


*True innovation  
from Italy: Pathos has  
come up with a unique  
valve/MOSFET hybrid*

by **KEN KESSLER**

# TWIN TOWERS



**D**uring the worst — no, make that ‘during the most obsessive’ period of my love affair with Italy\* — a pompous British wag railed at me that the country’s entire industry suffered from a lack of imagination and a fetish for retro. He argued that, gorgeous styling aside, the Italians contributed nothing whatsoever to our passion and that I was guilty of glorifying a ‘packaging job’. Suffice to say, he was a manufacturer of boring two-way loudspeakers.

Although I cited Unison Research’s *stable and affordable* single-ended triode amps, GRAAF’s success in making OTL amplifiers which work in the real world, Sonus Faber’s patented crossover in the Extrema and its prescient sub/sat system of over a decade ago, Audio Analogue’s under-priced electronics and more, he was unmoved. Now that the dispute is long-forgotten by my detractor, I find proof-positive that the Italians *do* innovate.

Why it took this long for me to get around to reviewing a Pathos† product is down to distribution. But now that Pathos is handled here by Italy’s virtual British-based embassy — UKD — I need wait in torment no longer. Did I say torment? Sure did: the Pathos goodies are among the sexiest, sleekest, most beautifully-assembled gems I’ve seen this decade; admiring them at shows for years but having to decline the offer of a review

has been torture indeed.

On the surface, the Pathos Twin Towers could be described as a tube/solid-state hybrid, and our friend above could argue, ‘So what’s new in that?’. But Pathos developed a topology to make it behave quite unlike most of the hybrids I’ve heard. With rare exceptions like the Radford TT100 (solid-state front-end but tube output), most hybrids use tube drivers to add a frisson of valve-like warmth. It’s worked so well that companies like Luxman have been tempted to use it in near-mass-market applications. And while some have come close to that ideal of ‘tube sound with solid-state convenience/size/cost/cool running’, most have sounded like what they are: mongrels. (I don’t mean that in a pejorative sense — any dog-lover will tell you that mutts are far more intelligent, friendly and loyal than prissy pure-breeds. What I mean is that a keen listener can identify the DNA strands.)

Pathos’ INPOL circuitry is the latest in a history of audio cross-pollination, but this one has earned a world-wide patent, and it seems designed to confront purist prejudices [see box]. MOSFETs or not, its demeanor is that of a tube amplifier, however minuscule its glass complement of two small tubes. As Italians understand the worth of visual impact, Pathos wisely positioned them at the front of the chassis in their own

**With rare exceptions like the Radford TT100 (solid-state front-end but tube output), most hybrids use tube drivers to add a frisson of valve-like warmth...**

*\*I’ve now settled into acceptance that I can never be Italian...*

*†Twin Towers is seemingly named after an American architectural achievement. The company name is invalid in this context if you look up the meaning: to elicit pity.*

**SUPPLIER**  
UKD  
23 Richings  
Way, Iwer,  
Bucks  
SL0 8YA.  
Tel: 01753  
654531

cages, serving as crafty sirens to distract anally-retentive valve purists. Behind the valves are four massive capacitors flanked by enormous black heatsinks, followed by the mains and output transformers, all superbly finished and resting on top of a chromed top plate. The Twin Towers’ edges are solid rosewood.

At the back, a row of beautifully appointed, gilded sockets accepts four line sources plus tape-out (a phono stage is in the planning), alongside an earthing tag, hefty multi-way binding posts, two user-changeable fuses and an IEC mains input. Beneath? Massive cones at each corner. All straightforward, but ask your dealer to unload the thing. Packed in a reassuring solid wooden crate, the Twin Towers is not something to be installed on one’s own. Its overall dimensions are a manageable 482x300x450mm (whd), but they hide a backbreaking 32kg weight.

A curved front plate contains but two rotary controls; recessed below are an on/off toggle switch and a red power-on LED indicator. At the right are the input selector and the rotary volume control, sited on either side of a small display. Here’s where the palms grow moist and where even rivals are driven to utter an involuntary ‘Cool!’: the Twin Towers comes with the slickest volume-only remote I’ve ever seen, a wand made from rosewood and gold-plated metal, bearing only up and down buttons in the form of tiny gold dots. The window in-between provides a numerical read-out of the level setting in bright red.

It’s here that I must bring up the price tag because the model I’m describing is the top of three versions of the Twin Towers. But, as the price difference between the non-remote, 24-step entry model, the same-plus-remote and this, the remote control-with-64-step-resistor volume control, is only £325, or 10% of the £3250 total, the lesser models are not being imported. The volume control is made in-house by Pathos, using 1% metal layer precision resistors, driven by a bank of vacuum reed relays with thorium contacts. Internal wiring is silver. The

## THE SECRET OF INPOL

**NO SARCASM, please, for the lack of a circuit diagram: INPOL is a trade secret, so the company does not offer diagrams to reprint. In the most dry-roasted of nutshells, INPOL is a pure Class A, single-ended, zero-negative-feedback output stage using power MOSFETs ‘current sourced’ by a large inductor and loaded in parallel with a capacitor.**

As you’d expect, the latter, while acting as a ‘passive’ current regulator, prevents DC from reaching the outputs. A pair of E83CCs/12AX7s serve as the drivers, and they mate with INPOL in such a way as to determine pretty much its entire sonic signature; given the near-ubiquity of the ECC83 and its variants, the sound can almost be described as all things to all tube crazies — both modern and vintage, all at once. A mix of both strengths and weakness, INPOL’s downside is relative inefficiency and hot-to-the-touch running (if not quite as poor in these areas as traditional Class A transistor amps), the requirement of a massive power supply and the need to face an impedance of a nominal 8 ohms; Pathos recommends 5-6 ohms and above, and you will hear it cry if you connect it to anything dipping below that. INPOL also means that the Twin Towers bears no protection circuitry, so please, be nice to it.



act of level setting has its own by-product: audible clicking which at first seems out of place with such a refined device. But you soon find yourself running up and down the volume scale just to hear those clicks, reminiscent of the finest mechanical cameras running on long exposures. Yummy...

Pathos rates the Twin Towers at 30W/ch into 8 ohms, with frequency response stated as 1–100kHz, +/-0.5dB, and signal-to-noise 90dB. In keeping with the company's direct and implied recommendations, I stuck with non-difficult speakers (LS3/5As, the old Quad ESLs and Tannoy R1), and used silver or silver-hybrid wiring. And I'll be damned if it didn't 'synergise' better with silver than copper.

And, oh! will you hear nuance and detail — naked enough to help you to assess wire. This amplifier is so quiet, so delicate, so transparent and so refined that I had to check and make sure I wasn't listening to some ultra-precious, non-300B SET. Note that I said 'non-300B'; I make that distinction because the Pathos does *not* pee on its part of the valve tree by dialling in excessive warmth in the mid-band. In this respect, it sounds so

explicitly like a modern tube amp of the Audio Research/C-J variety that anachrophiles might take it as an affront. But then, in keeping with the benefits of being a crossbreed, upstairs it demonstrates a vintage tubey-ness through the kind of silky, sweet, shimmering trebles you rarely hear this side of a Quad II or a Leak TL12. Call it judicious use of retro if you must. It's so luscious that a part of you wants to go into deep, irrecoverable denial, the kind of psychological state which puts a Porsche in every shrink's garage: you just will not believe that the guts of this baby are solid-state.

Then the bass kicks in and you just *know* that no tube amplifier — unless penned by, say, the iconoclastic Tim de Paravicini — could provide the sort of damping, slam and bass extension that oozes from Twin Towers. It's not that the sound is particularly transitory; it's more a case of us never expecting a tube amp to deliver such chunky, authoritative lower registers. And the all-tube amplifiers which *can* match or better the big solid-state amps tend to be rare, expensive or huge. Think Audio Research Reference 600, the classic EARs with 509 tubes or

**The Pathos goodies are among the sexiest, sleekest, most beautifully-assembled gems I've seen this decade; admiring them at shows for the past few years but having to decline the offer of a review has been torture indeed**

semi-pro units bearing a bushel of 6550s.

But, please, keep in mind that this is in the context of easy-to-drive speakers with sensible impedance and relative efficiency; I didn't dare try the WATT/Puppy system 5.1 or the little ALR Entry 2s. So, in a curious way, you have to treat the Pathos as you would an SET: fit mainly for sensitive, kindly speakers. If words like 'kind' and 'sensitive' suggest New Male warmth-and-fuzziness, please, spare me: we're talking about Italianate behaviour here, not Californian.

Tracks like Dino's 'Sott'er Cela de Roma' or Willy DeVille's 'Assassin of Love' showcase its rich vocals, correct dynamic contrasts, speed to cope with non-sequitur transients, and a sound-stage so deep and wide that you'd expect pigeons to drop down for a feeding. Try sparser works — solo piano courtesy of Otis Spann, for example — and you learn all about the intimacy denied us by systems which overwhelm.

Twin Towers is one of the finest amps I've ever heard, regardless of price. Had I not just sunk my life savings into my listening room, I'd be buying one right now. The Twin Towers is almost too good, too innovative, too classy to be true. †

