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Pass Labs INT-25 Stereo Integrated Amplifier

The most musical amplifier I've had the opportunity to listen to.

Review By Neven Kos of hifimedia magazine



It's been a while since I've had an opportunity to listen to some of the Pass amps officially. The last one was, if memory does serve me, an integrated INT-30 amplifier, a review you had the opportunity to read in this magazine (No. 81 / 2010). My experience with Pass Labs amps is not extensive, but it may be relevant. Before that integrated amplifier in my listening room I enjoyed my own amps over the years, such as integrated amplifier INT-150, power amp x150.5, preamplifier X1 and Aleph P. Either loaned to me, or through other familiar listening rooms, I also had the opportunity to listen to X250, X 250.5, X350, X600, X150, Aleph 3 and Aleph 5. As you can see from the above, there is a certain historical void in my acquaintance with Pass, which we will try to fill in by listening to and learning about the latest Pass Labs toy, the Pass INT-25 integrated amplifier. To my knowledge, this is, if not the first, then certainly one of the first reviews of this integrated amplifier published in the print media in the world. The INT-25 is somewhat different from what we've been accustomed to from Pass Labs in the last 20+ years. During this period the Pass devices were dominated by Super Symmetry topology, which processes the audio signal in a fully balanced manner.

Pass INT-25 is an amplifier of nominal output power of 25 Watts at 4 Ohm load, 50-ish Watts at 8 Ohms, with peak output power in Class A of 50 Watts at impedance of 2 Ohms. Common to all Pass labs amplifiers INT-25 use FET's, large and strong power supplies, and massive heat sinks. However, unlike all of them and just like the XA25 power amplifier on which this integrated is based, the structure and

performance is simplified – everything revolves around the Class A single-ended topology that guarantees both good measurement results and even better sound, thanks to, among other things, fewer active and passive parts in the signal path. With this approach we have simpler circuit, reduced number of gain stages, increased response speed and stability. Lower power supply voltages allow for more idle current with less heat dissipation, and an amplifier that runs deeper in Class A. Not only that, a pair of new, powerful FETs replaces the usual set of output transistors, with better temperature characteristic and no output resistance for balancing required with the direct connection to the speaker terminals. This reduces the distortion, increases the damping factor (approx. 500) and keeps the amplifier in the Class A at low impedances longer. The driver stage uses two pairs of Pass' favorite NOS complementary FETs in the Current feedback configuration.



The preamplifier stage fundamentally differentiates this amplifier from the XA25 power amplifier; it is a simplified single ended version of the circuit from the models INT-60 and INT-250, with three-line single ended inputs and volume control. The amplifier is directly connected from input to output, without DC servo controls, compensation circuits and similar "fixers". The front is simple, and it is enough to look at the photo to make sure that you do not need to read the manual to use the amplifier. It's the same with the remote control; it is simple, logical, transparent, massive, but easy to use. Let us mention here that the power amplifier XA25, in the measurements performed by Stereophile, achieved output power of 80W / 130W, which means there is also a certain reserve of power, for the possible coexistence of this amplifier with somewhat inefficient speakers.

Sound

We started the listening test with a usual setup, minus the Exposure 3010s2 monos xm HP preamplifier. The system included the MG12 Magneplanars, the Chord 2Qute DAC, the Wireworld interconnects and the Xindak FS1 speaker cables, which left the scene immediately as the right channel of the INT-25 did not work with this cable. Replacing it with the VdH CS122 was a disappointment, just like every time when we connected any of the Pass' amplifier with any of the speaker cables from VdH. Wireworld and Pass distributor came to the rescue by offering Wireworld Eclipse 7 speaker cables. Although it is

almost impossible to reasonably handle these cables due to their stiffness, the sound combined with this amplifier proved to balance on the edge of magical, so we can easily overcome this shortcoming.



With Maggies, speakers that do not have the declared 84dB/W/m sensitivity, but significantly less, by simple mathematics we come to the conclusion that the INT-25 cannot be the perfect partner, at least not in a listening room of the size of my room. And it's not. However, there are several paths to perfection, one of which is called musicality and enjoyment of music. So, a combination of Pass INT-25 + MG12, underpinned with detailed and fast Chord 2Qute DAC and transparent and robust sounding cables, sounds fine and detailed and above all, layered in the midrange area.

Yes, this midrange is impressively natural, so we have an extremely listenable amplifier in front of us that draws spatial image with impressively layered depth and width. There is a high fluidity of natural sound emanating from the amplifier, and due to the amount of detail created, an impression of excessive openness can be expected. However, this openness never goes into an excess that makes listening difficult or fatiguing, but rather, the sound remains very listenable and uniform in terms of expression, impression and range.

This completeness can be heard through tangible and sensitive mids, but also in a space rich and full of detail, it seemed as if it can be also touched with fingertips. The expressiveness of the amplifier is so strong thanks to the reproduction of the frequency extremes. High end is as delicate as spider's web, finely woven and connected to the rest of the spectrum.

And the bass...! The bass reproduction is perhaps the biggest surprise of all. I have never heard such a solid and weighty bass from a Pass amplifier before, it goes deeper than any amplifier I have ever heard at home. The bass was devoid of any kind of stray resonance, it was natural, deep and precise. It made the somewhat bass limited MG12's sound like a size or two larger speakers. Thanks to this amplifier it

became clear why the MG12 are kind of wonderful speakers. Listening to compressed music streamed from Deezer services in MP3 format (320kbps), the sound was spatial, dynamic and timbrally accurate, with a precise and easy to follow arrangement of instruments in recreation of the ambience and virtual soundstage.

Now, here we come to what is probably clear to everyone – approaching perfection in this combination happens at relatively low volumes. Insensitive speakers, combined with relatively low power, all put in a 150 cubic meter room, result in an acceptable reproduction up to the sound pressure of approx. 75 to 80 dB at the listening site (three meters from the line of speakers). Okay for easy listening, but by no means enough for the simulation of the concert hall experience in trying to reach the dynamic and volume we encounter in real life. Therefore, we have also tried the amplifier with Croatian-made speakers Beta System C2. It is a two-way bass reflex speaker with ceramic Accuton tweeter (open, detailed, fast, natural, and fantastic) and Davis Velvet bass / midrange speaker (smooth, detailed, fast, natural, and fantastic). And now, with the standard cone-type, dynamic and more efficient speakers, Pass INT-25 has obviously started to breathe easier. All good features now have become even better.

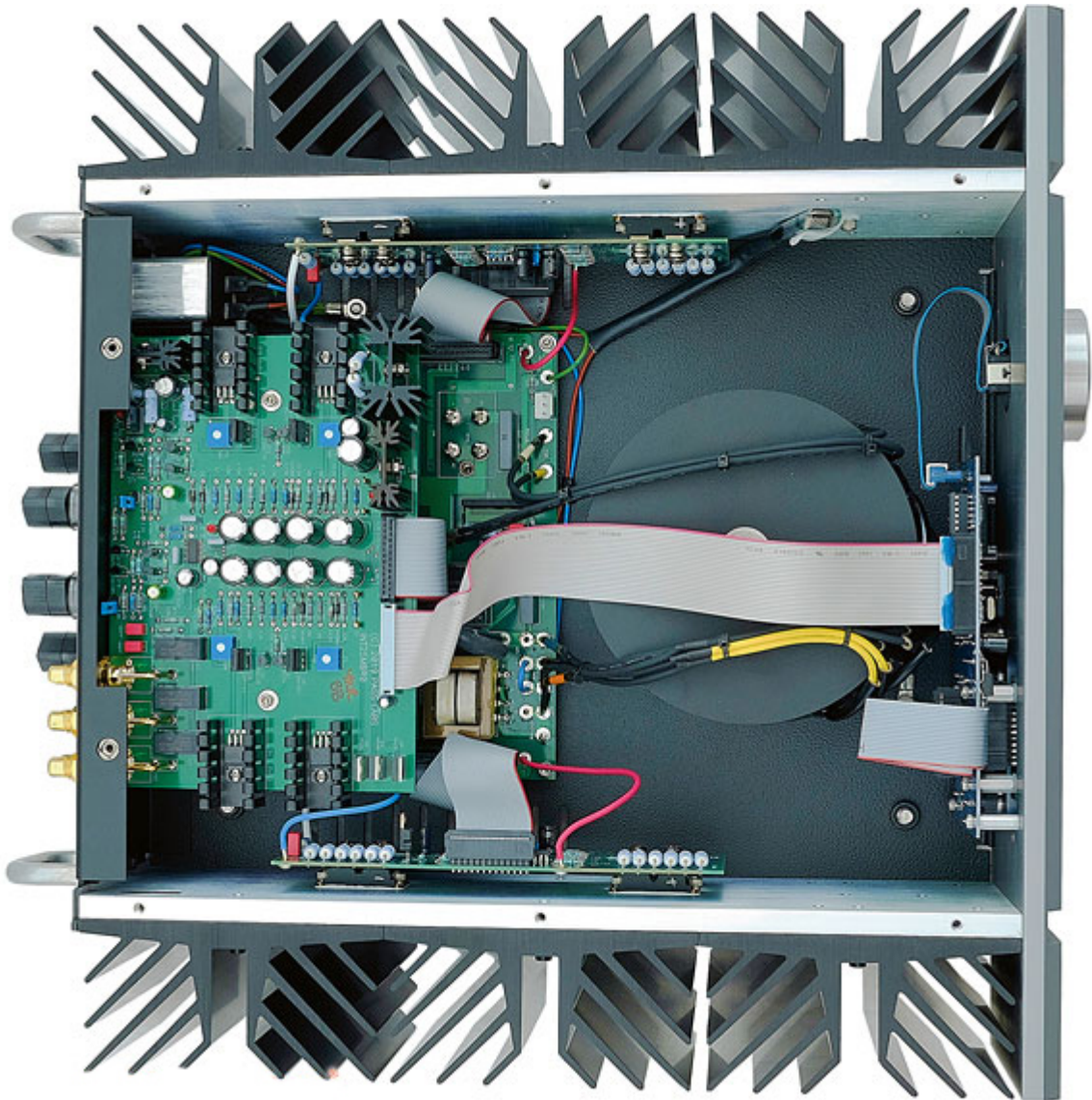


Precise and detailed as it already is, the tweeter brought to life the best features of an amplifier that we emphasized earlier - naturalness, detail, speed and excellent extension. Interesting was the way the amplifier controlled the bass / midrange membranes, allowing for an extremely natural, smooth, yet firm and above all extremely deep bass. Obviously, the simple structure, the lack of everything superfluous in the signal path, the quality of power supply and other little things we mentioned on in the technical description of the amplifier, contributed to the immediacy and musicality of the playback.

(Not) Important Comparisons

As for the comparisons, I tried to compare the INT-25 with what I had on hand. A comparison with the Exposure XM HP preamplifier, in combination with Exposure 3010S2 monoblocks, showed that monoblocks demonstrate more power and muscle and interact more easily with speakers, even notorious Maggies. This is primarily due to the feeling that monoblocks can reach a certain volume level more easily, with less compression and a feeling of lack of breath. The INT-25, on the other hand,

makes up for it with detail, fluid and gentle sound, with more finesse. Surprisingly, Pass's bass was deeper, more natural and with more control than obtained by (bipolar) monoblocks. Overall, the Exposure combination sounds a bit smaller and less expensive, which it really is, about half less at approximate European prices. The Exposure combination still represents a great value for money, while the INT-25 shows what a significantly more expensive and sophisticated device can do. To get a whole picture, we also listened to the Exposure 3010S2D Integrated Amplifier, which in its price range represents a phenomenal buy as it delivers great sound, plenty of power while still retaining a reasonable price tag.



It is interesting how the 3010S2D compensates for its shortcomings in comparison with the more expensive amplifier, due to its liquid and musical character. And it compensates for them so successfully that this integrated amplifier is my personal favorite for worry-free listening because it's not demanding, it doesn't consume a lot of power (we measured from the mains draws about 2.6 Ampere constantly) and doesn't heat up (Pass Lab's heat sinks measured ~25 degrees C above ambient temperature). The qualities 3010S2D provides are not at the level of the INT-25 (the price difference is fourfold), but the 3010S2D not only allows you to enjoy listening to music, it also does so at a high, yet entertaining level. Just to make myself clear – the INT-25 provides more detail and fluidity, more

faithful and convincing bass and more seductive female vocals, but we should expect nothing less. The differences are in any case less than the price difference but listening to the INT-25 never fails to make it clear why high-end hi-fi costs more than the "regular" one. Because of the often deceptive personal audio memory, I wanted to avoid comparing the INT-25 with other amplifiers that went through my listening room, and the experience I had with them. I nevertheless took a peek at my listening notes and remembered the sound experienced with Pathos InPol Heritage, a heavyweight among integrated amplifiers. Although the Pathos price is still some 40 percent higher than the Pass, the comparison seemed appropriate because both amplifiers, each in their own way, demonstrate what can be achieved in the look and sound of the amplifier when you are not short of money in R&D phase. Thus, just like the Pathos, the INT-25 imposes a relatively narrow selection of speakers which should be selected among the ones of at least moderate sensitivity. Common features between the two are character of the sound, which in both amps is detailed, smooth and musical, at the same time powerful, controlled and sovereign. We listened to the Pathos with the Beta Systems C2 as well, and then we were able to make a comparison more meaningfully: both amplifiers with this speakers resulted in detailed and musical sound, with exceptional bass control and transfer of an emotional impact of music that cannot be simply expressed by numbers.

Conclusion

I'll be brief as if not the best, this is definitely the most musical amplifier I've had the opportunity to listen to. And not just the one from Pass's catalogue. It is fascinating how easily Nelson Pass raises its qualitative bar with his amplifiers. As with other things in life, to achieve exceptional quality something needed to be sacrificed. With the Pass INT-25, the only casualty may have been the money one needs to pay for it, and the electricity bills.