

EQUIPMENT REPORT

Pass Labs XA160.8 Monoblock Power Amplifier

A Classic Updated

Greg Weaver

It is hard to imagine anyone who has been in or around this industry for any length of time not being familiar with Nelson Pass. I first became aware of his remarkable talents in the mid-1980s. When moving to manage an audio salon in central Pennsylvania, I was delighted to learn that I would be representing the entire Threshold lineup, including the then-current SA Series monoblocks, the S Series stereo amps, and the FET Series preamps.

Over the years, I've lived with a number of Nelson's creations, starting with the Threshold FET-9 preamp and SA/4e stereo amp in the 1980s. By the late 1990s, after Nelson had sold Threshold and begun Pass Labs, I ended up with the simply enchanting Pass Labs Aleph 3 stereo amplifier, which is one of the few pieces of gear I've let slip through my fingers that I truly regret having given up.

When I learned that the Point 8 Series was on the horizon, I was eager to put the review process in motion. However, with the Pass Labs manufacturing facility move of just a few miles from Forrest Hill, California, to a plant nearly three times larger in Auburn, California, and the production disruptions that move created, there were inevitable delays. During my wait, and while interviewing "Papa," as Nelson is known in Internet circles, for the forthcoming *Volume Two: Electronics of The Absolute Sound's Illustrated History of High-End Audio*, I had the opportunity to discuss the primary differences that define the Point 8 Series.

Starting with the smaller amplifiers in the XA lineup (the XA30.5, XA60.5, and XA100.5), dramatically larger output-stage heatsinking has been added, allowing for the use of more bias current. Coupled with the largely square-law character of the XAs' output stage, this permits a more generous Class A envelope. The physical change is apparent in a quick visual comparison, and is especially obvious to anyone who tries to lift



one of the amplifiers. Additionally, there has been an increase in power-supply capacitance for most models, while the entire lineup has received beefed-up secondary filtering for the front-end circuits.

Enhancements have been made to the layout configuration of the supply and channels, too, producing dramatically better noise figures than previous models—now about 50 μ V unweighted, which is something on the order of a 10dB improvement. Changes to the thermal tracking and DC offset of the output stage have allowed for higher levels of biasing of the second stage of the amplifier, thereby improving linearity and speed.

From a circuit topology standpoint, though the basic structure of the X Series has been retained, there are several differences. First, input impedance has been raised. Nelson claims that the amplifiers can now be driven by *anything*. Pass Labs has also implemented low-impedance "current" feedback in all models and selectively employed a new form of local feedback it calls "cascode feedback." (Further information on this circuit remains proprietary.)

In addition, and contrary to "accepted principles," Pass employs resistive loading of the second stage to ground. The resultant stability of the circuitry is now such that there are no capacitors or inductors in series with the signal, and no frequency compensation (including output Zobel networks) anywhere. The

EQUIPMENT REPORT - Pass Labs XA160.8 Monoblock Power Amplifier

only capacitors used are in the power supply and DC reference voltage circuits.

While still using single-ended Class A bias current in the output stage, as with the Point 5 Series, bias has been increased, creating a second-harmonic tonal character that holds to much higher power levels than previous models. Now the bias current figures are adjusted specifically *in each model* to control the relative amount and timing of the second and third harmonics of the output. While there is a general template for this sort of bias adjustment, the final values for each model are determined strictly through listening tests.

Introducing the use of a soft-start TRIAC circuit (subsequently bypassed by a 30-amp relay) for power switching, the Point 8 Series now complies with the world standard of less than 1W draw in standby mode.

Finally, while not an alteration *per se*, having previously assembled a large inventory of NOS Toshiba parts, Pass uses 2SK170/2SJ74 JFETs in the input stage and 2SK2013 and 2SJ313 MOSFETs in the second (voltage gain) stage, all measured and matched within two percent. Nelson feels quite strongly that these devices still have no equal in the marketplace. The result, as we will soon see, yields a new product that virtually basks in sonic innovation and improvement.

Mass

With a curb weight of 141 pounds, the XA160.8 is roughly 10 pounds heavier than the Point 5 iteration, although it is still considerably lighter than the closer-to-200-pound original XA160. Even with the handles on the back panel, the XA has a form factor (19" wide, 11" tall, and 21.5" deep) that makes the amp tough to schlep around all by yourself. It took a hand truck and all the strength I could muster to cart these behemoths downstairs and carefully drop them onto my amplifier isolation racks.

As visually stunning as it is massive, the Pass design is both exclusive and distinctive, created by Desmond Harrington who joined Pass Labs in 1996. A cyclopean, blue backlit meter, some 6-plus inches in diameter and centered horizontally, dominates the front panel. The round push-on power-switch is immediately beneath the meter, centered in a space between two milled grooves near the bottom of the massive, 1"-thick, sleekly beveled faceplate.

Two large, black heatsinks, one attached to each side of this robust chassis, are mounted to facilitate cooling. Under duty, these sinks get quite warm, nearly 130 degrees Fahrenheit.

Moving to the rear, we find a pair of handles and two sets of enormous Furutech binding posts, each vertically offset stereo pair set to the left and right of center and connected in parallel to allow for bi-wiring. When using single wires, speaker cables may be attached to whichever binding posts are closest to the speakers. These Furutech posts will take any speaker cable termination known and their hand-tighten-only (no post wrenches here) ratcheting system prevents enthusiastic audiophiles from over-tightening and breaking them.

Centered vertically about an inch down from the top is an RCA jack for single-ended connections (50k ohms impedance). Immediately below it is an XLR jack for balanced connections (100k ohms impedance), with a shorting pin between the (-)

SPECS & PRICING

Power output: 160W Class A

Inputs: One each RCA and XLR

Dimensions: 19" x 11" x 21.5"

Weight: 141 lbs.

Price: \$27,300

PASS LABORATORIES

13395 New Airport Rd, Suite G

Auburn, CA 95602

(530) 878-5350

passlabs.com



input and the ground (pins 1 and 3) that must be left in place with single-ended cables and removed with balanced ones. The XA160.8 is a fully balanced design, and as such, Pass recommends using XLR connections. (I used a balanced set of Audience Au24 SE's for this entire evaluation.)

Flanking the inputs to left and right are two small holes, one labeled M and the other L. They respectively allow for the adjustment of the meter-wand position and LED brightness control. Finally, also centered at the bottom of the rear chassis is the IEC socket for the power cord. Immediately to its left is a rocker switch that houses a thermal magnetic circuit breaker. There are no fuses.

Class

The XA160.8s readily respond to the use of proven after-market power cords. I paired them with a variety, but soon discovered the best balance of ease, tonal color, and spatial accuracy was provided by the superb Audience Au24 SE powerChord HP, which stayed in play for the entire audition.

Over the first two weeks of break-in, before I even started to take serious notes, one of the things that became quite apparent was the near-complete silence of these amps. These monoblocks have what may only be described as a vanishingly low noise floor. While this should come as no surprise with Pass gear, it is a feat not readily equaled by *all* solid-state (and far fewer tube) amplifiers. The welcome result is that all music emerges from virtual blackness.

Over their initial run-in period, small yet musically significant changes occurred, most notably progressive refinements in the rendering of textures and the bloom of instrumental body. At just past the two-week mark, I was satisfied that the XA160.8s were showing their true voice and I could seriously begin the audition.



Like all high-fidelity electronics, the amps benefit from a brief warm-up period. After running for some 40 to 50 minutes, a very slight lower midrange recession and an even slighter general “fog” dissipate. This slight “haze” burns off steadily as the amps reach thermal stability, allowing them to reveal their outstanding transparency and openness even more fully.

Let’s start with something that can present obstacles for lesser amplifiers: control. Right out of the shipping containers, totally factory-fresh, before their intoxicating texture and tone color fully developed, they exhibited unswerving control over my Von Schweikert VR-55 Aktives. Their ability to convey the transient speed of dynamic events (of all scale) and their steadfast control of both soundstage and image sizes served to foreshadow just how remarkable they would turn out to be.

Pitch definition in the lowest three octaves is every bit as good (or better) than I have heard from any amp, with nearly unmatched detail and ferociously explosive power, reconstructing instruments with convincingly proper weight, no unnatural bloat, and pants-leg-flapping punch! Melvin Lee Davis’ propulsive bass line from “Lay It Down,” the opening cut of Lee Ritenour’s 2010 release *6 String Theory* [Concord Records], has rarely been so clearly defined and easy to follow, while also being reproduced with authoritative weight and power. The XA160.8 elevated

the entire cut to a new level of dynamic expressiveness. Lesser amplifiers may have the drive *or* the pitch delineation, but the XA160.8 captures both with notable conviction.

Once the amp was run in and thermally stable, I was treated to some of the most tonally and texturally convincing lower midrange to mid-treble performance I’ve experienced. Mids were extraordinary, possessing a purity, texture, and bloom that reminded me of the best valve designs. Not that the XA160.8s came off as tube-like in overall character; rather, their palpability, “big” tone vibrancy of instrumental color, abundance of texture, and genuineness of bloom were exceptional.

The uppermost octaves were delicately recreated, with an extremely refined and natural sense of air and exquisitely rich and shimmering timbre. (The harmonic richness and completeness of these upper registers is one of this amplifier’s most relevant and rewarding gifts.) Listening to the diversity of cymbal work by Duncan Moore on Dmitri Matheny’s 2014 *Sagebrush Rebellion* [Papillon/Blueport] bordered on revelatory. Moore’s touch is masterful, and the XA160.8s revealed it with nearly unsurpassed resolution and accurate spatial and tonal characteristics, making for an exceptionally lifelike impression.

Two closely aligned attributes of reproduced sound of extreme importance to me are honest instrumental bloom and

EQUIPMENT REPORT - Pass Labs XA160.8 Monoblock Power Amplifier



body; a cello should sound like a cello in tone and size, not an instrument the size of a violin with a more sonorous voice. Here, the new XA160.8s really deliver, rendering individual instrument bodies and voices with an exceptionally realistic sense of scale, timbre, and size.

Just as remarkable as their truthful tonality is their impressive and incisive dynamic scale. With astonishing transient speed and unflappable control, they convey slam and impact with a graceful ease that is positively exhilarating. They have no difficulty making you jump when the music calls for it. Moreover, microdynamic accents are rendered so clearly, so discernibly, so palpably, especially for a pure Class A design, that I was inescapably drawn into any good recording. Their dynamic expressiveness is seemingly dauntless, affording subtle degrees of shading, with no apparent limit to their ability to unravel, resolve, and express delicate details.

Speaking of which, one of their paramount strengths is their engaging resolution and transparency, with no vestige of glare or the faintest hint of edge. While not offering quite the same disarming see-through lucidity of something like the Soulution or Constellation monoblocks, they afford an enthrallingly relaxed and exceedingly clear presentation. They are, at the same time, full of both musical *and* sonic detail. This is one of their most charismatic and captivating traits.

When it comes to staging and imaging, be prepared for them to set a new bar. Their ability to portray the size, placement, and contours of instruments is exceptional.

By way of comparison to other recent Pass Labs designs, it would seem logical to contrast them to the earlier Point 5 model. While I never had a Point 5 Series device in-house, I've heard many of them at shows and in several private installations, and the Point 8 is obviously more transparent than the earlier series, and presents swifter transients. While the Point 5 was

lusher in overall tonal character, the Point 8 is more accurate, in part due to its enhanced transparency. The Point 8 offers more control, augmented bass (both in definition and character), and enriched microdynamic involvement, yet still retains to an abundant degree the liquidity and ease that so many found to be seductive in the Point 5 Series.

Panache

I'll be the first to admit that the Pass Laboratories stated design goals make perfect sense to me. While I can acknowledge that the bench measurements these devices deliver are exceptional, I'm also firmly in the camp that could care *less* about such graphs and scope traces if the resultant voicing is sterile, lifeless, and cold. (The original Halcro dm58 Super Fidelity monoblocks come to mind.)

Luckily for the music lovers among us, Nelson Pass feels the same way. Unlike many others in his field, his longstanding public position has been that listening tests remain invaluable to advancing the art of amplifier design, and that electrical measurements alone can *never* fully characterize the sound of an amplifier.

While each of the individual sonic characteristics noted above is meaningful in its own right and would serve to raise the XA160.8s above many of their competitors, what makes them extraordinary is the seductive and striking voice created by the synergy of all their individual parts. With an almost imperceptible favoring of upper midbass to lower midrange energy, erring only slightly to the warmer side of neutral, the Pass Labs XA160.8s are exceptional creations.

With their sublime amalgam of control, neutrality, vibrancy, and transparency, they are able to sing with one of the most musical souls I've encountered, regardless of price. They embody that all-too-elusive ability to satisfy both the intellect and the heart; they make you want to dance!

Pass has stated that it took seven years to realize the Point 8 Series of amplifiers. In this listener's opinion, that

time was very well spent. While I've not heard the new X's dual-chassis flagship models, I can say that the XA Point 8 Series is a new performance pinnacle for Pass Labs. It is yet another inspiring and indisputable success from the mind of a man who for the past four decades (his first commercial product was released in 1975) has consistently risen—and continues to rise—to the challenge of besting himself. And as good as the XA160.8s are, frankly, I'll take even money that Nelson Pass does this same

trick yet again sometime in the not-too-distant future. Most enthusiastically recommended. **tbs**

