

part-time audiophile

by Steve Folberg

Pass Labs INT-250 Integrated Amplifier | Review



In the quirky (to put it kindly) universe of high-end audio, the epithet “Lifestyle Product” is a bit of a put-down — even for an amplifier as imposing as the Pass Labs INT-250. According to the high-end stereotype, a “lifestyle” product is one that combines luxurious, living-room friendly aesthetics and operational simplicity and convenience, but with suspect sound quality. A “lifestyle product” doesn’t sully your living room with graceless industrial design, nor does it necessitate situating a tangled-linguine pile of ugly cables in plain view of your dinner guests. It incorporates multiple functions in a single unit and provides a simple remote control to operate them all. It doesn’t require endless tweaking and fiddling to sound good. In all these ways (if you must) it passes the fabled Spousal Acceptance Factor test.

That said, the orthodoxy that holds that good looking, easy to use audio equipment is sonically inferior is a merely a prejudice waiting to be challenged. Who says that handsome, décor-friendly gear has to sound mediocre?

In the realm of combining gorgeous looks and high-end sonics, consider the iconic, wood and leather-clad monitors of Italy’s Sonus Faber, the smooth, gleaming colors and rounded shapes of loudspeakers from France’s Focal, or the glittering, steampunk bling offered by Dan D’Agonstino’s Momentum Lifestyle (!!)

 Integrated amp and wireless streamer.

As for “lifestyle product” convenience, standing at the pinnacle of make-it-uncomplicated-so-I don’t-have-to-think-about-it design, Apple’s surprisingly good-sounding (and almost

magically usable) AirPods earbuds come to mind, as does my Peachtree Deep Blue 2 Bluetooth speaker (recently updated to the Deep Blue 3), a room-filling party-in-a-box with surprisingly fine sonics. (Speaking of lifestyle audio, portability – like the Deep Blue, with its concealed carrying handle – is also a plus.) You might even argue (as some have) that it's precisely these and other easy to use, good sounding "lifestyle" products (the well-reviewed PS Audio Sprout 100 DAC/amp/phono preamp and KEF's LS50 wireless active speakers also come to mind) that will get those pesky millennials engaged with quality audio and thus save the high-end from its insular, smug, stratospherically priced self.

Why am I going on about lifestyle audio equipment in a review of the Pass Labs INT-250 integrated amplifier? On the one hand, the INT-250 does have some "lifestyle" chromosomes in its DNA. It's a single box that eliminates the need for additional interconnect cables and power cords while doing away with some of the trial and error of component matching. It also has a simple, intuitive, comprehensive remote control that makes it very easy to change the volume, power the unit on or off and switch inputs from the comfort of your listening chair. In every other respect, though, including size, weight, chunky "macho" looks (including very large, hot heat sinks) and immense power output, the INT-250 makes no attempt to disguise its Pass Labs lineage as a take-no-prisoners, bad-ass, audiophile muscle amp – albeit one that's "lifestyle" easy to use and enjoy.

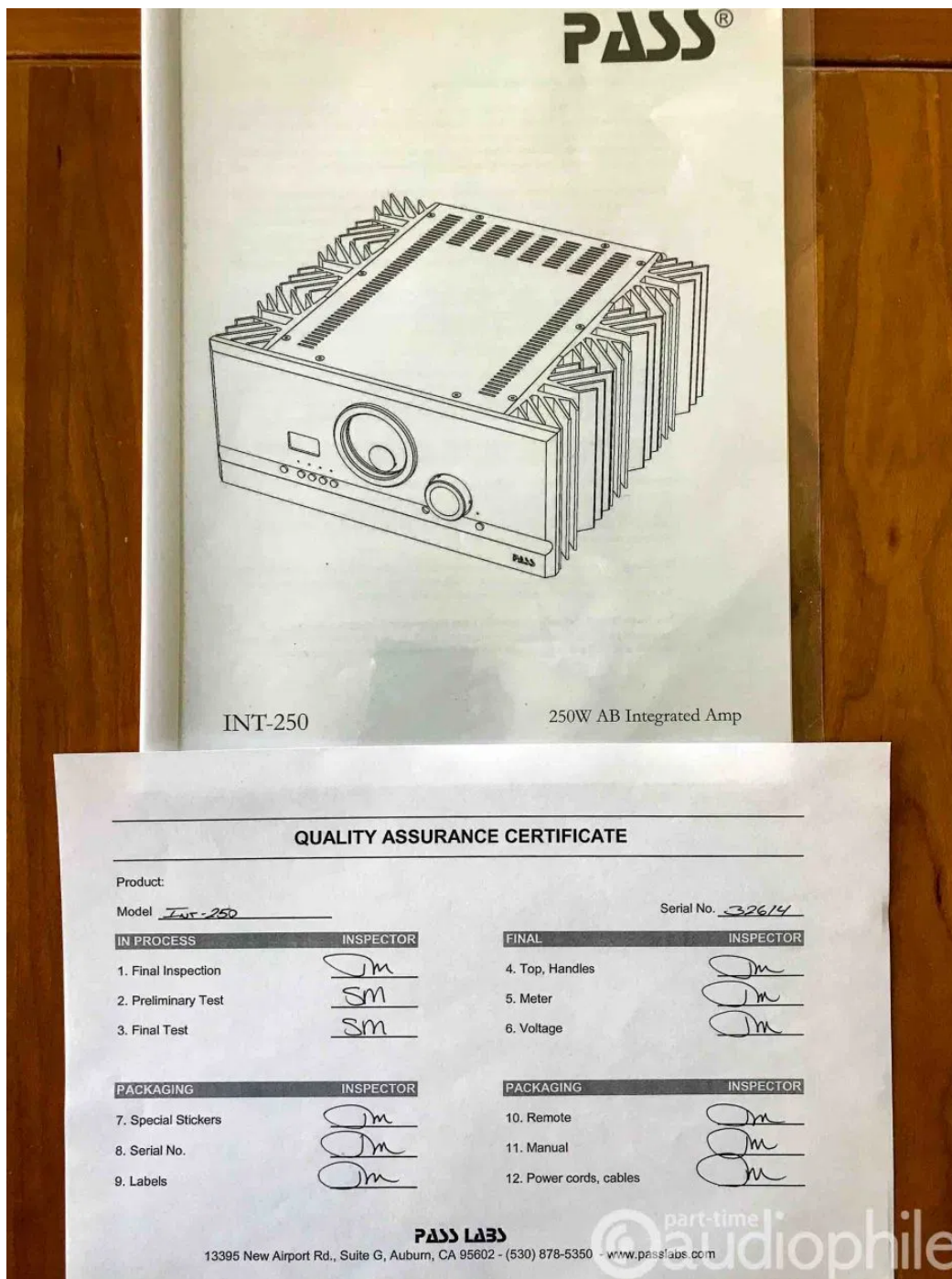
Pass Labs INT-250: Heavy Hitter

First, consider the Pass Labs INT-250's heaviness. This amp weighs in at 105 pounds (unboxed). Grab a star-head screwdriver, remove the 10 bolts on top, slide off the lid and you'll see part of the reason for the INT-250's heft: notice that huge, toroidal transformer, more or less the size of a small cheesecake, as well as a second, smaller transformer, plus lots of large power supply capacitors. Adding to the INT-250's weight, the casework on this thing is without a doubt the most overbuilt (in a good way) I've ever seen. The rigid sheet metal of the removable top cover is 1/8-inch-thick and protected with a very tough, textured paint. The brushed silver front panel is 3/4 inch thick. The external heat sinks (which are decidedly NOT for show) account for just shy of one third of the overall width of the unit. Nothing about this INT-250 camouflages what it is: stereo equipment, not "audio furniture."



I was about to finish the previous paragraph with "you get the idea," but until you've seen the INT-250 in person, I don't think you can fully appreciate how massive it is. Try to pick it up, though, and you'll immediately get it. The opening paragraph of the owner's manual cautions you that removing the amplifier from its shipping carton and situating it where you want it to live is a two-person job. I ought to have listened to that warning, but, having no one else at home when the INT-250 arrived and being over-eager to get it onto my stereo cabinet and plugged into my rig, I tried to do this on my own. Thank God, I was ultimately successful, but there were moments when I thought (beneath the involuntary grunting noises I was making), "I am going to end up in the emergency room with a broken foot or a spinal injury, because I am the contrarian who ignored the warning in the manual." You,

however, have been cautioned: don't try to unpack and install this amp by yourself, even if you've been bench pressing a pair of Wilson Alexandria XLF's. As intimidated as I was by the sheer bulk of the Pass Labs INT-250, I must add that all that weight is the flip side of something undeniable: this amp is built to last forever, by skilled and devoted humans, in California, USA, no less. Peek inside again and you'll find impeccable workmanship and tidy, no-nonsense component layout everywhere you look. In fact, inside my review unit were several pieces of masking tape bearing handwritten notes in ballpoint pen, which I later learned contain assembly, inspection and component matching information. More officially, you'll also receive a hand initialed inspection checklist, tucked into the slim owner's manual. The overall impression is that capable artisans have invested their time, pride and care into this product.



Wizard's Assistant

When writing a review, I'll ask for a contact person at the manufacturer who can answer my questions as I'm getting to know the gear in question. For this review of the Pass Labs INT-250, I was put in touch with Wayne Colburn. Wayne has been with Pass Labs for 30 years and is one of the four co-owners of the firm. He was originally hired by Nelson Pass at Threshold in 1989, after he answered an ad that Nelson Pass posted, looking for a "wizard's assistant." At Pass Labs, Wayne primarily does preamplifier design. "The preamplifier section, front panel, housekeeping circuitry and software [of the INT-250] are my part. [But the] INT-250... is an adaptation of the X250.8 that Nelson did, so [it's really] a group effort."

Given its \$12,000 MSRP, a lot of potential customers with such a budget might be shopping for "separates," rather than a very large integrated amp, so I asked Wayne who the target audience was when the INT-250 was first conceived. "This was a request of a distributor in Asia," he replied, "for [customers living in] luxury condos, driving larger box speakers, Wilsons, Magicos, etc."

I'm imagining a spare, impeccably elegant living room, like some sparkling high-rise in the movie *Crazy Rich Asians*, with the Pass Labs INT-250 parked on the floor between a pair of huge YG's or Magico's, the whole rig positioned in front of a window with a panoramic view of Singapore's twinkling night skyline. Yeah.

Well Connected

The INT-250's no-nonsense front panel is clean and uncluttered. A row of pushbuttons controls power on/off, along with separate buttons for each of the amp's four inputs. A large volume knob, an LED window for volume readout, a mute button and that big VU meter complete the picture. Kudos to Pass for duplicating the individual source buttons on the very solid, aluminum remote, an arrangement I much prefer to a remote with a single source button that forces you to click-cycle through all the inputs to find the one you want.

A positive side of the amp being so enormous is that it allows the connections on the rear panel to be spaciously laid out and a joy to work with. I am in love with the speaker binding posts (from Japan's Furutech, according to Wayne). They are wrapped in big, teardrop-shaped plastic casings that feel great in your hand and make it easy to fully tighten whatever kind of termination your cables happen to have. They're also ratcheted to prevent over-tightening. Just lovely!

The input connectors are logically laid out and clearly numbered. Inputs 3 and 4 feature single-ended, line-level RCA connectors. Inputs 1 and 2 can be used in either balanced or single-ended (RCA connected) mode, depending on whether the balanced inputs are disabled by inserting the included jumpers. There's also a set of both balanced and single-ended Preamp Outputs that can be used to drive a second system, a subwoofer or even other amplifiers for bi-amping. These Preamp Outputs are only active when the amp is live and muted.

Somewhat oddly, two large, metal grab handles protrude several inches from the back of the amp. Were there similar handles on the front face of the amplifier, as used to be common with "rackmount" style equipment, these rear-mounted handles might make more sense, but alone, they aren't very functional. I asked Wayne about this, and he responded that these handles might be a design holdover from when there were front-mounted handles on such amps, and that the handles also afford some protection to the rear of the unit.



Feel the Warmth

I mentioned earlier that the large heat-sinks that flank the sides of the INT-250 aren't for show. I found that the amp sounds best after about 60 to 90 minutes of warming up, and at that point, those metal fins are giving off some serious heat (about 122 degrees F, 50 degrees C according to Wayne). Some of this heat is attributable to the amp being "biased" to run in Class A mode for its first 15 watts. In Class A, the transistors are run switched on all the time, even with no musical signal passing through (as opposed to class A/B, where the output devices are switched on and off). As I wrote in my review of the Luxman L-550 AX Mk II, "Where does that wattage go when there is no incoming signal? It is converted into heat, which is why Class A amps are sometimes referred to as "space heaters..." [But] because well-executed Class A designs don't have to apply various engineering Band-Aids to compensate for the distortions inherent in topologies that turn the output devices on and off (like Class A/B and Class D...) Class A designs produce a particularly sweet, musical sound." As Wayne puts it, "We like as much class A as the package can support, [so] that is mostly what drives it." This should be particularly true driving a reasonably efficient load like my reference Spatial Hologram M3 Turbo S's. Let's see...



Listening ... and Head Scratching

After giving the Pass Labs INT-250 about 100 hours of break-in, I sat down for some serious listening. One of the first things I noticed (and somehow this isn't surprising) is that the INT-250 had an iron grip on those M3's, especially in the bass and sub-bass regions. It's not so much that the M3's plumbed unprecedented depths when driven by the Pass amp, but rather that there was a presence and solidity to the low end that I hadn't quite heard before. It was there in Tony Levin's sharply plucked bass lines near the opening of Peter Gabriel's Don't Give Up (from his So LP) and in the thundering drum whacks that open the Princess Mononoke film soundtrack.

Beyond that, the pairing of the M3 and the INT-250 was something of a head-scratcher. It's not that they sounded bad together by any stretch, but I wasn't wowed by the combination, either. As notoriously difficult as it is to put these sonic perceptions into words, I'd say that the combination initially sounded a bit "flat," both in terms of spatial presentation and also a certain paucity of tonal richness. I missed the musical magic dished out by the combination of the M3's and my reference Vinnie Rossi LIO integrated. Given Pass Labs' impeccable reputation for producing killer amplifiers, something, I thought, must be awry in my rig. What now?

This led to considerable theorizing. Perhaps what I was (or wasn't) hearing was a lack of speaker/amplifier synergy. Using a behemoth amp like the INT-250 to drive the 95-dB efficient Spatial M3 Turbo S speakers in a medium-sized room (in a semi-nearfield seating arrangement, no less) might be a case of overkill, like cramming a Ferrari engine into a

Mini Cooper. Then again, the impedance curve of the 4 Ohm Spatial M3 Turbo S is far from flat, so I'd expect the INT-250 to tame it with ease. But maybe, maybe another speaker would be more to the Pass amp's liking? More on that in a moment.

I also realized that plunking the INT-250 into my system and allowing my experience with the LIO to color my perceptions of the new amp was problematic. I've been using my LIO's very fine built-in DAC and phono stage with high-resolution music files, CD's and vinyl. But the INT-250, requires outboard digital and phono support. I, therefore, had to press my excellent (but aging) Musical Fidelity M1 DAC and M1 CDT transport for digital into service, along with my hand-built Bottlehead Seduction tube phono stage for LP's. The Seduction is also good, but hardly state of the art. I considered borrowing a better, newer DAC and phono preamp from a friend, but decided against it since that would introduce yet more unfamiliar components into the evaluative mix.

What about using the LIO as a preamp and the Pass as a power amp to make the comparison fairer? Unfortunately, in this case, the INT-250 doesn't offer a way to bypass its preamp section.



On the Fritz (Carrera)

In order to test the hypothesis that for some reason the Spatial's and the INT-250 weren't playing nicely together, I called the ever-delightful John "Fritz" Heiler of Fritz Speakers, to see if I might borrow a pair of his lovely monitors for comparison. Fritz Speakers is a one-man shop that has, for many years, produced endlessly listenable, seductively musical speakers (monitors, especially) at real-world prices. The value proposition of all Fritz's products is very high, featuring premium drivers from big-name manufacturers like Scanspeak and SEAS, easy-to-drive series crossovers, and rock-solid, well-damped cabinetry. Happily, Fritz had a review pair of his upper-end Carrera BE monitors sojourning in Dallas and was nice enough to ship them down the interstate to Austin for my use. I reviewed the Carrera Rev 7 BE (so named due to their 7 inch Scanspeak Revelator mid-woofer and beryllium tweeter) on my little audio blog back in 2016, paired with the Audio Note Kits "Kit 1" 300B SET amp I was running back then. Although they made great music together, the 87 dB sensitive Carrera BE's seemed to want more juice than their less expensive sibling, the Fritz Carbon 7 SE that I'd reviewed earlier. For that reason, I was eager to hear them with an amp that would easily supply more than the required grunt to

drive them. The Carrera BE's in beautiful striped ebony veneer (perhaps the exact pair I'd reviewed four years ago?) were quickly at my door and perched atop some generic, 24-inch stands (filled with kitty litter). How did they sound connected to the Pass Labs INT-250? In a word, wonderful! Fritz's Carbon 7 and Carrera are known for producing a prodigious, tuneful low end that feels magically out of proportion to their small size, but the INT-250 had such a grip on the Carreras that this quality was even more otherworldly, as in (forgive the cliché) "Where's the subwoofer?" The combo also enabled the Carrera 7 BE's to acoustically disappear into a large, coherent soundstage, with that swanky beryllium tweeter providing a sweet, airy top end that seems to extend forever upward without a hint of harshness. I could go on, but you get the idea: The INT-250 made the Fritz Carreras sing like a bird and brought out more of their most winning qualities.

Circling Back to Spatial

Upon moving the Fritz monitors out of my rig and restoring the Spatial M3 Turbo S's to their prior positions, something odd happened: everything clicked and sounded orders of magnitude better than it had before temporarily replacing them with the Fritz monitors. Had the Pass amp crossed some magical break-in threshold while connected to the Carrera's? Did some subtle difference in positioning of the Spatial's dial things in? What the heck was going on?

The most honest answer is, "I don't know," but I do have a hypothesis, and it has to do with amplifier warm-up. Once the INT-250 is fully broken in, it is absolutely essential (perhaps even more so with particularly sensitive speakers like the Spatial's) that the amplifier be completely warmed up before you do any serious, deep listening. As I mentioned earlier, I believe that in the case of the INT-250, "fully warmed up" means powered on for at least an hour, 90 minutes if possible. By that point, the upper surfaces of those big, external heatsinks will be borderline too hot to touch, and the amp will manifest the kind of midrange liquidity and high-frequency sweetness that you expect to hear from those first 15 W of Class A goodness, coupled with a powerful, well-defined control of the lowest octaves.

Here are some examples of what I heard coming out of the Spatial M3 Turbo S's when the INT-250 was banging on all eight cylinders.

Highs were sweet and airy, and individual musical lines within massed vocals were easy to pick out. On the European, vinyl pressing of Lorde's debut album, *Pure Heroine* (which trounces the CD version, by the way) the harmonies on the chorus of the mega-hit *Royals* hung in the air with eerie presence, bathed in a cathedral-like studio reverb.



If you love great pop music the way I do, check out eighteen-year-old recording sensation Billie Eilish. Her debut EP, *Don't Smile at Me*, showcases Eilish's finesse with nuance and phrasing, as does her multi-Grammy nominated follow-up album, *When We All Fall Asleep, Where Do We Go?* If you are captivated by her ability to caress every syllable of a song, and if you hear, as I do, the almost Great American Songbook, Tin Pan Alley sensibility of many of her songs (albeit infused with synthesized, sampled, contemporary studio trickery) you won't be surprised to learn that she grew up listening to Frank Sinatra and other great pop singers. That said, the Pass Labs INT-250 and Spatial M3 Turbo S brought out the best in these dense, sonically challenging tracks.

Take, for example, *Party Favor* from that debut EP. The song begins with the sound of a cell phone ring tone, and Eilish's voice and ukulele accompaniment are deliberately distant and muffled to simulate a voicemail message, but over a handful of measures, the voicemail effect fades out and as more instrumentation enters, everything comes into sharp focus and blooms, especially in the hilariously coy, nasty chorus:

"And I hate to do this to you on your birthday

Happy birthday, by the way.

It's not you, it's me, and all that other bullshit

You know that's bullshit, don't you babe?

I'm not your party favor..."

Eilish and her coproducer and cowriter brother, Finneas O'Connell, love multi-tracking her voice in gigantic, closely stacked harmonies. The effect is gorgeous on *Party Favor*, and the INT-250 perfectly captures the arrangement's essential mix of delicacy and power, showcasing not only the dense vocal harmonies, but also the thundering, subterranean synth bass lines. The same sort of layered choral harmonies adorn *Ocean Eyes* and many other songs from both albums. *Hostage* and *I Love You*, from the first and second albums, respectively, are almost unbearably beautiful tunes – romantic, sad and more than a little sinister, all at once – and the Pass Labs amp does an amazing job bringing them to life.

The INT-250 was also a standout performer in the realm of spatial presentation, including both soundstage and imaging. It had been quite a while since I'd listened to the 2011 LP reissue of XTC's Beatle-esque classic, *Skylarking*. At the time of its recording, the band's album sales had tanked in North America, and their record label issued them an ultimatum: bring in an American to produce your next record, or you're finished. The band chose Todd Rundgren to produce *Skylarking*, and the result is a trippy, beautiful ode to summertime and sexual awakening. Rundgren employed a lot of studio wizardry to get the sounds he wanted, especially on the first few tracks. On the opener, *Summer's Cauldron*, the introductory melodica melody is interspersed with cricket noises, buzzing insects, a barking dog, a chirping bird and other nature sounds. The INT-250 splashes these sounds (and the melodica itself) all over the room, generating a breathtakingly wide and extremely tall soundstage that dissolved the boundaries of my listening room as I suspect Rundgren intended.



Conclusion

The Pass Labs INT-250 is one heck of an audio component: powerful, easy to set up and use and overbuilt like the proverbial tank. For my personal system, in my not-so-large listening space, it's quite certainly overkill. As a matter of fact, I'd love to hear how the 250's younger sibling, the 60 Watt INT-60, or (even more eagerly) how Pass Labs' new, 25 Watt, all Class A INT-25 would sound in my home rig. (I suspect it would be a killer combo.) But if you have demanding speakers and/or a large listening room to fill, and you want the "lifestyle simplicity" of an integrated amp, the Pass INT-250 should most definitely be on your amplifier audition shortlist.