

stereophile

Pass Laboratories XP-27

PHONO PREAMPLIFIER

JIM AUSTIN

One of the pleasures of reviewing—and also using—products from Pass Laboratories is an encounter with Nelson Pass’s writing, which can usually be found in the owner’s manual and is always competent, insightful, and sometimes funny. How often do you get real pleasure and insight from reading an owner’s manual?

Pass Labs has a lot of owner’s manuals online. Reading through one, I encountered the following passage; you’ll find the same or similar language in other manuals and on the Pass Labs website. I present it not only because I admire it and agree with the philosophy it expresses but also because it captures the spirit of the product under review—the XP-27 phono preamplifier (\$12,075 in silver)—at least as I’ve experienced it during an extended review period. Here it is, quoted at length with some slight adjustments to make it consistent with *Stereophile*’s editorial style:

“For a very long time, there has been faith in the technical community that eventually some objective analysis would reconcile critical listeners’ subjective experience with a repeatable laboratory measurement protocol. Perhaps this will ultimately occur, but in the meantime, audiophiles largely reject bench specifications as an indicator of audio quality. This is appropriate; the appreciation of audio is a



The low notes on Diehl’s piano were cavernous, with, when struck hard, an appropriately woody-metallic leading edge. All the music was present and accounted for.

completely subjective human experience. We should no more let the numbers define audio quality than we would let chemical analysis be the ultimate arbiter of fine wines. Measurements are certainly

critical, they can and do provide a measure of insight, but are no substitute for human judgment of that which is pleasant.

“As in art, classic audio components are the results of individual

SPECIFICATIONS

Description Two-chassis, balanced phono preamplifier with dual inputs and front-panel gain and loading settings. Inputs: Balanced (XLR) and unbalanced (RCA). Balanced-mode gain: 53dB, 66dB, 76dB; 6dB less at single-ended output. RIAA accuracy: 20–20kHz, ±0.1dB. THD: <0.005% at 1mV MC input, <0.002% at 10mV

MM input. Maximum output voltage: 22V RMS. Output impedance: 150 ohms balanced, 150 ohms single-ended. Input capacitance, adjustable 100pF–750pF on either input. Input resistance: 30 ohms–47k ohms on either input. Unweighted noise: –93dB ref. 10mV (MM), –85dB ref. 1mV (MC). Power consumption: 50W.

Dimensions 17" (432mm) W × 4" (102mm) H × 12" (305mm) D, each chassis. Weight: 45lb (20.4kg).

Finish Silver or black brushed aluminum.

Serial number of unit reviewed Signal chassis: 36200, power supply chassis 36199. Designed and manufactured in USA.

Price \$12,075 in silver, \$12,825 in black. Number of US dealers: 20. Warranty: Three years, parts and labor, transferrable.

Manufacturer Pass Laboratories Inc., 13395 New Airport Rd., Suite G, Auburn, CA 95602. Tel: (530) 878-5350. Web: passlabs.com.

and collective efforts that reflect a coherent underlying goal and philosophy by the major participants. If successful, they make both a subjective and an objective statement of quality, which is meant to elicit appreciation in the final product. It is essential that the circuitry of an audio component reflects a philosophy which addresses the subjective nature of its performance first and foremost.

“Lacking the ability to completely characterize performance in an objective manner, we should take a step back from the resulting waveform and take into account the process by which it has been achieved. The history of what has been done to the music is important and must be considered a part of the result. Everything that has been done to the signal is embedded in that signal, however subtly.”

This passage, and the philosophy it espouses, could serve as a how-to manual for aspiring *Stereophile* reviewers. Objective aspects—technical details and measure-



MEASUREMENTS

I measured the Pass Labs XP-27 phono preamplifier with my Audio Precision SYS2722 system,¹ repeating some tests with the magazine’s higher-resolution APx500 analyzer. To minimize noise, I connected a wire from the grounding terminal on the preamplifier chassis’s rear panel to the analyzer ground connections. The XP-27 gets warm. The temperature of the top panel after an hour of testing was 99.5°F (37.5°C).

The inputs preserved absolute polarity from both the balanced and single-ended outputs. The gain from the balanced outputs was fairly close to the numeric values: 57.85dB with the gain set to “53,” 65.5dB with it set to “66,” and 77.5dB with it set to “76.” The gains from the single-ended outputs were exactly 6dB lower than these values.

The input impedances were close to the values set with the rotary control on the front panel: 30 ohms with it set to “30,” 101 ohms with it set to “100,” 166 ohms with it set to “160,” and 348 ohms with it set to “320,” for example, with all these values consistent from 20Hz to 20kHz. With the impedance set to “1k,” the measured values were 1138 ohms at 20Hz, 980 ohms at 1kHz, and 966 ohms at 20kHz. With the control set to “47k,” I measured 45k ohms at 20Hz and 1kHz, but 22.2k ohms at 20kHz. (The capacitance was set to 100pF for these measurements.) The source impedance is specified as 150 ohms from

both types of output; I measured 200 ohms from the single-ended outputs, 540 ohms from the balanced outputs. Though these impedances are higher than the specified values, they are still low in absolute terms.

The error in the XP-27’s RIAA equalization (fig.1, blue and red traces) was extremely low, though there was a very slight boost in the lower midrange and bass, reaching +0.25dB at 100Hz and +0.36dB at 20Hz. The output rolls off above the audioband, and with the high-pass filter selected with the front-panel button, the response was down by 2dB at 10Hz (green and gray traces). The channel matching was excellent overall. Channel separation (not shown) was >80dB in both directions below 8kHz and still 72dB at the top of the audioband. (I always look at the

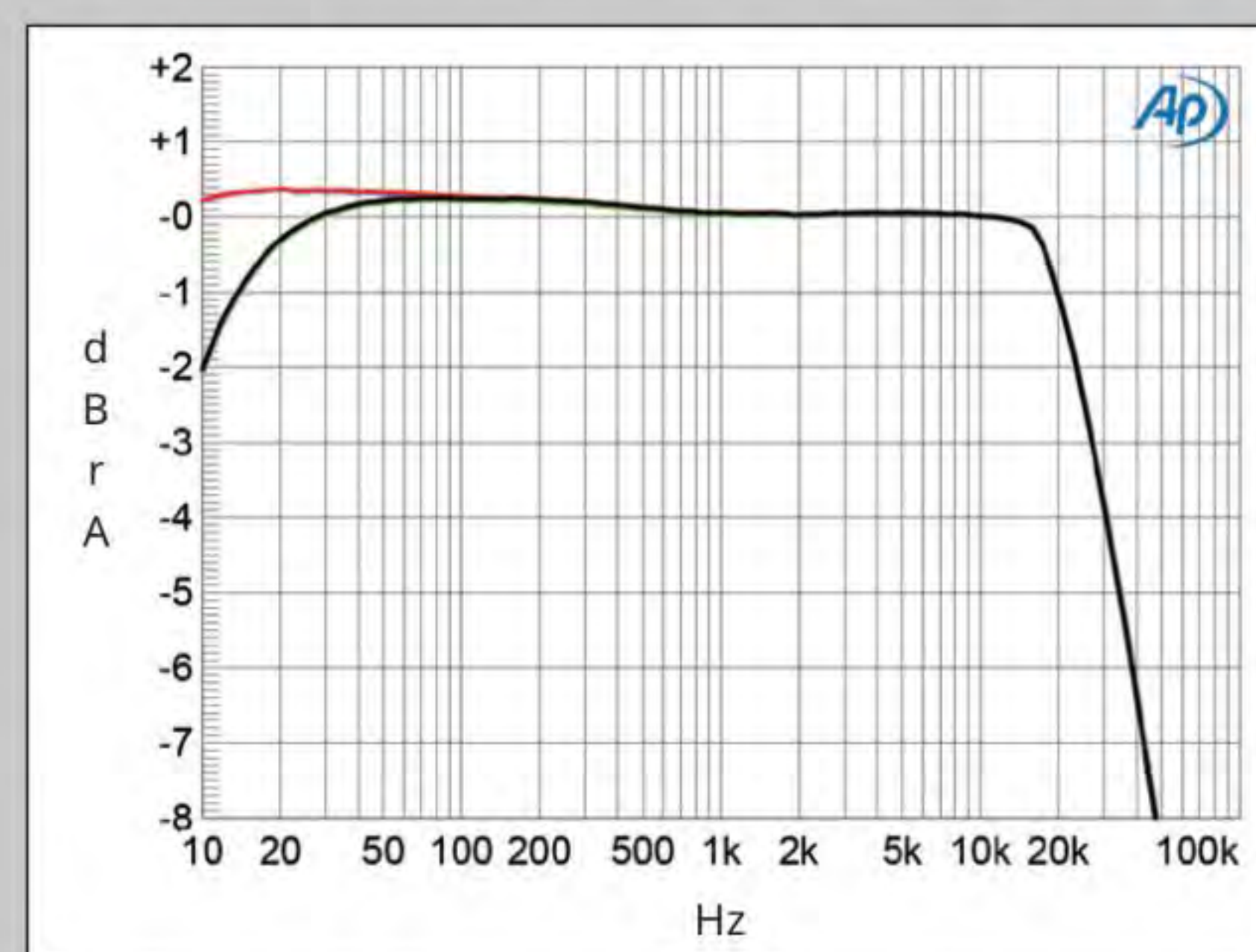


Fig.1 Pass Labs XP-27, response with RIAA correction into 100k ohms (left channel blue, right red) and with the high-pass filter engaged (left green, right gray) (1dB/vertical div.).

undriven channel’s output on the oscilloscope screen while examining the channel separation; the XP-27’s reading was true crosstalk rather than noise.)

With the gain set to “53,” the Pass’s unweighted, wideband S/N ratio, measured with the input shorted to ground and ref. 1kHz at 5mV, was a very good 80.5dB in the left channel, 74.4dB in the right. Restricting the measurement bandwidth to 22Hz–22kHz increased the ratios to 84dB in the left channel, 75.5dB in the right, and the A-weighted ratios were a superb 94.5dB, left, and 93.1dB, right. (These ratios were measured at the balanced outputs; they were identical at the unbalanced outputs.) As expected, the ratios were lower at the

¹ See stereophile.com/content/measurements-maps-precision.

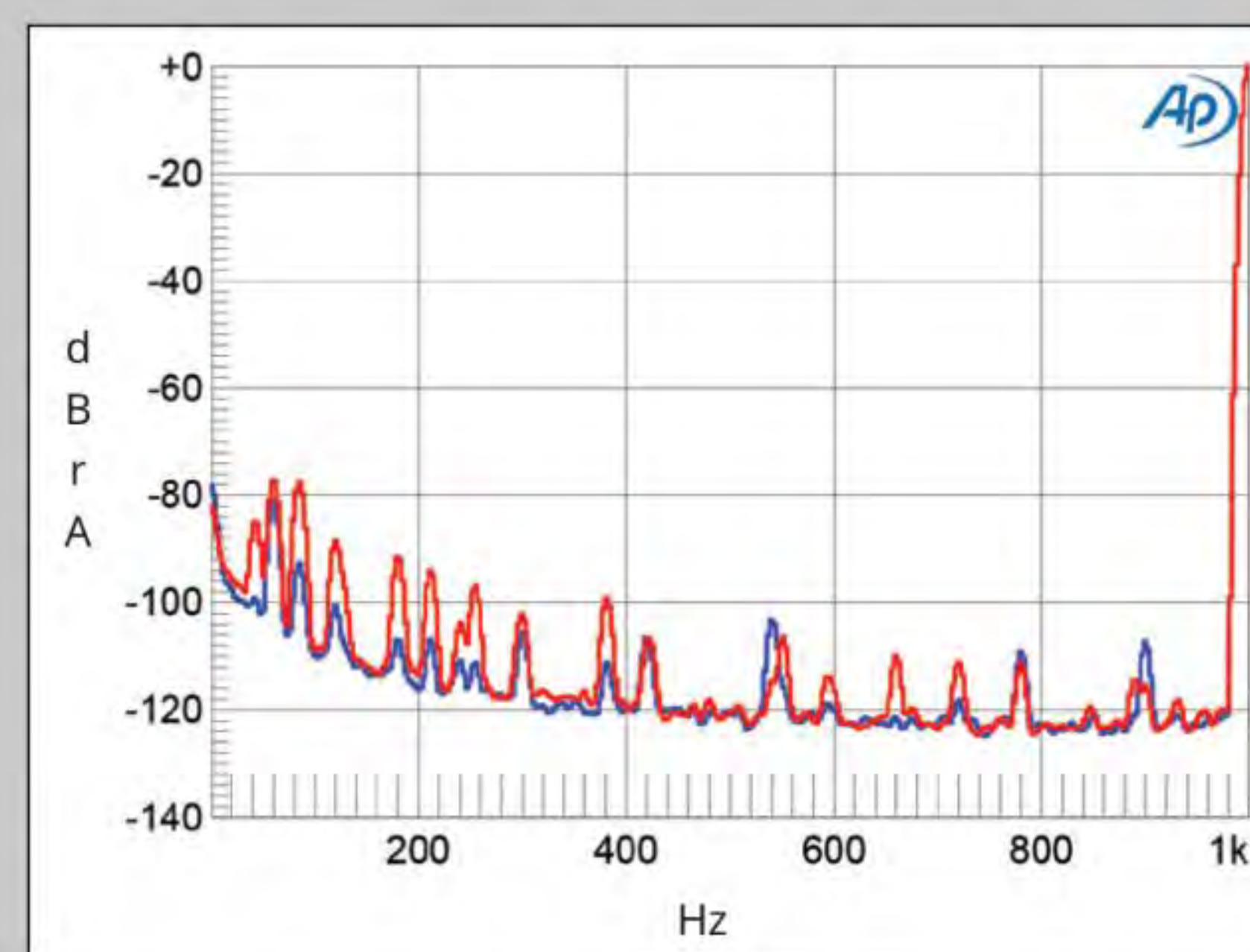


Fig.2 Pass Labs XP-27, gain “53,” spectrum, DC–1kHz, of output ref. 5mV input (left channel blue, right red, linear frequency scale, 20dB/vertical div.).

ments—matter, but they're secondary to the sonic result, and the component should be considered in context: the context of the review system and of the product's development history. I aim to do that in this review.

The essay, which was written by Nelson Pass (I asked), goes on to list three principles that inform Pass Labs designs: Keep circuits simple and reduce the parts count, especially in the signal path; pay attention to and exploit the unique characteristics of the gain device employed; maximize intrinsic linearity, then minimize feedback (the main purpose of which is to increase linearity) because "Experience suggests that feedback ... removes information from the signal."

In doing research for this review, I was surprised to learn that this language goes all the way back to the manual for the Aleph Ono phono preamplifier, which debuted at the tail end of the 20th century. That was, it's safe to say, the first iteration of the phono preamplifier that eventually became the XP-27. So let's start there.

Like many early-ish Pass Labs designs, the Aleph Ono was innovative.¹ It used a combination of JFETs, MOSFETs, and bipolar tran-

sistors to produce very high gain at very low noise with no global feedback, while providing great flexibility in cartridge loading. The specifications were excellent for the time, yet that was hardly the point. Nelson wrote in the owner's manual, "it is perhaps remarkable that the final product displays such spectacular objective qualities."² However, we view the specifications as a secondary source of pride in this product. ... The measurements only hint at the listening experience with the Aleph Ono. The sound is lush and smooth, with a wide soundstage, fine detail and layering, and a nice, firm bottom."

Jump forward a decade or so, to the XP-25 phono stage, which was introduced at the 2010 Consumer Electronics Show. Though built in the spirit of the Aleph Ono, the XP-25 was, in my view, the first modern, mainstream Pass Labs phono preamp—modern and

¹ Wayne Colburn—not Nelson Pass—has been designing Pass Labs preamplifiers for decades. The Aleph Ono and all the other phono preamplifiers mentioned in this review are Wayne Colburn's work.

² Upon measuring the Aleph Ono, Tom Norton, who at the time was *Stereophile's* technical editor, wrote, "There were no surprises in the Aleph Ono's excellent test-bench results." See Michael Fremer's review at stereophile.com/phonopreamps/199pass/index.html.

measurements, continued

highest gain setting, at 64.2dB/56.7dB, left/right, unweighted, 65dB/57dB when restricted to the audioband, and 81.7dB/77dB when A-weighted. Spectral analysis of the XP-27's low-frequency noise floor with the gain set to "53" and ref. 1kHz at 5mV (fig.2) revealed that the lower ratios in the right channel were due to higher levels of AC supply-related and other spurious in that channel (red trace) than in the left (blue trace). Even so, the XP-27 is a quiet preamplifier.

The XP-27's overload margin with the gain set to "76," ref. 1kHz at the standard MC level of 500 μ V, was an excellent 18.7dB in both channels from 20Hz to 20kHz. It was even greater at 20Hz and 1kHz with the gain set to "66," at 30.6dB and 32.5dB, respectively, though it was the same 18.7dB at 20kHz. Setting the gain to "53" gave overload margins of 18.3dB at 20Hz and 1kHz ref. 1kHz at the standard MM level of 5mV, but the margin dropped to -1dB at 20kHz. This gain setting should

only be used with low-output moving magnet cartridges.

The XP-27 offered very low distortion. Fig.3 shows the spectrum of the preamplifier's output reproducing an input signal of 1kHz at 5mV with the gain set to "53." The only distortion harmonics that can be seen above the noise floor are the second, at -76dB (0.015%) and the third, at -104dB (0.0006%). These very low levels didn't increase when I reduced the load impedance to the current-demanding 600 ohms and were similar at lower frequencies and with the two higher gain settings.

Fig.4 shows a wideband spectrum of the XP-27's output with the gain set to "53" while it reproduced a 20kHz tone at 35mV input, which is 2dB below the point where the XP-27 overloads at this frequency. Both the second and third harmonics lie close to -60dB (0.1%). With this reduced linearity at high frequencies

and levels, the XP-27 offered higher levels of intermodulation distortion with an equal mix of 19kHz and 20kHz tones than I was expecting. Fig.5 shows the spectrum of the XP-27's output with the gain set to "76" and the peak input level 13dB below the clipping voltage at 20kHz. While the higher-order products were at a respectably low -90dB (0.003%), the difference product at 1kHz lay at -54dB (0.2%). This was despite the levels of the second and third harmonics with a 20kHz tone at the same peak level and the same gain setting respectively lying at -76dB (0.02%) and -81dB (0.01%).

Other than the limited overload margin at the top of the audioband at the lowest gain setting and the somewhat disappointing high-frequency intermodulation results, the Pass Labs XP-27 offers accurate RIAA equalization, very low noise, subjectively innocuous harmonic distortion, and an output stage that handles low impedances with aplomb.—John Atkinson

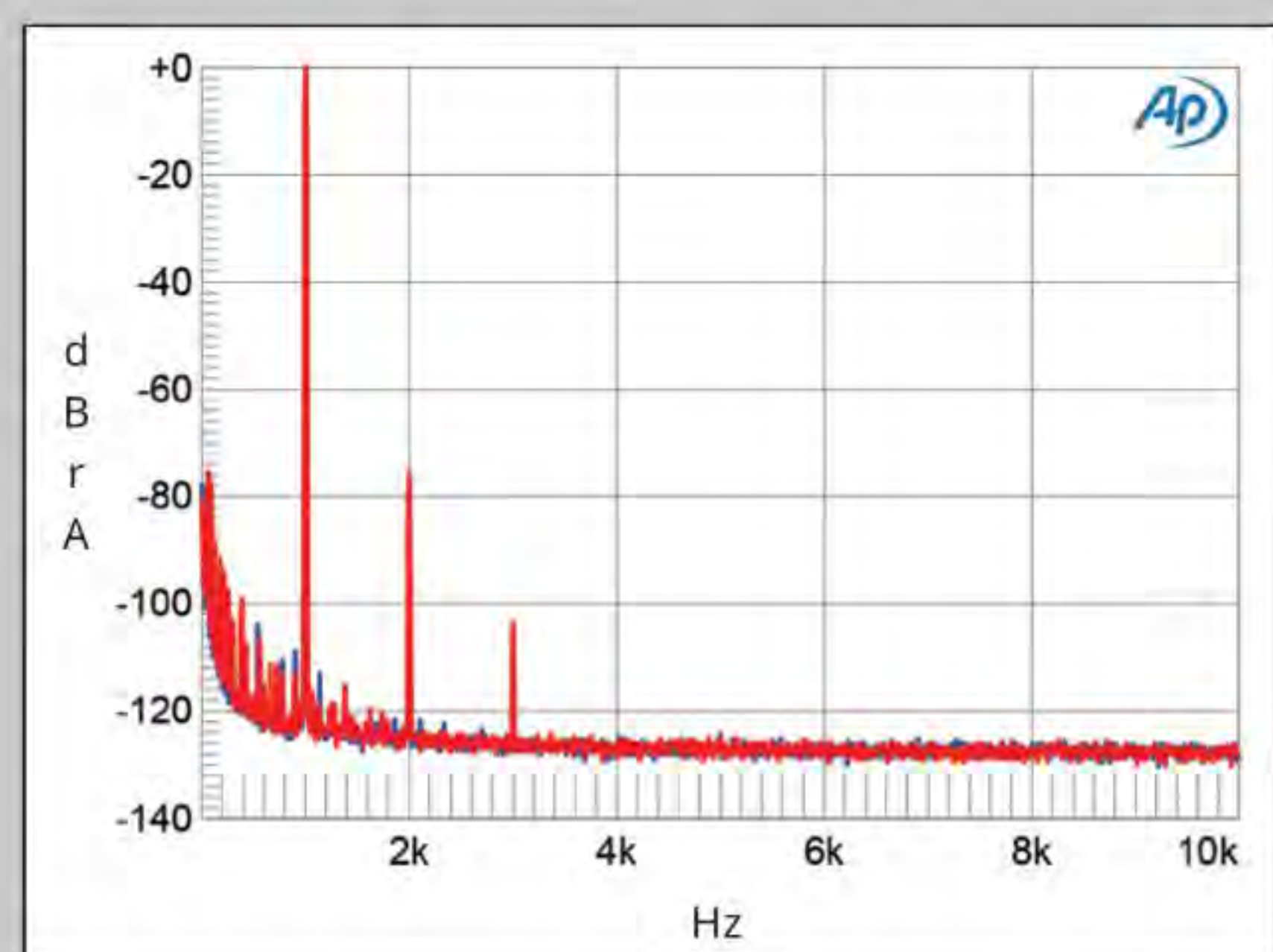


Fig.3 Pass Labs XP-27, gain "53," spectrum of 1kHz sine wave, DC-10kHz, into 100k ohms for 5mV input (left channel blue, right red, linear frequency scale).

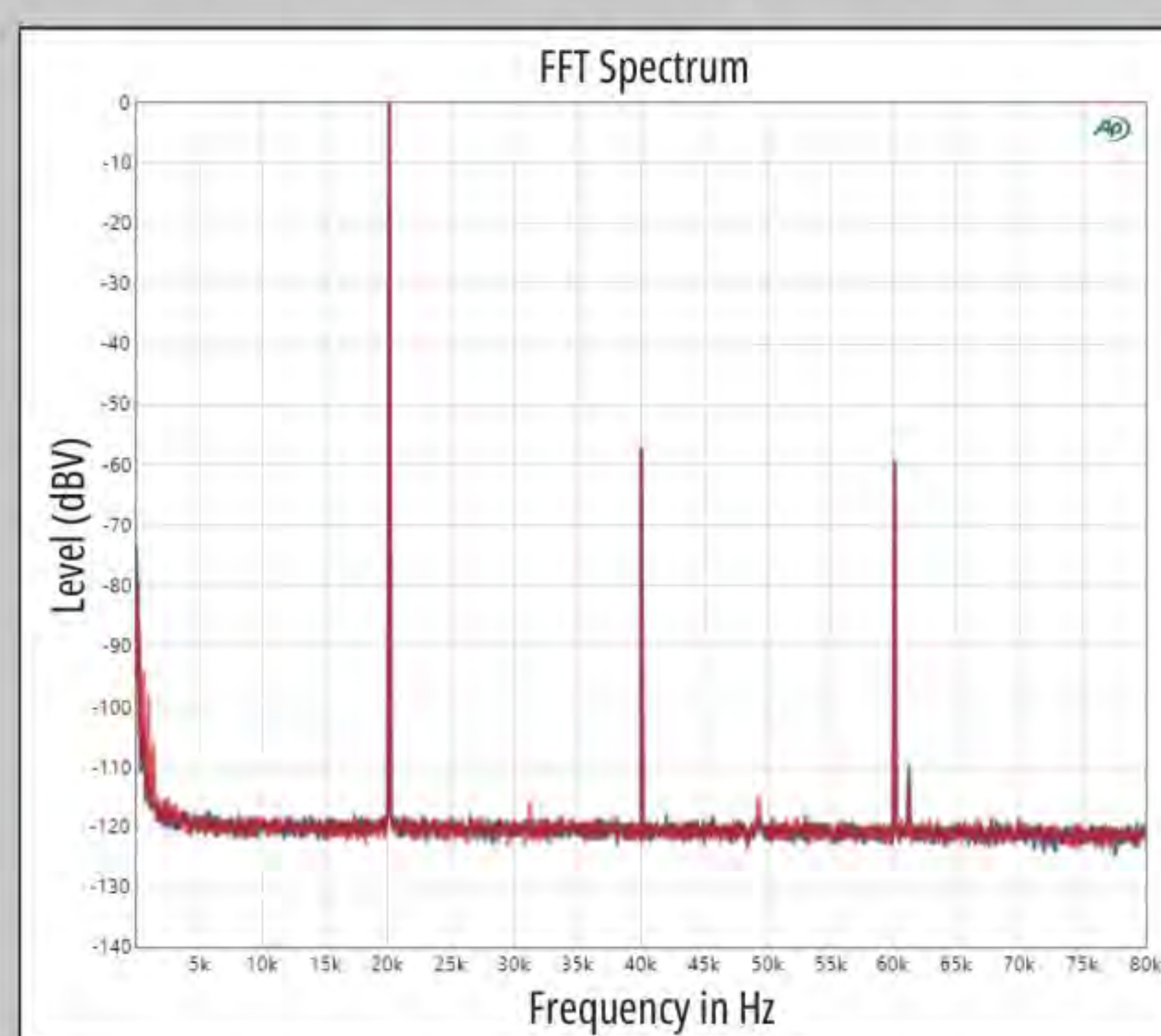


Fig.4 Pass Labs XP-27, gain "53," spectrum of 20kHz sine wave, DC-80kHz, into 100k ohms for 35mV input (left channel blue, right red, linear frequency scale).

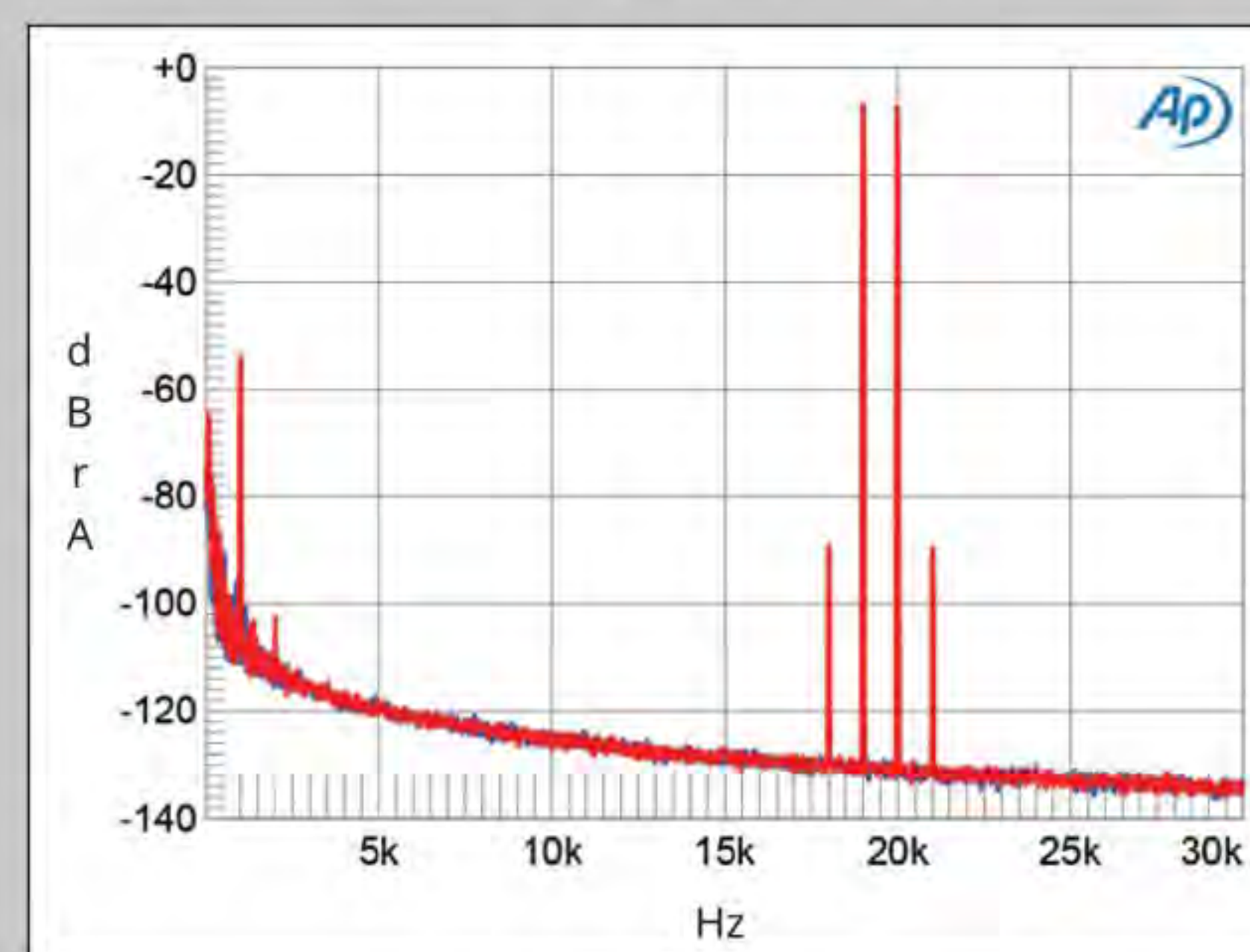


Fig.5 Pass Labs XP-27, gain "76," HF intermodulation spectrum, DC-30kHz, 19+20kHz into 100k ohms for 10mV peak input (left channel blue, right red, linear frequency scale).

mainstream in that it combined high performance with support for two tonearms/cartridges and all adjustments on the front panel (as opposed to rear panel DIP switches). It also employed some negative feedback.

The Pass Labs XP-27 is very similar to the XP-25, inside and out. Both put the power supply in a separate, second chassis. If you stand back so far that you can't see the writing on the front panel, you won't be able to tell the two preamps apart. The owner's manuals even share much of the same language.

Then why does the XP-27 exist? Because designer Wayne Colburn and the Pass Labs crew kept asking themselves how they could improve the XP-25. Once they had accumulated enough ideas to improve the XP-25, they created the XP-27. In the next section, I'll describe those upgrades in detail.

What it is

The XP-27 is a fully balanced, dual-input, very adjustable phono preamplifier with all its adjustments on the front panel.

As already mentioned, it employs separate chassis for the power supply and the signal circuitry. Why two chassis? An important source of noise pollution in low-level circuitry is coupling from noisy AC power. Putting the power supply in a separate chassis keeps all that away from the tiny signal passing out of an MC cartridge and into the phono preamp. A grounded chassis made from metal acts as a cage, keeping electromagnetic radiation from exiting or entering (though it's better at the former than the latter).

Inside the power supply chassis, that 120V AC is rectified, regulated, and down-converted so that all that emerges and passes to the other chassis (via nine silver-coated conductors inside a very nice, well-shielded umbilical cable) is precisely regulated constant voltage. Because it has no time-varying component, it cannot pollute that tiny input signal in the main chassis.

Like its predecessor, the XP-27 doesn't distinguish between MM and MC cartridges; just plug the tonearm cable in to one of the two inputs and select the appropriate gain and loading parameters. All choices are made from the front panel. There are three gain settings: 53dB, 66dB, and 76dB. (That's for balanced output; unbalanced gain is 6dB lower.) Load resistance can be varied from 30 ohms to 1k ohm in eight steps for MC plus 47k ohms for MM. Load capacitance varies from 100–750pF in six steps, appropriate for loading an MM cartridge, which is typical; one rarely sees capacitive loading for MC cartridges, which requires much larger capacitance values.

All these changes can be made on the fly from the front panel—though not from your listening seat, since there's no remote control. This pleases me: I'm happy to get up from my chair, and I don't want another remote control to deal with.

One thing you'll notice when changing settings on the fly: The music is muted for a few seconds. Why? Wayne Colburn said, "The



I was struck by how these drones mapped out the recording venue and how the timbres and textures of the varied instruments contrasted (and complemented) each other.

front panel knob settings are controlled by a micro and sent over a serial bus to a serial to parallel expander." The circuitry for that is inside the main chassis. "The expander goes into sleep mode after the settings are changed." Whenever the control circuit is active, then, the music is muted. Noise from

the controller cannot effect the music.

Is that noise even audible to start with? Colburn again: "I don't know that this really affects the audio, but it does help lower EMI for agency approvals." No BS.

There is also a mute button on the front panel, which does what you'd expect. Mute is automatically activated when gain or loading is changed, but it is also user-selectable. You can mute the sound when dropping the needle, for example, to avoid the unpleasant sound that results when the stylus misses the groove at the start of an album, or simply if you prefer silent queuing.

In addition to the source selector and Mute buttons, there's one more small button on the front panel, for a defeatable rumble filter. I never used it.

The first gain stage in the XP-27 employs lower-noise resistors—lower than in the XP-25—and all film and electrolytic capacitors have been upgraded. The same transistors are used, from Toshiba. The second gain stage "has similar topology but is now DC coupled [to the first stage] and has some upgraded parts and improved circuit layout." That's Colburn again.

A point of emphasis for Pass Labs phono stages is accuracy of RIAA correction. One of the biggest design changes in the XP-27 affects how gain is adjusted and how that adjustment interacts with the RIAA circuit. "On the XP-25," Colburn said, "I varied the feedback to set the gain." Varying feedback, though, can affect the sound, with the result that the preamp could sound different at high gain than at low gain. Nelson Pass: "The level-control circuit is now a tapped resistor bank between the low-frequency RIAA EQ circuit and the gain stage, which follows." The gain setting should now have no impact on the RIAA circuit.

A good bit of work has been put into the power supply, which now has two power transformers, one for the digital control cir-

cuitry, the other for the analog parts. These transformers are toroidal, epoxy-sealed under vacuum; this will lengthen their life and stabilize them to reduce (probably eliminate) mechanical noise. They're also double shielded, with mu-metal, a nickel-iron alloy that's especially good at keeping magnetic fields in or out. Here, this should reduce any coupling between the AC and the surrounding circuitry.

"The power filtering is better," Colburn said, "with added capacitance and preregulation. Improvements were made for lower noise and safety to meet new worldwide regulations. The cable between the supply and amplifier is also new—heavier and shielded, with nice connectors made by Japan Aerospace.

"The rectifiers are upgraded," Colburn said, "and have suppression to stop ringing and to lower EMI." Nelson was slightly more specific, noting the addition of "separate snubbed rectifier bridges for each polarity." Nelson also mentioned CRC filters: "All this to lower the noise," both over the air RF and on the AC line.

I noticed that, despite all these changes, the noise specification is unchanged—the same as for the XP-25. I asked Colburn about this. "The noise differences don't show up in the specs because they are out of the Audio Precision analyzer's measurement range," he responded. "I measure on a stand-alone spectrum analyzer. Having had my hearing tested, it also falls out of my ear's range. Why it seems quieter, I don't know."

"The XP-27 doesn't represent much in the way of fundamental changes from its predecessor," Nelson Pass said, "just a list of incremental improvements."

Colburn noted "lower noise and better bass performance. Noise is such a large portion of the THD+N in phono stages due to the low signal levels that lowering noise really helps out in small details. The XP-25 was quite good, but these improvements add up to make the new one even better."

Setup

Apart from cartridge setup—details of which go beyond the scope of this review—preparation was straightforward. I simply inserted the XP-27 in my reference system, keeping everything else the same. Like many manufacturers of multichassis components, Pass Labs prefer that the chassis not be stacked, lest noise from the power supply get picked up by the signal chassis. "The transformers are shielded and very quiet," Pass's Desmond Harrington told me in an email, "but there is a lot of gain in the XP-27, so best to keep the transformers away." I didn't stack them, mainly because the fixed shelves on my Butcherblock Acoustics rack are about a millimeter too narrow for two layers of Pass Labs components.

Periodically throughout the review, I switched in different amplifiers and line-level preamps, from among spares or in house for a review, altering the sound subtly and providing a different perspective. I used three phono cartridges, all high-performance moving coils with low-voltage output: the Ortofon Windfeld Ti (0.3mV; the Windfeld was mounted with custom shims from WallyTools³), the Ortofon Verismo (0.2mV), and the Lyra Etna λ Lambda (not the



SL version; 0.56mV), all installed on the SME Series V tonearm that comes with the SME 30/12 turntable. At one point, I subbed in the Sutherland Big Loco phono stage for contrast.

Incidentally, my longtime reference system is populated with other Pass Labs components: the XP-32 preamplifier and the XA60.8 monoblocks. I also used the CH Precision L1 preamplifier and amplifiers from CH Precision (the M1.1) and Burmester (the 216). Loudspeakers were the Wilson Audio Specialties Alexx V.

The XP-27 owner's manual outlines in detail a subjective approach to choosing appropriate phono cartridge loading. Some excerpts: "The loading of moving coil cartridges is at best a very inexact science. Specific requirements for loading moving coil devices should be taken (and offered) very lightly. ... I encourage you to think separately from the cartridge manufacturer and choose your resistive loadings accordingly"; when choosing resistive loading, you must take into account the capacitance of the tonearm cable, though "As long as you derive your final setting empirically through careful listening you may ignore these wire effects"; "An improperly loaded cartridge will suffer every unwanted sonic anomaly, ranging from lack of definition and bass to a very strident and screechy high end"; "in selecting a cartridge load, we will be listening for a compromise loading which sounds best across the whole audio spectrum and specifically not that loading which optimizes one cut on one LP"

Here's the strategy suggested by Pass: With MC cartridges, start with 100 ohms and dial down the resistance step by step until the sound (across a wide variety of tracks) stops improving and starts to deteriorate, then move it back up one notch; remember that you're looking for musical balance—of highs and lows, for example. Setting aside preconceptions and manufacturer recommendations, this process led me to load the Lyra Etna λ Lambda at 100 ohms, which is slightly below the range recommended by Lyra. Later, I moved it up a notch, to 200 ohms, and kept it there.⁴

A final instruction for folks who don't read user manuals. For Pass Labs creations with two (or more) chassis, it is important to connect things in the proper order. Never connect the umbilical cable with the power supply already plugged in to the wall. In fact, hook everything else up first—the umbilical and all the intercon-

³ See stereophile.com/content/analog-corner-312-wallytools-wallyreference.

⁴ In its excellent user guide, the Lyra Etna λ Lambda includes extensive guidance on setting loading, including the admonition, "finalize by listening."

nects—then plug the power cord into the IEC socket and then into the wall. What happens if you fail to follow these instructions? I don't know, but I doubt it's good.

Listening

How quiet is the XP-27? With no music playing, I set the XP-27 to its highest gain setting (76dB) and turned the preamp volume up and up. I heard no noise—not a hint, even with my ear to the various speaker drivers—until the volume was about 20dB above my typical listening level. At that point, the volume display on the CH Precision L1 preamp (which was in the system at the time) was well into the orange, almost to red. This is a quiet phono preamp.

Over years, I've gradually set aside my previous procedure of auditioning components solely with familiar music. I *do* always listen with familiar music, even if I don't always write about it. But including new music makes reviews more interesting, for me and for readers, and I find that including unfamiliar music alongside familiar tracks adds a different and useful perspective.⁵

In sonic character, the XP-27 is liquid and detailed—and of course very quiet. It is mostly literal, but there may be a hint of added warmth. Bass is deep and solid but not exaggerated. The soundstage is true, reflecting, as far as I can tell, the information present on an LP.

An example—not an *old* friend but a new one, a record I've come to know fairly well with repeated listening since its release just last May—is bassist Stephan Crump's *Slow Water*, reviewed in CD form by Tom Conrad in the June *Stereophile*. *Slow Water* (Papillon Sounds PS 28241) is fascinating in its conception. In composing it and playing it, Crump, who was born in Memphis, so on the Mississippi River, and has spent his life near water—most recently, for the last 30 years, Brooklyn's infamous Gowanus Canal, still one of the most polluted bodies of water in America—sought to *inhabit* water, to put himself in its place, to emulate it. I suppose you could consider this the record an environmental statement, but it's hardly doctrinaire and its conclusions are hardly clear-cut. If there's a take-home message, it's something like, Whether in spite of what we do or because of it, water will, due to its power and persistence, eventually kick our collective ass.

Today, I found myself especially enjoying “Strata,” the minimalist final track on side 1 of this two-LP set, in which several, mostly lower-register instruments—bass, trombone, viola, others—generate drones that vary greatly in timbre. I was struck by how these drones mapped out the recording venue and how the timbres and textures of the varied instruments contrasted (and complemented) each other. Reverb tails seemed natural. These factors, indeed, are the chief pleasure of the track. Every track on this album offers different pleasures, some more than others of course.

Next up, an old friend: a mono Milestone reissue of Riverside RLP 12-252, *The Chicago Sound*, by the Wilber Ware Quintet with Johnny Griffin (Milestone SMJ-6048M). This record puts whoever's soloing upfront and (of course) center, whether it's Griffin's tenor sax, Junior Mance's piano, Ware's bass, or any of the other musicians when they solo. This is a decent—not great—mono recording. Via the Lyra cartridge and the XP-27, those solo instruments were portrayed with distinctive tone and touch—specific musicians were easy to recognize—and it was all very pleasant to listen to. This is a bassist's record, and I especially enjoyed the relatively dry, forward sound of Ware's bass. I heard good front-to-back separation between the solo instruments and the instruments playing behind, including drums (except during drum solos; this was either Frank Dunlop or Wilbur Campbell, depending on the track). The amount of the separation varied from track to track, convincing me further that the XP-27 was delivering what's on the record. Relatively fine differences in production were laid bare.

ASSOCIATED EQUIPMENT

Analog sources SME 30/12 (original version) with Series V-12 tonearm. Phono cartridges: Ortofon Windfeld Ti, Ortofon Verismo; Lyra Etna λ Lambda.

Preamplification Line: Pass Laboratories XP-32, CH Precision L1. Phono: Sutherland Big Loco.

Power amplifiers Pass Laboratories XA60.8, CH Precision M1.1, Burmester 216.

Loudspeakers Wilson Audio Specialties Alexx V.

Cables Digital: AudioQuest Carbon, Cinnamon, & Coffee USB; CAD USB; Wireworld Platinum Starlight 8 Ethernet. Interconnect: AudioQuest ThunderBird (XLR and RCA). Speaker: AudioQuest ThunderBird ZERO. Power: AudioQuest Tornado High-Current C13, NRG-X3, and Monsoon.

Accessories Melco S100, Silent Angel Bonn N8 Pro, and Innuos PhoenixNET Ethernet switches; Butcher Block Acoustics RigidRack, IsoAcoustics, and Magico footers.—Jim Austin

I ended my auditioning with a familiar, well-engineered album from a familiar artist: my autographed copy of Cecile McLorin Salvant's Grammy Award-winning *WomanChild* (Mack Avenue MAC1072LP), recorded and mixed by Todd Whitlock, mastered by Mark Wilder, and committed to vinyl by Kevin Gray. I started with the first track on side 4, “Jitterbug Waltz,” then skipped ahead to “Deep Dark Blue,” which, in less than two minutes, puts Salvant's impressive vocal skills on display. I've heard Salvant live at least five times and at least twice with this pianist, Aaron Diehl; here I heard ... I hesitate to say *every* nuance and inflection of her uniquely expressive voice, because how could I know? But this is an album—and a voice, and a pianist—that I know very well, and the sonic picture I heard was rich in information. The low notes on Diehl's piano were cavernous, with, when struck hard, an appropriately woody-metallic leading edge. Reverb tails were long and relaxed. All the music was present and accounted for.

Because in describing the XP-27's development I took a historical approach, I'll end with a historical review: Michael Fremer's of the Pass Labs Aleph Ono, from early 1999; see reference 2. Mikey was lukewarm in his conclusions, commenting on the pre's “somewhat deficient and perhaps mushy lower midbass, which gives the Ono an overall lean sound.” Mikey knows his phono preamps, and the Aleph Ono was an early design, radical for its time, so I don't doubt his conclusions about that Pass Labs phono pre, but in one of the longest-lasting auditions I've experienced, I heard no hint of leanness or midbass mushiness from the XP-27.

Conclusion

The Pass Laboratories XP-27 is a high-achieving component both technically and musically; if, along with the reference system I auditioned it with, it's leaving any music behind in the grooves, I couldn't detect it. With the XP-27 in the system, specific musicians were easy to identify, and the character of each of the three phono cartridges I used was instantly recognizable.

Are there better phono preamps out there? Maybe. Quite a few on the market cost far more than this one does; hopefully some of them are better. Yet the Pass Labs XP-27 put me in the position, awkward for a reviewer, of not seeing a clear way forward—not being able to point to areas where it can be improved. No doubt a better phono preamp can be made; I'm just not sure where one should start. I guess I'll know it when I hear it. ■

⁵ For a more detailed justification of this new approach, see stereophile.com/content/thats-just-how-record-sounds.