

## Review: Pass Labs X250.8 Stereo Amplifier

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by John Richardson

We all know what they say about youth, right? Yep, that it's wasted on the youth...

Now well into middle age, I often like to think back to the trials, tribulations, and good times spent in my younger days. The people I hung out with, the stuff we did, and of course the audio equipment I yearned for but never had the money to buy. Let's go back in time a bit, shall we, say to about 1991 or 1992. I was a graduate student burning the candle at both ends, but still finding time to pursue the audiophile dream to the extent that I could, given my pittance of a stipend. My wife had a good job, but she was smart enough not to toss hard-earned money toward my habit... And she still hasn't lost that good sense.

Back then, what I really lusted after was one of those "super amps" you'd see on the cover of *Stereophile* and *TAS*, back when you could browse these publications in real brick-and-mortar high-end audio salons. Krell, Levinson, Threshold ... Ah, my mouth still waters over those massive chassis, huge heat sinks, big iron... I tried to justify to my frugal better half that the warmth thrown off by one of these monsters just might be sufficient to heat the living room in our small house and thereby save us money in the long run, but she never did buy into that argument.

To feed my lust, I had the good fortune to make friends with the proprietors of several high-end shops in the area. I think back to how generous these guys were to me, given that they knew I didn't have two dimes to rub together. They'd let me borrow gear for a few days, and sometimes for up to a week to try out in my system. That's how I got Krell and Threshold amps into my house, and how I really fell in love with Big Iron. Compared to the lowly B&K ST-140 I had in those days (no slouch of an amp, mind you), these monsters grabbed hold of my speakers and didn't let go. I heard details I'd never heard before, sound-stages popped, and there was bass! Loads of bass, so much I could wallow in it. What kid doesn't like bass? I was happy as a clam, and hooked to boot.



My day of reckoning came when one of my proprietor buddies offered me a close-out deal on a Bedini BA-801 stereo amp. Not quite a Krell or Threshold in sheer size or grunt, it still ran in class A, and was cool-looking. He'd dropped the manufacturer and couldn't get rid of the thing as dead stock, so he offered it to me at his cost. I didn't have the money, but he let me pay it off over time. I even got a part-time job in the evenings to pay it off faster, and I refused to pick it up until it was paid for. In the meantime, he hooked it up to his main system when I came for visits so I could hear it and keep my appetite whetted. God almighty, that amp sounded glorious! It was my main amp for nearly 15 years, and I loved it like a child. I was sorry to see it go when I finally decided to sell it, and of all the audio gear I've let go of over the years, it's the one piece I still think about and wonder where it ended up. In the meantime, I've had other wonderful amps, including a full class A vintage Threshold that did me good service right up until last year when it too was finally replaced.

Yes, I have a soft spot in my heart for big, heavy, solid state amps. I especially love the warm illumination of the music offered by those biased heavily into class A. They just sound right to my ears and always have.

I bring all of this up because each of us has a history, and it's that history that has formed us into the audio enthusiasts we are today. So when offered the chance to spend some time with the new X-250.8 amplifier from Pass Laboratories, I knew I was in for a trip down memory lane. Let's just say that this amp is everything I lusted for back in my youth and more.

# The X-250.8

For starters, the X-250.8 is the next-to-largest stereo amp in the newish Point 8 line offered by Pass Labs. As the name suggests, it puts out 250 watts per channel into an 8 ohm load, which doubles to 500 watts per channel into 4 ohms. Its gain is 26 dB, which I found to be more than sufficient when using the passive volume control on my Antelope DAC. This amp is Bad Ass, emphasis on capital B and A. It's big and heavy, almost too heavy for an old guy like me to lug around. I'm glad I have a 16-year-old kid to help out when needed. In fact, I'd suggest you have a helper on hand when the box shows up and it's time to unpack.

The amp is beautiful in a techie sort of way, with the brushed aluminum faceplate, big blue back-lit meter, and tasteful but-I-mean-business heat sinks. I'd have killed to have this thing as a younger adult; I'd probably do only slightly less to have it today. It's bulletproof, tough-looking, and exudes excess in a similar way that those big diesel trucks that haul boats down the interstate do.

Like one of those diesels, the X-250.8 is probably big-time overkill for me — though that *doesn't* mean I couldn't really enjoy all it had to offer. Sometimes knowing that the horsepower is there when needed can be really comforting, even if you know you'll probably never use it. My ATC SCM 19 (version 2) speakers are notoriously inefficient power drains, but they were child's play for the Pass Labs amp — they weren't power-limited in any way when the X-250.8 was in the house.



Other useful features? Well, the amp has really nifty ratcheting binding posts that grip down hard but don't let you over tighten a spade lug; these will readily accept banana terminations as well. The X-250.8 accepts both single-ended and balanced inputs; just be aware that there are jumpers that must be removed if you choose to go balanced, which are then re-installed before going back to RCA terminations. The main power switch is on the rear panel, but the amp also has a standby switch on its front, just under the meter. I kept the amp powered up at all times via the mains, but often switched into standby mode after a listening session to save on power and reduce the heat output. Even from standby, I gave the amp a good half-hour minimum of warm-up before doing

any serious listening. Other than that, keep in mind that the amp does get quite hot during use and should be placed in a well-ventilated environment.

As a general rule, I have preferred to own smaller amps of lesser power. My Bedini put out 70 watts per channel, and my Threshold only offered up 60 watts, both full class A. The REDGUM integrated amp I often use is good for about 100 watts per channel. These have all worked quite well because my speakers, in general, have been reasonably efficient (e.g., 90 dB or better), and I tend not to listen at high levels. Further, I have always been of the belief that more powerful amplifiers tend to have less finesse, thus making them sound a bit ham-handed and rough around the edges. My philosophy changed a bit when I moved toward the less than efficient ATC monitor speakers I mentioned earlier. At about 84 dB efficiency, these presented a challenge for amps such as my REDGUM; as a matter of fact, the speakers could easily send that amp into thermal distress, especially on a warm day. I needed a more powerful solution, and I knew it. My fix was to purchase a pair of Merrill Audio's Class D Thor monoblocks, which at 200 watts per side, drive the ATCs with no problem watt-so-ever.

## Set-Up and Initial Listening Impressions

For those who ultimately wish to purchase a brand new Pass Labs amp: please be advised of the following issues. First, the amp I got was right off the assembly bench. When I initially plugged it in and turned it on, it gave off a raunchy chemical odor, probably from some compound sprayed onto the circuit boards prior to assembly. This odor persisted for well over a month, even when I kept the amp on for long periods of time. It didn't particularly bother me, as I'm a chemist by training and used to odd smells. Did I mention that I have a teenage son? Yeah, that helps too in terms of adjusting to such unpleasantities. Second, the amp needs a long time to break in, and I mean a long



time. Scot Hull told me to be patient until around 300 hours, or was it 600? Either way, the amp sounded pretty good fresh out of the box, but it definitely got better, a *lot* better, as time went on.

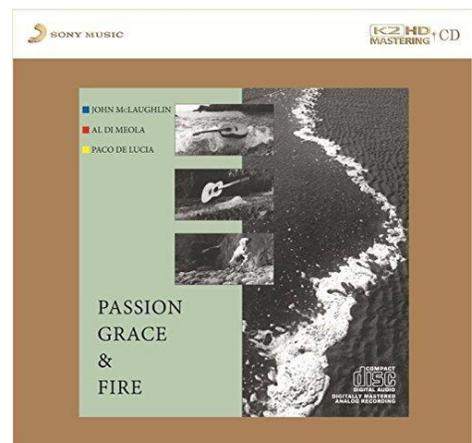
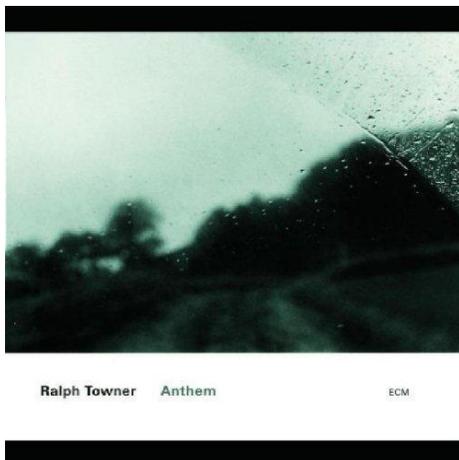
So hold your horses. And one more thing. Don't obsess over the meter and its function. In my experience, it's nifty and cool looking, but it never did anything. Not one damned thing. The needle just sat at about the 11 o'clock position and never so much as twitched, even when I cranked the volume and put my noggin right up against the little window to get a better view. I've read that it measures bias current, which changes as the amp leaves class A and transitions over to class AB operation. If that's the case, I presume to have been experiencing class A operation pretty much the whole time, and that's a good thing when it comes to sonic purity.

I won't go through the perambulations associated with the break-in phase, but rather focus on the sound of the X-250.8 later on in my time with it. As expected, I really like this amp. It demonstrates the concept of the "velvet fist" to a "T" as it has loads of power in reserve when needed, but possesses at the same time the precision and finesse of a skilled ballerina. Yep, it can point its toes, go into a quick spin, and then stop on a dime. As expected from an amp operating primarily in class A, the X-250.8 is smooth, yet detailed, with a lovely sense of luminosity exposing each note. What I mean to describe here is natural warmth of tone, as if illuminated from within to expose its full natural beauty, but without causing it to become artificially etched in any way. This is a hard feature of musicality to reproduce, and I have heard it most often from very good single-ended vacuum tube amps and low-powered class A solid state amps, both of which tend to crap out at high volume with less than efficient speakers. Add this sonic gracefulness to the power reserves of the X-250.8, and the result is pure adrenaline-rush type audio excitement.

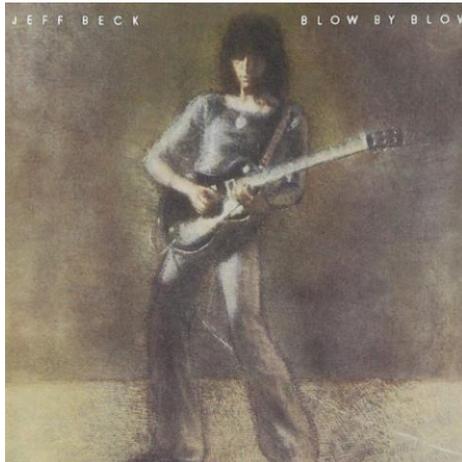
Of course, the big Pass Labs amp can be gentle and beguiling when called upon to do so. Listening to Ralph Towner's album *Anthem* (cd, ECM), I hear the subtle inflections of the solo guitar, fingers against strings. This is a great just-before-bed album that puts me in a sleepy, relaxed mood every time I hear it. I'm hearing lots of harmonic layering along with the velvety impact of strings vibrating against air. Towner's guitar is locked in place, floating dead center between the speakers, and just behind the baffle plane. Once drawn into the album, I rarely if ever hit the pause button, and listening through the X-250.8 was no exception; if anything, it made me savor the music to an even greater degree than normal thanks to the tonal purity and precision of the reproduction. Furthermore, much of the mood of this album comes from the minute and fleeting shifts

in dynamics that make solo guitar listening so much fun. The amp captured these moments with aplomb, keeping me mesmerized in the listening experience.

Speaking of guitar recordings, another one I frequently use for evaluation of audio gear is the 1983 Columbia studio collaboration of John McLaughlin, Al Di Meola, and Paco De Lucia entitled *Passion, Grace, and Fire* (Columbia LP, digitally archived). I chose this album partly because its title pretty much sums up not only the music, but also my evaluation of the X-250.8 amplifier. All three guitarists perform together, filling the soundstage with a whirling, twirling, and highly interactive feast of strings. It's fun and sometimes challenging to try to pick the individual performers out of the sonic melee. Each plays a different instrument, with McLaughlin and De



Lucia using gut strings while Di Meola plays with steel strings. A really good system should allow the listener to not only pick out each guitar in its own space, but also differentiate amongst the instruments themselves. Here, resolution and harmonic purity are required to achieve this goal. My favorite cut is "Orient Blue Suite," written by Al Di Meola. Here, the big amp glows with all of the passion, grace, and fire extant in this cut, letting me hear the power of the sound coming off the wood body instruments, but with the finesse and grace of these three guys playing some of the best flamenco/jazz fusion type stuff I could imagine. Fire? Heck yeah! These dudes really go to town, and I can't imagine my own personal concert to be much better than that afforded by my system with the X-250.8 doing the amplification honors.



Good rock recordings are also imbued with that warm, glowing, effervescence. Be it Jeff Beck's classic *Blow by Blow* (Epic LP, digitally archived) or plain ol' Beck's languid *Sea Change* ([HDTracks download](#)), I found myself ever more immersed in the musical experience. Was it the lovely tonality, or even deeper layers of detail and resolution coming through? Dunno, but I'm really liking it. Nothing sounded thrashed, strained, or washed out, as many rock recordings often do to my ears. What I felt was that underlying sense of refined power backing up my aural experience and letting the speakers sing with nary a concern whatsoever, regardless of whether I was listening at low

volume late at night or tweaking the knob upward to more dangerous levels. It was almost eerie to hear Beck's haunting voice in *Sea Change* reverberating through the recording venue; I don't think I'd noticed this effect to such a degree before, which speaks volumes for the X-250.8's ability to coax increased resolution out of the recording. I felt enveloped by the music, yet I could easily pick out small details in three-dimensional space, as well as individual instrument lines. What really stood out, though, was the tonal and harmonic "rightness" of what I was hearing; it was really quite addicting.



## Comparisons: Class A/B vs. Class D

The main comparison I wanted to make was that between the Pass Labs X-250.8 and my Class D Merrill Thor monoblocks. Design-wise, the two amps probably couldn't be more different. Beside the bulk and metal of the big Pass Labs amp, the Thors looked positively wimpy. Of course, they represent the best aspects of Class D operation, which stresses efficiency and cool operation while preserving high power output. While I admire the design goals of class D amps, many of us, myself included, have wondered about whether they represent a mature technology at this time, or still have a ways to go. My concerns have been mostly allayed by my experience with the Merrill amps, which I have now lived with for the better part of a year. They are an excellent match to my ATC speakers, which is why I bought them in the first place. On the other hand, I think most of us are in agreement that traditional solid state amps of the class A or class A/B variety are a pretty mature technology.



I have to admit that I've been curious to see how the Merrill Thors would stand up against a really good modern class A/B amp such as the X-250.8. Power-wise, I felt that the comparison would be fair, as neither amp has any trouble driving my ATC speakers. Of course, it is worth noting that the Merrill monoblocks cost \$4800 for the pair, whereas the Pass Labs amp will set you back exactly double that at \$9600.

In the end, I'd have to admit that the X-250.8 is the better amp, but not by leaps and bounds. The two amplifiers actually share a lot of sonic similarities and attributes; ones that should benefit most listeners. First, they are both quite smooth in character. There's no nastiness anywhere in the frequency range, with both boasting a very natural, full, and lovely harmonic presentation. Both provide that nice, but not overly nice to the point of sounding fake, sense of warmth that music exudes when heard live. Nothing seemed overdone or gimmicky in any way with either amp. The same can be said for imaging and soundstage representation, with both amps giving a really nice sense of three dimensionality with performers floating free of the speaker boxes with plenty of

space around them. Differences were apparent, but not what I would call detrimental to either amp. At this level, it really comes down to good system matching and personal preferences.

The major difference I heard between the two designs was that the Merrill Thor seemed to homogenize the music just a bit when compared to the Pass Labs amp. Here, I mean to imply that the Thor tended to possibly smooth out some harmonic glow or sonic colorations that are part of the actual musical tapestry. In a sense, it tended to make everything sound really nice, possibly a bit smoothed over, but without giving up anything in the way of detail and resolution. This in and of itself is not necessarily a bad thing, as it can help to make some otherwise less than listenable recordings sound quite good. I probably wouldn't have even noticed this trait if I hadn't compared the excellent Thors against the X-250.8. Another way of stating this observation is that perhaps the Merrill amps didn't quite illuminate the performers from within quite as well as the Pass Labs amp managed to do. Given the differential in price, such minor differences should really come as no surprise. Personally, I can say that while I was mightily impressed with what the Pass Labs X-250.8 could do, I'm not ready to give up my Merrill Thors, which are in and of themselves a real work of art, and even more appreciated as warm weather approaches.

As a final exercise, I really wanted to try to make the Pass Labs amp work a bit to earn its keep here in my house. While it never broke a sweat dealing with my ATC monitors, I figured that I might be able to challenge it by rolling in my Shahinian Double Eagle subwoofer. This bugger is the bass unit of the famed Shahinian Diapason full-range speaker, and it's a big transmission line loaded monster with two 8-inch drivers and an equal number of passive radiators. Oh, and it's not powered. The Double Eagle is designed to be driven by the same amp that drives the midrange and treble drivers of whatever speakers are being used with it. While claiming to take some of the bass strain away from the ATCs thanks to its passive internal filter, the Double Eagle is a bit of a bear to drive in and of itself. Well, I had the X-250.8 driving this whole assembly, and sometimes to pretty insane levels. The sound was definitely full-range and a heck of a lot of fun to experience (think orchestral or stadium rock), but what really struck me was the effortlessness of the big Pass in accomplishing this task. The needle on the meter still didn't want to move, though I *swear* I thought I saw it twitch on a couple of occasions. Or was it just an illusion?

## Final Thoughts

It's really not hard for me to summarize my thoughts regarding the Pass Labs X-250.8 stereo amplifier. It's probably the best sounding power amp I've had the pleasure of using in my system up to this time. Granted, I haven't heard that much of the real "megabuck" stuff here in my home, but I've still had some really nice (and pretty expensive) amps pass through here. The X-250.8 just does a great job of checking my Important Boxes when it comes to producing good sound. It's got seemingly unlimited power reserves, coupled with grace, passion, and nimbleness. It throws a huge soundstage, both deep *and* wide, and places plenty of air around instruments and vocalists. Further, with that limitless sense of power I mentioned, there's true dynamic slam, but a nice sense of dynamic touch which really served me just as well for much of the low level listening I prefer. Rest assured, however, that the X-250.8 doesn't mind having the volume turned up a bit from time to time! Just do it; you'll be glad you did.

I've saved the best for last... The thing I love most about this amp is its ability to really cast a sense of aural illumination on the notes that make them so much more than mere notes. What you get here, my friends, is music reproduction of the highest order indeed.

Of course, \$9600 is a lot of scratch for most of us here in the real world, so unfortunately an amp like this is probably still a bit out of reach for me... Well, at least for now. Don't worry. I'll be keeping an eye on you guys at Pass Labs. Watching closely, indeed.

## Affiliated Equipment

- Amplifiers: Pass Labs X250.8, Merrill Audio Thor
- Digital Source: Antelope Audio Zodiac DAC powered by a custom linear power supply by YFS (Your Final System); Sound Devices USBPre2 audio interface serving as a usb to S/PDIF converter, also with custom YFS linear supply; Mac Mini with Channel D Pure Music Audio Engine.
- Power Conditioner: Spiritual Audio VX-9
- Cables/interconnects: Darwin Cables, Tel-wire, Harmonic Technology
- Power cables: Core Audio Technology, Tel-wire, Merrill Audio
- Speakers: ATC SCM19 version 2, Shahinian Double Eagle Subwoofer
- Speaker stands: Sound Anchors

## About the Author



John Richardson has been interested in music and audio since his early teen years, or stated another way, as long as he can remember. He has been involved in the audio community in one way or another for around 20 years and for the last five has been a regular contributor to the on-line magazine *StereoMojo*. There, he has been the resident computer audio guy and “value conscious audiophile” (aka “cheap bastard”).

John is also a professor of analytical chemistry and forensic chemistry consultant in his spare time when he isn't listening to music or evaluating gear. He tries to fit in plenty of time to hang out with his two teenage kids, his lovely wife, and the family cat, though only the cat also seems to harbor audiophile tendencies. John also enjoys running, cycling, golfing, hiking, or just about any other activity that sucks up time and money.