hear trannies trying to sound like KT88s. That said, it reminded me more of the ARC REF 75SE with their KT150s than I expected.

Were there any sonic vices to which I could point? Aside from extreme instances, not really. D'Agostino's Momentum amps typically apply greater mass [see p32], the stage depth is deeper via the REF 75SE, yadayadayada. I hate dissecting the sound like this, but it's called 'reviewing'. I'd say the Gato PWR-222s delivered some of the silkiest sounds I've heard in recent times, wrapped up in a (non-magnetic) suit that would do Savile Row proud. ☺

## HI-FI NEWS VERDICT

While I'm shallow enough to admit that I fell in love with Gato Audio's distinctive electronics years ago at a Munich show, before ever listening to them, I know that a sexy chassis is never reason enough to justify buying a pair of monoblocks at this price point. The good news is that, yes, these sound as wonderful as the styling promises. And if your wife/partner does not approve, I can also recommend a good optician.

Sound Quality: 87%

