



TWO PHONO PREAMPS

It should be easy to build a phono preamplifier. It deals with very small currents, in contrast to a power amplifier, say, which has to juggle many watts, and plenty of amperes as well. Such devices used to be included aboard every amplifier and every receiver. More recently, there are even inexpensive computer software programs that can do the job. What's so tough? And why would a phono preamplifier cost more than a family meal at McDo?

In fact a phono preamplifier has a tough job to do. Start with the fact that it is handling a *very* small signal. A moving magnet cartridge has a nominal output of 0.002 volts, but that's at maximum level. Go 60 dB down, and we're talking about 0.000002 volts. A typical moving coil cartridge has one more decimal place in there!

Then there's the fact that, unlike a normal preamplifier, whose circuits are expected to have flat frequency response, a phono preamp needs to boost the high frequencies an extra 30 dB or so, thereby boosting the noise and harmonic distortion too.

As if that weren't enough, a phono cartridge, unlike most other audio sources, works best if the phono preamplifier "looks" to it as much as possible like a pure resistance. Good luck with that!

Those are a few of the reasons inexpensive phono preamps sound horrible, with inaccurate frequency balance, screechy highs and smeared transients. We've tried some of them before, and we were always less than impressed.

The Moon 100LP is not in that cheap-and-cheerful category, of course. We have praised its predecessor, and we were confident that the new version would be equal to the task. No, the one we had doubts about was the Nerve preamp. A hi-fi phono preamp for just a hundred bucks? Claiming that takes a lot of...well, nerve.

But read on.

The Simaudio Moon 110LP

The 110LP is a new product, but at the same time it's new. At one time Simaudio's phono stages were not in the same league as its justly famous power amplifiers. Time marches on, however, and with the earlier LP3, Simaudio's engineers showed what they could do. A lot, it turned out.

The circuit of the LP3 was very similar to that of Simaudio's more expensive phono preamp, the LP5.3. *That* one (reviewed in *UHF* No. XX) was so good that, had we not already bought an Audiomat Phono-1.6, we would have bought one. The LP5.3 has since been replaced by the restyled and slightly-enhanced 310LP). Of course, to hold the cost down some sacrifices had to be made. The LP3 had only unbalanced outputs, and its power supply was now a 12 volt wall wart. Still, unlike most economy phono preamps, not only could it handle a low-impedance moving coil cartridge, but it could do it without sacrificing anything.

The most obvious difference between the LP3 and the new 110LP is cosmetic. The new unit looks more like the high-end product it is, and its styling matches

Simaudio's newer products. There's another difference, though. The wall wart has been bumped up from 12 volts to 18 volts, with a claimed improvement in dynamics and possibly noise performance. As with the earlier unit, you need to get out a screwdriver in order to adjust the gain (MM/MC), the load resistance and the capacitance.

Like all electronic products (and most manufactured products, from car engines to shoes) a phono preamp needs to be broken in before it performs the way it was designed. We used a special break-in CD from Granite Audio. Its low-level equalized signal "looks" to a phono preamp like that from a phono cartridge. We ran it for well over 100 hours, less than the 300 hours Simaudio recommends, but what the hell!

Our mission was a fairly simple one. The LP3 had impressed us; would the 110LP disappoint us? We listened to our music selections with our reference phono preamplifier, connected to the reference turntable in our Omega system. Then we substituted the 100LP and listened again.

We began with a recording that is a legendary challenge to the entire playback chain, from cartridge to arm to electronics to speakers: the *Chorus Line Medley* from the Dallas Wind Band's *Beachcomber* album (Reference Recordings RR-62). Its full-tilt introduction is awesome enough in HDCD, but on LP it pushes you back in your chair. There is also some remarkable bass drum work, captured as only Keith O. Johnson knows how.

Sure, it sounded better with our reference phono preamp, but the 110LP did nothing to spoil our day. The impact remained huge, and there was plenty of detail in the complex orchestration. That bass drum was just terrific as well.

The differences? The space remained three-dimensional, but it wasn't quite as large. The snare drum was just a little too crisp, the highs just a bit more prominent and therefore rougher, as was the brass. Albert liked the dazzle of the brass but found the body lacking, with less natural warmth. "The tambourine was 'whiter,'" and more emphasized," said Toby, who concluded nonetheless that the Moon was a terrific preamp.

We then turned to a recording we have owned for many years, which includes one of the most natural violin sounds known to us. The piece, for Baroque violin and harpsichord, is Uccellini's *Sonata e correnti* (Open Window OW 002).

Like the wind band recording, this one continued to sound very good, with an excellent reproduction of the hall sound. "But I found myself picking out sounds rather than listening to the performance," said Toby. "There's less transparency, and less tension." Once again the solo violin had reduced body, even though the Moon sounded by no means thin. That allowed the harpsichord to predominate, while the bass, on the contrary, was more discreet and seemed less integrated with the overall sound. "The violin is by no means shrill," said Gerard, "but its tone is a little less warm and more 'acid.'"

Were we nitpicking? That's our job, of course, but we still gave the Moon high marks.

We needed to include a female voice, whose higher tessitura can reveal both the qualities and the shortcomings of a music system. We picked *No Frontiers* from the long-discontinued LP by Irish singer Mary Black. The 100D did even better on this remarkable LP than it had with the two others.

Of course we were listening for added sibilance, a common artefact of systems that are less than optimum. Black's esses were in fact a little disembodied, but that was an easily forgotten flaw in an otherwise impressive performance. Her voice remained pure and powerful. "She seemed to be forcing her vocal chords a little more," said Toby, "but it didn't hurt at all." The guitar and the accompanying bongos remained very good.

Still, we've characterized the sound of our very favorite phono stages as magical, and the 110LP couldn't quite deliver all of that magic. "Normally I detest vocal recordings that use doubling over the chorus," said Gerard. "Mary Black makes it sound right, perhaps because the multiple voices seem so coherent. They're just a little less coherent with this phono preamp, though, and perhaps that accounts for a little of the missing magic."



By now, we knew we wouldn't have to agonize over our conclusions. The older LP3 was a terrific bargain, and so is its successor. To sweeten the deal even more, Simaudio dealers will give you a 100% trade against the superlative 310LP in the first year, or 75% in the second year. Talk about hedging your bets!

The Nerve Audio PH1

This diminutive phono preamp is reduced to its simplest possible form, just as those ultra-cheap (and ultra-awful) phono preamps are. It's a metal box with four jacks and a place to plug in the 12-volt wall wart power supply. There are no settings, since the PH1 is designed for moving magnet cartridges only, or for "high output" moving coil cartridges.

There isn't even a ground lug to accept the separate ground wire from a turntable. Some turntables don't have or need one, of course, but if yours does you'll need a clip to connect it to something, such as a chassis. We used a wire with a clip at either end between

our Linn turntables ground wire and one of the connectors.

The Nerve might be problematic with some interconnect cables, because the jacks are somewhat recessed behind the metal box, just as they once were on Briston gear. That's a problem with wide plugs such as the ones on our Atlas Mavros cables. Not only do the connectors need to fit, but the edge of the connector must not touch the chassis. We would up substituting an Atlas Navigator cable. We don't like to inject uncontrolled variables into our tests, but we had little choice. Besides, anyone buying a \$100 phono preamp is unlikely to mate it with a cable costing over \$400.

Naturally, we gave the Nerve lots of break-in time, just as we had with the Moon. We then added it to our Omega system, not without some trepidation. We've heard lots of cheap phono circuits, and we were bracing for the worst.

If we tell you it wasn't all that bad, are we praising it with faint damns? The *Beachcomber* LP is a challenge for the whole system. It is far tougher to reproduce than a mere handful of recordings, though the rewards are worth it. Just that full orchestral tutti opening will put a strain on whatever you're listening on.

Well, the tiny Nerve box delivered plenty of impact, no doubt about that, perhaps just a little too much. We had run the volume at the same setting as with our reference. (Our Moon P-8 preamplifier, with its big red front panel, makes this easy), but perhaps the Nerve had more gain than the 110LP had. We pulled it down 2 dB and listened again.

We were still not happy, because lowering the volume by even that little sucked some of the life out of this

SUMMING IT UP...

Brand/model: Moon 110LP
Price: \$600
Size (WDH): 12.8 x 16 x 7 cm
Adjustments: MM/MC, input resistance, parallel capacitance
Most liked: Budget price with minimum compromise
Least liked: Adjustments require opening the box
Verdict: Still the audiophile bargain its predecessor was

remarkable recording. We realized that the Nerve wasn't louder than our reference, but a little rougher, and the upward shift of the energy made everything sound just a little too loud. The result was that the brass was not only brash but too bright, the instrumental timbres not quite natural. Percussive details were remarkable but less distinct, like a picture whose paint has run. "I'm not sure I would listen to this recording with less than the Moon 110LP," said Toby.

But wait a minute, remember that we said we were bracing for the worst? Well, we didn't get it. We had begun with a recording hugely difficult to reproduce, and this inexpensive preamp had not disgraced itself. "It's not just better than I had feared," said Gerard, "it's *infinitely* better than I had feared."

The second recording was also challenging, though in a different way. The violin, magical through the best gear, might turn shrill and cutting with this preamp, and we were pleased to note that it didn't. Sure, there was a considerable loss of information, so that the timbres

of the violin and the more discreet cello sometimes got confused. The sound was less rich, but we liked the coherence of the sound, and even the very good reproduction of the space. Not bad. *Better* than not bad.

If the Nerve did that well with a violin, could it be expected to do as well with a female voice?

If Mary Black's voice didn't have all the richness it had with the 110LP (to say nothing of our reference!), it remained gorgeous, and that is nothing if not an achievement! The sibilance had increased, but it didn't dominate. There

was extra brightness, but nothing like what we had feared. There was a certain roundness to her, and the all-important lyrics lost none of their clarity.

We were so pleased that we then listened again, not with the reference but with the Moon preamp. Was it better? Of *course* it was, with added magic, and what Gerard characterized as *je ne sais quoi*. "The sound is better balanced," judged Toby, but it's not six times better."

Of course you can't judge a product just by its price, and if you've got a really good turntable, then one of the two Moon preamps are a much better choice.

But perhaps you've got some other preoccupation. You're just getting back into vinyl, after years of digital. Or you were born in the digital age, but you want to check out what this renewed vinyl craze is all about. You've picked out a first turntable that will let you explore, and then you realize that your amplifier doesn't have a phono input.

Has Nerve Audio got a deal for you!



SUMMING IT UP...

Brand/model: Nerve Audio PH1

Price: \$100

Size (WDH): 11 x 6 x 3.6 cm

Adjustments: None

Most liked: unexpected listenability at a great price

Least liked: Awkward recessed jacks

Verdict: Should make competitors blush, if they still know how

CROSSTALK

The Nerve preamp is the one that caught me by surprise. That's because I knew that the Moon 110LP was but a slightly refined version of the older LP3, which was a terrific bargain we've recommended warmly. Unless the Simaudio engineers had screwed up, its successor had to be at least as good. And they didn't screw up, so no surprise.

Which brings us to the Nerve.

Contrary to what you might think, it's not the cheapest phono preamplifier available. You can actually land a serviceable phono preamp for about \$30, though frankly that would be \$30 wasted. With a \$100 preamp you can waste over three times as much, right?

No, in fact, and there's the surprise. The Nerve doesn't suffer from the very thin lows or screechy highs that are hallmarks of the typical low-cost phono stage (and *all* phono stages that are much over 30 years old). It delivers a reasonable representation of what's on the LP. At this price? Wow!

—Gerard Rejskind

Let's be clear at the outset, they are not in the same league. They obviously

do the same work but one of them does it okay, and the Moon does it with talent. We handed them difficult music to reproduce, it seemed, and neither of them could handle it with as much talent as it required to be entirely convincing.

If you have no means by which to get music out of the grooves of those LPs that were handed on to you, and not much immediately available budget, you'll appreciate the Nerve. And you'll find it surprisingly satisfying, especially when considering what you paid for it. But don't stop there, and think that you now know what the fuss is all about, in this analog business.

If you think you do, try the Moon for a bit and you'll really start to get it. The grooves will reveal a good part of their secrets, and chances are you'll be hooked.

Welcome to the club.

—Albert Simon

We reviewed by listening to the reference first, and then we moved down in price. Going in that direction, there was a tendency to notice what was missing each time.

The Moon 110LP really didn't lose very much. Dynamics and soundstage didn't seem different at all. The edge on the brass instruments in the *Chorus Line* medley was a tiny bit more pronounced, their tones were a little less rich. Mary Black's voice had a little less tonal color, so she sounded a tiny bit more forced compared with the reference. Still, these things were hardly noticeable. What a good phono preamp this is!

As expected given its itty bitty price, the Nerve lost more, starting with the extreme low end. Instruments were less well differentiated, there was less of the guitar body sound on the Black piece, and energy was shifted up the spectrum generally.

That kind of observation doesn't tell the full story, though, or even the best part. The glass was actually more full than empty. The fact that my notes are all about details, not the musical message, is significant.

Yes, save for the best phono stage you can afford, but even with the least expensive one we heard, you'll want to listen to music.

—Toby Earp