



Pass Labs Xs 300 Dual Chassis mono amplifiers Review

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This review is about the fabulously over-the-top Pass Labs Xs 300 monoblock amplifiers – although how can you even call them “monoblocks” when each channel comes in two hulking metal enclosures? Pass Labs calls them “Dual Chassis Monoblocks”, but that doesn’t come close to fully describing this 298-pound-per-side power plant.

So, how did I get so lucky?

I’ve now had the Pass Labs Xs 300 in my system for four months and finally have the opportunity to reflect on the experience. One of the first thoughts that popped into my mind was “How did I get so lucky?” I suspect it’s a combination of things, including my experience with amps, my electrical power setup, and my speakers. Let’ start with my experience with amps.

My amp reviews have been almost completely focused on high power amps. I’ve reviewed and/or owned the Proceed HPA-2 And HPA-3 stereo amps, Mark Levinson 350 stereo amp, Plinius SA-201, Sphinx Project Eighteen monoblocks, XLH M-2000 monoblocks, Rotel RB-1092 stereo amp, ShengYa PSM-600, Pass Labs X-600.5 monoblocks, Electrocompaniet Nemo monoblocks and Electrocompaniet Nada monoblocks. Prior to receiving the Pass Labs Xs 300, I ran the Electrocompaniet Nemo monos (600/1200 wpc at 8/4 ohms) and the Electrocompaniet Nada monos (400/800 wpc at 8/4 ohms) in biamp mode to drive my Vivid Giya G1.

Given the high power amps I run, my electrical system is pretty robust. My front-end is powered via a dedicated 15-amp electrical circuit using 2 different duplex outlets: one Wattgate 381 Gold outlet and one Walker Audio High Conductivity outlet. An Isoclean PT 3030G III Isolation transformer connected via a Isoclean Super Focus power cord runs from the wall outlet to a Lessloss Firewall. Lessloss DFPC Signatures from the Firewall power my front end. Each of the left and right Nemo and Nada monoblock pairs is powered by its own dedicated 20-amp electrical circuit. The outlets for the two 20-amp circuits are Walker Audio High Conductivity outlets and the power cords are Lessloss DFPC Signatures combined with two additional Lessloss Firewalls – one for each circuit. During the review I also used A.R.T. Super SE power cords, speaker cable and interconnects (review to come) with the Xs 300, to great effect.

Finally, the Vivid Giya G1 sounded great with virtually any kind of amp, but nuanced high power amps really make them sing. I've been powering them in passive biamp mode with my Electrocompaniet Nada's handling the mids and treble, and my Electrocompaniet Nemo's handling the bass. This is both a good fit and a stiff challenge for the Pass Labs Xs 300, in that at 300 wpc I can compare them directly against the 600 wpc Nemo's and the 400wpc Nada's individually, as well as those amps used in biamp mode at 1,000 wpc. In addition, toward the end of the review period I received the Tannoy Canterbury Gold Reference speakers (review to come) and was able to spend a good deal of time listening to them being powered by the Xs 300.

The elephants in the room

I never start a review by focusing on the downsides, but I'm breaking that rule here. There are three huge elephants in the room when you talk about amps like the Pass Labs Xs 300.

The first "elephant" is price. At \$85,000.00 (but yes – for that you get two!) we're talking money that only the very wealthy can afford. That's a pretty obvious downside for everyone else.

The second obvious elephant is the sheer size of these amps. Each amp consists of two enclosures connected by an umbilical connector, and one enclosure is 168 pounds while the other is a more modest 130 pounds. I don't know whether to be proud of the fact that I actually unpacked and set up the Pass Labs Xs 300 completely by myself, or whether to just admit I was stupid for risking injury to myself and the amps by not waiting for help. Visually these amps are anything but subtle. They look great, but they're definitely not equipment that sits in the background. Visitors definitely will say "Wow – what are those things!?"

The third and final elephant is heat – lots of heat. The Xs 300 are biased to draw 1,000 wpc from the wall outlet constantly. Right now it's late November in Chicago, and the heat given off by the Xs 300 obviates any need to heat my listening room. In winter this is actually a cost-saving benefit, as well as an audiophile benefit because the sound of our forced-air furnace is nonexistent, but in August the air conditioning literally cannot keep up. By way of comparison, my Electrocompaniet Nemo/Nada combo, which runs in Class A virtually all of the time when amplifying a signal, tends to bring my room temperature up 3-4 degrees during serious extended listening sessions. The Pass Labs Xs 300 can raise my room temperature 5-8 degrees during the same period. Ok, I'm glad I have that out of the way, because the sonic performance of these amps is fabulous. From a purely sonic standpoint, the only reason you might choose another pair of amps over the Pass Labs Xs 300 is personal taste or system synergy. As you'll see as we go along, even system synergy isn't really an issue that affects these amps. Let's get to it.

Review music

I played a really wide variety of music with my system driven by the Pass Labs Xs 300, but for analytical listening purposes I focused on a handful of tunes:

The Beach Boys – “Wouldn't it be Nice” from Pet Sounds 24/96
Beatles – “Drive My Car” from Rubber Soul 24/44.1
Persuasions – “Angel of Harlem” - from Chesky records, The Ultimate Demonstration Disc 24/96
Soji Yokouchi – “Swingin' On A Camel” from The Super Analog Sound Of the Three Blind Mice
Bela Fleck – “Flight of the Cosmic Hippo”, from Flight of the Cosmic Hippo
Joni Mitchell – “In France They Kiss on Main Street”, from The Hissing of Summer Lawns 24/96
Robert Lucas – “Big Man Mambo” from Luke and the Locomotives
Patricia Barber – “The Moon” from Mythologies
Hot Club of San Francisco – “Mystery Pacific” from Yerba Buena Bounce 24/96
Donald Runnicles/Atlanta Symphony Orchestra and Chorus - “Fortune Plango Vulnera” from Carmina Burana 24/96
Trevor Pinnock - “Concerto No. 2” from The Brandenburg Concertos 1, 2 and 3 by J.S. Bach
The George Enescu Philharmonic Opera – “Concerto No. 5” from Brandenburg Concertos 3 and 5 by J.S. Bach 24/96
52nd Street Blues Project – “You Lied” from Blues & Grass 24/96
Van Morrison – “Astral Weeks” from Astral Weeks 24/96

Relevant equipment for comparisons

My head-to-head comparisons were the Pass Labs Xs 300 against the Electrocompaniet Nada, the Electrocompaniet Nemo, and then against the Nadas and Nemos set up in biamp mode. When I first began biamping the Nemo and the Nada I spent several days going back and forth between (a) using the Nemo for the woofers and the Nada for the midrange and tweeters and (b) substituting the Nada for the woofers and using the Nemo on the mids and highs. This makes a difference because the Nemo and the Nada have somewhat different tonalities.

The Nemo leans a bit to the euphonic side, while the Nada is more neutral, leaning toward but not quite becoming analytical. In the end, I decided to go with the Nemo on the woofers and the Nada on the mids and tweeter, but used silver aftermarket fuses to tweak the Nemos and gold aftermarket fuses to tweak the Nadas to sound slightly closer to each other. This really did the trick for me, and I was able to obtain my desired sound. (Yes, I know – that was a lot of work.) One side effect was to increase my options when doing reviews, since I am able to compare combinations of amps.

In all cases, the amp connections included Walker Audio Eliminator directional antennas. Speaker cables were the Audio Reference Technology (A.R.T.) Super SE and the Silent Source Silver Signatures. Power cords were the A.R.T. Super SE and the Lessloss DFPCs and interconnects to the amps were A.R.T. Super SE, Tara Labs Omega Zero Gold and Silent Source Music Reference in various combinations.

Each side was plugged into its own 20-amp outlet. The two chassis of each Pass Labs Xs 300 monoblock were connected via supplied neutrik connectors, and the monoblocks were placed on Walker Audio amp stands.

I also used the Pass Labs XP-20 and XP-30 3-chassis preamps with the Xs 300, with most of my serious listening done using the XP-30. However, I also listened to the Xs 300 in the system without use of a preamp, since the MBL 1620 DAC and Bricasti M-1 DAC (review to come) I had on hand incorporate volume controls. It would have been something to listen to the Xs 300 in conjunction with the Xs Preamp, but it was not to be.

Real power: What's in a watt?

There's no denying it – virtually every speaker sounds more dynamic and realistic with higher power amps. Yes, yes – I know that low power triode amp lovers relish the full-bodied and nuanced sound of those amps, but unless their system is perfectly matched to the low power amps they will not come close to the dynamics that great high power amps can exhibit. Based on their “mere” 300 wpc spec, the Pass Labs Xs 300 are not extremely high power amps. I reserve that classification for amps that crack 500 wpc such as Pass Labs' own X600.5, because I can clearly hear improvements in control, power and dynamics when that additional power is available. However, as you will see, the Xs 300 defies traditional sonic classification.

The Pass Labs Xs 300 is a great example of how the difference between wattage output of various amps can be deceiving. When focusing solely on the characteristics of control, power and dynamics, the Xs 300 sounds more like 600 wpc amps I've heard. The Electrocompaniet I run are collectively rated at 1,000 watts per channel, 600 to the bass drivers and 400 to the mids and highs, but the bass of the Xs 300's, which “only” puts out 300 watts per channel, makes the Vivid Giya G1 deeper, with absolute control.

Subjectively speaking, it sounds like the Xs 300's go 1/3 of an octave deeper in the bass, while reproducing the full body of the bass with even more control than the Nemo's. Ry Cooder's “Flight of the Cosmic Hippo” left my visitors open-mouthed and salivating. I played this tune at least three times to small groups of audiophile listeners with the Xs 300's doing the amplification, and in each case they all left muttering about how they need to do something about the bass reproduction in their systems.

An amp's power also affects the dynamic range of the music.

My subjective impression of the Xs 300's dynamic range is off the charts, especially when paired with the XP-30 preamp. Patricia Barber's “The Moon” starts quietly, with only Barber and her piano, and still continues quietly when the bass sedately joins in. The laid back opening abruptly ends when the drums explode through the Vivid Giya G1, rapidly followed by an aggressive grunting bass line. Then Barber's piano joins in, going rapidly to forte and then fortissimo. My system was quite good at startling the listener when the drums come in, but the Xs 300 added more “kick” and made some visitors jump forward in their seats when dynamic recordings were played. I give the Xs 300 extremely high grades for its bass, dynamic range and overall command of the speakers.

Of course, powerful bass which is too analytical or uninvolved doesn't do us any good. We audiophiles want our bass to sound real – like it sounds live in a good acoustic venue, imparting body to the instruments and exhibiting a natural tonality. In this respect, I have always thought that the Electrocompaniet Nemo, more than any other high power amp I've heard, sounds more like a hugely powerful tube amp, but with more bass grunt and grip. That's why it has been a staple in my system for several years. The Pass Labs Xs 300's bass is just a tad less full-bodied than that of the Nemo's, even when it extends deeper. Is it more accurate than the Nemo in this respect? I don't know if the Nemo's rendering of the timbre of bass instruments is less accurate, but I do know that it's like asking how many angels can dance on the head of a pin. The bass performance of the Xs 300 is state-of-the-art in every respect – power, control, extension, transparency, weight, speed, PRATO, dynamics and timbre – and if you prefer another amp's bass performance it's purely a matter of personal taste. Paul McCartney's bass in “Drive My Car” almost sounds like he's in my listening room – deep, extended, lively and powerful – and only the Nemo has come close to that in the past. The bass of other amps has either been just a tad too thick, too thin, too slow or too analytical to feel really “live”. In my system, the Xs 300 has the most neutral and musically accurate bass of any amp I've ever heard.



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Midrange and treble

Sometimes reviewers will say that a component is extremely “unforgiving” of poor recordings. By this they often mean that the high notes are grating and/or the midrange sounds unnatural. At the other extreme, a reviewer may say that a component makes everything sound “pretty”, making the music sound euphonic and causing differing recordings to sound alike. Then there is the proverbial “neutral” component, which may indeed truly be neutral in some sense, but is also lifeless and uninvolved.

So, how do I describe the mid and treble characteristics of the Pass Labs Xs 300? The Xs 300’s mids and highs are beautiful, but certainly not euphonic. They are replete with detail and nuance, but are forgiving with most music. They are as close to neutral as I have heard an amp be, while still being very involving and satisfying. So how did they do that?

Let’s focus first on the treble. Solid-state amps do a good job of accurately reproducing the leading edge of triangles, bells, cymbals and other percussion instruments, replaying them with a staccato crispness. However, all you need to do is listen to a good tube amp to hear that the trailing resonance of those instruments is prematurely cut short, preventing the note from fully developing. The Pass Labs Xs 300 manages to capture both the leading edge and the decay. Imagine a really clean-sounding and fast tube amp that leans towards closer to neutral musical reproduction than other tube amps, but has a lot less noise. That’s the Xs 300.

Let’s turn now to the midrange. Many music lovers will tell you that this is really where the soul of a recording lies, especially recordings with vocals. The vocals on the 24/96 versions of the Beach Boys’ “Wouldn’t It Nice” and Van Morrison’s “Astral Weeks” sound too “hot” on many systems, and are good tests for speakers and amplifiers. Now, I know that the Astral Weeks album is regarded as good recording, but to me the title song “Astral Weeks” did not

do justice to Morrison's voice, overemphasizing its nasal quality in a way that you rarely hear on other Van Morrison albums. I obviously wasn't at the recording session, so I'm not claiming I know exactly what Van's voice should sound like when it's reproduced. The point is that you can more easily compare audio components in the context of specific characteristics of a recording, since a stereo system's biases often overemphasize or mask shortcomings in the recording. Playing Astral Weeks with the Nada handling the treble and midrange resulted in the "hottest" rendition of Van's voice. The Nemo produced the most subdued version, creating an almost tube-like rendition on Van's voice. The Pass Labs Xs 300 produced something in between, but also with a bit more detail and natural texture than the Nemo or Nada. In my subjective opinion, the Pass Labs Xs 300 did the best job with this recording, taking the edge off Van's voice while still providing every detail and nuance of that voice.

The Persuasions' rendition of "Angel of Harlem" on Chesky Records is a very excellent recording, and you can hear the Persuasions up close and personal, with a sense of being at a live performance. The Pass Labs Xs 300 sounded very musical playing this recording, as well as with all the vocals I played, and did so with extreme detail and nuance.

One reason I picked two of the Brandenburg Concertos as review music was the fact that I had box seats for the Chicago Symphony's performance of the Brandenburg Concertos at Symphony Hall in November. I made a point of listening to Concertos 2 and 5 on my system the day before and the day after the performance at Orchestra Hall. The piccolo trumpet in Bach's Concerto No. 2 was absolutely "real" in both my listening room and at the concert, with a purity of tone that was piercing but never shrill. Very impressive. In separate listening session involving just the Nemo or just the Nada, the Nemo made the trumpet sound very good, but did so in part by slightly muting the trumpet. The Nada, on the other hand, also made it sound good, but was a bit more analytical, losing the sense of the body of the instrument. The Pass Labs Xs 300 nailed all the details, combining the best characteristics of both the Nemo and the Nada. Admittedly, we are splitting some hairs here, but the difference was clear upon close listening.

Soundstage

The soundstage of the Pass Labs Xs 300 was top notch in all respects, and was the equivalent of the soundstage experienced with the Nemo and Nada operating together in bi-amp mode. That pairing of the Electrocompaniet has always given me a fabulously wide and deep soundstage, with excellent location of performers. However, when the Nemo or Nada were used alone there was a small but nonetheless noticeable reduction in the expanse of the soundstage, both in width and depth. I may not have noticed the difference if I was not listening for it, but it's unmistakable if you pay attention, and in this respect the Xs 300 betters both the Nemo and the Nada used individually. This is very impressive performance, and the Xs 300 did not have any problem filling my 29-foot room width. Combine this with the detailed nature of the Xs 300 and you've got a very lifelike presentation happening in your listening room. To be more specific, the performers are stable and readily identifiable on the stage, each one clearly separated from the others. One reason for this is that system noise is nearly undetectable, thus eliminating the "wall of sound" effect unless it is intentionally part of the recording. The sound of the amps is about the cleanest I've heard, especially when used in conjunction with the Pass Labs XP-30. All this is accomplished without making the presentation clinical or "hifi". Finally, as you might expect from the discussion about the Xs 300's bass performance, this amp is totally stable at any volume level. This applies equally to the mids, treble, and overall soundstage. Even at the ear-damaging levels the soundstage was rock solid.

Resolution

The Pass Labs Xs 300 amplifiers offer the advantages of very high resolution, but not at the expense of creating an artificial sound. One of the great ironies of highly resolved recordings played on extremely resolving audio systems is that they often don't sound natural or realistic. Some details, such as spatial cues, add to the sense of realism, while others detract from it. How can this be? I am convinced that it has a lot to do with how we normally hear live music. It is extremely rare to be able to hear every minute detail of a concert during live performances. When we hear such fine details for the first time we may be impressed, but sometimes by the fourth or fifth listen we start getting the feeling that this detail isn't "real" or "natural". The Xs 300 is a very resolving amplifier, but nothing in the detail sounds artificial or takes away from the holistic presentation of the performance. One good test of this quality is "Mystery Pacific" by The Hot Club of San Francisco. The plucking of the lead and rhythm guitars and nuances of the violin were clearly brought out by the Pass Labs Xs 300, and in a very positive way. Rather than distracting from the overall performance, the details simply make the recording more palpable. When listening to "Fortune Plango Vulnera" from Carmina Burana the size and ambience of the venue can be discerned. It's also easy to identify each singer in the choir, but you don't lose the power of the overall performance. On recording after recording I found that each performer can be appreciated both for his or her own performance and how it fits with the band, orchestra, quartet, etc. I personally regard this aspect of the Xs 300 as one of its signature accomplishments.

Comparison with Pass Labs X-600.5

Sonic memory is fleeting, but I regularly thought back to my review of the Pass Labs X-600.5 monoblocks. Those amps had excellent power and dynamics, and did a very credible job with subtle details, but didn't have the nuance of the XA series amps. You had to choose between the extreme power and dynamics of the X series, and the more natural presentation of the XA series. The Xs completely blows away the distinction between the X and XA series, besting both in every category. The realism of the presentation, especially in the midrange, sets the Xs 300 apart from the vast majority of high-power solid-state amps, including other Pass Labs models.

Conclusion

As I finish this review I'm sitting in our home's smallish glass and stone sunroom, which is an acoustic nightmare, listening to music on Linn Radio with an iPad Mini as the Internet radio source, played through a Wadia 171i transport and 151 PowerDAC Mini and an ancient pair of entry-level Klipsch bookshelf speakers. I'm doing this to put things back in perspective. I'm a person who enjoys music on many systems, both good and bad, because, well, I enjoy music. Too often we forget that enjoyment of music is why we are in this hobby. Leaving out the iPad Mini (which I use for multiple purposes and is thus not strictly a piece of audio equipment) the system I'm listening to cost me around \$850, and I'm enjoying the heck out of it as I look out the East/South/West windows. So what can justify spending \$85k on the Pass Labs Xs 300 amps? I mean, these amps are one hundred times as expensive as this entire system! After spending several months with the Xs 300, the answer is easy: if you can afford it and are looking for iron-grip-down-to-Hades-yet-silky-smooth-and-highly-nuanced high power amps, these babies will take your enjoyment of music to an extremely high level. Even if you think you really want high power tube amps, you should compare the Pass Labs Xs 300 because there is a big chance that they will change your mind. Hell – even if you're shopping for low power tube amps you should first hear what these amps are capable of just to get a point of reference. Any hesitation you have about the Xs 300 (other than the money and heat) will be based totally on your own personal taste – not because of any actual shortcoming of these amps. Very highly recommended in the cost-no-object category and a reference for what is possible with power amps.