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ABBEY ROAD:**
Rick Visits
Alan Parsons

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This month's column is devoted to the Pathos Acoustics Twin Towers integrated amplifier.

Good grief, what a name!

To Italians, "pathos" apparently suggests emotion. According to one dictionary on hand, the original Greek means "suffering" — something audiophiles are fond of.

My *Collins English Dictionary* defines it as "the quality or power, especially in literature or speech, of arousing feelings of pity, sorrow, etc."

I don't know about the sorrow and the pity, but the Pathos Twin Towers integrated amplifier may be just the thing to end your hi-fi misery!

Three guys from Vicenza

Pathos Acoustics was founded in 1994 by three guys from Vicenza — Gianni Borinato, Paolo Andriolo, and Gaetano Zanini. The Pathos Twin Towers (\$4950 in its basic version, reviewed here) was their first product. Other products in the line include the Classic One integrated amp (\$1950), and a battery-powered phono stage called In the Groove (\$1150).

The importer, Richard Kohlruss, of Hi-Fi Forum, is on a roll these days, what with Triangle loudspeakers from France, Audio Analogue electronics from Italy, and Final electrostatic loudspeakers from the Netherlands.

"You may like it after a while," Richard said when he delivered the Pathos.

"You mean not at first?"

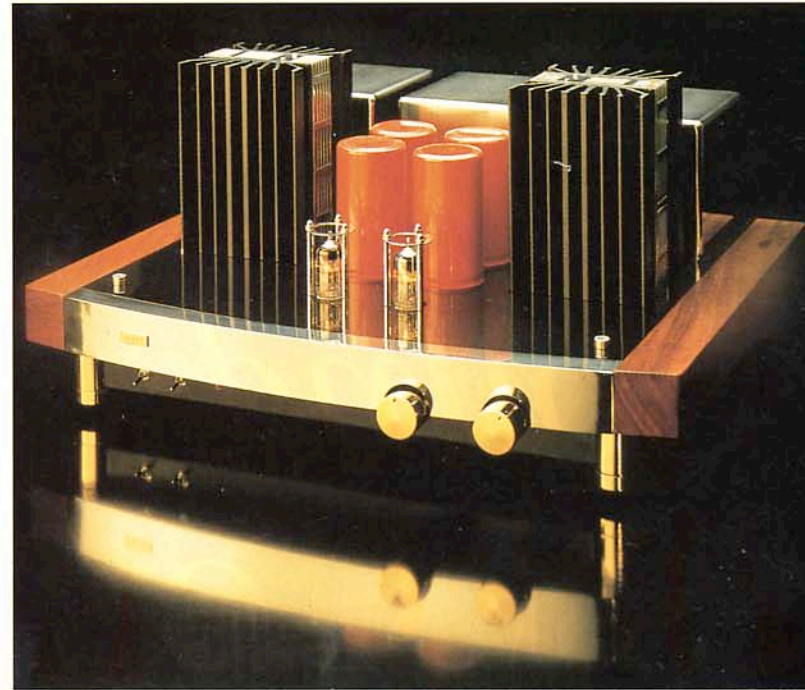
"It seems to take some getting used to."

He doesn't mean the amp has to break in. He means *you* do. (Actually, Richard cooked the amplifier for me in advance.)

Emotionally, the Pathos is the complete opposite of the Audio Analogue Puccini that I wrote about in December, which tries (successfully) to ingratiate with a sweet tube sound, even though it isn't tubed. The Pathos is more Northern Italian than Southern. But if it sounds somewhat cool, I've warmed up to it — in a big way.

Palladio's home turf

Vicenza is the city where the renowned



Pathos Acoustics Twin Towers integrated amplifier

Vicenza, but Palladio designed many buildings in and around town — palaces, villas, churches, and the city's town hall, known as the Basilica. If you tour Venice, as Marina and I recently did, you might want to visit the churches of San Giorgio Maggiore and Il Redentore — two of Palladio's masterpieces.

Palladio aimed to capture the splendor and simplicity of antiquity. His designs have a cool, classic logic that exerted a strong influence on architects ranging from Inigo Jones to Thomas Jefferson.

There's more than a little of Palladio in the Pathos Twin Towers. As you can see from the photo, this is a work of art — a sculpture. Both Gianni Borinato, the chief engineer, and Paolo Andriolo, who created the looks, are to be congratulated. Palladio would be proud.

Like the great renaissance architect, Gianni and Paolo aim for simplicity — a purity of sound and visual design. And just

rewritten the rules of amplifier design. The Pathos Twin Towers is an original.

"Don't listen with your eyes!"

That was John Atkinson's reaction when I started to enthuse over the Pathos Twin Towers.

Ha! An Englishman talking!

Bene, Giovanni — what's wrong with listening with your eyes? What do you think — that hi-fi equipment should be so ugly you want to listen with the lights out? So masculine, military, and intimidating that your wife won't have the slightest desire to turn it on?

Actually, I think JA would be impressed if he saw and heard this amp. And weighed it! We're *not* talking about flashy design with flimsy build quality here. There's substance along with style. Just lift the damned thing. But be careful — you might drop it. Eighty-eight lbs. This heavyweight champ ships in a wooden crate.

Amps by the pound

appear that you're paying a premium. Consider: At \$4950 for the standard edition, the Pathos amplifier weighs in at a very reasonable \$56.25/lb.

For comparison, the Bryston B-60 (\$1495) is considerably more expensive at \$74.75/lb. The Creek 4330R (\$595) looks like a bargain, but tops the scales at \$59.50/lb (still a bargain, though). And the Conrad-Johnson CAV-50 (\$2495) comes in at \$63.38/lb.

All that weight comes from several things.

First, the massive twin heatsinks—the Twin Towers—which are necessary to dissipate the considerable heat from the Twin's pure class-A operation. The Pathos Twin Towers is rated at 35Wpc into 8 ohms, by the way. The amp draws 240W from the wall at all times, and, like all class-A amps, will run even hotter at idle than it will playing music at any volume.

Look at what appear to be three large transformers in the back—that's a good part of the weight. Actually, two of those "transformers" are inductors/coils. That's part of the unique circuit story, which I'll get to presently.

Palladian cages

Paolo Andriolo must have soaked up all that Palladian architecture from childhood. The twin tube rotundas—cages, if you will—out in front are, well... Palladian. Inside reside two 12AX7 input tubes. On the sides, slightly in back, the twin heatsinks soar from the chassis like cathedral towers.

Mamma mia!

Marina watched as Richard and I uncrate the amp. "Oooh," she cried. "*Ochen panraviloe!* (I like it very much!)" Richard could have sold it to her on the spot. Russians love things Italian; especially Russians from Marina's native city of St. Petersburg. Peter the Great hired Italian architects—chiefly Rastelli and Rossi—to design the core of the city. The Palladian influence is very much in view along the banks of the Neva River.

Taking their cue from our pal, Palladio, the three guys from Vicenza have done everything possible to eliminate clutter and to simplify. This goes for the circuitry, too—starting with the fact that this is a "passive integrated." There is no line stage. And—what a blessed relief after struggling to use my new DVD player—there are only two

recessed under the left front corner of the chassis—easy to get at once you know where it is, hard to find if you don't.

The sound of the Pathos Twin Towers is as bracing as a Vivaldi concerto played in a Venetian church.

There is no balance control. No headphone jack. No preamp-out jacks. And only one set of speaker binding posts—but good ones—so biwires will have to double up. You want remote? The standard version with stepped attenuator is remoteless. But two remote versions are available. I'll tell you about those later.

Solid-state punch

I tried the Pathos Twin Towers with a number of speakers, including the B&W CDM1 SE, Triangle Zephyr II, Verity Audio Fidelio, and Audio Physic Step SE. As a source, I used mainly a Micromega Stage 6 CD player.

With the B&W CDM1 SE, the three guys from Vicenza scored decisively over Santo and Fred from Pisa. Okay, Santo and Fred's little gem, the Audio Analogue Puccini SE, costs a mere \$1195—a pittance compared to the price of the Pathos. The Puccini SE is a great buy—you can have it for a song. Or an aria. The Pathos Twin Towers is in a different league, though. At more than four times the price, the Pathos sounds more open, airy, delicate.

And the bass?

This is a tube/transistor hybrid design. The bass is definitely solid-state: tight, taut, with astonishing speed and control.

But the transparency took my breath away.

Not right away, mind you. At first, I found this amplifier a little cool. If Palladio had designed audio products instead of buildings, this is the kind of sound he probably would have aimed for: harmonically pure and, yes, harmonically rich—but not overripe. The ears adjust over time. Mine did, anyway.

My moment of truth with the Pathos

Pathos Twin Towers on your Silver Siggies, JA.

On second thought, nah. A amp that looks this good can't possibly *sound* this good, can it? We wouldn't want to be listening with our *eyes*, now. We wouldn't want to treat ourselves to too much *pleasure*. (I'm sure that Laura Jean LoVecchio Atkinson would flip for the Pathos, though.)

The sound of the Pathos is as bracing as a Vivaldi concerto played in a Venetian church. I can say that, having recently heard Vivaldi's music played in a Venetian church. It's crisp, clean, fast. Few amplifiers, tube or solid-state, are as fleet of foot as the Pathos Twin Towers.

The amp also has spatial resolution in spades. More so with analog, but the sound is open and airy with a well-recorded CD as well. You can hear the sound of the hall. You can hear the musicians breathe.

Some single-ended tube amps impart more richness to the sound. More sweetness, too. But the Pathos Twin Towers is probably more neutral than most of the SET breed—and, over time, neutrality wears very well.

Massed strings are handled particularly well—en masse but individually, too, with no glomming up. Give the Pathos a good recording from a decent source—yeah, preferably analog—and there's a sense, just like you get in a concert hall, of individual instruments playing together.

There is no artificial sweetening effect; you'll need single-ended triode for that. Yet the string sound can be ravishing—when it ought to be. And there is nary the slightest hint of stridency or grain.

The INPOL circuit

I said INPOL. *Not* Interpol. This has nothing to do with European police.

According to the poop sheet, translated from the Italian, Pathos Acoustics "was founded to develop and propagate a new amplification circuit called INPOL (Inseguitore a Pompa Lineare = Linear Pump Tracker)..." The INPOL circuit is patented.

Gianni Borinato, the chief engineer, says he chose tubes for the input stage not to be fashionable or nostalgic, but because tubes still rule when it comes to amplifying high maximum voltage swings with very low distortion. Ac-

Current, of course, is another matter. That's where tubes — we're talking output tubes now — typically poop out.

You do have to remember, though, that the power rating of the Pathos is 35Wpc into 8 ohms. Avoid very insensitive speakers and crazy low-impedance loads, listen at reasonable volume levels, and you may find that the Twin Towers can shake you out of your seat — or at least out of your complacency.

I hadn't realized that the B&W CDM1 SE or the Triangle Zephyr II could go so low. I easily got an extra half-octave of surprise bass extension from both speakers — compared, say, with the Audio Analogue Puccini SE or the various single-ended tube amps I had on hand.

Single-ended

A new amplifier circuit design. Big deal.

I hear your skepticism. After 15 years of writing about hi-fi, I, too, have become yaded — as my Swedish friend Lars likes to say — about new miracle circuits.

But something special is going on with the INPOL circuit. And when I looked into what's actually going on, I thought: No wonder!

For starters, the INPOL circuit is single-ended, not push-pull. Only the input stage is tubed — those two 12AX7s. The output stage is solid-state. There are three — that's right, three — MOSFET transistors per channel, running class-A, single-ended. (For push-pull, you'd need transistor pairs.)

Sr. Borinato uses only NPN (negative-positive-negative) transistors. According to Gianni, NPN transistors sound better than PNP transistors. And when you pair NPN transistors with PNP transistors (as is usually done in push-pull solid-state amps), you *must*

ed feedback can provide considerable advantages, it nevertheless remains an artifice which cannot but have implications on the sonic result in terms of loss of naturalness and 'sharpness.' ”

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could go so low.
With the Twin Towers,
I easily got an extra
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from both speakers.

So how does Sr. Borinato get 35Wpc from three MOSFET transistors per side while running them in single-ended class-A?

He gooses the juice with inductors.

Remember those three “transformers” at the back of the amp, two of which are not? The middle one actually is a transformer — the power-supply transformer. The other two blocks, to the sides, each conceal one massive coil.

The tubed input stage of each channel feeds into a transistor, which in turn controls a large inductor. Each inductor acts as a current generator — goosing the juice in concert with the three paralleled output transistors per side.

According to Gianni, the inductors double the voltage swing, and this doubles the efficiency of the output transistors, making them “50% efficient instead of 25% efficient, as with most pure class-A amps.”

The output impedance, by the way, is very low at a stated 0.07 ohm. Typically, an SET tube amp has a much higher output impedance (1.0 ohm or greater). This will affect the frequency response with certain loudspeakers — boosting the midrange, perhaps, and rolling off the highs. You should have no such problem with the Pathos Twin Towers.

For all its innovation, the circuit is very simple. “The less the signal is manipulated, the more the sound keeps

Any downside to the INPOL circuit?

You can go only so far, power-wise, with this approach before practicality and economics kick in. With class-A, if you want much more power than 35Wpc, you're talking about a great deal more heat — and heatsinking — to go along with it. At 88 lbs, the Pathos Twin Towers is already about as heavy as you'd want a stereo integrated amp to be!

For various reasons, the circuit doesn't work so well at higher output levels. You're asking for too much voltage swing from the input tubes, the inductors can goose the juice only so much, and so on. So 35Wpc is about it.¹

You'll note that the Pathos Twin Towers is not power-rated into 4 ohms. I wouldn't let that scare me — I had no difficulty driving such nominal 4 ohm speakers as the Audio Physic Step SE and the Triangle Zephyr II. Still, I'd avoid insensitive speakers, particularly those whose impedance drops much below 4 ohms.

A real sesame open-up

Lars visited last night and had a listen. He was impressed by the Pathos Twin Towers. He seemed to enjoy himself!

“Transparency like that is a real sesame open-up,” he opined.

“A sesame open-up?”

“I said something wrong?”

“It's ‘open sesame,’ I believe.”

“Not in Swedish.”

For me, the Pathos amp represents an exciting alternative to single-ended triodes — a real sesame open-up! Did I say alternative? Perhaps the SET tube amps should be considered alternatives to the Pathos Twin Towers.

Why do SET amps, as a rule, sound so transparent, so live, so immediate?

For several reasons. SET amps operate in pure class-A. There is no “notch distortion” switching into class-A/B. There is no splitting of the waveform — that's what single-ended means. And with most SET designs, there is no overall negative feedback — or you can dial it out. These are the very same reasons the Pathos Twin Towers sounds the way it does!

And consider the advantages *vs* SET. There are no expensive (up to \$800 per matched pair) output tubes to replace. You're much less limited with regard to

Contacts

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Hi-Fi Forum, P.O. Box 570, Chazy, NY 12921; or P.O. Box 8, 1217 Greene Avenue, Montreal, QC H3Z 2T1, Canada. Tel: (800) 771-8729 (from US), (514) 932-

Spatial resolution. The freedom from listening fatigue.

Have you heard the *Sing We Christmas* CD (Teldec 94563-2) by the vocal ensemble Chanticleer? The sense of space on this recording is superb—as is the overall resolution. With the Pathos Twin Towers, every syllable was clearly and cleanly reproduced—almost as if live—and much in the manner of a great single-ended triode tube amp. This is *not* the rich, romantic SET sound, though. Even running single-ended with no negative feedback, solid-state output devices are not going to sound like a 300B or 2A3 output tube. The Pathos Twin Towers may be more neutral, though.

Marina and I just returned from a concert by the New York Wind Ensemble. The group's wonderful bassoonist, Frank Morelli, is featured on a number of recordings by the Orpheus Chamber Orchestra. I decided to compare Mr. Morelli live with Mr. Morelli on disc, via the Pathos Twin Towers. I can tell you that the sound is very close to what I just heard live. In fact, maybe this is as close as it can get.

Twin Towers has a stepped attenuator with 23 steps in 2dB increments. Each of its 23 positions has only two resistances (1% metal layer) in the audio signal path.

**The Pathos Acoustics
Twin Towers amplifier
is an original,
a sonic and
visual masterpiece.**

A remote-control version is available for the same \$4950, but no one is pretending that its sound quality is quite up to that of the stepped attenuator. For that, you need the optical Reference Remote edition (\$5700).

An onboard phono stage used to be an option but no longer is, since most people who wanted phono opted for Pathos' In the Groove outboard phono stage (\$1195). I didn't have a chance to groove on it myself, but I did do some analog listening through Tim de

Palladio rewrote the rules of architectural design. Gianni and Paolo rewrote the rules of amplifier design. They started with a clean sheet of paper. The Pathos Twin Towers appears to represent a completely fresh approach—something all too rare in hi-fi products.

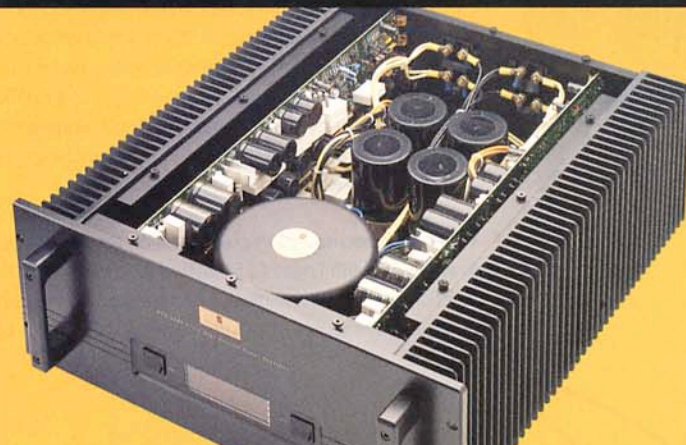
It succeeds brilliantly—more so than any of the other single-ended solid-state amplifiers I've heard. Like any great piece of hi-fi gear, it succeeds on its own terms. It is very convincing. I can't point to any weaknesses—except, perhaps, the relative lack of liquidity when compared with certain single-ended triode amps. But, like I say, the Pathos may be more neutral.

If you're an SET fan, you still may prefer the romance and the richness of a 300B or a 2A3—or of a great push-pull tube amp like the Conrad-Johnson CAV-50, for that matter. But the Pathos Twin Towers is something you should hear...and see. It's an original, a sonic and visual masterpiece.

Marina and I are purchasing the Reference Remote version for use in our living room. ☒

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