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Pass Labs X250.8 Solid-State Stereo Amplifier

A powerful, detailed and delicate sound from the Pass Labs X250.8 amplifier.

Review By Anthony Nicosia



Not too long ago (in a galaxy...), during July 2012 actually, it was my privilege to review two products from Pass Laboratories. Specifically, their very impressive XP-10 preamplifier and outstanding XA 60.5 monoblock power amplifiers. Both were a joy to have in my audio system and were sorely missed when returned to the factory after my standard two month review period. So when the opportunity arose for me to borrow their new .8 series amplifier, the X250.8, there was absolutely no hesitation on my part to jump at the chance to again audition a Nelson Pass design. So one might ask, what is the deal with the .8 amplifiers and how does it differ from the .5 series? Below is a statement issued by the company in response to such a question.

"We're excited! Because we're celebrating our 23rd year by presenting the best amplifiers we've ever made. Our New Point 8 Series, X.8 & XA.8, operate "higher" into Class A than ever before and bridge the gap between measured performance and subjective experience. Designed for audiophiles by even more demanding audiophiles, they invite listeners into the music as never before. Even more, they represent a summation of our expertise in designing amplifiers, while elegantly expressing our philosophy of more amplifier, more progress and more music.

Seven years in the making, the Point 8 Series demonstrates our belief that the best products must be carefully adjusted until their components operate in harmony – then subjectively fine-tuned. Not satisfied with measurements alone, we put the amplifiers' state-of-the-art engineering through an

extensive, rigorous listening process using six different sound systems to deliver peak musical experiences. As a result, the amplifiers glow with innovation. For example, the output stages of the larger Point 8 amplifiers bias more deeply into the Class A operating region. Their larger push-pull Class A operating envelopes deliver low distortion and additional loudspeaker control at ordinary listening levels. Plus there are higher power MOSFETs, many more than usual, to thus increase the amplifiers' Class A operation while running at fractions of their stated specs to enhance both performance and reliability. Still not content, we uniquely molded each model's front end to the specifics of its output stage so that the nine amplifiers' front ends vary in size, voltage, bias current, dissipation, and single-ended vs. push-pull bias distribution. The directly coupled front ends, which house the input and voltage gain stages, maximize each model's output stage performance, while imparting to each model its own subtle and unique sonic signature. There's more – including larger power supplies, more storage capacitance, more precise reference voltages, and new, larger heat sinks – but suffice it to say that with the Point 8 Series, we move beyond cookie-cutter circuits." One of the things I found interesting with Pass Labs amplifiers from my previous review was that their meters reflect current draw or bias, rather than a display of power output. "The meters on our amplifiers are different. They reflect the current consumption of the amplifier, and when the amplifier is operating, they don't go down to zero like the meters on other amplifiers. This is because the electrical current consumption of our circuits has a fairly high value at all times, a property called the bias. The bias current runs through the amplifiers at a minimum value, determining the class of operation – Class B, Class AB, or Class A. Class B has no bias current, Class AB has a moderate bias current, and Class A has a high bias current. Class AB push-pull amplifiers are hybrids between Class B and Class A. Class AB run Class A at low power levels, and become Class B amplifiers at output currents determined by the bias."



The X250.8 amplifier is a Class AB design that runs Class A up to 25 Watts into 8 Ohms at which point it moves into Class B where it peaks out at 250 Watts into 8 Ohms, while doubling down to 500 Watts into a 4 Ohm load. My Wilson Audio 5.1 Watt/Puppy loudspeakers have a nominal impedance of 4 Ohms along with a nominal sensitivity of 93dB/W/m making them fairly efficient to drive. This sounded like a great match with my Watt/Puppy loudspeakers being fed some very clean Class A amplification for most of my listening, yet holding all that powerful Class B power in reserve for times when needed. While Class A amplification just simply sounds better, having an amplifier run Class AB is also good as it generates more power without generating all that additional heat pure Class A amplifiers are known for. Pass Lab amplifiers have been said to run "hot to the touch" as they have themselves stated or about 23 degrees centigrade above ambient temperature (approximately 70 degrees Fahrenheit). That would put the amplifiers temperature at about 93 degrees plus or minus depending on your room's environment.

One should be careful when touching the amplifier as it might run too hot for you put your hands on for any length of time, although I am not sure why one would do that. During its stay with me it never did get too hot to touch, as it sat on the floor well ventilated and not enclosed in any cabinet. Keep in mind the temperature in the small town in Northern California where I live near the ocean was also quite moderate and therefore so was my listening room's environment. It is a habit of mine to either place an amplifier on the floor or atop my audio rack so that air can easily circulate around it, whether a tube or solid-state amplifier makes no difference to me as I believe in providing all my amplifiers with plenty of air circulation.

Note also that the XA 60.5 mono block power amplifiers I had previously reviewed also never got too hot to touch in my listening room. While the factory recommends a 24-36 hour break in time period they also state that the amplifiers sound will improve the longer it is left on. I found that to be true and around the hour mark seemed like the biggest difference felt by me which is where the notes for this review took place. While that hour mark seemed to be the sweet spot, never did the amplifier sound unpleasant in any way even when first turned on, although true to factory recommendation the sound did improve with longer listening sessions.

Like other Pass Lab gear the X250.8 sports a front faceplate made of billet aluminum and with its one large recessed display meter sporting blue lights, looked absolutely stunning. There is also a recessed line on both sides near the bottom of the amplifiers faceplate leading to the center where there is a stand-by button and the word "PASS", which is also recessed into the faceplate. This is a nice design concept which I found quite pleasing to look at and to show off when friends dropped by to listen to music. While a nicely laid out faceplate does nothing for the sound it certainly is a pleasure to look at and there is nothing wrong with that. Unlike with my review of the XA 60.5 mono block power amplifiers, the cooling fins on the X250.8 do not point upwards. Rather they are in the more traditional sense reaching out left to right while not exceeding beyond the reach of the front faceplate.

Looking at the rear of the unit there are both balanced and unbalanced input jacks. If you are using the unbalanced RCA inputs there are gold input jumpers provided by the factory that are necessary to use, so do not throw them away when you remove them while using the balanced XLR inputs. A power on/off switch is located on that back panel (it was always left on by me so as to use the stand-by button on the front faceplate to start the music) and an AC outlet for either a factory supplied power cord or a compatible one of your own choosing of course. The factory cable was robust enough and provided

good sound but of course you may experiment at your own risk. As for loudspeaker cable connections the factory has it setup so that you can use bare wire, spade lugs or banana connectors. When comparing the X250.8 to the X250.5 series the .8 has higher input impedance, lower noise, lower feedback and more bias on the front end and output stage. They also have more output stages (56 output devices vs 40) and larger heat sinks. It was pointed out to me by Nelson Pass that "Also worth noting is the .8 version has been tweaked for a slightly different harmonic characteristic, with more second harmonic than the .5". These are just some of the reasons the 250.8 is set up to sound better than the less expensive .5 model, although the .5 is in its own right another great amplifier from Pass Labs.



Power, Detail And So Much More

Since the company recommends a 25 to 35 hour break-in period, 35 hours seemed like a reasonable point at which to start my initial listening sessions. During those 35 hours, my Magnum Dynalab tuner was left on, tuned to my wife's favorite radio station of course, while I left the room rarely to return until the appropriate time period was at hand. While it does not seem necessary to go into details about my impressions during the break-in process it should be noted that when initially set-up this amplifier sounded quite good and never was a disappointment even when cold fresh out of the box, but as time marched on it sounded increasingly better still. Being a tube type of guy a solid-state amplifier is still always kept close by as they can do things tube amplifiers have a harder time with, at least the ones my budget allows for.

The really good solid-state designs such as the X250.8 has low distortion, takes good control of that deep bass, runs quiet and produces a musical experience full of wonderful detail. With all the power the X250.8 can produce, driving most loudspeakers with relative ease is a simple task and one need not search for efficient loudspeakers to match it to. There have been times when upon purchasing a new set of loudspeakers it was necessary for me to find a different amplifier as the lower powered tube

amplifier was not able to adequately drive them. Had an X250.8 been on hand that problem would have been eliminated for with its great power comes great flexibility.

After the initial break-in period I reached for the new SACD from 2L, *Astrognesia & Aesop* [2L-111]. Here it sounded very spacious as the loudspeakers seemed to disappear from the soundstage leaving only the orchestra in its place. Wilson Audio Watt/Puppy 5.1 loudspeakers are known to be quite revealing of the equipment put in front of them and with the X250.8 this was no exception. The 5.1's now came alive with clarity, dynamics and a wide soundstage, sounding very good indeed. Moving on to the Air Supply CD, *Live in Hong Kong* [Evosound EVSA275A] this Pass Labs amplifier almost knocked me off my listening chair as "Two Less Lonely People" had never sounded so clear and open in my system. One thing that surprised me most was the depth of soundscape when the audience either applauded or sang along. The X250.8 was quite tube like in its ability to recreate a good sense of presence and its powerful dynamic impact put it over the top with regard to reproducing an incredible listening experience.

While tube amplifiers tend to somewhat soften music this amplifier was detail oriented in a very good way. I was expecting the music to give into at least some solid-state edge as the volume was raised but as far as I would take it the sound never did give way to such a situation. In fact the louder my system played the more impressed I was with its performance, not that it did not sound well at lower levels but that dynamic impact ability was just so addicting it was a bit hard for me to lower the volume. As tempting as it is, one should of course be prudent to make sure not raise the volume too loud as to damage ones hearing and I am very mindful of this as you should be.

The duet of Buddy Guy and Susan Tedeschi on "Too Many Tears" from the CD *Skin Deep* [Silvertone Records 86697-31629-2] was another pleasant surprise as the two performers could definitely be heard with an appropriate distance between each rather than any overlapping of vocals. I very clearly heard two distinct individuals close yet separate within their own space during this beautiful intimate performance. The soulful guitar riffs of Buddy Guy and Eric Clapton on "Every Time I Sing the Blues" from that same CD was masterful as the X250.8 drew me deep into the music. One last note from this album was the feeling of depth given to images of performers onstage, especially behind the loudspeakers which is not too often accomplished in my room. This effect should not be overlooked as it added so much to the music and differentiated it from other amplifiers of lesser ability.

A CD quite familiar to me and so worth throwing into the mix here was *Yo-Yo Ma & Friends, Songs of Joy & Peace* [Sony Classical 88697-24414-2]. Here we find a wide variety of musical passages from James Taylor to Diana Krall and Sergio Assad to Wu Tong, plus much more. The small details heard coming from within the cello of Yo-Yo Ma and the ukulele of Jake Shimabukuro on "Happy Xmas (War is Over)", was emotionally moving as it added great realism to the overall performance. That perceived intimate interaction between instrument and performer drew me more deeply into the music in a way that was quite pleasing. Let us now take a trip down memory lane with some good old rock and roll from the CD *Greendale* (Reprise 48533-9), with Neil Young and the band Crazy Horse. This is a great album that was played with all the power and realism from an equally great amplifier, the X250.8. On "Be the Rain" someone is heard speaking through a megaphone to a group of protesters. With the X250.8 it sounded as if you were actually there within the group experiencing first-hand the demonstration, taking me back to the protest movements of the 1960's and 1970's.

The strong rock beat from the band Crazy Horse, background vocals from the Mountainettes, along with guitar work and vocals from Neil Young make for one great rock classic. In fact it was hard not to want to get up and dance along with the song as every individual's contribution could be clearly heard playing in unison for the good of one and all. As for the decay of the final guitar cord at songs end, it provided a fitting finish to the album leaving one wanting even more and so play it over again and again I certainly did. What more can I say but that the Pass Labs X250.8 got it right once again. For those of you, and let us hope there are many out there, who love vinyl records it was time to turn off my CD player and fire up the turntable. The Wolfgang Mozart Violin Concertos 180 gram vinyl recording from 2L [2L-038-LP] is a wonderful album to own. Spinning this record with my VPI Classic 3 turntable, Lyra Delos moving coil cartridge fed into a Musical Surroundings Nova Phonomena Phono Stage (with new custom factory upgrades), powered by the X250.8 transported me to vinyl paradise. It did more than just give me a sense of being in the Selbu Church in Norway where it was recorded. The sense of spaciousness within the church was there yes, but so were the small intricate details of the sounds of violins playing. It appears one can have their cake and eat it too, given the right audio equipment and environment. Traffic's The Low Spark of High Heeled Boys [Mobile Fidelity Sound Lab MFSL 1-209] Special Limited Edition 200 gram pressing was next up. On "Hidden Treasure" the stark realism of the recording was amazing and the X250.8 was as quiet as one would expect from such a world class amplifier. Tube amplifiers can be wonderful but this combination of power, finesse and silence was just oh so nice. Truth be told it was all rather addicting. Everyone within the soundscape was so easy to identify as to the space they occupied and the sound of the natural timbre of instruments.



Finally it was time to wrap things up with a listen to one of my generation's most favorite groups, The Beatles. Out came my original vinyl mono recording of Something New [Capitol Records T 21080]. What struck me most that have yet to be mentioned was the sound of vocals. Some amplifiers just do this right and here with the X250.8 everything worked beautifully. On "Things We Said Today", Paul McCarthy sounded as if I were sitting up close in a small cabaret where I was able to hear him in full detail. Again the loudspeakers appeared to disappear with the "boys" playing in the space just ten feet before me.

To really enjoy The Beatles you have got to get the speed just right and with this setup everything was very enjoyable as song after song got my feet a tapping and my head a bobbing. Turning now to their Abbey Road [Apple SO-383] vinyl recording of "I Want You (She's So Heavy)" this Pass Labs amplifier was able to flex some more of its muscles as the song yearns to be played loudly. At seven minutes forty nine seconds this is one very long vocal and jam session that at the end just stops cold and abruptly, which is quite beautiful really. Playing this song at high realistic volume levels showcased the X250.8's ability to play without an edge of harshness and added to the songs beauty.

Summation

As with other Pass Lab products, it has been my pleasure to experience the X250.8 as it was another great performer! Fit and finish of the product is excellent and in keeping with the quality of sound the amplifier was able to reproduce when placed within my system. Soundstage depth behind my loudspeakers was a surprise that I did not expect and added a welcomed dimension to performances that were already a pleasure to listen to. While drawing on 25 pure Class A Watts most of the time, when it was needed to move into Class B with all of its 250 Watts this amplifier never sounded harsh nor lost its "magic". Intricate details found on the recordings were clearly defined as was the sense of a performer's individual space on a wide soundstage, all this plus dynamics to die for. There really is not anything I can fault with the X250.8 as it satisfied me on so many levels and exceeded my expectations on others. What more can be said, audition this if you get a chance and do not be surprised if you wind up buying the X250.8, even if you are a tube enthusiast like myself. To put it very simply, I found the X250.8 to be a true world-class amplifier!

The Listening Environment

The review room is 18' 8" long by 13' wide with loudspeakers and equipment kept on the short wall. The cathedral ceiling starts at eight feet on the short wall slopping upwards to reach a height of thirteen feet in the middle than returning to eight feet at the opposite end. The hardwood floor is partially covered by a nine by six foot oriental rug lying down the long ways facing toward the loudspeakers, placed dead center between but not under the listener or the audio rack. The room has no doors but there are two openings. One opening is in front of the right loudspeaker on the long wall giving access to the hallway the other behind the listening position to a formal dining area. There are two large floor standing GIF Tri-trap acoustical panels one in each corner of the short wall in front of the listener and two panels from Acoustic Revive (AR) located on the wall directly behind each loudspeaker. A third AR panel is placed about two feet behind the listener's chair. Numerous Auralex Studio foam squares are placed along walls and high up in each of the four corners of the room. All the audio equipment is located in a Synergy Twin S30 Salamander audio rack placed about a foot away from and in the middle of the short wall opposite the listening position.

Tonality	██████████
Sub-bass (10Hz - 60Hz)	██████████
Mid-bass (80Hz - 200Hz)	██████████
Midrange (200Hz - 3,000Hz)	██████████
High Frequencies (3,000Hz On Up)	██████████
Attack	██████████
Decay	██████████
Inner Resolution	██████████
Soundscape Width Front	██████████
Soundscape Width Rear	██████████
Soundscape Depth Behind Speakers	██████████
Soundscape Extension Into Room	██████████
Imaging	██████████
Fit And Finish	██████████
Self Noise	██████████
Value For The Money	██████████

