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Introduction

Recently, we reviewed the [Pass Labs INT-150](#) integrated amplifier, which is biased into Class A at about 5 watts, and leaves Class A into Class AB at 10 watts peak. It is a superb integrated amplifier. The INT-150's brother, the INT-30A integrated amplifier, is Pure Class A throughout its 30 watt output (into 8 ohms) specification. Chris Eberle [originally reviewed](#) the INT-30A in 2010, and in this review, I compare the INT-30A with the INT-150, and add bench tests which were not in Chris' review.

SPECIFICATIONS

- Design: Integrated Stereo Amplifier
- Power: Pure Class A 30 Watts RMS x 2 into 8 Ohms, 60 Watts RMS x 2 into 4 Ohms
- Input Impedance: 36 kOhms Unbalanced, 18 kOhms Balanced
- Inputs: Two Sets XLR/RCA, Three Sets RCA
- Outputs: One Set XLR/RCA
- Dimensions: 7" H x 19" W x 19" D
- Weight: 60 pounds
- MSRP: \$7,150 USD
- [Pass Labs](#)
- Tags: Pass Labs, Integrated Amplifiers, Amplifiers, Audio, Stereo

The Design

Like the INT-150, the INT-30A's preamplifier section has an input relay selector that routes the signal to an analog volume control, and this feeds a Class A FET unity gain buffer. The output of this buffer goes to the preamp output stage and, from there, to the power amplifier section. The INT-30A has a lower rail voltage than the INT-150, in keeping with its lower power output specification.

The front panel has a horizontal row of buttons, the first of which is the power on/off, and the rest are for selecting the input. The volume is read in 0.5 units, up to 63, so it is a relative scale, not dBV.

The rear panel has, from left to right, a set of preamp outputs, which includes both RCA unbalanced and XLR balanced. To the right of the pre-outs are the inputs, with three sets of unbalanced RCA jacks, followed by two sets of balanced XLR jacks that also have adjacent unbalanced RCA jacks. The AC receptacle is three-pin grounded. The main power on/off toggle is next to the receptacle. So, when it is on, the front on/off button serves as standby and power on. The speaker binding posts are really intended for cables with spade terminations, as the rear end of the binding posts are blocked with plastic plugs. Note that there are U-shaped jumpers that short two of the pins in the XLR input jacks. These have to be there if you use the RCA inputs. For balanced use, simply pull the pins out and put them in a safe place.



The remote control is the same as with the INT-150. Very nicely manufactured, in metal, with simple, straightforward buttons. All the buttons are shaped the same, but there are so few, it is not a problem to do what you want in a darkened room, such as changing the volume.



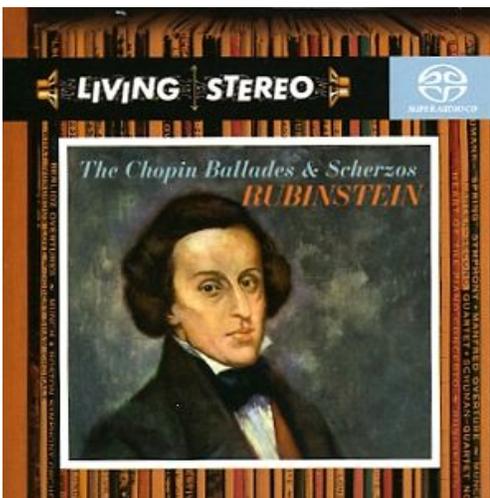
In Use

I tested the INT-150 using an OPPO BDP-95 universal player, Carver Mark IV ribbon speakers, and Krix Equinox Mini-Monitor (Bookshelf) speakers. Cables were Wireworld and Emotiva.

The first thing I did was listen to several albums with the Krix speakers, including the albums that I used with the INT-150. Then, I played several mono music tracks that I had created by ripping the CDs to my computer, and then, using Adobe Audition CS6, I converted the stereo to mono. I set the system up with the INT-150 driving one speaker, and the INT-30A driving the other, and just muted

one speaker when listening to the other by using the remote control (I placed the amplifiers close to the speakers so the remote wouldn't mute both channels when I pushed the Mute button). After a while, I switched the speakers that each amplifier was driving. To calibrate the sound, I used a 1 kHz sine wave and adjusted the volume control on each amplifier so that the SPL coming from both speakers was the same (80 dB at 1 foot).

Artur Rubenstein was a living legend, and fortunately, he lived a long time and recorded an entire library of music. Piano is a difficult instrument to reproduce, but the INT-30A had no problems here. I could only hear the deep fundamentals of the lowest notes on the Carver speakers, but they are not very sensitive, so loudness was more in the domain of the INT-150's capability. Nevertheless, at "normal" listening levels, where less than 10 watts are used, the INT-30A and ribbon speakers were a wonderful combination. In the INT-150/INT-30A left/right channel mono test, I could tell there was something different between the two amplifiers, but I could not describe what it was, yet. They both sounded very good, but there was a voice in the back of my mind telling me that they differed. This album is *The Chopin Ballades & Scherzos* (RCA Red Seal 82876-61396-2 RE1), which is a remaster in SACD three-channel, with the CD version included.



Here is an SACD recording of *Liszt Organ Works* (Membran International 4-019272-601446). Again both Pass models sounded terrific, but it strained the INT-30A, while the INT-150 was able to deal with it, at reasonably loud levels. However, when I set it so that the deep pedal tones didn't use more than about 25 watts, even the Carver Amazings shuddered when they were driven with the INT-30A. With this recording, and the INT-150/INT-30A left/right channel mono test, I could not hear any difference between the two amplifiers.



Playing this *Recorder Sonatas* CD (NAXOS 8.572023), which included a recorder (similar to a flute), harpsichord, and cello, I discovered what the difference was between the two Pass models. There was just a bit more clarity and detail in the INT-30A. I had originally expected that there might be more warmth to the INT-30A, but this was not the case. It was simply in the details. Now, I would be happy with either the INT-150 or the INT-30A, but if I had the INT-30A, I would pair it with much more sensitive speakers, such as horn designs, which have a sensitivity approaching 100 dB/w/m.

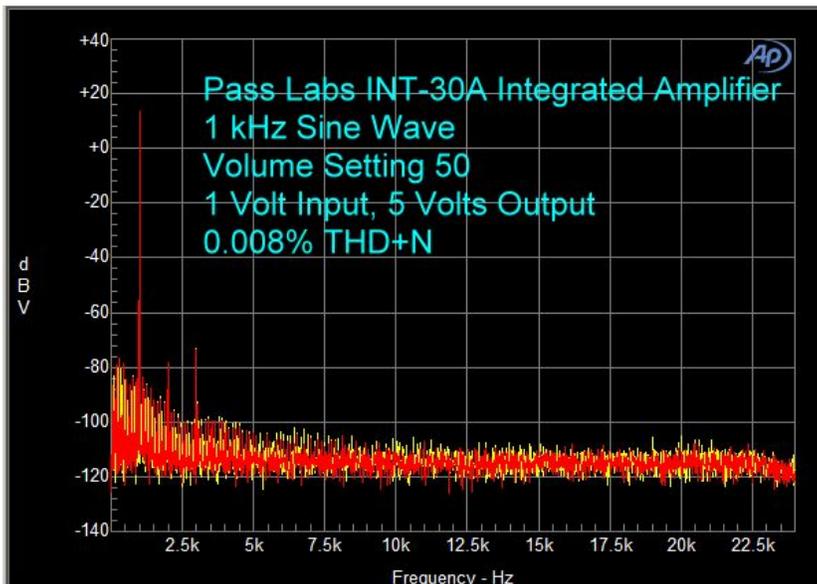


On the Bench

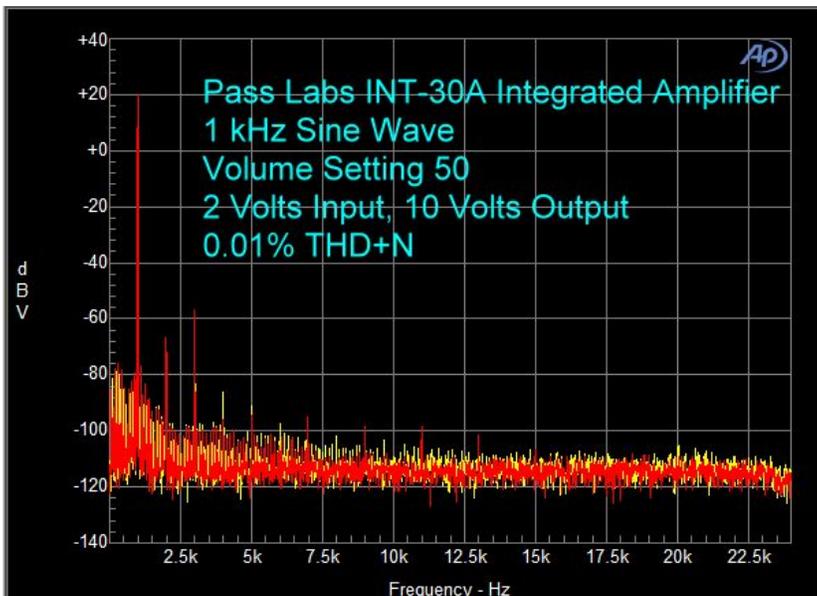
All distortion tests were made within an 80 kHz bandwidth. Tests were with an 8 ohms load, unless otherwise specified.

Now, what I suggest you do is open another window in your browser and go to the [bench test page for the INT-150](#). Then you can scroll down the page to see the same tests for both amplifiers, side-by-side.

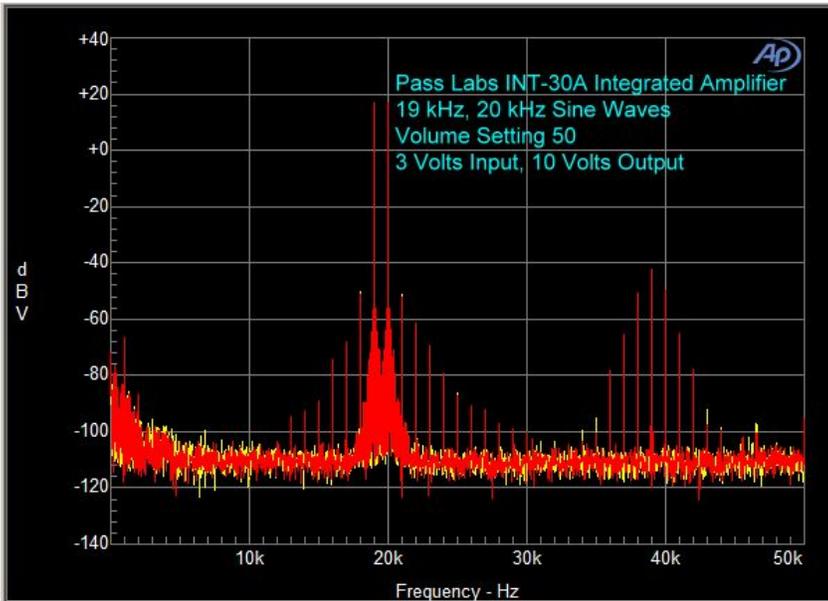
At 1 kHz and 5 volts output, distortion was 0.008%. There are only two harmonics, the second and third ordered, with the third being the largest. With the INT-150, there were second, third, and fourth ordered harmonics, but the second harmonic was the largest.



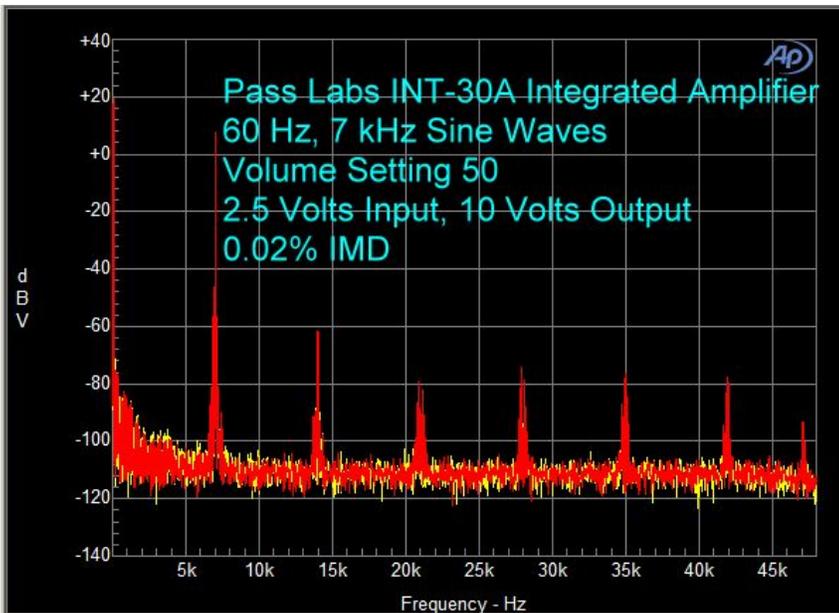
At 10 volts output, there are multiple harmonics, with the third being the largest, and the smallest being the thirteenth. Overall, the harmonics present in the INT-30A are lower in height than in the INT-150, even though the measured number is higher. This higher measurement reflects some noise around the 1 kHz region, and that increases the numeric value.



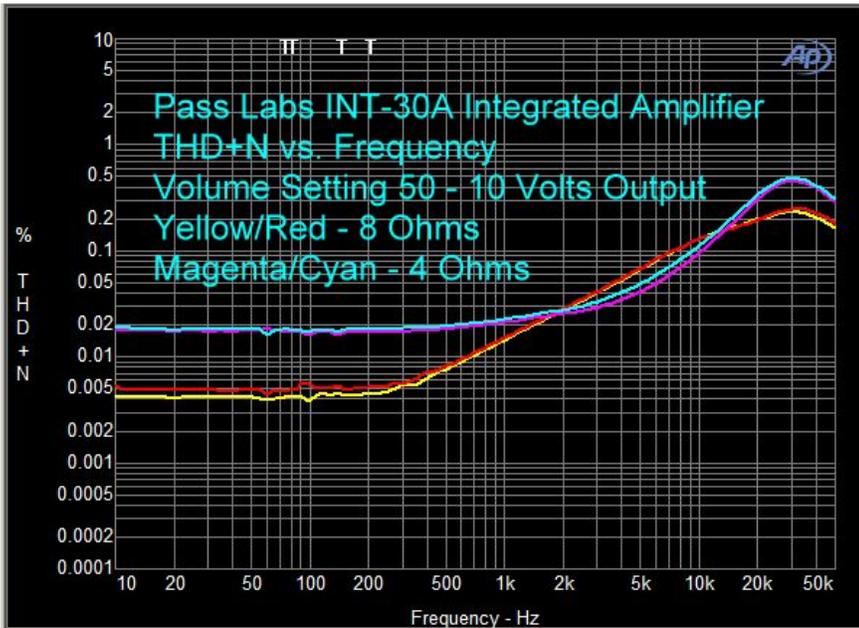
The 19 kHz, 20 kHz test results are shown below. There is a visible B-A peak (1 kHz) that is 84 dB below the fundamentals. Not significantly different from the INT-150. There is one more side peak to the left of the fundamentals in the INT-150. Again, not significant, in my opinion.



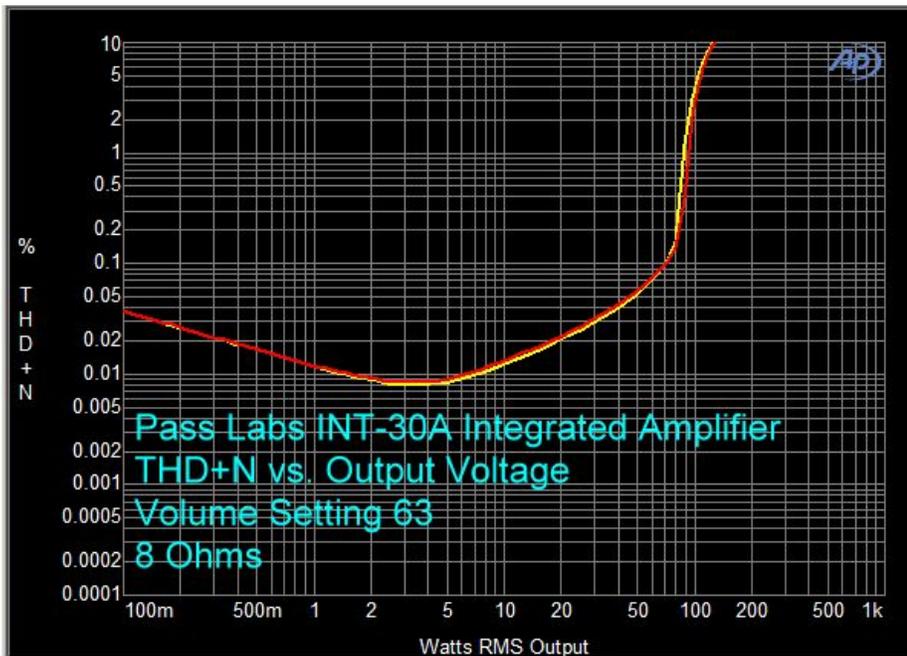
IMD at 10 volts was 0.02%. This is less than half that measured in the INT-150 and may be part of the reason I found the INT-30A sound to have more detail.



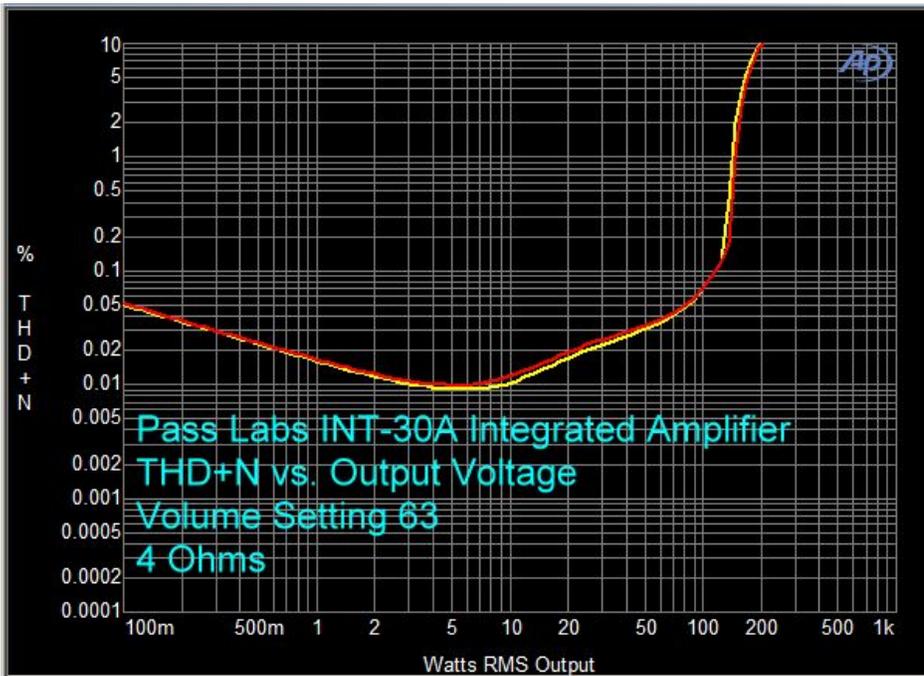
The following graph shows THD+N vs. Frequency with a 10 volts output into 8 ohms and 4 ohms. With the INT-30A, distortion begins to rise at 200 Hz (8 ohms), while with the INT-150, it begins rising at 1 kHz. This is where having more power makes a difference, because 10 volts is a smaller percentage of the output in the INT-150 than in the INT-30A.



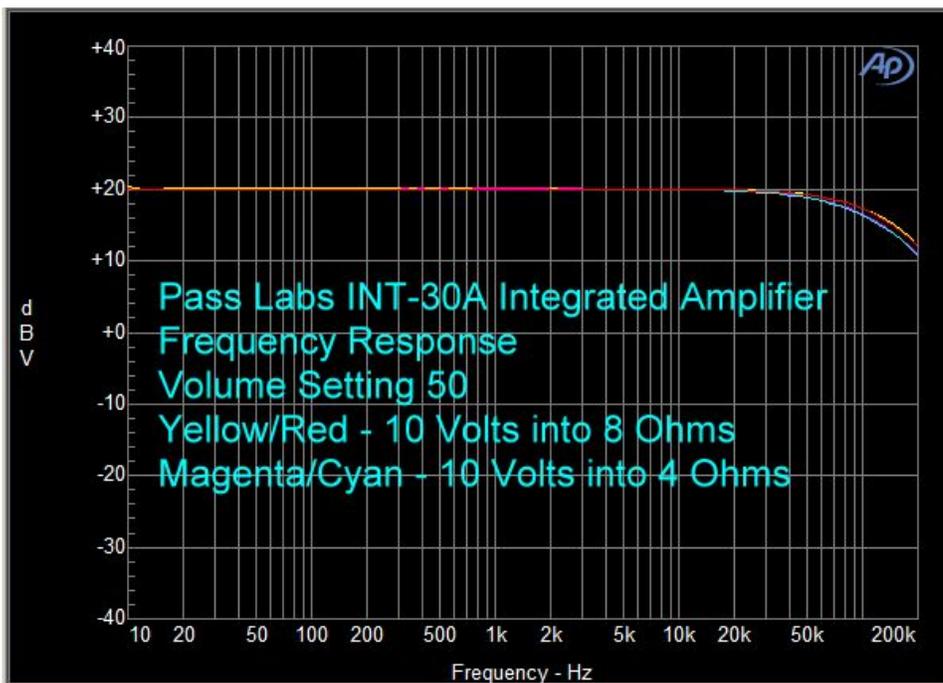
THD+N vs. Output Voltage is shown below. The first graph is with an 8 ohms load. The soft knee is at 4 watts output, and the hard knee is at 80 watts, with clipping at 90 watts. So, for a 30 watt spec, that is pretty fine performance. (The INT-30A leaves Class A operation at 60 watts output, and goes into Class AB operation.)



With a 4 ohms load, the soft knee is at 7 watts, and the hard knee is at 130 watts. Clipping occurred at 150 watts output. This is *SOME* 30 watt amplifier !!



The measured Frequency Response was down 0.5 dB at 30 kHz. There was a bit more attenuation with a 4 ohms load.



Conclusions

Both the Pass Labs INT-150 and INT-30A are great little (but heavy) integrated amplifiers. Each one speaks its own voice, but the difference is not like that between a baritone and soprano, but more like two baritones, with one of them being able to sing louder than the other, and the other baritone being

able to sing three notes higher on the scale. The choice would be a toss-up for me. If I had a couple of horn speakers, I would go for the INT-30A. With my ribbon speakers, the INT-150. Either way, you get something that will probably still be around when you aren't. A nice item to inherit for a grandchild. Oh yes !!