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NuForce Reference 9 V2 Mono Amplifiers and P-9 Preamp

I'm the kind of guy who subscribed to *Popular Science* magazine for 20 years. If you know the magazine, you can guess that I tend to be partial toward new technology that beats up on old technology.

So when I had an opportunity a few years back to attend, at a Northeast Wisconsin Audio Society meeting, a shoot-out between two pairs of monoblocks -- the NuForce Reference 8 and the Simaudio Moon W10 -- my sympathies were with the new guy. NuForce had just begun to make its mark in the audiophile world, and, like most of my fellow NEWAS members (we're proud of our acronym, thank you), I'd been reading the largely astonished and delighted reviews of their amps, and figured that they might be a way for me to get world-class sound without having to work a second job.



At the shoot-out, the Sim Moon W10s proved to be big and dynamic. But when the NuForce Reference 8s were inserted in the system, I knew we weren't in Kansas anymore. Where before there had been a fuzziness that required a willing suspension of disbelief to hear as live music, now there was clarity. Bass, in particular, was under far better control, as was the rest of the audible spectrum. There was room for improvement, but the NuForces were clearly doing something I hadn't heard before.

On the strength of that experience, I requested a home audition of NuForce's Reference 9 monoblocks, then soon to be released. When the diminutive boxes finally arrived, I immediately hooked up their contents and was enthralled by detail, detail, detail. Of course, I had to invite my audiophile friend Larry over to listen to them; he arrived with interest, but with fewer biases about new technology than I had.

After a few minutes of listening to classical music, Larry made a face and shook his head. "Listen to those timbres -- they're just not accurate." He was right. Violins sounded thin and somewhat unnatural, horns more electronic. As my rosy glow of bias faded, I also heard an overall flatness that was uninviting. Up against my amp of that time, a Conrad-Johnson MF2500A, the NuForce Reference 9s created detail in abundance, but the overall musical experience was easy to walk out on.

I sent back the Reference 9s with regret, and with a better sense of just how much bias can affect what we hear. But I still felt that NuForce was on to something good, and looked forward to hearing their amps again a generation or two down the road. So when I got the opportunity to review the Reference 9 V2 (\$3500 USD per pair), I was more than ready.

NuForce as a force

NuForce has probably the best-written website I've seen from an audio company. If you want to read eloquent prose about the NuForce revolution and the breakthrough technology of their analog switching amps, and come away with more than the usual amount of actually useful information, visit www.nuforce.com.

The basic idea behind NuForce is pretty simple. Casey Ng, vice president of product development, put it to me straight: "NuForce wants to create products that make sense and sound good. Our goal is to make high-performance products, not opulent products. Since we have a unique technology, we can ignore the status quo and focus on creating state-of-the-art products."

These straightforward but ambitious goals are reflected not only in NuForce's release of new products such as the P-9 preamplifier (\$3150), but in their commitment to making significant improvements in existing products. For instance, the "V2" in "Reference 9 V2" refers to an entirely new amplifier circuit board that shortens the signal path, reduces the noise floor by 20dB (their website notes that this is *not* a typo), and increases the efficiency of energy delivery by 20%. "The result is more delicacy and accuracy, with better high-frequency extension and bass control," said Ng.



The V2 board helps NuForce achieve another goal. "We are committed to preserve a definable upgrade path for our products," said Ng. "Owners of older models will be able to upgrade for less than what it would cost them to buy new models." This consumer-friendly policy has already been put to good use by many NuForce owners, and will likely be so in the future as many of them upgrade their V1 amps with the V2 board.

NuForce's goal for the P-9 is to establish it as a top-performing preamp in its own right, and as a foundation for other products. "The P-9 is a building block for our preamp development program," said Ng. "The P-9's high-performance preamp circuit is going to lead to other products." The P-9's two-box design is also significant. "We put all the noisy stuff, the digital circuitry and power supplies, into a 'dirty box,'" said Ng. "We connected it by cable to a 'clean box' that houses the analog volume control and all the elements of the signal path. By doing that, we eliminated a lot of high-frequency noise from the system."

In short, the P-9 represents the current state of NuForce's art, and the Reference 9 V2 monoblock is one short step away from it (exceeded only by the Reference 9 V2 Special Edition, or 9 V2SE). It was with a fair amount of anticipation that I set them up in my system.

Setup

According to their respective manuals, the Reference 9 V2 amps and the P-9 preamp each require 75 hours of break-in. I found, as I often do with manufacturers' break-in recommendations, that the sound of all three units continued to subtly change for longer than that. I gave the NuForces over 200 hours of break-in before beginning my serious listening.

Some good things were evident as soon as I set up the NuForces. The change when powering up the Reference 9 V2s was significant: just a barely audible click. Previous versions of the amp that I'd heard were sometimes alarmingly noisy on startup. Also, the P-9's remote control is impressive and elegant: a hexagonal rod with buttons for on/off, volume, and source selection.

The P-9 itself had a significant problem, however. The manual Alps volume control on the analog "clean box" worked beautifully and smoothly by hand. But the electronic digital controller in the digital "dirty box" made, in my view, unacceptably large jumps in volume with each number change and click of the remote. Even ideally (*i.e.*, with a source output of 1V RMS, per NuForce), the jumps for each click of the remote ranged from nearly 5dB (also not a typo) going from silence to the first audible level, down to 1.2dB (still quite a leap), with irregular increments in between.

Furthermore, for high-output sources delivering greater than 3-4V RMS (my Cary Audio 306/200 CD player's output is rated at 3V), the intervals were even greater. Three clicks of the remote took my CD player from silence to "too loud." NuForce's response to this problem was to provide photocopied instructions for opening the case and replacing resistors. Needless to say, requiring buyers of a component costing \$3150 to wield a soldering iron to get even a somewhat usable response from the remote control is unacceptable.

Casey Ng noted that NuForce has received complaints from early users about this and that changes are in the works. For instance, NuForce now includes a jumper cable with the P-9 that reduces gain by 50%, and a free gain-adjustment service is available from the factory. Still, it seems strange to release a preamp that some users will find difficult, if not impossible, to operate with its remote control. During the review period, I made all volume adjustments using the manual control on the analog box.

NuForce suggests that their stock power cords be used, so that's what I did during break-in. After a bit of listening, however, I replaced them and was surprised at how big a difference the power cord made with both amps and preamp. After several hours of trying different combinations, I ended up with ESP Essence Reference cords on the 9 V2s and an AudioQuest NRG-5 cord on the P-9 (if I'd had another ESP cord, I'd have used it). My Conrad-Johnson Premier 350 power amp also was wired with an ESP Essence Reference cord.

I found the NuForce gear similarly sensitive to the vibration control used. This is the one area of my system in which I still give my DIY inclinations free rein, and within the limits of my own creativity, I felt good about the results. The NuForce amps were the first piece of audio gear I've had in my system for a while that sounded best sitting on their own feet. The P-9 preamp sounded best with both cases supported with vibration-control pads.

After I'd been listening to the NuForces for a few days, I became increasingly aware of an electronic edginess. After pondering this and taking into account the NuForces' RF emissions, I realized that a possible solution was sitting on my tweak shelf: Stillpoints ERS sheets. Designed to shield and disperse electronic emissions, these can often help the performance of digital equipment such as CD players. To my surprise, placing them on the NuForce amps made only a small difference. But placing a sheet atop the "dirty" digital preamp box did an amazing job of settling down the sound. The best results came from covering only the rear half of the digital box with ERS sheets; covering it entirely had a slightly muffled effect.

The rest of the gear for the listening tests included a Cary Audio Design 306/200 CD player, a Bent Audio NOH transformer-based passive line stage, the Conrad-Johnson Premier 350, Triangle Stratos Australe speakers, Legenburg Hermes interconnects and Apollo speaker cables (biwired), and a PS Audio Premier Power Plant power conditioner. Based on their performance with other equipment, it was my expectation that these interconnects, speaker cables, and AC cords would give the NuForce gear a very good chance of conveying the natural sound of acoustic instruments.

Listening four ways

I listened to all four possible combinations of amps and preamps: Bent Audio NOH and NuForce P-9 preamps with NuForce Reference 9 V2 and C-J Premier 350 amps. I spent about a month with the two NuForce products in my system to give myself the best chance to know what they'd be like to live with. Toward the end of the review period, I tried the other combinations for relatively brief A/B tests, then spent a few days listening to my reference system again. A number of things became clear.

First (no surprise here), the NuForce amps and preamp were remarkable at reproducing detail. The textures of the double basses and cellos in the opening minute of *Pines Near a Catacomb*, from Respighi's *The Pines of Rome*, performed by Jesu Lopez-Cobos and the Cincinnati Symphony Orchestra [CD, Telarc CD-80505], were rich and moving. Similarly, massed strings were beautifully articulated in this passage and in others on this disc, notably the torturously dense opening section, *Pines of the Villa Borghese*, in which the massed strings and horns nearly always sound congested. The various combinations of gear helped me to discover that the P-9 preamp did a slightly better job at detail than my Bent Audio reference.

The NuForce amp and preamp also demonstrated great control over bass frequencies -- noticeably better than the C-J Premier 350, which is no slouch at articulating bass detail. The same deep-strings passage in *Pines Near a Catacomb* showed this eloquently, but it was easy to hear elsewhere as well. For instance, the drums and electric bass in Hugh Masekela's "District Six," from his most recent CD *Revival* [CD, Chissa HUCD 3093], were impactful and sharply defined. The deep opening notes of "Bye-Bye Blackbird," from Patricia Barber's *Nightclub* [CD, Premonition/Blue Note 27290], are played in unison by a string bass and piano; the tone of each instrument was easy to distinguish.

The NuForce combo's treble extension was similar to that of my reference gear, though this was reduced slightly when I drove the NuForce Reference 9 V2s with my reference Bent preamp. On the other hand, using the NuForce P-9 to drive the C-J Premier 350 extended the treble just a hair beyond what I heard with the Bent, perhaps in part because of the increased detail. From this I conclude that the NuForce amps had slightly less treble extension than the C-J, and the NuForce preamp had a bit better treble extension than the Bent. Midrange detail was also wonderful with the NuForce combo and the duo of P-9 and C-J. The NuForce combo's soundstage was also more sharply focused than that of my reference rig, though it seemed that the latter was slightly deeper and wider.

The timbres of acoustic instruments were significantly improved over my several-years-old memory of them through the Reference 9 amps. In any of the Respighi tracks, or in the sections of Maxim Vengerov's recording of Tchaikovsky's Violin Concerto [CD, Teldec 90881] that showcase the clarinet, flute, oboe, or bassoon, those instruments sounded convincing. Even my audiophile friend Larry approved. "They've dealt with the timbre problem," he acknowledged. "Clearly, they've put in a lot of work." However, although timbres were acceptable and convincing on their own, in A/B comparisons my reference system still exceeded the NuForce components, together or separately, in this area. Woodwinds, violins, and horns all sounded more like themselves through the Bent Audio passive preamp and the Conrad-Johnson amp.

Together, the two NuForce products also created notable clarity and transparency, with a sense of "seeing through" the music to the silence beyond it. This effect was not altogether positive, however, particularly after several days' listening. Sometimes the sound came across as *too* clean -- as artificially clean as the outfits worn by cowboys in 1950s Westerns, giving a similarly subtle sense of inauthenticity. As part of this effect, some aspects of the internal textures of the sound seemed smoothed-over, although the edges of

Take 2: NuForce Reference 9 V2SE

I first bought the NuForce Reference 9, then upgraded to the Reference 9 SE, and now to the Reference 9 V2SE. A new "engine," aka "board," drives the 9 V2SE. NuForce says the Special Edition is best appreciated by those with high-resolution systems. I qualify. Okay, my system qualifies -- I'm not sure about me. I don't *want* to hear nose-hair whistles.

The buzz is that there's no buzz. Sorry. The buzz is that everything is cleaner, deeper, and wider, with more natural harmonics. This time, the buzz is right, but there's a matter of degree.

Examples: There's not much air in Steely Dan's *Gaucho* [SACD, MCA B0000868-36], but for some reason, Donald Fagen's voice, especially in "Babylon Sisters," gives me a good look into a system's synergy. When Fagen is clearly audible, it's a good sign. With some gear his voice gets phasey; with others, his articulation is lost. I listen to *Chinese Wall*, Philip Bailey's (lead singer for Earth, Wind & Fire) solo album from the 1980s [CD, Columbia CK 39542], produced by Phil Collins, for drum dynamics and vocal nuance as the songs get differing treatment. On Basia Trzecievska's *The Sweetest Illusion* [CD, Epic EK 64255], she often sings at high pitch and is sometimes double tracked -- the sound is good when you can distinguish both unison voices. And, like all of her albums, this one is good for tests of sibilance or glare.

Compared to the Reference 9 SE, turn-on/off pops were gone with the Reference 9 V2SE. RFI is said to have been reduced, though I've never had a problem with that -- I have no radio or TV nearby. The 9 V2SE seems to run hotter than the 9 SE -- I'd guess 115°F. Somehow, the bass is even tighter with the 9 V2SE -- and it was tight *before* the upgrade. The 9 V2SE had good integration and a full frequency range. No artifacts, very clean, and dynamic as a Batman comic book (BAM!!!!). Certain sounds were propelled at me; there was more side-to-side soundstaging and depth -- more than layering, the soundstage was like 3D with some tracks. None of this was harsh. Drums sounded more impactful, with more *pop!* on each stroke.

the notes preserved a sense of detail.

The main problem, though, was not unrelated to what I'd heard from the original NuForce Reference 9s. The Reference 9 V2s generated a subtle flatness that lost the sense of the music being alive. Hugh Masekela's trumpet didn't have as much personality and expression, for instance, and female singers seemed not like recordings of live people, but like recordings of recordings. My test for this was simple. With eyes closed and a track playing, I tried to imagine the musician sitting in front of me singing into a microphone or playing an instrument. Certainly, the microphone or other electronic gear might add distortion to the sound, but could I still sense a live person behind it all? With the NuForce 9 V2s in the system, the answer was no. With my own reference gear in place, the answer was yes. That's what Larry thought, too. "The sound is still flat," he said. "It doesn't have heart. All gravy, no meat."

However, that wasn't the case with the combo of NuForce P-9 preamp and Conrad-Johnson Premier 350. From my notes on the vocalist in Masekela's "District Six": "She's back!" She wasn't there quite as vividly as she'd been with the Bent Audio passive preamp, but she was definitely there. So if sounding "alive" is based on a sensitivity to microdynamics and subtle variations in tone and texture, this was mainly a problem with the amps.

In sum, the NuForce combo did a remarkable job with most aspects of the sound. Detail and bass control were outstanding, and acoustic timbres were quite acceptable. The P-9 preamplifier, in particular, added a bit of detail and clarity beyond the performance of my reference Bent Audio NOH preamp, nearly matched it in allowing the music to come alive, but wasn't quite as good with the timbres of acoustic instruments. However, something was lacking in the NuForce amplifiers' reproduction of music expressed by voices and acoustic instruments. It was the difference between looking deep into the eyes of someone you love and looking into their eyes in a photograph. It wasn't a bad experience -- just hard to live with if what you want is the real thing.

Other considerations and conclusion

Fans of FM music will be pleased to hear that, unlike the NuForce V1 amps, the Reference 9 V2 amps and P-9 preamp do not emit enough

Cymbals sounded gloriously metallic.

Basically, through the Reference 9 V2SE great discs sounded great and bad discs sounded bad. I could detect no euphonic colorations. The 9 V2SE didn't sound like my tube amp at all. I'm tempted to describe the Audio Research VT100's sound as like "butterscotch." The VT100 was a humid day in July, the NuForce a crisp, clear fall day. Or: The ARC's tube sound was compressed; the solid-state NuForce sounded alive.

In their manual, NuForce describes some amps' tendency to mask some aspects of the sound due to the power demands made by other aspects. With the ARC VT100 even at medium volume (under 85dB), vocal passages on certain CDs were somewhat buried, seemingly due to the other thunder on the track. Not so with the NuForce. Voices were clean and clear when recorded that way, and not held back at all. Was it the circuitry or the extra power?

When I hear live music, I'm struck first by the dynamics, then by the detail. But have you noticed that some CDs sound a lot louder than others? That's because they're compressed to hell and back, which allows the overall volume level to be higher, at the penalty of a greatly narrowed (or compressed) dynamic range. Most of today's CDs are compressed, and today's popular music is hammered *very* hard. This is one reason you seldom hear a great simulation of the human voice in your room. More dynamic systems and recordings come closer to reality.

Through the NuForce Reference 9 V2SE I heard a complete absence of compression. The instruments could thunder, but the lead singer still wasn't compromised in any way. It sounded as if there was as much headroom as I could ever use: loudness with no penalty. The dynamic range seemed unchanged from the 9 SE, but the 9 V2SE was so completely without distortion artifacts that its dynamic range *seemed* that much more realistic. One of my relatively uncompressed CDs now sounds much better than I've ever heard it before. Go West's eponymous album [CD, Chrysalis VK 41495] is British synth-pop from the digitally gnarly mid-1980s. The vocals are outstanding, the synthesizers burst like bubbles, and the drums, sampled or real, sound alive. The 9 V2SE's better dynamics gave a better impression of the actual performance, the goal I hold most holy. I light a votive candle. Amen.

The NuForce Reference 9 V2SE is as good a

RF interference to bother FM transmissions. Even trying my best to get the V2 amps and preamp to interfere with my Fanfare FT-1A FM tuner (imagine me waving the NuForce amps and preamp on all sides of my audio cabinet, and draping the antenna cable over them), I couldn't get them to affect the broadcast in any way I could hear.

monoblock power amplifier as I've heard. I can't imagine a better one. Did it sound warm and tube-like? Not when compared to my last tube amp. Was it dry, sterile, chalky? No. The Reference 9 V2SE sounded more like live music than anything I've owned.

...*Bob Wood*

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However, the manual for the NuForce Reference 9 V2 does note that "This equipment emits stray RF energy and will interfere with . . . medical devices. Do not operate this equipment near any medical devices (especially heart pacemaker)." NuForce describes the problems as being even worse if their equipment is used without having been properly grounded, a warning that also applies to the P-9 preamp.

During my phone call with him, Casey Ng acknowledged that there is no research on if or when a NuForce amp might affect a pacemaker, and that the warning is based on legal advice they've received. In other words, we don't know the magnitude of the risk posed by amps, only that there might be one. Even so, this warning is somewhat unsettling, and I hope that NuForce will identify as soon as possible whether or not a significant risk exists and make any remedies that are necessary.

Despite my problems with the NuForce amps' expressiveness and the preamp's remote volume control, the Reference 9 V2 monoblock and P-9 preamplifier are a great step forward for NuForce. Perhaps some of the limitations of the Reference 9 V2, in particular its treble extension, are addressed in the Reference 9 V2SE, which requires an additional outlay of \$1500/pair over the Reference 9 V2's price.

NuForce products have a unique and attractive signature sound. NuForce's tightly controlled yet impactful performance, particularly in the bass, has won them many fans. The level of detail and transparency of NuForce gear throughout the rest of the audio spectrum is also impressive, and shortcomings in the reproduction of the timbres of acoustic instruments have largely been resolved. Furthermore, it was an unexpected benefit to be able to optimize the sound of the NuForce amps and preamp with power cords, vibration-control devices, and ERS sheets.

NuForce has a history of beating up on their competition, and these latest offerings will no doubt continue that tradition. With the Reference 9 V2 monoblock power amplifier and P-9 preamplifier, NuForce has surpassed its own previous considerable achievements. Even audiophiles who *don't* read *Popular Science* can be excited about that.

...*Albert Bellg*

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NuForce Reference 9 V2 Mono Amplifiers

Price: \$3500 USD per pair

NuForce P-9 Preamplifier

Price: \$3150 USD

Warranty (both): Three years parts and labor.

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